Board of Education Regular Meeting
Monday, April 14, 2025 7:00 PM
Humboldt Board Conference Room
810 Central Ave
Humboldt, NE 68376-9706

1. **OPEN MEETING NOTICE - CALL MEETING TO ORDER- ROLL CALL - PLEDGE OF ALLEGIANCE***
2. **WELCOME PATRONS & GUESTS: PATRON COMMENT**
3. **APPROVE CONSENT AGENDA**
   - 3.1. Meeting Minutes
   - 3.2. Bills for Payment
   - 3.3. Review Treasurer's report
4. **REPORTS**
   - 4.1. Principal Caniglia
   - 4.2. Principal Standerford
   - 4.3. NASB Report - Neal Kanel
   - 4.4. Committee Reports
     - 4.4.1. Building and Grounds
5. **AGENDA ITEMS**
   - 5.1. Approve board member's leave of absence
   - 5.2. State Standards Second Read
   - 5.3. Update to 2025-2026 Calendar
   - 5.4. Computer Rotation for K-3 ($26,227.60) Grade 4 ($8385.66) and Grade 9 ($19,521.25) for a total of $54,134.51.
   - 5.5. Replace Five External Cameras plus Professional Services.
   - 5.6. Band Chairs and Dolly
   - 5.7. Purchase and Installation of 3 Boxlight Boards
   - 5.8. Front of School Renewal Project
   - 5.9. Replace South Staircase at the Back of the Stage
   - 5.10. Wiring For Third Floor North
   - 5.11. Playground Equipment for ELC
   - 5.12. Install Gates in Football Field Parking Lot
   - 5.13. New Teacher Evaluation Tool
   - 5.14. Personnel
     - 5.14.1. Resignations/Retirements
       Alicia Gerdes - Resignation
       Robin Thacker - Retirement
       Tanner Merwin - Resignation
     - 5.14.2. Hires
       Chelsea Kerwin - Elementary
6. **SUPERINTENDENT GRIFFITH REPORT**
   - 6.1. Strategic Plan
   - 6.2. Curriculum

7. **BOARD MEMBER CONCERNS**
8. **ADJOURN**

Board of Education Regular Meeting
Monday, March 10, 2025 7:00 PM
Humboldt Board Conference Room
Attendance Taken at 7:01 PM. Quentin Bowen: Present, Kyle Hilgenfeld: Present, Mike Kanel: Present, Neal Kanel: Present, Dave Mezger: Present, Scott Ogle: Present.

1. OPEN MEETING NOTICE - CALL MEETING TO ORDER- ROLL CALL -PLEDGE OF ALLEGIANCE*

2. WELCOME PATRONS & GUESTS: PATRON COMMENT

3. APPROVE CONSENT AGENDA

Motion to approve passed with a motion by Dave Mezger and a second by Scott Ogle. Yea: 6, Nay: 0

3.1. Meeting Minutes
3.2. Bills for Payment
3.3. Review Treasurer's report

4. REPORTS

4.1. Principal Caniglia's report discussed past student achievements, upcoming activities, High School Counselor's report and upcoming student activities.
4.2. Principal Standerford's report discussed upcoming ACT's & State testing, how parent teacher conference went and trips the elementary has taken this past month.
4.3. NASB Report - Neal Kanel
4.4. Committee Reports

5. AGENDA ITEMS

5.1. Approve board member's leave of absence
5.2. First Read State Education Standards
5.3. Curriculum Program

Motion to approve & go forward with Curriculum Works passed with a motion by Scott Ogle and a second by Mike Kanel. Yea: 6, Nay: 0

5.4. NJUMP Participation

Motion to move forward with NJUMP passed with a motion by Scott Ogle and a second by Dave Mezger. Yea: 6, Nay: 0

5.5. Genetec Camera Replacement Bid

Motion to table this for discussion and other quotes passed with a motion by Neal Kanel and a second by Scott Ogle. Yea: 6, Nay: 0

5.6. Personnel
Katie Umland Resignation
Jayne Karas Retirement

Motion to approve both Katie Umland's resignation and Jaynie Karas' retirement passed with a motion by Mike Kanel and a second by Neal Kanel. Yea: 6, Nay: 0

5.7. Administrator Contracts

Motion to approve Administrative Contracts passed with a motion by Neal Kanel and a second by Mike Kanel. Yea: 6, Nay: 0

6. SUPERINTENDENT GRIFFITH REPORT

7. BOARD MEMBER CONCERNS

SAPP BROS - Neal will follow up with them because receipts will not print at the machine.

8. ADJOURN

Motion to adjourn at 7:32pm passed with a motion by Scott Ogle and a second by Mike Kanel. Yea: 6, Nay: 0

Respectfully submitted,
Chantel Farwell

Account Number	Detail Description	Amount
01 1100 610 001	ACT Test	4,275.00
Total 3MT TEST PREP		4,275.00
01 2230 610 000	PO 8304 TECH SUPPLIES	45.98
01 1100 610 003	PO 8303 EL Supplies	209.34
01 1100 610 003	PO 8303	144.99
01 1100 610 003	PO 8303	901.57
01 1100 890 002	PO 8343 -8th grade grad holder	134.99
Total Amazon Capital Services		1,436.87
01 2620 350 000	Labor 217191	125.00
01 2620 610 000	Parts 216994	774.21
01 2620 350 000	Labor 216994	700.00
01 2620 350 000	Labor 217131	468.00
01 2620 610 000	Parts 217131	759.07
Total BEATRICE MECHANICAL SERVICE		2,826.28
01 2620 610 000	Maintenance Supplies	40.50
Total Blecha's General Store		40.50
01 2710 610 000	Transportation Maint. Parts	403.82
01 2710 610 000	parts	603.62
Total BOOMGARN, RENEE		1,007.44
01 2620 610 000	MAINT Supplies	91.34
01 2320 580 000	SUPT TRAVEL EXPENSES	118.00
01 2320 580 000	SUPT TRAVEL EXPENSES	19.56
01 1100 610 001	TINY HOUSE	353.96
01 2151 610 000	PO 8298	129.74
01 2141 330 000	PO 8306	130.00
01 3541 340 003	PO 8333	106.99
01 3541 580 003	Sixpence Travel Expenses	43.10
01 1100 580 000	AD Meetings-Meals	27.44
01 6988 330 000	PO 8261+	1,402.57
01 6988 610 000	ARP-ESSER III AFTERschl SUPPLIES	123.06
01 2510 531 000	POSTAGE	330.80
01 6988 610 000	PO 8320	32.58
01 1100 610 001	PO 8302	30.00
01 1200 610 003	EL SPED Supplies	219.30
01 2620 610 000	MAINT Supplies	982.24
01 1100 580 000	SPED SA Psych STAFF DEVELOPMENT/TRAINING	145.00
01 3541 610 003	PO 8299.8335.8334.8331	269.84
01 2410 330 000	PO 8312	200.00
01 1100 610 001	PO 8315	6.75
01 1100 610 001	PO 8315	20.89
01 2570 330 000	PO 8313	40.00
01 1100 610 001	PO 8302	223.42
01 2510 610 000	PO Forms	303.85
Total CARDMEMBER SERVICE		5,350.43
01 1100 610 003	Dr. Seuss - Elem.	133.28
01 1100 610 001	FCS	42.05
01 6988 610 000	STEAM	59.52
01 1100 610 001	FCS	36.19
Total CLEANING COUSINS, LLC		271.04
01 1100 610 003	PO 8340	472.99
Total Creative 3, LLC		472.99
01 2310 610 000	CRG Evacuation Maps	800.00
Total Criditcal Response Group, Inc.		800.00
01 1100 643 000	CW Subscription	3,087.50
01 1100 643 000	CW Training	3,675.00

Account Number	Detail Description	Amount
Total Curriculum Crafter LLC		6,762.50
01 2230 650 000	tech / OCIO	292.87
01 2230 650 000	tech / OCIO	292.87
Total DAS STATE ACCOUNTING - CENTRAL FINANCE		585.74
01 1100 610 001	FF2996	89.10
01 1100 610 001	FF3026	49.50
01 1100 610 001	HS Teaching Supplies	(83.00)
Total DIETZE MUSIC HOUSE		55.60
01 2620 350 000	Service Call	70.00
Total Don Plager		70.00
01 2620 350 000	Service Call/Labor	432.50
01 2620 610 000	Parts	33.83
01 2620 610 000	Filters	631.54
Total DSTK PHILLIPS, INC		1,097.87
01 2620 610 000	PO 8322	455.60
01 1100 440 000	EGoldfax Contract	46.58
Total EAKES OFFICE SOLUTIONS		502.18
01 6408 591 003	0-2 SPED Dir	281.88
01 6408 591 003	3-5 SPED Dir	281.88
01 6408 591 003	0-2 Audiology	108.35
01 6408 591 003	3-5 Audiology	108.35
01 6408 591 003	0-2 Speech Therapy	864.00
01 6408 591 003	0-2 EC	200.00
01 2213 330 000	NDE Improv Plan	60.00
01 6408 591 003	0-2 EC Consultant	254.17
01 6408 591 003	3-5 EC Consultant	254.16
01 1200 591 003	EL SPED Dir	2,536.92
01 1200 591 001	Secondary SPED Dir	2,536.92
01 2151 591 000	EL Audiology	975.20
01 2151 591 000	Secondary Audiology	975.20
Total ESU #4		9,437.03
01 2230 643 000	tech hosting services	61.23
01 1200 330 000	SPED STAFF DEV/TRAINING	75.00
Total ESU #6		136.23
01 6988 610 000	STEAM	79.65
Total FALLS CITY MERCANTILE CO.		79.65
01 2620 420 000	trash-utilities	590.00
01 2620 420 000	trash-utilities	590.00
Total FALLS CITY SANITATION		1,180.00
01 2620 610 000	Maint Parts/Supplies	185.75
Total FARM & CITY SUPPLY		185.75
01 1100 382 001	distance learning	428.98
Total FIBER PLATFORM, LLC		428.98
01 2230 643 000	PO 8326	1,553.20
Total FOLLETT SCHOOL SOLUTIONS		1,553.20
01 2620 340 000	Service of Bleachers	766.00
Total FRENCH, LEE		766.00
01 2710 890 000	3554-Bus Title	10.00
01 2510 890 000	w/d Deposit Slips	13.00
01 2213 330 000	3555-Per Diem, State Speech Meals	387.00
01 2710 890 000	3556-'25 Bus Title	16.00
01 2710 890 000	3557-Suburban Title	10.00
01 2213 330 000	3558-Per Diem	450.00
01 2213 330 000	3565 - Per Diem	400.00

Account Number	Detail Description	Amount
01 2213 330 000	3566 - Per Diem	1,000.00
01 6989 610 000	3567 - PO 8339, STEAM Theatre	500.00
01 3541 610 003	3559 - FC Aquatic Sixpence	200.00
01 2213 330 000	3560 - Per Diem	691.00
01 3541 610 003	3561 - Mulberry Farm, Sixpence	88.00
01 2213 330 000	3562 - Per Diem	500.00
01 2710 890 000	3563 - '22 Bus Title	10.00
01 3541 610 003	3564 - Sixpence to ELC reimb	80.00
Total GENERAL OFFICE CHECKING ACCT.		4,355.00
01 2620 350 000	Part	5.00
01 2620 350 000	Labor	93.75
01 2620 890 000	Mileage	645.00
Total GOODWIN TUCKER GROUP		743.75
01 2620 610 000	PO 8305	63.72
Total HD Supply		63.72
01 1100 440 000	Copier Lease	1,287.03
01 1100 440 000	Stapler Lease	90.77
Total Hometown Leasing		1,377.80
01 2310 540 000	advertising messages	153.00
Total HTMC		153.00
01 1100 610 001	FFA Reimb from Ag Class	31.12
Total HTRS ACTIVITY FUND		31.12
01 3541 340 003	Reimburse ELC Account	240.00
Total HTRS EARLY LEARNING CENTER		240.00
01 102	payroll expenses	596,652.59
Total HTRS PAYROLL ACCT		596,652.59
01 2310 540 000	ADVERTISING	320.88
01 2310 540 000	advertising	341.77
01 2310 540 000	9817	5.78
01 2310 540 000	9851	6.67
01 2310 540 000	9860	125.32
01 2310 540 000	advertising	144.00
Total HUMBOLDT STANDARD		944.42
01 3541 610 003	PO 8332	500.00
Total JCMF CHILDREN'S CHARITIES		500.00
01 1100 890 002	PO 8341	341.25
Total JONES SCHOOL SUPPLY CO, INC		341.25
01 2620 431 000	Repair Door	475.00
Total KEYSTONE GLASS COMPANY		475.00
01 2330 317 000	legal services	404.00
Total KSB School Law		404.00
01 2620 350 000	water soft contract	467.64
01 2620 350 000	water soft contract	467.64
Total KURITA AMERICA INC		935.28
01 6408 340 003	0-2 yo	92.25
01 6408 340 003	3-5yo	299.29
01 2161 340 000	SA	1,704.96
Total MALCOLM, MARY		2,096.50
01 1100 610 002	Science	24.33
Total MCGRAW HILL SCHOOL EDUCATION, INC		24.33
01 2620 610 000	Lockset + install	1,095.00
Total METAL DOORS & HARDWARE CO		1,095.00
01 6408 340 003	0-2 yo	413.57
01 6408 340 003	3-5 yo	227.18
01 2171 340 000	SA	575.90

Account Number		Detail Description	Amount
Total	NATIONAL THERAPEUTIC ASSOCIATES, INC		1,216.65
01 2141 610 002		MARCH 2025	37.05
Total	NCS PEARSON, INC		37.05
01 2410 330 000		PO 8245-KC & KS	330.00
Total	NCSA - NEBRASKA COUNCIL OF SCHOOL ADMIN		330.00
01 2710 330 000		MS Transportation Course	125.00
Total	NEBRASKA SAFETY CENTER @ UNK		125.00
01 2610 621 000		118003	219.06
01 2610 621 000		43462	136.92
01 2610 621 000		69158	33.83
01 2610 621 000		43471	4,217.24
01 2610 621 000		43465	45.43
01 2610 621 000		31711	32.63
Total	NPPD		4,685.11
01 2710 340 000		advertising	225.00
01 2310 540 000		Advertising	256.00
01 2310 540 000		55924	10.00
01 2310 540 000		56021	76.13
01 2310 540 000		56019	10.00
Total	Pawnee Republican		577.13
01 3535 610 003		HAL Testing	204.00
Total	PEARSON EDUCATION		204.00
01 2230 650 000		Genetec Renewal	3,523.30
Total	PRIME COMMUNICATIONS, INC		3,523.30
01 2620 610 000		EE Reimbursement - Maint Supplies	286.61
Total	Ramer, Gary		286.61
01 2620 350 000		pest control-spraying	72.00
01 2620 350 000		pest control-spraying	72.00
Total	SCHENDEL PEST CONTROL		144.00
01 1100 610 002		PO 8314	168.00
Total	SCHMITT MUSIC		168.00
01 2620 350 000		Fire Ext Insp	514.25
Total	SECURITY SERVICES		514.25
01 6988 610 000		PO 8338 STEAM	650.00
Total	SPEED STACKS, INC		650.00
01 2710 626 000		GAS & DIESEL	3,726.50
01 2710 610 000		VEHICLE PARTS/SUPPLIES	12.00
Total	STATION SERVICE CENTER INC., THE		3,738.50
01 2710 610 000		Geo Tab Monthly Charges	289.10
Total	T-Mobile USA INC		289.10
01 2620 350 000		elevator maintenance	562.00
Total	TK ELEVATOR CORPORATION		562.00
01 2710 610 000		Parts	610.44
Total	TRUCK CENTER COMPANIES		610.44
01 1200 330 000		PO 8300 ASD Conf	250.00
Total	University of Nebraska-Lincoln		250.00
01 2510 530 000		Principal	86.21
01 3300 890 000		Daycare	68.35
01 3541 890 000		Sixpence	78.47
01 2510 530 000		Principal	(14.31)
Total	US Cellular		218.72
01 2510 530 000		long distance	91.54
Total	VERIZON BUSINESS		91.54

Account Number	Detail Description	Amount
01 2161 340 000	OT SPED Services	1,296.00
01 2161 340 000	OT Travel Expenses	232.74
01 2161 340 000	OT SPED Services	4,009.50
01 2161 340 000	OT Travel Expenses	349.11
Total WILCOCK, JOY		5,887.35
01 2510 530 000	phone utilities	110.35
Total WINDSTREAM NEBRASKA		110.35
Checking Account ID 1		673,973.14

Humboldt Table Tock S Rock Steinauer School
Breakfast/Lunch Program

Mar-25

RECEIPTS

Lunches	$8,644.31
State	$7,867.47
Int.	$1.01
TOTAL RECEIPTS	**$16,512.79**

EXPENSES

Falls City Merc.	$3,958.41
Cash-Wa	$2,747.32
Sysco	$4,685.12
Dawn Gutzmer	$50.25
TOTAL EXPENSE	$11,441.10
BALANCE	$28,406.32

Activity Fund Balance Report - Summary - Exclude Encumbrances

03/2025 - 03/2025

Regular; Beginning Month 03/2025; Processing Month 03/2025; Accounts to Include Accounts with Activity; Fund Number 05

Fund: 05 ACTIVITY FUND

Chart of Account Number	Chart of Account Description	Beginning Balance	Expenses	Revenues	Balance Change	Balance
05 704 0098	2030	1,229.77	0.00	0.00	0.00	1,229.77
05 704 0099	2026	7,813.12	514.99	0.00	0.00	7,298.13
05 704 0100	Athletics - Miscellaneous	(7,710.11)	300.00	480.04	0.00	(7,530.07)
05 704 0102	2029	687.25	0.00	0.00	0.00	687.25
05 704 0122	2025	5,583.05	0.00	0.00	0.00	5,583.05
05 704 0123	2021	2,174.69	0.00	0.00	0.00	2,174.69
05 704 0124	2023	1,624.08	0.00	0.00	0.00	1,624.08
05 704 0125	2024	766.55	0.00	0.00	0.00	766.55
05 704 0132	2027	1,885.20	0.00	0.00	0.00	1,885.20
05 704 0133	2028	2,311.30	0.00	0.00	0.00	2,311.30
05 704 0135	Annual	(2,638.01)	0.00	385.00	0.00	(2,253.01)
05 704 0136	Drill Team	1,100.19	0.00	0.00	0.00	1,100.19
05 704 0137	Track	339.39	0.00	0.00	0.00	339.39
05 704 0138	Concession	7,517.55	3,096.62	2,525.00	0.00	6,945.93
05 704 0139	FCS	721.11	0.00	0.00	0.00	721.11
05 704 0140	Industrial Arts	3,976.12	0.00	0.00	0.00	3,976.12
05 704 0141	One Act	902.73	0.00	13.75	0.00	916.48
05 704 0142	Student Council - H S	738.08	189.94	746.00	0.00	1,294.14
05 704 0143	H.S. Youth Leadership	5,121.53	385.00	0.00	0.00	4,736.53
05 704 0144	H.S. Cheerleading	3,133.29	829.79	0.00	0.00	2,303.50
05 704 0145	Legion Scholarship	1,521.96	0.00	0.00	0.00	1,521.96
05 704 0146	Foundation Scholarship	225.00	0.00	0.00	0.00	225.00
05 704 0147	Donations	3,599.40	0.00	0.00	0.00	3,599.40
05 704 0148	Activities	(7,388.55)	2,436.00	5,362.45	0.00	(4,462.10)
05 704 0149	Library	5,373.55	764.02	763.98	0.00	5,373.51
05 704 0150	Wrestling	254.00	758.69	150.00	0.00	(354.69)
05 704 0151	Grants & Scholarships	4,241.07	0.00	0.00	0.00	4,241.07
05 704 0152	Elementary	671.21	0.00	0.00	0.00	671.21
05 704 0154	Music (new)	1,503.32	139.43	0.00	0.00	1,363.89
05 704 0155	Snack Cart	963.68	0.00	572.05	0.00	1,535.73
05 704 0156	Leap Program	4,564.00	0.00	0.00	0.00	4,564.00
05 704 0157	COF	2,461.99	0.00	0.00	0.00	2,461.99
05 704 0160	Cheerleading-Mid School	65.00	0.00	0.00	0.00	65.00
05 704 0161	StuCo - Middle School	2,186.19	0.00	0.00	0.00	2,186.19
05 704 0162	Mock Trial	885.43	0.00	0.00	0.00	885.43
05 704 0163	Volleyball Club	495.69	0.00	0.00	0.00	495.69

Regular; Beginning Month 03/2025; Processing Month 03/2025; Accounts to Include Accounts with Activity; Fund Number 05

Fund: 05 ACTIVITY FUND

Chart of Account Number	Chart of Account Description	Beginning Balance	Expenses	Revenues	Balance Change	Balance
05 704 0164	Golf Club	831.17	0.00	0.00	0.00	831.17
05 704 0165	Middle School-Youth Leadership	946.66	0.00	0.00	0.00	946.66
05 704 0166	Power Lifting	2,957.30	0.00	0.00	0.00	2,957.30
05 704 0168	Speech	541.84	75.00	0.00	0.00	466.84
05 704 0169	MS Robotics	2,425.66	0.00	0.00	0.00	2,425.66
05 704 0171	Boys Basketball	2,657.31	0.00	0.00	0.00	2,657.31
05 704 0172	Girls Basketball	1,649.88	0.00	0.00	0.00	1,649.88
05 704 0173	Sport Posters	2,754.23	0.00	0.00	0.00	2,754.23
05 704 0174	Football Club	1,128.56	0.00	0.00	0.00	1,128.56
05 704 0175	FFA	4,763.65	2,159.00	0.00	0.00	2,604.65
05 704 0176	HS Robotics	(1,198.42)	700.00	0.00	0.00	(1,898.42)
05 704 0995	Interest	408.58	0.00	0.00	0.00	408.58
05 704 0996	Service Charge	(4,080.55)	0.00	0.00	0.00	(4,080.55)
	Fund Total: 05	74,685.69	12,348.48	10,998.27	0.00	73,335.48

HTRS ACCOUNT BALANCES - Cash on Hand

03x31x2025

Account			March		Previous Month
ACTIVITY ACCOUNT	x488	$	73,335.48	$	73,284.10
BREAKFAST/LUNCH	x462	$	28,406.32	$	23,334.63
BUILDING FUND	x0640	$	1,197,000.27	$	1,177,743.47
DEPRECIATION	x3541	$	143,768.53	$	143,676.41
EMPLOYEE BEN FUND MM	x7455	$	136,987.34	$	136,899.56
GENERAL FUND	x2567	$	1,640,555.08	$	1,501,761.82
OFFICE ACCOUNT	x3638	$	693.64	$	2,093.64
PAYROLL FUND	x2648	$	90,158.40	$	89,833.82
QCPUF	x2583	$	7,320.23	$	7,309.48
STUDENT FEES	x5156	$	13,604.83	$	13,601.70
DAYCARE	x295	$	9,107.07	$	6,487.08

INTERNAL TRANSFERS - Current FY

GENERAL to LUNCH FUND

GENERAL to Activity FUND

GENERAL to PAYROLL

Fund: 01 General Fund

Account Number	Description	Revised Budget	During Month	To Date	% of Budget	Budget Balance
01 1100	Taxes Levied/Assessed	0.00	31,402.26	1,837,471.59	0.00	(1,837,471.59)
01 1115	Carline Tax	0.00	0.00	3,020.99	0.00	(3,020.99)
01 1120	Public Power Dist. Sales Tax	0.00	0.00	497.86	0.00	(497.86)
01 1125	Motor Vehicle Tax	0.00	24,244.87	180,315.76	0.00	(180,315.76)
01 1140	Penalties/Int on Taxes	0.00	1,008.39	12,768.22	0.00	(12,768.22)
01 1190	Other taxes levied	0.00	(125.42)	63,400.45	0.00	(63,400.45)
01 1311	Tuition Drivers Education	0.00	200.00	200.00	0.00	(200.00)
01 1315	Tuition from other entities(early entry)	0.00	0.00	9,660.92	0.00	(9,660.92)
01 1370	Preschool tuition	0.00	555.00	11,292.43	0.00	(11,292.43)
01 1800 1810	Fitness Center Dues	0.00	100.00	1,450.00	0.00	(1,450.00)
01 1800 1830	Laptop Fees	0.00	0.00	3,817.95	0.00	(3,817.95)
01 1800 1840	Industrial Arts Fees	0.00	0.00	311.00	0.00	(311.00)
01 1800 1850	Before/After School Program	0.00	230.00	22,434.49	0.00	(22,434.49)
01 1800 1870	Daycare Receipts	0.00	4,294.96	46,753.50	0.00	(46,753.50)
01 1911	Local license fees	0.00	0.00	(121.18)	0.00	121.18
01 1920	Contributions/Donations	0.00	0.00	7,050.00	0.00	(7,050.00)
01 1921	City-Police court fines	0.00	10.00	16,360.86	0.00	(16,360.86)
01 1925	Grant Receipts	0.00	0.00	270.00	0.00	(270.00)
	Subtotal: LOCAL RECIEPTS	0.00	61,920.06	2,216,954.84	0.00	(2,216,954.84)
01 2110	County Fines & Licence Fees	0.00	7,127.93	19,330.32	0.00	(19,330.32)
01 2210	ESU Receipts	0.00	0.00	7,511.25	0.00	(7,511.25)
	Subtotal: COUNTY AND ESU RECEIPTS	0.00	7,127.93	26,841.57	0.00	(26,841.57)
01 3110	State Aid	0.00	93,530.00	327,355.00	0.00	(327,355.00)
01 3120	SPED School Age (SA)	0.00	137,926.00	542,050.00	0.00	(542,050.00)
01 3130	Homestead Exemption	0.00	7,513.70	8,233.45	0.00	(8,233.45)
01 3131	Property tax credit	0.00	479,809.55	1,196,961.36	0.00	(1,196,961.36)
01 3132	Personal property tax credit	0.00	0.00	36,529.46	0.00	(36,529.46)
01 3133	Nameplate Capacity Tax (windmills)	0.00	0.00	63,100.24	0.00	(63,100.24)
01 3134	Personal Property Tax Credit	0.00	0.00	322,625.38	0.00	(322,625.38)
01 3180	Pro Rate Motor Vehicle	0.00	0.00	5,309.26	0.00	(5,309.26)
01 3400	State apportionment	0.00	0.00	153,878.28	0.00	(153,878.28)
01 3535	High ability learners	0.00	0.00	4,166.00	0.00	(4,166.00)
01 3541	Sixpence Grant Receipts	0.00	0.00	14,585.00	0.00	(14,585.00)
	Subtotal: STATE RECEIPTS	0.00	718,779.25	2,674,793.43	0.00	(2,674,793.43)
01 4505	Title I, Part A ESSA	0.00	0.00	62,306.00	0.00	(62,306.00)
01 4518	SPED - IDEA Base/Enr Pov	0.00	0.00	98,903.00	0.00	(98,903.00)
01 4521	IDEA Part B, Propt, Age 3-21	0.00	0.00	2,968.00	0.00	(2,968.00)
01 4705	Flood control	0.00	0.00	16,346.40	0.00	(16,346.40)
01 4708	Medicaid in Public Schools MIPS	0.00	0.00	10,195.20	0.00	(10,195.20)
01 4709	Medicaid Admin Activities MAAPS	0.00	0.00	4,334.69	0.00	(4,334.69)
01 4969	TITLE IV (6969)	0.00	0.00	10,000.00	0.00	(10,000.00)
01 4988	ARP ESSER III AFTER school	0.00	0.00	41,161.00	0.00	(41,161.00)
01 4989	ARP - ESSER III SUMMER school	0.00	0.00	13,220.00	0.00	(13,220.00)
01 4998	ESSERS III ARP	0.00	0.00	272,523.00	0.00	(272,523.00)
	Subtotal: FEDERAL RECEIPTS	0.00	0.00	531,957.29	0.00	(531,957.29)
01 5200	Fund Transfers In (from other HTRS fund)	0.00	0.00	198.30	0.00	(198.30)
01 5300	Sale of Property	0.00	0.00	11,046.75	0.00	(11,046.75)
01 5301	Insurance refunds/adjustments	0.00	500.00	3,476.35	0.00	(3,476.35)
01 5500	TRANSFERS FROM FUNDS (INCOMING)	0.00	0.00	42,377.64	0.00	(42,377.64)
01 5690	Other Non-revenue Receipt	0.00	0.00	48,009.15	0.00	(48,009.15)
	Subtotal: NON-REVENUE RECEIPTS	0.00	500.00	105,108.19	0.00	(105,108.19)
01 9000	Non-programmed Receipts	0.00	0.00	40,498.01	0.00	(40,498.01)
	Subtotal: NON-PROGRAM RECEIPTS	0.00	0.00	40,498.01	0.00	(40,498.01)

Fund: 01 General Fund

Account Number	Description	Revised Budget	During Month	To Date	% of Budget	Budget Balance
	Fund Total:	0.00	788,327.24	5,596,153.33	0.00	(5,596,153.33)

Revenue Summary Report

Processing Month: 03/2025

	Revised Budget	During Month	To Date	% of Budget	Budget Balance
Grand Total:	0.00	788,327.24	5,596,153.33	0.00	(5,596,153.33)

Account Number	Account Description	Revised Budget	Expended During Month	% of Budget	Unencumbered Balance
01 General Fund					
1100 REGULAR INSTRUCTIONAL PROGRAMS					
01 1100 111 000	Extra Duty Salary	240,561.00	16,587.71	65.52	82,946.06
01 1100 111 001	HS Teacher Salaries	770,758.00	54,327.27	53.81	355,995.71
01 1100 111 002	MS Teacher Salaries	394,575.00	29,048.54	58.90	162,186.68
01 1100 111 003	EL Teacher Salaries	569,184.00	39,298.80	58.15	238,198.21
111 SALARIES TCHR/PROF		1,975,078.00	139,262.32	57.50	839,326.66
01 1100 112 002	MS AIDE/PARA	3,706.00	385.98	85.49	537.91
01 1100 112 003	EL AIDE/PARA	32,871.00	2,946.39	58.76	13,556.92
112 SALARIES AIDE/PARA		36,577.00	3,332.37	61.47	14,094.83
01 1100 113 001	HS SUB TCHR	34,459.00	5,273.75	105.38	(1,853.50)
01 1100 113 002	MS SUB TCHR	34,119.00	3,120.00	73.16	9,159.00
01 1100 113 003	EL SUB TCHR	62,580.00	3,806.25	42.82	35,782.80
113 SALARIES SUB TCHR		131,158.00	12,200.00	67.15	43,088.30
01 1100 153 000	TEACH SUB/CLASS COVERAGE	2,558.00	0.00	58.70	1,056.50
01 1100 153 001	EXTRA DUTY / STIPENDS	18,150.00	787.20	76.79	4,212.40
01 1100 153 002	CERT Unused Leave Payouts	13,168.00	0.00	0.00	13,168.00
153 EXTRA DUTY / STIPENDS		33,876.00	787.20	45.58	18,436.90
01 1100 211 000	D GROUP INSURANCE TCHR/PROF	35,376.00	3,420.34	73.04	9,537.30
01 1100 211 001	HS GROUP INSURANCE TCHR/PROF	228,840.00	17,456.45	61.69	87,660.03
01 1100 211 002	MS GROUP INSURANCE TCHR/PROF	100,924.00	6,595.68	51.26	49,186.61
01 1100 211 003	EL GROUP INSURANCE TCHR/PROF	185,596.00	15,623.82	68.17	59,080.87
211 GROUP INS TCHR/PROF		550,736.00	43,096.29	62.69	205,464.81
01 1100 212 002	MS GROUP INSURANCE AIDE/PARA	0.00	67.44	0.00	(269.77)
01 1100 212 003	EL GROUP INSURANCE AIDE/PARA	6,017.00	48.11	39.16	3,660.71
212 GROUP INSURANCE AIDE/PARA		6,017.00	115.55	43.64	3,390.94
01 1100 213 001	CERTIFIED CLASS COVG-BCBS	3,292.00	201.26	48.57	1,693.08
01 1100 213 003	CERTIFIED CLASS COVG-BCBS	293.00	0.00	1.52	288.55
213 CERTIFIED CLASS COVG-BCBS		3,585.00	201.26	44.72	1,981.63
01 1100 221 000	D SOCIAL SECURITY TCHR/PROF	18,349.00	1,253.21	64.94	6,433.30
01 1100 221 001	HS SOCIAL SECURITY TCHR/PROF	58,306.00	4,111.05	53.81	26,934.28
01 1100 221 002	MS SOCIAL SECURITY TCHR/PROF	30,071.00	2,205.92	58.70	12,420.15
01 1100 221 003	EL SOCIAL SECURITY TCHR/PROF	43,327.00	2,989.56	58.12	18,147.04
221 SOCIAL SECURITY TCHR/PROF		150,053.00	10,559.74	57.39	63,934.77
01 1100 222 001	HS SOCIAL SECURITY AIDE/PARA	0.00	0.00	0.00	0.00
01 1100 222 002	MS SOCIAL SECURITY AIDE/PARA	285.00	28.45	83.62	46.69
01 1100 222 003	EL SOCIAL SECURITY AIDE/PARA	2,463.00	221.71	58.55	1,020.89
222 SOCIAL SECURITY AIDE/PARA		2,748.00	250.16	61.15	1,067.58
01 1100 223 000	SOCIAL SECURITY Tchr Sub Pay	196.00	0.00	58.58	81.18
01 1100 223 001	HS SOCIAL SECURITY SUB TCHR	4,016.00	463.06	89.89	405.87
01 1100 223 002	MS SOCIAL SECURITY SUB TCHR	3,626.00	238.68	52.66	1,716.54
01 1100 223 003	EL SOCIAL SECURITY SUB TCHR	4,788.00	291.20	42.82	2,737.80
223 SOCIAL SECURITY SUB TCHR		12,626.00	992.94	60.86	4,941.39
01 1100 231 000	D RETIREMENT TCHR/PROF	19,433.00	1,391.19	59.78	7,816.66
01 1100 231 001	HS RETIREMENT TCHR/PROF	57,074.00	5,329.71	70.53	16,818.33

Account Number	Account Description	Revised Budget	Expended During Month	% of Budget	Unencumbered Balance
01 1100 231 002	MS RETIREMENT TCHR/PROF	29,642.00	2,859.58	77.18	6,765.39
01 1100 231 003	EL RETIREMENT TCHR/PROF	42,771.00	3,867.16	76.17	10,194.44
231 RETIREMENT TCHR/PROF		148,920.00	13,447.64	72.07	41,594.82
01 1100 232 001	HS RETIREMENT AIDE/PARA	0.00	0.00	0.00	0.00
01 1100 232 002	MS RETIREMENT AIDE/PARA	355.00	38.12	88.15	42.06
01 1100 232 003	EL RETIREMENT AIDE/PARA	3,594.00	291.04	52.39	1,711.17
232 RETIREMENT AIDE/PARA		3,949.00	329.16	55.60	1,753.23
01 1100 233 000	RETIREMENT Tchr Class Covg	251.00	0.00	59.10	102.66
01 1100 233 001	HS RETIREMENT SUB TCHR	1,687.00	55.53	48.09	875.74
01 1100 233 002	MS RETIREMENT SUB TCHR	3,370.00	0.00	0.00	3,370.00
01 1100 233 003	EL RETIREMENT SUB TCHR	124.00	0.00	23.39	95.00
233 RETIREMENT SUB TCHR		5,432.00	55.53	18.20	4,443.40
01 1100 237 000	D RETIREMENT TCHR/PROF	0.00	0.00	0.00	0.00
01 1100 237 001	Increased Retirement Contribution Rate	17,951.00	0.00	0.00	17,951.00
01 1100 237 002	MSIncreased Retirement Contribution Rate	9,323.00	0.00	0.00	9,323.00
01 1100 237 003	ELIncreased Retirement Contribution Rate	13,452.00	0.00	0.00	13,452.00
237 Inc Ret Contribution Rate		40,726.00	0.00	0.00	40,726.00
01 1100 260 000	D UNEMPLOYMENT PMTS	0.00	0.00	0.00	0.00
260 UNEMPLOYMENT PMTS		0.00	0.00	0.00	0.00
01 1100 281 000	D LTD/STD TCHR/PROF	605.00	23.46	29.21	428.28
01 1100 281 001	HS LTD/STD TCHR/PROF	4,975.00	501.91	78.30	1,079.49
01 1100 281 002	MS LTD/STD TCHR/PROF	2,662.00	244.69	75.61	649.25
01 1100 281 003	EL LTD/STD TCHR/PROF	3,758.00	352.31	79.23	780.67
281 LTD/STD TCHR/PROF		12,000.00	1,122.37	75.52	2,937.69
01 1100 282 001	HS LTD/STD AIDE/PARA	0.00	0.00	0.00	0.00
01 1100 282 002	MS LTD/STD AIDE/PARA	16.00	2.02	86.94	2.09
01 1100 282 003	EL LTD/STD AIDE/PARA	183.00	9.94	46.86	97.25
282 LTD/STD AIDE/PARA		199.00	11.96	50.08	99.34
01 1100 283 001	LTD/STD SUB TCHR	21.00	0.83	41.29	12.33
01 1100 283 002	LTD/STD SUB TCHR	111.00	0.00	0.00	111.00
01 1100 283 003	LTD/STD SUB TCHR	4.00	0.00	72.25	1.11
283 LTD/STD SUB TCHR		136.00	0.83	8.50	124.44
01 1100 320 000	PROF EDUC SERVICES	410.00	0.00	0.00	410.00
320 PROF EDUC SERVICES		410.00	0.00	0.00	410.00
01 1100 333 000	MILEAGE PAID TO STAFF	836.00	0.00	67.11	274.95
333 MILEAGE TO STAFF		836.00	0.00	67.11	274.95
01 1100 382 001	Tuition - Distance Learning	21,886.00	428.98	45.92	11,836.41
01 1100 382 002	Tuition - Distance Learning	0.00	0.00	0.00	0.00
382 DISTANCE LEARNING		21,886.00	428.98	45.92	11,836.41
01 1100 440 000	DISTRICT RENTALS/LEASES	25,522.00	1,424.38	67.82	8,212.64
440 LEASE/RENTALS		25,522.00	1,424.38	67.82	8,212.64
01 1100 580 000	INSTRUCTIONAL TRAVEL EXPENSES	1,834.00	172.44	137.77	(692.65)
580 TRAVEL EXPENSES		1,834.00	172.44	137.77	(692.65)
01 1100 610 001	HS Teaching Supplies	36,878.00	5,074.98	56.47	16,053.70
01 1100 610 002	MS Teaching Supplies	7,909.00	192.33	301.62	(15,945.85)
01 1100 610 003	EL Teaching Supplies	7,700.00	1,862.17	100.89	(68.24)

Account Number	Account Description	Revised Budget	Expended During Month	% of Budget	Unencumbered Balance
610 SUPPLIES		52,487.00	7,129.48	99.92	39.61
01 1100 640 001	HS Textbooks	5,516.00	0.00	0.46	5,490.38
01 1100 640 002	MS Textbooks	0.00	0.00	0.00	0.00
01 1100 640 003	EL Textbooks	6,206.00	0.00	48.32	3,207.00
640 BOOKS/PERIODICALS		11,722.00	0.00	25.80	8,697.38
01 1100 643 000	WEB/CLOUD BASED SOFTWARE	9,445.00	6,762.50	106.19	(585.04)
643 WEB/CLOUD BASED SOFTWARE		9,445.00	6,762.50	106.19	(585.04)
01 1100 733 001	HS Furniture And Equipment	17,149.00	0.00	8.42	15,704.89
01 1100 733 002	MS Furniture And Equipment	1,100.00	0.00	21.23	866.45
01 1100 733 003	EL Furniture And Equipment	1,513.00	0.00	6.38	1,416.40
733 FURNITURE/FIXTURES		19,762.00	0.00	8.98	17,987.74
01 1100 890 001	HS Other Expense	10,976.00	0.00	24.54	8,282.14
01 1100 890 002	MS Other Expense	5,461.00	476.24	47.48	2,868.00
01 1100 890 003	EL Other Expense	7,131.00	0.00	44.20	3,978.92
890 MISC EXPENDITURES		23,568.00	476.24	35.81	15,129.06
1100 REGULAR INSTRUCTIONAL PROGRAMS		3,281,288.00	242,159.34	58.90	1,348,716.83
1150 LIMITED ENGLISH PROF PROGRAMS					
01 1150 111 003	LEP/ESL SALARIES TCHR/PROF	0.00	0.00	0.00	0.00
111 SALARIES TCHR/PROF		0.00	0.00	0.00	0.00
01 1150 211 003	ELA GROUP INSURANCE TCHR/PROF	0.00	0.00	0.00	0.00
211 GROUP INS TCHR/PROF		0.00	0.00	0.00	0.00
01 1150 221 003	ELA SOCIAL SECURITY TCHR/PROF	0.00	0.00	0.00	0.00
221 SOCIAL SECURITY TCHR/PROF		0.00	0.00	0.00	0.00
01 1150 231 003	ELA RETIREMENT TCHR/PROF	0.00	0.00	0.00	0.00
231 RETIREMENT TCHR/PROF		0.00	0.00	0.00	0.00
01 1150 281 003	ELA LTD/STD TCHR/PROF	0.00	0.00	0.00	0.00
281 LTD/STD TCHR/PROF		0.00	0.00	0.00	0.00
1150 LIMITED ENGLISH PROF PROGRAMS		0.00	0.00	0.00	0.00
1160 POVERTY PROGRAMS					
01 1160 111 003	Teacher Salaries - Poverty	176,804.00	12,045.00	54.50	80,444.00
111 SALARIES TCHR/PROF		176,804.00	12,045.00	54.50	80,444.00
01 1160 113 003	Substitute Salaries - Poverty	0.00	0.00	0.00	0.00
113 SALARIES SUB TCHR		0.00	0.00	0.00	0.00
01 1160 211 003	Health Insurance - Poverty	42,603.00	3,033.66	56.97	18,333.72
211 GROUP INS TCHR/PROF		42,603.00	3,033.66	56.97	18,333.72
01 1160 221 003	Social Security - Poverty	13,185.00	897.25	54.44	6,006.85
221 SOCIAL SECURITY TCHR/PROF		13,185.00	897.25	54.44	6,006.85
01 1160 231 003	Retirement - Poverty	13,286.00	1,189.78	71.64	3,767.76
231 RETIREMENT TCHR/PROF		13,286.00	1,189.78	71.64	3,767.76
01 1160 237 003	Inc Ret Contribution Rate	4,179.00	0.00	0.00	4,179.00
237 Inc Ret Contribution Rate		4,179.00	0.00	0.00	4,179.00
01 1160 281 003	Long Term Disability - Poverty	1,154.00	102.38	70.97	334.96
281 LTD/STD TCHR/PROF		1,154.00	102.38	70.97	334.96
01 1160 610 003	Teaching Supplies - Poverty	0.00	0.00	0.00	0.00
610 SUPPLIES		0.00	0.00	0.00	0.00

Account Number	Account Description	Revised Budget	Expended During Month	% of Budget	Unencumbered Balance
01 1160 890 003	Other Expense - Poverty	0.00	0.00	0.00	0.00
890 MISC EXPENDITURES		0.00	0.00	0.00	0.00
1160 POVERTY PROGRAMS		251,211.00	17,268.07	54.99	113,066.29
1190 EARLY CHILDHOOD ED PROGRAMS					
01 1190 111 003	Early Childhood Salary	163,198.00	13,517.16	66.26	55,060.72
111 SALARIES TCHR/PROF		163,198.00	13,517.16	66.26	55,060.72
01 1190 112 003	EC Early Childhood Aide	1,379.00	0.00	0.00	1,379.00
112 SALARIES AIDE/PARA		1,379.00	0.00	0.00	1,379.00
01 1190 113 003	EC Substitute Salaries	216.00	0.00	0.00	216.00
113 SALARIES SUB TCHR		216.00	0.00	0.00	216.00
01 1190 211 003	EC Health Insurance	68,177.00	6,610.43	77.57	15,293.56
211 GROUP INS TCHR/PROF		68,177.00	6,610.43	77.57	15,293.56
01 1190 212 003	GROUP INSURANCE AIDE/PARA	216.00	0.00	0.00	216.00
212 GROUP INSURANCE AIDE/PARA		216.00	0.00	0.00	216.00
01 1190 221 003	EC Social Security	12,264.00	1,001.76	65.35	4,249.77
221 SOCIAL SECURITY TCHR/PROF		12,264.00	1,001.76	65.35	4,249.77
01 1190 222 003	EC SOC SEC AIDE/PARA	105.00	0.00	0.00	105.00
222 SOCIAL SECURITY AIDE/PARA		105.00	0.00	0.00	105.00
01 1190 223 003	EC SOC SEC SUB TCHR	16.00	0.00	0.00	16.00
223 SOCIAL SECURITY SUB TCHR		16.00	0.00	0.00	16.00
01 1190 231 003	EC Retirement	16,120.00	1,335.19	66.26	5,438.47
231 RETIREMENT TCHR/PROF		16,120.00	1,335.19	66.26	5,438.47
01 1190 232 003	RETIREMENT AIDE/PARA	72.00	0.00	0.00	72.00
232 RETIREMENT AIDE/PARA		72.00	0.00	0.00	72.00
01 1190 237 003	Increased Retirement Contribution Rate	0.00	0.00	0.00	0.00
237 Inc Ret Contribution Rate		0.00	0.00	0.00	0.00
01 1190 281 003	EC LTD/STD TCHR/PROF	1,115.00	95.92	68.82	347.64
281 LTD/STD TCHR/PROF		1,115.00	95.92	68.82	347.64
01 1190 282 003	LTD/STD AIDE/PARA	5.00	0.00	0.00	5.00
282 LTD/STD AIDE/PARA		5.00	0.00	0.00	5.00
01 1190 283 003	LTD/STD SUB TCHR	0.00	0.00	0.00	0.00
283 LTD/STD SUB TCHR		0.00	0.00	0.00	0.00
01 1190 330 003	EC STAFF DEVELOPMENT/TRAINING	334.00	0.00	26.95	244.00
330 STAFF DEVELOPMENT/TRAINING		334.00	0.00	26.95	244.00
01 1190 333 003	EC Mileage	0.00	0.00	0.00	0.00
333 MILEAGE TO STAFF		0.00	0.00	0.00	0.00
01 1190 610 003	EC Supplies	3,146.00	0.00	14.46	2,691.00
610 SUPPLIES		3,146.00	0.00	14.46	2,691.00
01 1190 733 003	EC Furniture & Equipment	1,137.00	0.00	0.00	1,137.00
733 FURNITURE/FIXTURES		1,137.00	0.00	0.00	1,137.00
1190 EARLY CHILDHOOD ED PROGRAMS		267,500.00	22,560.46	67.67	86,471.16
1200 SPECIAL EDUCATION INSTRUCTIONAL PROGRAMS					
01 1200 111 001	HS SPED Teacher Salaries	143,770.00	16,597.54	92.36	10,989.68
01 1200 111 002	MS SPED Teacher Salaries	147,255.00	5,633.04	30.60	102,190.68

Account Number	Account Description	Revised Budget	Expended During Month	% of Budget	Unencumbered Balance
01 1200 111 003	EL SPED Teacher Salaries	256,891.00	15,714.71	48.94	131,173.32
111 SALARIES TCHR/PROF		547,916.00	37,945.29	55.40	244,353.68
01 1200 112 001	HS SPED Teacher Aide	46,859.00	7,227.26	114.89	(6,979.41)
01 1200 112 002	MS SPED Teacher Aide	16,373.00	2,075.47	100.65	(105.64)
01 1200 112 003	EL SPED Teacher Aide	249,808.00	18,568.78	66.19	84,471.30
112 SALARIES AIDE/PARA		313,040.00	27,871.51	75.28	77,386.25
01 1200 113 001	HS SPED Substitute Salaries	0.00	0.00	0.00	0.00
01 1200 113 002	MS SPED Substitute Salaries	0.00	0.00	0.00	0.00
01 1200 113 003	EL SPED Substitute Salaries	0.00	0.00	0.00	0.00
113 SALARIES SUB TCHR		0.00	0.00	0.00	0.00
01 1200 211 001	HS SPED GROUP INS TCHR/PROF	54,441.00	4,925.75	72.08	15,197.39
01 1200 211 002	MS SPED GROUP INS TCHR/PROF	60,631.00	2,235.85	29.35	42,838.46
01 1200 211 003	EL SPED GROUP INS TCHR/PROF	99,352.00	6,201.87	49.91	49,766.55
211 GROUP INS TCHR/PROF		214,424.00	13,363.47	49.72	107,802.40
01 1200 212 001	HS SPED GROUP INS AIDE/PARA	0.00	606.99	0.00	(2,427.95)
01 1200 212 003	EL SPED GROUP INS AIDE/PARA	54,115.00	4,547.96	78.66	11,549.34
212 GROUP INSURANCE AIDE/PARA		54,115.00	5,154.95	83.14	9,121.39
01 1200 221 001	HS SPED SOCIAL SECURITY TCHR/PROF	10,861.00	1,247.14	91.88	881.89
01 1200 221 002	MS SPED SOCIAL SECURITY TCHR/PROF	11,114.00	422.25	30.40	7,734.91
01 1200 221 003	EL SPED SOCIAL SECURITY TCHR/PROF	19,504.00	1,193.46	48.95	9,955.84
221 SOCIAL SECURITY TCHR/PROF		41,479.00	2,862.85	55.22	18,572.64
01 1200 222 001	SOCIAL SECURITY AIDE/PARA	3,601.00	542.52	113.19	(474.97)
01 1200 222 002	MS SPED SOCIAL SECURITY AIDE/PARA	1,258.00	159.13	100.47	(5.92)
01 1200 222 003	EL SPED SOCIAL SECURITY AIDE/PARA	18,860.00	1,351.29	64.01	6,786.82
222 SOCIAL SECURITY AIDE/PARA		23,719.00	2,052.94	73.41	6,305.93
01 1200 223 003	EL SPED SOCIAL SECURITY SUB TCHR	0.00	0.00	0.00	0.00
223 SOCIAL SECURITY SUB TCHR		0.00	0.00	0.00	0.00
01 1200 231 001	HS SPED RETIREMENT TCHR/PROF	10,279.00	1,639.48	127.60	(2,836.79)
01 1200 231 002	MS SPED RETIREMENT TCHR/PROF	11,046.00	556.42	40.30	6,594.63
01 1200 231 003	EL SPED RETIREMENT TCHR/PROF	19,304.00	1,552.26	64.33	6,885.87
231 RETIREMENT TCHR/PROF		40,629.00	3,748.16	73.80	10,643.71
01 1200 232 001	RETIREMENT AIDE/PARA	4,424.00	713.91	120.21	(894.10)
01 1200 232 002	MS RETIREMENT AIDE/PARA	1,496.00	205.01	108.80	(131.72)
01 1200 232 003	EL SPED RETIREMENT AIDE/PARA	24,960.00	1,834.16	64.87	8,768.12
232 RETIREMENT AIDE/PARA		30,880.00	2,753.08	74.93	7,742.30
01 1200 237 001	Increased Retirement Contribution Rate	3,233.00	0.00	0.00	3,233.00
01 1200 237 002	Increased Retirement Contribution Rate	3,474.00	0.00	0.00	3,474.00
01 1200 237 003	Increased Retirement Contribution Rate	6,071.00	0.00	0.00	6,071.00
237 Inc Ret Contribution Rate		12,778.00	0.00	0.00	12,778.00
01 1200 281 001	HS SPED LTD/STD TCHR/PROF	872.00	134.52	123.28	(203.04)
01 1200 281 002	MS SPED LTD/STD TCHR/PROF	996.00	50.14	40.23	595.27

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01 1200 281 003	HS SPED LTD/STD TCHR/PROF	2,020.00	136.19	53.97	929.90
281 LTD/STD TCHR/PROF		3,888.00	320.85	65.99	1,322.13
01 1200 282 001	LTD/STD AIDE/PARA	208.00	38.04	123.65	(49.19)
01 1200 282 002	LTD/STD AIDE/PARA	75.00	4.74	57.03	32.23
01 1200 282 003	EL SPED LTD/STD AIDE/PARA	1,554.00	101.08	58.29	648.25
282 LTD/STD AIDE/PARA		1,837.00	143.86	65.63	631.29
01 1200 330 000	SPED STAFF DEV/TRAINING	2,371.00	325.00	76.13	566.00
330 STAFF DEVELOPMENT/TRAINING		2,371.00	325.00	76.13	566.00
01 1200 333 000	SPED Mileage to Staff	0.00	0.00	0.00	0.00
333 MILEAGE TO STAFF		0.00	0.00	0.00	0.00
01 1200 340 003	Non-ESU OTHER PROF SERVICES	0.00	0.00	0.00	0.00
340 OTHER PROFESSIONAL SERVICES		0.00	0.00	0.00	0.00
01 1200 431 000	SPED NON-TECH BLDG REPAIRS/MAINT	0.00	0.00	0.00	0.00
431 NON-TECH REPAIRS/MAINT		0.00	0.00	0.00	0.00
01 1200 580 000	SPED TRAVEL EXPENSES	973.00	0.00	169.24	(673.69)
580 TRAVEL EXPENSES		973.00	0.00	169.24	(673.69)
01 1200 591 001	HS PURCHASED SERVICES	21,107.00	2,536.92	61.75	8,072.48
01 1200 591 002	MS PURCHASED SERVICES	221.00	0.00	0.00	221.00
01 1200 591 003	EL PURCHASED SERVICES	40,530.00	2,536.92	50.25	20,161.68
591 PURCHASED SERVICES		61,858.00	5,073.84	54.00	28,455.16
01 1200 610 001	HS SPED Supplies	2,473.00	0.00	0.00	2,473.00
01 1200 610 002	MS SPED Supplies	2,645.00	0.00	0.00	2,645.00
01 1200 610 003	EL SPED Supplies	5,677.00	219.30	4.70	5,410.45
610 SUPPLIES		10,795.00	219.30	2.47	10,528.45
01 1200 640 001	HS SPED Textbooks	0.00	0.00	0.00	0.00
01 1200 640 002	MS SPED Textbooks	0.00	0.00	0.00	0.00
01 1200 640 003	EL SPED Textbooks	0.00	0.00	0.00	0.00
640 BOOKS/PERIODICALS		0.00	0.00	0.00	0.00
01 1200 643 000	SPED Web/Cloud Based Software	7,054.00	0.00	0.00	7,054.00
643 WEB/CLOUD BASED SOFTWARE		7,054.00	0.00	0.00	7,054.00
01 1200 650 000	SPED Computer Hardware	4,338.00	0.00	0.00	4,338.00
650 TECH SUPPLIES		4,338.00	0.00	0.00	4,338.00
01 1200 733 001	HS SPED Furniture And Equipment	533.00	0.00	521.95	(2,249.00)
01 1200 733 002	MS SPED Furniture And Equipment	2,371.00	0.00	0.00	2,371.00
01 1200 733 003	EL SPED Furniture And Equipment	0.00	0.00	0.00	0.00
733 FURNITURE/FIXTURES		2,904.00	0.00	95.80	122.00
1200 SPECIAL EDUCATION INSTRUCTIONAL PROGRAMS		1,374,998.00	101,835.10	60.21	547,049.64
1291 SPED 3-5 YO					
01 1291 111 003	SPED PREK SALARIES TCHR/PROF	0.00	0.00	0.00	0.00
111 SALARIES TCHR/PROF		0.00	0.00	0.00	0.00
01 1291 211 003	Sped BAF - BCBS	0.00	0.00	0.00	0.00
211 GROUP INS TCHR/PROF		0.00	0.00	0.00	0.00
01 1291 221 003	SPED BAF - Fica	0.00	0.00	0.00	0.00
221 SOCIAL SECURITY TCHR/PROF		0.00	0.00	0.00	0.00
01 1291 231 003	SPED BAF - Retire	0.00	0.00	0.00	0.00
231 RETIREMENT TCHR/PROF		0.00	0.00	0.00	0.00

Account Number	Account Description	Revised Budget	Expended During Month	% of Budget	Unencumbered Balance
01 1291 281 003	SPED BAF - LTD	0.00	0.00	0.00	0.00
281 LTD/STD TCHR/PROF		0.00	0.00	0.00	0.00
01 1291 591 003	SPED 3-5 YO PURCH SERVICES	0.00	0.00	0.00	0.00
591 PURCHASED SERVICES		0.00	0.00	0.00	0.00
1291 SPED 3-5 YO		0.00	0.00	0.00	0.00
1292 SPED DIRECTOR					
01 1292 591 003	EC SPED DIR 0-2 yo	0.00	0.00	0.00	0.00
591 PURCHASED SERVICES		0.00	0.00	0.00	0.00
1292 SPED DIRECTOR		0.00	0.00	0.00	0.00
1300 SUMMER SCHOOL					
01 1300 111 001	Driver's Education Salary	4,113.00	0.00	3.46	3,970.50
111 SALARIES TCHR/PROF		4,113.00	0.00	3.46	3,970.50
01 1300 211 001	Driver's Ed Summer School	1,145.00	0.00	3.41	1,105.92
211 GROUP INS TCHR/PROF		1,145.00	0.00	3.41	1,105.92
01 1300 221 001	DrEd Social Security	315.00	0.00	3.36	304.42
221 SOCIAL SECURITY TCHR/PROF		315.00	0.00	3.36	304.42
01 1300 231 001	DrEd Retirement	406.00	0.00	3.47	391.91
231 RETIREMENT TCHR/PROF		406.00	0.00	3.47	391.91
01 1300 237 001	Increased Retirement Contribution Rate	0.00	0.00	0.00	0.00
237 Inc Ret Contribution Rate		0.00	0.00	0.00	0.00
01 1300 281 001	DrEd LTD/STD	21.00	0.00	3.48	20.27
281 LTD/STD TCHR/PROF		21.00	0.00	3.48	20.27
01 1300 338 001	DrEd Repairs	0.00	0.00	0.00	0.00
338 REPAIRS AND MAINTENANCE		0.00	0.00	0.00	0.00
01 1300 580 001	DrEd GAS & OIL	0.00	0.00	0.00	0.00
580 TRAVEL EXPENSES		0.00	0.00	0.00	0.00
1300 SUMMER SCHOOL		6,000.00	0.00	3.45	5,793.02
2120 GUIDANCE SERVICES					
01 2120 111 001	HS Counselor's Salary	85,636.00	5,353.33	50.01	42,809.36
01 2120 111 002	MS Counselor's Salary	34,340.00	1,525.70	26.66	25,185.80
01 2120 111 003	EL Counselor's Salary	51,510.00	3,559.97	42.30	29,723.63
111 SALARIES TCHR/PROF		171,486.00	10,439.00	43.02	97,718.79
01 2120 211 001	HS Group Ins Counselor	31,504.00	2,174.22	50.89	15,470.32
01 2120 211 002	MS Group Ins Counselor	7,449.00	627.25	51.48	3,614.55
01 2120 211 003	EL Group Ins Counselor	11,173.00	1,463.60	80.08	2,225.80
211 GROUP INS TCHR/PROF		50,126.00	4,265.07	57.49	21,310.67
01 2120 221 001	HS Social Security	6,579.00	412.95	50.21	3,275.37
01 2120 221 002	MS Social Security	2,638.00	113.65	25.83	1,956.60
01 2120 221 003	EL Social Security	3,958.00	265.20	40.18	2,367.80
221 SOCIAL SECURITY TCHR/PROF		13,175.00	791.80	42.32	7,599.77
01 2120 231 001	HS Retirement COUNSELOR	6,361.00	528.79	66.50	2,130.68
01 2120 231 002	MS Retirement COUNSELOR	3,257.00	150.71	27.76	2,352.74
01 2120 231 003	EL Retirement COUNSELOR	4,885.00	351.65	43.19	2,775.10
231 RETIREMENT TCHR/PROF		14,503.00	1,031.15	49.95	7,258.52
01 2120 237 001	Increased Retirement Contribution Rate	2,001.00	0.00	0.00	2,001.00
01 2120 237 003	Increased Retirement Contribution	0.00	0.00	0.00	0.00

Account Number	Account Description	Revised Budget	Expended During Month	% of Budget	Unencumbered Balance
237 Inc Ret Contribution Rate	Rate	2,001.00	0.00	0.00	2,001.00
01 2120 281 001	HS LTD/STD COUNSELOR	535.00	52.57	77.68	119.42
01 2120 281 002	MS LTD/STD COUNSELOR	212.00	13.97	39.66	127.93
01 2120 281 003	EL LTD/STD COUNSELOR	318.00	32.59	61.68	121.86
281 LTD/STD TCHR/PROF		1,065.00	99.13	65.33	369.21
01 2120 330 001	HS Counselor DEV/TRAINING	316.00	0.00	56.96	136.00
01 2120 330 002	MS Counselor DEV/TRAINING	0.00	0.00	0.00	0.00
01 2120 330 003	EL Counselor DEV/TRAINING	0.00	0.00	0.00	(2,980.00)
330 STAFF DEVELOPMENT/TRAINING		316.00	0.00	1,000.00	(2,844.00)
01 2120 610 001	HS Guidance Supplies	0.00	0.00	0.00	0.00
01 2120 610 002	MS Guidance Supplies	14.00	0.00	0.00	14.00
01 2120 610 003	EL Guidance Supplies	0.00	0.00	0.00	(280.00)
610 SUPPLIES		14.00	0.00	2,000.00	(266.00)
01 2120 890 001	HS Other Expense	228.00	0.00	0.00	228.00
01 2120 890 002	MS Other Expense	0.00	0.00	0.00	0.00
01 2120 890 003	EL Other Expense	0.00	0.00	0.00	(278.50)
890 MISC EXPENDITURES		228.00	0.00	122.15	(50.50)
2120 GUIDANCE SERVICES		252,914.00	16,626.15	47.37	133,097.46
2130 HEALTH SERVICES					
01 2130 116 000	SALARIES NURSE	75,288.00	4,759.38	54.33	34,384.71
116 SALARIES PROF CLASS		75,288.00	4,759.38	54.33	34,384.71
01 2130 216 000	GROUP INSURANCE NURSE	32,008.00	2,352.83	58.81	13,185.36
216 GROUP INSURANCE PROF CLASS		32,008.00	2,352.83	58.81	13,185.36
01 2130 226 000	SOCIAL SECURITY NURSE	5,756.00	314.18	48.12	2,986.22
226 SOCIAL SECURITY PROF CLASS		5,756.00	314.18	48.12	2,986.22
01 2130 236 000	RETIREMENT NURSE	6,949.00	470.12	56.95	2,991.64
236 RETIREMENT PROF CLASS		6,949.00	470.12	56.95	2,991.64
01 2130 237 000	Increased Retirement Contribution Rate	0.00	0.00	0.00	0.00
237 Inc Ret Contribution Rate		0.00	0.00	0.00	0.00
01 2130 286 000	LTD/STD NURSE	417.00	17.60	33.76	276.20
286 LTD/STD PROF CLASS		417.00	17.60	33.76	276.20
01 2130 320 000	Student Health Screenings	3,371.00	0.00	0.00	3,371.00
320 PROF EDUC SERVICES		3,371.00	0.00	0.00	3,371.00
01 2130 610 000	Nurse Supplies	23,297.00	0.00	26.74	17,067.89
610 SUPPLIES		23,297.00	0.00	26.74	17,067.89
2130 HEALTH SERVICES		147,086.00	7,914.11	49.51	74,263.02
2141 SPED SA Psych Services					
01 2141 111 000	School Psych Salaries	0.00	9,583.33	0.00	(76,666.64)
01 2141 111 001	School Psych Salaries HS	0.00	0.00	0.00	0.00
01 2141 111 002	School Psych Salaries MS	0.00	0.00	0.00	0.00
01 2141 111 003	School Psych Salaries EL	0.00	0.00	0.00	0.00
111 SALARIES TCHR/PROF		0.00	9,583.33	0.00	(76,666.64)
01 2141 211 000	School Psych Insurance	0.00	84.95	0.00	(679.60)
211 GROUP INS TCHR/PROF		0.00	84.95	0.00	(679.60)
01 2141 221 000	School Psych Social Security	0.00	717.00	0.00	(5,736.00)

Account Number	Account Description	Revised Budget	Expended During Month	% of Budget	Unencumbered Balance
221 SOCIAL SECURITY TCHR/PROF		0.00	717.00	0.00	(5,736.00)
01 2141 231 000	School Psych Retirement	0.00	946.62	0.00	(7,572.96)
231 RETIREMENT TCHR/PROF		0.00	946.62	0.00	(7,572.96)
01 2141 260 000	SCHOOL PSYCH UNEMPLOYMENT PMTS	0.00	0.00	0.00	0.00
260 UNEMPLOYMENT PMTS		0.00	0.00	0.00	0.00
01 2141 281 000	SCHOOL PSYCH LTD/STD TCHR/PROF	0.00	62.20	0.00	(497.60)
281 LTD/STD TCHR/PROF		0.00	62.20	0.00	(497.60)
01 2141 330 000	SPED SA Psych STAFF DEVELOPMENT/TRAINING	0.00	130.00	0.00	(545.00)
330 STAFF DEVELOPMENT/TRAINING		0.00	130.00	0.00	(545.00)
01 2141 580 000	School Psych TRAVEL EXPENSES	0.00	0.00	0.00	0.00
580 TRAVEL EXPENSES		0.00	0.00	0.00	0.00
01 2141 591 000	SPED SA Psych Services	107,726.00	0.00	0.00	107,726.00
591 PURCHASED SERVICES		107,726.00	0.00	0.00	107,726.00
01 2141 610 000	School Psych Supplies	1,427.00	0.00	0.00	1,427.00
01 2141 610 001	School Psych HS Supplies	0.00	0.00	0.00	0.00
01 2141 610 002	School Psych MS Supplies	0.00	37.05	0.00	(255.99)
01 2141 610 003	School Psych EL Supplies	0.00	0.00	0.00	(500.92)
610 SUPPLIES		1,427.00	37.05	53.04	670.09
01 2141 733 000	SPED SA Psych FURNITURE/FIXTURES	0.00	0.00	0.00	0.00
733 FURNITURE/FIXTURES		0.00	0.00	0.00	0.00
01 2141 890 000	SPED SA Psych MISC EXPENDITURES	0.00	0.00	0.00	0.00
890 MISC EXPENDITURES		0.00	0.00	0.00	0.00
2141 SPED SA Psych Services		109,153.00	11,561.15	84.70	16,698.29
2142 SPED 3-5 Pscyh Services					
01 2142 591 003	SPED 3-5 Psych Services	0.00	0.00	0.00	0.00
591 PURCHASED SERVICES		0.00	0.00	0.00	0.00
2142 SPED 3-5 Pscyh Services		0.00	0.00	0.00	0.00
2143 SPED 0-2 Psych Services					
01 2143 591 003	SPED 0-2 Psych Services	0.00	0.00	0.00	0.00
591 PURCHASED SERVICES		0.00	0.00	0.00	0.00
2143 SPED 0-2 Psych Services		0.00	0.00	0.00	0.00
2151 SPED SA Speech/Audiology					
01 2151 111 001	Speech Path HS SALARIES TCHR/PROF	22,480.00	1,480.42	52.68	10,636.64
01 2151 111 002	Speech Path MS RETIREMENT TCHR/PROF	17,747.00	1,168.75	52.68	8,397.00
01 2151 111 003	Speech Path EL SALARIES TCHR/PROF	41,410.00	2,727.07	52.68	19,593.39
111 SALARIES TCHR/PROF		81,637.00	5,376.24	52.68	38,627.03
01 2151 211 001	Speech Path HS GROUP INS TCHR/PROF	4,686.00	425.50	72.64	1,282.00
01 2151 211 002	Speech Path MS GROUP INS TCHR/PROF	3,700.00	335.91	72.63	1,012.72
01 2151 211 003	Speech Path EL GROUP INS TCHR/PROF	8,632.00	783.80	72.64	2,361.60
211 GROUP INS TCHR/PROF		17,018.00	1,545.21	72.64	4,656.32

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01 2151 221 001	Speech Path HS SOC SECTCHR/PROF	1,723.00	113.54	52.72	814.62
01 2151 221 002	Speech Path MS SOC SEC TCHR/PROF	1,360.00	89.64	52.73	642.88
01 2151 221 003	Speech Path EL SOC SEC TCHR/PROF	3,173.00	209.15	52.73	1,499.80
221 SOCIAL SECURITY TCHR/PROF		6,256.00	412.33	52.73	2,957.30
01 2151 231 001	Speech Path HS RETIREMENT TCHR/PROF	2,221.00	146.24	52.67	1,051.16
01 2151 231 002	Speech Path MS RETIREMENT TCHR/PROF	1,753.00	115.45	52.69	829.40
01 2151 231 003	Speech Path EL RETIREMENT TCHR/PROF	4,090.00	269.37	52.69	1,934.99
231 RETIREMENT TCHR/PROF		8,064.00	531.06	52.68	3,815.55
01 2151 237 001	HS Speech Inc Ret Contr Rate	0.00	0.00	0.00	0.00
01 2151 237 002	MS Speech Inc Ret Contr Rate	0.00	0.00	0.00	0.00
01 2151 237 003	EL Speech Inc Ret Contr Rate	0.00	0.00	0.00	0.00
237 Inc Ret Contribution Rate		0.00	0.00	0.00	0.00
01 2151 281 001	Speech Path HS LTD/STD TCHR/PROF	116.00	11.82	81.52	21.44
01 2151 281 002	Speech Path MS LTD/STD TCHR/PROF	92.00	9.33	81.13	17.36
01 2151 281 003	Speech Path HS LTD/STD TCHR/PROF	214.00	21.77	81.38	39.84
281 LTD/STD TCHR/PROF		422.00	42.92	81.36	78.64
01 2151 591 000	SPED SA Speech/Audiology	25,958.00	1,950.40	56.57	11,274.52
591 PURCHASED SERVICES		25,958.00	1,950.40	56.57	11,274.52
01 2151 610 000	SPED Speech Path SUPPLIES	735.00	129.74	63.58	267.69
610 SUPPLIES		735.00	129.74	63.58	267.69
2151 SPED SA Speech/Audiology		140,090.00	9,987.90	55.97	61,677.05
2152 SPED 3-5 Speech/Audiology					
01 2152 340 003	SPED 3-5 Speech/Audiology Prf Serv	288.00	0.00	0.00	288.00
340 OTHER PROFESSIONAL SERVICES		288.00	0.00	0.00	288.00
01 2152 591 003	SPED 3-5 Speech/Audiology	0.00	0.00	0.00	0.00
591 PURCHASED SERVICES		0.00	0.00	0.00	0.00
2152 SPED 3-5 Speech/Audiology		288.00	0.00	0.00	288.00
2153 SPED 0-2 Speech/Audiology					
01 2153 591 003	SPED 0-2 Speech/Audiology	0.00	0.00	0.00	0.00
591 PURCHASED SERVICES		0.00	0.00	0.00	0.00
2153 SPED 0-2 Speech/Audiology		0.00	0.00	0.00	0.00
2161 SPED SA OccTherapy					
01 2161 340 000	SPED SA OccTherapy (nonESU)	62,530.00	7,592.31	69.22	19,249.37
340 OTHER PROFESSIONAL SERVICES		62,530.00	7,592.31	69.22	19,249.37
2161 SPED SA OccTherapy		62,530.00	7,592.31	69.22	19,249.37
2162 SPED 3-5 OccTherapy					
01 2162 340 003	SPED 3-5 OccTherapy (nonESU)	0.00	0.00	0.00	0.00
340 OTHER PROFESSIONAL SERVICES		0.00	0.00	0.00	0.00
2162 SPED 3-5 OccTherapy		0.00	0.00	0.00	0.00
2163 SPED 0-2 OccTherapy					
01 2163 340 003	SPED 0-2 OccTherapy (nonESU)	0.00	0.00	0.00	0.00

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340 OTHER PROFESSIONAL SERVICES		0.00	0.00	0.00	0.00
2163 SPED 0-2 OccTherapy		0.00	0.00	0.00	0.00
2171 SPED SA PhysTherapy					
01 2171 340 000	SPED SA PhysTherapy (nonESU)	12,939.00	575.90	46.74	6,891.45
340 OTHER PROFESSIONAL SERVICES		12,939.00	575.90	46.74	6,891.45
2171 SPED SA PhysTherapy		12,939.00	575.90	46.74	6,891.45
2172 SPED 3-5 PhysTherapy					
01 2172 340 003	SPED 3-5 PhysTherapy (nonESU)	0.00	0.00	0.00	0.00
340 OTHER PROFESSIONAL SERVICES		0.00	0.00	0.00	0.00
2172 SPED 3-5 PhysTherapy		0.00	0.00	0.00	0.00
2173 SPED 0-2 PhysTherapy					
01 2173 340 003	SPED 0-2 PhysTherapy (nonESU)	0.00	0.00	0.00	0.00
340 OTHER PROFESSIONAL SERVICES		0.00	0.00	0.00	0.00
2173 SPED 0-2 PhysTherapy		0.00	0.00	0.00	0.00
2181 SPED SA Vision Services					
01 2181 340 000	SPED SA-Vision Prof Serv	0.00	0.00	0.00	0.00
340 OTHER PROFESSIONAL SERVICES		0.00	0.00	0.00	0.00
01 2181 591 000	SPED SA Vision Services	0.00	0.00	0.00	0.00
591 PURCHASED SERVICES		0.00	0.00	0.00	0.00
2181 SPED SA Vision Services		0.00	0.00	0.00	0.00
2182 SPED 3-5 Vision Services					
01 2182 340 003	SPED 3-5YO Vision Serv	0.00	0.00	0.00	0.00
340 OTHER PROFESSIONAL SERVICES		0.00	0.00	0.00	0.00
01 2182 591 003	SPED 3-5 Vision Services	0.00	0.00	0.00	0.00
591 PURCHASED SERVICES		0.00	0.00	0.00	0.00
2182 SPED 3-5 Vision Services		0.00	0.00	0.00	0.00
2183 SPED 0-2 Vision Services					
01 2183 340 003	SPED 0-2YO Vision Services	0.00	0.00	0.00	0.00
340 OTHER PROFESSIONAL SERVICES		0.00	0.00	0.00	0.00
01 2183 591 003	SPED 0-2 Vision Services	0.00	0.00	0.00	0.00
591 PURCHASED SERVICES		0.00	0.00	0.00	0.00
2183 SPED 0-2 Vision Services		0.00	0.00	0.00	0.00
2211 SCHOOL IMPROVEMENT					
01 2211 111 000	School Impr - Salaries	0.00	0.00	0.00	0.00
111 SALARIES TCHR/PROF		0.00	0.00	0.00	0.00
01 2211 333 000	School Impr - Travel	0.00	0.00	0.00	0.00
333 MILEAGE TO STAFF		0.00	0.00	0.00	0.00
2211 SCHOOL IMPROVEMENT		0.00	0.00	0.00	0.00
2213 SCHOOL IMPROVEMENT					
01 2213 330 000	INSTRUCTIONAL STAFF DEV/TRAINING	0.00	3,488.00	0.00	(17,849.10)
330 STAFF DEVELOPMENT/TRAINING		0.00	3,488.00	0.00	(17,849.10)
2213 SCHOOL IMPROVEMENT		0.00	3,488.00	0.00	(17,849.10)
2220 LIBRARY/MEDIA SERVICES					
01 2220 111 000	Library/Media Tchr Salaries	82,170.00	5,353.33	52.12	39,343.36

Account Number	Account Description	Revised Budget	Expended During Month	% of Budget	Unencumbered Balance
111 SALARIES TCHR/PROF		82,170.00	5,353.33	52.12	39,343.36
01 2220 112 000	Library Aide Salary	0.00	0.00	0.00	0.00
112 SALARIES AIDE/PARA		0.00	0.00	0.00	0.00
01 2220 113 000	L/M Substitute Salaries	0.00	0.00	0.00	0.00
113 SALARIES SUB TCHR		0.00	0.00	0.00	0.00
01 2220 211 000	L/M Group Ins	25,160.00	1,607.46	49.37	12,738.52
211 GROUP INS TCHR/PROF		25,160.00	1,607.46	49.37	12,738.52
01 2220 221 000	L/M Social Security TCHR/PROF	5,832.00	384.62	52.76	2,754.92
221 SOCIAL SECURITY TCHR/PROF		5,832.00	384.62	52.76	2,754.92
01 2220 222 000	L/M Social Security AIDE	0.00	0.00	0.00	0.00
222 SOCIAL SECURITY AIDE/PARA		0.00	0.00	0.00	0.00
01 2220 231 000	L/M Retirement TCHR/PROF	8,117.00	528.80	52.12	3,886.61
231 RETIREMENT TCHR/PROF		8,117.00	528.80	52.12	3,886.61
01 2220 232 000	L/M Retirement AIDE	0.00	0.00	0.00	0.00
232 RETIREMENT AIDE/PARA		0.00	0.00	0.00	0.00
01 2220 237 000	Increased Retirement Contribution Rate	0.00	0.00	0.00	0.00
237 Inc Ret Contribution Rate		0.00	0.00	0.00	0.00
01 2220 281 000	L/M LTD/STD TCHR/PROF	557.00	31.79	45.66	302.68
281 LTD/STD TCHR/PROF		557.00	31.79	45.66	302.68
01 2220 282 000	L/M LTD/STD AIDE	0.00	0.00	0.00	0.00
282 LTD/STD AIDE/PARA		0.00	0.00	0.00	0.00
01 2220 610 000	L/M Supplies	0.00	0.00	0.00	(203.50)
610 SUPPLIES		0.00	0.00	0.00	(203.50)
01 2220 640 000	Library Books & Subscriptions	902.00	0.00	434.82	(3,020.11)
640 BOOKS/PERIODICALS		902.00	0.00	434.82	(3,020.11)
01 2220 650 000	L/M Computer Software	0.00	0.00	0.00	0.00
650 TECH SUPPLIES		0.00	0.00	0.00	0.00
01 2220 733 000	L/M Furniture And Equipment	0.00	0.00	0.00	0.00
733 FURNITURE/FIXTURES		0.00	0.00	0.00	0.00
01 2220 890 000	L/M Other Expense	0.00	0.00	0.00	0.00
890 MISC EXPENDITURES		0.00	0.00	0.00	0.00
2220 LIBRARY/MEDIA SERVICES		122,738.00	7,906.00	54.54	55,802.48
2224 EDUCATIONAL TELEVISION SERVICES					
01 2224 382 000	Distant Learning / Internet	11,005.00	0.00	83.60	1,805.00
382 DISTANCE LEARNING		11,005.00	0.00	83.60	1,805.00
2224 EDUCATIONAL TELEVISION SERVICES		11,005.00	0.00	83.60	1,805.00
2230 INSTRUCTION RELATED TECH					
01 2230 111 000	Technology Coordinator	10,481.00	672.97	51.37	5,097.24
111 SALARIES TCHR/PROF		10,481.00	672.97	51.37	5,097.24
01 2230 116 000	Technology Support Staff	70,919.00	4,865.85	49.80	35,600.90
116 SALARIES PROF CLASS		70,919.00	4,865.85	49.80	35,600.90
01 2230 211 000	Technology Group Ins TCHR/PROF	3,474.00	223.85	51.82	1,673.76
211 GROUP INS TCHR/PROF		3,474.00	223.85	51.82	1,673.76
01 2230 216 000	Technology Group Ins SUPPORT PROF CLASS	29,681.00	2,352.83	63.42	10,858.36

Account Number	Account Description	Revised Budget	Expended During Month	% of Budget	Unencumbered Balance
216 GROUP INSURANCE PROF CLASS		29,681.00	2,352.83	63.42	10,858.36
01 2230 221 000	Technology Social Security TCHR/PROF	803.00	51.74	51.55	389.05
221 SOCIAL SECURITY TCHR/PROF		803.00	51.74	51.55	389.05
01 2230 226 000	Technology Social Security PROF CLASS	5,053.00	366.37	52.54	2,398.13
226 SOCIAL SECURITY PROF CLASS		5,053.00	366.37	52.54	2,398.13
01 2230 231 000	Technology Retirement TCHR/PROF	1,035.00	66.47	51.38	503.24
231 RETIREMENT TCHR/PROF		1,035.00	66.47	51.38	503.24
01 2230 236 000	Technology Retirement PROF CLASS	7,005.00	473.23	48.46	3,610.57
236 RETIREMENT PROF CLASS		7,005.00	473.23	48.46	3,610.57
01 2230 237 000	Increased Retirement Contribution Rate	0.00	0.00	0.00	0.00
237 Inc Ret Contribution Rate		0.00	0.00	0.00	0.00
01 2230 281 000	Technology LTD/STD TCHR/PROF	65.00	5.71	70.65	19.08
281 LTD/STD TCHR/PROF		65.00	5.71	70.65	19.08
01 2230 286 000	Technology LTD/STD PROF CLASS	309.00	21.20	54.89	139.40
286 LTD/STD PROF CLASS		309.00	21.20	54.89	139.40
01 2230 333 000	TECH Mileage	0.00	0.00	0.00	0.00
333 MILEAGE TO STAFF		0.00	0.00	0.00	0.00
01 2230 591 000	TECH PURCHASED SERVICES	22.00	0.00	0.00	22.00
591 PURCHASED SERVICES		22.00	0.00	0.00	22.00
01 2230 610 000	Tech Supplies	2,418.00	45.98	44.60	1,339.49
610 SUPPLIES		2,418.00	45.98	44.60	1,339.49
01 2230 643 000	TECH Web/Cloud Based Software	96,651.00	1,614.43	52.42	45,987.24
643 WEB/CLOUD BASED SOFTWARE		96,651.00	1,614.43	52.42	45,987.24
01 2230 650 000	TECH Supplies/Soft/Hardware	38,341.00	4,109.04	33.34	25,558.48
650 TECH SUPPLIES		38,341.00	4,109.04	33.34	25,558.48
01 2230 734 000	TECH Hardware Capital Outlay	0.00	0.00	0.00	0.00
734 TECH HARDWARE		0.00	0.00	0.00	0.00
01 2230 735 000	TECH Software Capital Outlay	0.00	0.00	0.00	0.00
735 TECH SOFTWARE		0.00	0.00	0.00	0.00
2230 INSTRUCTION RELATED TECH		266,257.00	14,869.67	49.97	133,196.94
2310 BOARD OF EDUCATION					
01 2310 330 000	BOE DEV/TRAINING	1,126.00	0.00	78.69	240.00
330 STAFF DEVELOPMENT/TRAINING		1,126.00	0.00	78.69	240.00
01 2310 340 000	Contracted Serv / Hearing Officer	0.00	0.00	0.00	(110.25)
340 OTHER PROFESSIONAL SERVICES		0.00	0.00	0.00	(110.25)
01 2310 520 000	PROPERTY/LIABILITY INSURANCE	0.00	0.00	0.00	0.00
520 PROPERTY/LIABILITY INSURANCE		0.00	0.00	0.00	0.00
01 2310 540 000	ADVERTISING	14,509.00	1,449.55	58.76	5,982.99
540 ADVERTISING		14,509.00	1,449.55	58.76	5,982.99
01 2310 580 000	TRAVEL EXPENSES	103.00	0.00	173.23	(75.43)
580 TRAVEL EXPENSES		103.00	0.00	173.23	(75.43)
01 2310 610 000	BOE Supplies	0.00	800.00	0.00	(11,305.00)
610 SUPPLIES		0.00	800.00	0.00	(11,305.00)

Account Number	Account Description	Revised Budget	Expended During Month	% of Budget	Unencumbered Balance
01 2310 733 000	SUPT FURNITURE/FIXTURES	0.00	0.00	0.00	0.00
733 FURNITURE/FIXTURES		0.00	0.00	0.00	0.00
01 2310 810 000	BOE Dues & Fees	18,473.00	0.00	105.29	(976.43)
810 DUES & FEES		18,473.00	0.00	105.29	(976.43)
01 2310 890 000	BOE Misc Expense	789.00	0.00	591.20	(3,875.57)
890 MISC EXPENDITURES		789.00	0.00	591.20	(3,875.57)
2310 BOARD OF EDUCATION		35,000.00	2,249.55	128.91	(10,119.69)
2320 EXECUTIVE ADMINISTRATION					
01 2320 105 000	SUPERINTENDENT SALARY	148,702.00	11,800.00	63.48	54,302.00
105 SUPERINTENDENT SALARY		148,702.00	11,800.00	63.48	54,302.00
01 2320 155 000	SUPT ADDT'L COMP	0.00	0.00	0.00	0.00
155 SUPT ADDT'L COMP		0.00	0.00	0.00	0.00
01 2320 159 000	SUPT Cell Stipend	0.00	0.00	0.00	0.00
159 STIPENDS		0.00	0.00	0.00	0.00
01 2320 215 000	SUPT GROUP INS	21,328.00	1,653.73	62.03	8,098.16
215 GROUP INSURANCE SUPT		21,328.00	1,653.73	62.03	8,098.16
01 2320 221 000	SUPT SOCIAL SECURITY	0.00	0.00	0.00	0.00
221 SOCIAL SECURITY TCHR/PROF		0.00	0.00	0.00	0.00
01 2320 223 000	SOC SEC SUPT STIPEND	92.00	0.00	66.51	30.81
223 SOCIAL SECURITY SUB TCHR		92.00	0.00	66.51	30.81
01 2320 225 000	SUPT SOCIAL SECURITY	11,540.00	917.68	63.10	4,257.83
225 SOCIAL SECURITY SUPT		11,540.00	917.68	63.10	4,257.83
01 2320 233 000	RET SUPT STIPEND	119.00	0.00	58.11	49.85
233 RETIREMENT SUB TCHR		119.00	0.00	58.11	49.85
01 2320 235 000	SUPT RETIREMENT	11,223.00	1,165.58	83.28	1,876.13
235 RETIREMENT SUPT		11,223.00	1,165.58	83.28	1,876.13
01 2320 237 000	Increased Retirement Contribution Rate	3,530.00	0.00	0.00	3,530.00
237 Inc Ret Contribution Rate		3,530.00	0.00	0.00	3,530.00
01 2320 285 000	SUPT LTD/STD	589.00	62.20	84.48	91.40
285 LTD/STD SUPT		589.00	62.20	84.48	91.40
01 2320 295 000	OTHER BENEFITS (CELL PHONE/moving)	3,034.00	175.00	20.60	2,409.00
295 OTHER BENEFITS (CELL PHONE)		3,034.00	175.00	20.60	2,409.00
01 2320 310 000	SUPT DUES & FEES	569.00	0.00	179.26	(451.00)
310 OFFICIAL ADMIN SERVICES		569.00	0.00	179.26	(451.00)
01 2320 330 000	SUPT Staff Dev/Training	2,774.00	0.00	107.57	(210.13)
330 STAFF DEVELOPMENT/TRAINING		2,774.00	0.00	107.57	(210.13)
01 2320 333 000	SUPT Mileage	1,203.00	0.00	66.50	403.00
333 MILEAGE TO STAFF		1,203.00	0.00	66.50	403.00
01 2320 560 000	SUPT Computer Hardware	0.00	0.00	0.00	0.00
560 COMPUTER HARDWARE		0.00	0.00	0.00	0.00
01 2320 580 000	SUPT TRAVEL EXPENSES	3,954.00	137.56	54.01	1,818.34
580 TRAVEL EXPENSES		3,954.00	137.56	54.01	1,818.34
01 2320 610 000	SUPT Supplies	813.00	0.00	0.00	813.00
610 SUPPLIES		813.00	0.00	0.00	813.00

Account Number	Account Description	Revised Budget	Expended During Month	% of Budget	Unencumbered Balance
01 2320 650 000	SUPT Computer Software	9,130.00	0.00	0.00	9,130.00
650 TECH SUPPLIES		9,130.00	0.00	0.00	9,130.00
01 2320 733 000	SUPT Furniture & Equipment	6,392.00	0.00	0.00	6,392.00
733 FURNITURE/FIXTURES		6,392.00	0.00	0.00	6,392.00
01 2320 890 000	SUPT Other Expense	5,009.00	0.00	45.96	2,706.95
890 MISC EXPENDITURES		5,009.00	0.00	45.96	2,706.95
2320 EXECUTIVE ADMINISTRATION		230,001.00	15,911.75	58.59	95,247.34
2330 District Legal Services					
01 2330 317 000	LEGAL SERVICES	0.00	404.00	0.00	(6,961.28)
317 CONTRACCTED LEGAL SERVICES		0.00	404.00	0.00	(6,961.28)
2330 District Legal Services		0.00	404.00	0.00	(6,961.28)
2410 OFFICE OF THE PRINCIPAL					
01 2410 110 000	Clerical Salaries	83,262.00	6,248.01	65.60	28,644.48
110 SALARIES NON-INSTR		83,262.00	6,248.01	65.60	28,644.48
01 2410 111 001	HS PRINCIPAL HEAD&ASST SALARIES	64,006.00	7,333.34	80.20	12,672.64
01 2410 111 002	MS PRINCIPAL HEAD&ASST SALARIES	63,184.00	4,861.68	73.16	16,957.20
01 2410 111 003	EL PRINCIPAL HEAD&ASST SALARIES	54,966.00	3,028.35	44.08	30,739.20
111 SALARIES TCHR/PROF		182,156.00	15,223.37	66.86	60,369.04
01 2410 210 000	Clerical Group Insurance	53,359.00	3,189.19	52.29	25,457.96
210 GROUP INSURANCE NON-INSTR		53,359.00	3,189.19	52.29	25,457.96
01 2410 211 001	HS PRINCIPAL OFFICE GROUP INS	17,716.00	1,821.36	71.97	4,966.48
01 2410 211 002	MS PRINCIPAL OFFICE GROUP INS	17,523.00	1,462.69	77.41	3,957.86
01 2410 211 003	EL PRINCIPAL OFFICE GROUP INS	15,594.00	1,007.35	51.95	7,492.90
211 GROUP INS TCHR/PROF		50,833.00	4,291.40	67.70	16,417.24
01 2410 220 000	Clerical Social Security	6,379.00	478.40	65.45	2,203.95
220 SOCIAL SECURITY NON-INSTR		6,379.00	478.40	65.45	2,203.95
01 2410 221 001	HS PRINCIPAL OFFICE SOC SEC	4,917.00	563.41	80.21	973.16
01 2410 221 002	MS PRINCIPAL OFFICE SOC SEC	4,854.00	373.73	73.20	1,300.83
01 2410 221 003	EL PRINCIPAL OFFICE SOC SEC	4,221.00	232.87	44.14	2,358.03
221 SOCIAL SECURITY TCHR/PROF		13,992.00	1,170.01	66.90	4,632.02
01 2410 230 000	Clerical Retirement	8,193.00	617.16	62.86	3,042.87
230 RETIREMENT NON-INSTR		8,193.00	617.16	62.86	3,042.87
01 2410 231 001	HS PRINCIPAL OFFICE RETIREMENT	4,810.00	724.38	105.42	(260.63)
01 2410 231 002	MS PRINCIPAL OFFICE RETIREMENT	3,449.00	480.22	132.39	(1,117.13)
01 2410 231 003	EL PRINCIPAL OFFICE RETIREMENT	5,429.00	299.13	44.08	3,035.95
231 RETIREMENT TCHR/PROF		13,688.00	1,503.73	87.89	1,658.19
01 2410 237 000	Increased Retirement Contribution Rate	0.00	0.00	0.00	0.00
01 2410 237 001	Increased Retirement Contribution Rate	1,513.00	0.00	0.00	1,513.00
01 2410 237 002	Increased Retirement Contribution Rate	1,493.00	0.00	0.00	1,493.00
01 2410 237 003	Increased Retirement Contribution Rate	1,299.00	0.00	0.00	1,299.00

Account Number	Account Description	Revised Budget	Expended During Month	% of Budget	Unencumbered Balance
237 Inc Ret Contribution Rate		4,305.00	0.00	0.00	4,305.00
01 2410 280 000	Clerical LTD/STD	618.00	30.13	38.66	379.11
280 LTD/STD NON-INSTR		618.00	30.13	38.66	379.11
01 2410 281 001	HS PRINCIPAL OFFICE LTD/STD	389.00	49.76	89.54	40.68
01 2410 281 002	MS PRINCIPAL OFFICE LTD/STD	384.00	38.13	92.67	28.14
01 2410 281 003	EL PRINCIPAL OFFICE LTD/STD	333.00	25.69	62.04	126.42
281 LTD/STD TCHR/PROF		1,106.00	113.58	82.35	195.24
01 2410 310 000	PRINC OFFICE DUES/FEES	719.00	0.00	197.50	(701.00)
310 OFFICIAL ADMIN SERVICES		719.00	0.00	197.50	(701.00)
01 2410 330 000	PRINCIPAL OFFICE STAFF DEV/TRN	232.00	530.00	336.21	(548.00)
330 STAFF DEVELOPMENT/TRAINING		232.00	530.00	336.21	(548.00)
01 2410 580 000	PRINC OFFICE TRAVEL EXPENSES	1,831.00	0.00	16.06	1,536.91
580 TRAVEL EXPENSES		1,831.00	0.00	16.06	1,536.91
01 2410 610 001	HS PRINCIPAL OFFICE SUPPLIES	0.00	0.00	0.00	(44.54)
01 2410 610 002	MS PRINCIPAL OFFICE SUPPLIES	0.00	0.00	0.00	0.00
01 2410 610 003	EL PRINCIPAL OFFICE SUPPLIES	0.00	0.00	0.00	0.00
610 SUPPLIES		0.00	0.00	0.00	(44.54)
01 2410 733 000	PRIN OFFICE FURNITURE	3,714.00	0.00	6.56	3,470.22
733 FURNITURE/FIXTURES		3,714.00	0.00	6.56	3,470.22
01 2410 890 000	PRINCIPAL OFFICE MISC EXP	615.00	0.00	52.03	295.04
890 MISC EXPENDITURES		615.00	0.00	52.03	295.04
2410 OFFICE OF THE PRINCIPAL		425,002.00	33,394.98	64.40	151,313.73
2510 FISCAL SERVICES					
01 2510 112 000	Concession Mgr Salaries	3,839.00	0.00	0.00	3,839.00
112 SALARIES AIDE/PARA		3,839.00	0.00	0.00	3,839.00
01 2510 116 000	FISCAL SERVICES SALARIES	95,828.00	3,640.13	35.10	62,190.14
116 SALARIES PROF CLASS		95,828.00	3,640.13	35.10	62,190.14
01 2510 210 000	Concession Mgr Group Ins	0.00	0.00	0.00	0.00
210 GROUP INSURANCE NON-INSTR		0.00	0.00	0.00	0.00
01 2510 212 000	CONCMGR GROUP INS AIDE/PARA	0.00	0.00	0.00	0.00
212 GROUP INSURANCE AIDE/PARA		0.00	0.00	0.00	0.00
01 2510 216 000	FISCAL SERVICES GROUP INS	53,251.00	2,276.70	34.20	35,037.40
216 GROUP INSURANCE PROF CLASS		53,251.00	2,276.70	34.20	35,037.40
01 2510 220 000	Concession Mgr Soc Sec	0.00	0.00	0.00	0.00
220 SOCIAL SECURITY NON-INSTR		0.00	0.00	0.00	0.00
01 2510 222 000	SOCIAL SECURITY CONC MGR	295.00	0.00	0.00	295.00
222 SOCIAL SECURITY AIDE/PARA		295.00	0.00	0.00	295.00
01 2510 226 000	SOCIAL SECURITY PROF CLASS	7,263.00	275.13	35.06	4,716.46
226 SOCIAL SECURITY PROF CLASS		7,263.00	275.13	35.06	4,716.46
01 2510 232 000	Concession Mgr Retirement	379.00	0.00	0.00	379.00
232 RETIREMENT AIDE/PARA		379.00	0.00	0.00	379.00
01 2510 236 000	FISCAL SERVICES RETIREMENT	9,466.00	359.56	35.10	6,143.32
236 RETIREMENT PROF CLASS		9,466.00	359.56	35.10	6,143.32
01 2510 237 000	Increased Retirement Contribution	0.00	0.00	0.00	0.00

Account Number	Account Description	Revised Budget	Expended During Month	% of Budget	Unencumbered Balance
Rate					
237 Inc Ret Contribution Rate		0.00	0.00	0.00	0.00
01 2510 282 000	Concession Mgr LTD/STD	16.00	0.00	0.00	16.00
282 LTD/STD AIDE/PARA		16.00	0.00	0.00	16.00
01 2510 286 000	FISCAL SERVICES LTD/STD	669.00	19.03	22.76	516.76
286 LTD/STD PROF CLASS		669.00	19.03	22.76	516.76
01 2510 310 000	FISCAL SERV/BANK FEES	3,327.00	0.00	55.05	1,495.45
310 OFFICIAL ADMIN SERVICES		3,327.00	0.00	55.05	1,495.45
01 2510 315 000	AUDIT/BUDGET SERVICES	19,581.00	0.00	60.26	7,781.00
315 ACCOUNTING/AUDITING SERVICES		19,581.00	0.00	60.26	7,781.00
01 2510 330 000	FISCAL OFFICE ST DEV/TRN	308.00	0.00	51.95	148.00
330 STAFF DEVELOPMENT/TRAINING		308.00	0.00	51.95	148.00
01 2510 340 000	OTHER PROFESSIONAL FISCAL SERVICES	4,148.00	0.00	23.45	3,175.40
340 OTHER PROFESSIONAL SERVICES		4,148.00	0.00	23.45	3,175.40
01 2510 530 000	PHONE/INTERNET	23,114.00	273.79	28.69	16,482.37
530 PHONE/INTERNET		23,114.00	273.79	28.69	16,482.37
01 2510 531 000	POSTAGE	13,628.00	330.80	14.18	11,695.06
531 POSTAGE		13,628.00	330.80	14.18	11,695.06
01 2510 580 000	FISCAL SERV TRAVEL EXPENSES	677.00	0.00	0.00	677.00
580 TRAVEL EXPENSES		677.00	0.00	0.00	677.00
01 2510 610 000	FISCAL OFFICE SUPPLIES	3,490.00	303.85	59.52	1,412.63
610 SUPPLIES		3,490.00	303.85	59.52	1,412.63
01 2510 733 000	FURNITURE/FIXTURES	0.00	0.00	0.00	(202.32)
733 FURNITURE/FIXTURES		0.00	0.00	0.00	(202.32)
01 2510 890 000	FISCAL SERVICES MISC EXP	1,408.00	13.00	657.37	(7,847.73)
890 MISC EXPENDITURES		1,408.00	13.00	657.37	(7,847.73)
2510 FISCAL SERVICES		240,687.00	7,491.99	38.53	147,949.94
2570 PERSONNEL SERV-ESRP					
01 2570 330 000	NON-INSTR STAFF DEV/TRAINING	9,314.00	40.00	11.05	8,284.86
330 STAFF DEVELOPMENT/TRAINING		9,314.00	40.00	11.05	8,284.86
2570 PERSONNEL SERV-ESRP		9,314.00	40.00	11.05	8,284.86
2590 WORKERS COMP INS					
01 2590 270 000	WORKERS COMP NON-INSTR	0.00	0.00	0.00	(98,549.00)
270 WORKERS COMP NON-INSTR		0.00	0.00	0.00	(98,549.00)
01 2590 271 000	WORKERS COMP TCHR/PROF	0.00	0.00	0.00	0.00
271 WORKERS COMP TCHR/PROF		0.00	0.00	0.00	0.00
2590 WORKERS COMP INS		0.00	0.00	0.00	(98,549.00)
2610 OPERATION OF BUILDINGS					
01 2610 520 000	PROPERTY/LIABILITY INSURANCE	0.00	0.00	0.00	0.00
520 PROPERTY/LIABILITY INSURANCE		0.00	0.00	0.00	0.00
01 2610 621 000	UTILITIES NAT GAS/FUEL	159,687.00	4,685.11	44.74	88,244.07
621 NATURAL GAS		159,687.00	4,685.11	44.74	88,244.07
2610 OPERATION OF BUILDINGS		159,687.00	4,685.11	44.74	88,244.07
2620 MAINT OF BUILDINGS					
01 2620 110 000	MAINTENANCE STAFF SALARIES	291,560.00	14,043.79	41.46	170,666.07

Account Number	Account Description	Revised Budget	Expended During Month	% of Budget	Unencumbered Balance
110 SALARIES NON-INSTR		291,560.00	14,043.79	41.46	170,666.07
01 2620 210 000	MAINT GROUP INS	64,187.00	7,454.94	50.80	31,578.35
210 GROUP INSURANCE NON-INSTR		64,187.00	7,454.94	50.80	31,578.35
01 2620 220 000	MAINT SOCIAL SECURITY	22,281.00	1,058.02	41.04	13,136.48
220 SOCIAL SECURITY NON-INSTR		22,281.00	1,058.02	41.04	13,136.48
01 2620 230 000	MAINT RETIREMENT	28,800.00	1,382.28	37.01	18,141.26
230 RETIREMENT NON-INSTR		28,800.00	1,382.28	37.01	18,141.26
01 2620 237 000	Increased Retirement Contribution Rate	0.00	0.00	0.00	0.00
237 Inc Ret Contribution Rate		0.00	0.00	0.00	0.00
01 2620 280 000	MAINT LTD/STD	975.00	68.28	56.85	420.69
280 LTD/STD NON-INSTR		975.00	68.28	56.85	420.69
01 2620 330 000	MAINT STAFF DEV/TRN	0.00	0.00	0.00	0.00
330 STAFF DEVELOPMENT/TRAINING		0.00	0.00	0.00	0.00
01 2620 340 000	OTHER PROFESSIONAL SERVICES	5,799.00	766.00	32.50	3,914.53
340 OTHER PROFESSIONAL SERVICES		5,799.00	766.00	32.50	3,914.53
01 2620 350 000	MAINT. REPAIRS	50,969.00	4,049.78	181.64	(41,611.67)
350 TECHNICAL SERVICES		50,969.00	4,049.78	181.64	(41,611.67)
01 2620 410 000	WATER & SEWER	21,443.00	0.00	52.40	10,206.07
410 WATER/SEWER		21,443.00	0.00	52.40	10,206.07
01 2620 420 000	TRASH SERVICE	8,039.00	1,180.00	58.71	3,319.00
420 TRASH SERVICE		8,039.00	1,180.00	58.71	3,319.00
01 2620 431 000	BLDG REPAIRS & MAINT	2,476.00	475.00	377.29	(6,865.65)
431 NON-TECH REPAIRS/MAINT		2,476.00	475.00	377.29	(6,865.65)
01 2620 490 000	Maint OTHER SUPPLIES & MATERIALS	99,258.00	0.00	4.52	94,773.16
490 OTHER SUPPLIES AND MATERIALS		99,258.00	0.00	4.52	94,773.16
01 2620 610 000	MAINT Supplies	108,509.00	5,399.41	46.77	57,762.47
610 SUPPLIES		108,509.00	5,399.41	46.77	57,762.47
01 2620 733 000	MAINT Furniture & Equipment	961.00	0.00	290.86	(1,834.17)
733 FURNITURE/FIXTURES		961.00	0.00	290.86	(1,834.17)
01 2620 890 000	MISC EXPENSE	541.00	645.00	176.89	(416.00)
890 MISC EXPENDITURES		541.00	645.00	176.89	(416.00)
2620 MAINT OF BUILDINGS		705,798.00	36,522.50	49.96	353,190.59
2630 OUTSIDE MAINTENANCE					
01 2630 340 000	OUTSIDE REPAIRS/MAINT	57,163.00	0.00	4.68	54,487.46
340 OTHER PROFESSIONAL SERVICES		57,163.00	0.00	4.68	54,487.46
2630 OUTSIDE MAINTENANCE		57,163.00	0.00	4.68	54,487.46
2650 VEHICLE OPER/MAINT/PURCH (NON STUDENT)					
01 2650 732 000	Vehicle Aquisition (non-pupil)	0.00	0.00	0.00	0.00
732 VEHICLES		0.00	0.00	0.00	0.00
2650 VEHICLE OPER/MAINT/PURCH (NON STUDENT)		0.00	0.00	0.00	0.00
2660 SECURITY (CAMAERAS)					
01 2660 590 000	SCHOOL RESOURCE OFFICER	0.00	0.00	0.00	(23,516.47)
590 INTERAGENCY PURCH SERVICES		0.00	0.00	0.00	(23,516.47)

Account Number	Account Description	Revised Budget	Expended During Month	% of Budget	Unencumbered Balance
2660 SECURITY (CAMAERAS)		0.00	0.00	0.00	(23,516.47)
2670 SAFETY (FIRE ALARM)					
01 2670 650 000	Safety Tech Supplies	2,354.00	0.00	63.72	854.00
650 TECH SUPPLIES		2,354.00	0.00	63.72	854.00
01 2670 734 000	Safety Tech Hardware	0.00	0.00	0.00	0.00
734 TECH HARDWARE		0.00	0.00	0.00	0.00
2670 SAFETY (FIRE ALARM)		2,354.00	0.00	63.72	854.00
2710 VEHICLE OPER/MAINT/PURCH (STUDENT)					
01 2710 110 000	TRANSPORTATION Salaries	347,454.00	19,337.01	47.29	183,136.30
110 SALARIES NON-INSTR		347,454.00	19,337.01	47.29	183,136.30
01 2710 210 000	TRANSP GROUP INSURANCE	35,719.00	1,965.04	43.85	20,057.61
210 GROUP INSURANCE NON-INSTR		35,719.00	1,965.04	43.85	20,057.61
01 2710 220 000	TRANSP SOCIAL SECURITY	26,328.00	1,462.70	47.24	13,890.15
220 SOCIAL SECURITY NON-INSTR		26,328.00	1,462.70	47.24	13,890.15
01 2710 230 000	TRANSP RETIREMENT	33,912.00	1,810.79	44.41	18,853.09
230 RETIREMENT NON-INSTR		33,912.00	1,810.79	44.41	18,853.09
01 2710 237 000	Increased Retirement Contribution Rate	0.00	0.00	0.00	0.00
237 Inc Ret Contribution Rate		0.00	0.00	0.00	0.00
01 2710 260 000	Unemployment Payments	0.00	0.00	0.00	0.00
260 UNEMPLOYMENT PMTS		0.00	0.00	0.00	0.00
01 2710 271 000	Workmen's Compensation	0.00	0.00	0.00	0.00
271 WORKERS COMP TCHR/PROF		0.00	0.00	0.00	0.00
01 2710 280 000	TRANSP LTD/STD	959.00	43.59	37.13	602.94
280 LTD/STD NON-INSTR		959.00	43.59	37.13	602.94
01 2710 330 000	TRANSP STAFF DEV/TRN	6,404.00	125.00	30.55	4,447.50
330 STAFF DEVELOPMENT/TRAINING		6,404.00	125.00	30.55	4,447.50
01 2710 340 000	VEHICLE REPAIRS/MAINT	50,098.00	225.00	20.99	39,583.82
340 OTHER PROFESSIONAL SERVICES		50,098.00	225.00	20.99	39,583.82
01 2710 610 000	VEHICLE PARTS/SUPPLIES	32,870.00	1,918.98	30.34	22,897.85
610 SUPPLIES		32,870.00	1,918.98	30.34	22,897.85
01 2710 626 000	GAS & DIESEL	61,113.00	3,726.50	38.12	37,818.48
626 GAS/DIESEL FUEL		61,113.00	3,726.50	38.12	37,818.48
01 2710 732 000	Bus Acquisition (pupil)	0.00	0.00	0.00	0.00
732 VEHICLES		0.00	0.00	0.00	0.00
01 2710 890 000	Transp. Other Expense	5,143.00	46.00	35.27	3,329.05
890 MISC EXPENDITURES		5,143.00	46.00	35.27	3,329.05
2710 VEHICLE OPER/MAINT/PURCH (STUDENT)		600,000.00	30,660.61	42.56	344,616.79
2712 VEHICLE OPER/MAINT/PURCH (SPED)					
01 2712 110 000	Sped Transportation Salaries	24,251.00	3,306.20	70.21	7,224.04
110 SALARIES NON-INSTR		24,251.00	3,306.20	70.21	7,224.04
01 2712 210 000	SPED TRANSP Group Ins	2,226.00	221.84	77.02	511.59
210 GROUP INSURANCE NON-INSTR		2,226.00	221.84	77.02	511.59
01 2712 220 000	SPED TRANSP Soc Sec	1,850.00	246.84	68.87	575.84
220 SOCIAL SECURITY NON-INSTR		1,850.00	246.84	68.87	575.84
01 2712 230 000	SPED TRANS Retirement	2,370.00	326.58	70.71	694.14

Account Number	Account Description	Revised Budget	Expended During Month	% of Budget	Unencumbered Balance
230 RETIREMENT NON-INSTR		2,370.00	326.58	70.71	694.14
01 2712 237 000	Increased Retirement Contribution Rate	0.00	0.00	0.00	0.00
237 Inc Ret Contribution Rate		0.00	0.00	0.00	0.00
01 2712 280 000	SPED TRANSP LTD/STD	105.00	8.57	47.11	55.53
280 LTD/STD NON-INSTR		105.00	8.57	47.11	55.53
01 2712 330 000	SPED TRANSP STAFF DEV/TRAINING	0.00	0.00	0.00	0.00
330 STAFF DEVELOPMENT/TRAINING		0.00	0.00	0.00	0.00
01 2712 332 000	SPED Mileage to Parents	893.00	0.00	0.00	893.00
332 MILEAGE TO PARENTS		893.00	0.00	0.00	893.00
01 2712 626 000	SPED GAS/DIESEL FUEL	1,992.00	0.00	269.61	(3,378.68)
626 GAS/DIESEL FUEL		1,992.00	0.00	269.61	(3,378.68)
01 2712 732 000	SPED VEHICLE OP/MAINT/PURCH	1,313.00	0.00	0.00	1,313.00
732 VEHICLES		1,313.00	0.00	0.00	1,313.00
2712 VEHICLE OPER/MAINT/PURCH (SPED)		35,000.00	4,110.03	77.46	7,888.46
2732 SPED Vehicle Rep/Maint					
01 2732 430 000	SPED Vehicle Rep/Maint	0.00	0.00	0.00	0.00
430 OUTSIDE REPAIRS/MAINT		0.00	0.00	0.00	0.00
2732 SPED Vehicle Rep/Maint		0.00	0.00	0.00	0.00
2792 SPED Transp Services					
01 2792 510 000	Sped Transportation	0.00	0.00	0.00	0.00
510 STUDENT TRANSPORTATION SERVICES		0.00	0.00	0.00	0.00
2792 SPED Transp Services		0.00	0.00	0.00	0.00
2900 OTHER SUPPORT SERVICES					
01 2900 890 000	Non-Revenue/Other Support Serv	0.00	0.00	0.00	0.00
890 MISC EXPENDITURES		0.00	0.00	0.00	0.00
2900 OTHER SUPPORT SERVICES		0.00	0.00	0.00	0.00
3300 COMMUNITY SERV OPER					
01 3300 110 000	Daycare Salaries	125,000.00	4,124.25	27.38	90,775.92
110 SALARIES NON-INSTR		125,000.00	4,124.25	27.38	90,775.92
01 3300 111 000	Daycare Teacher Salaries	15,000.00	0.00	7.52	13,872.24
111 SALARIES TCHR/PROF		15,000.00	0.00	7.52	13,872.24
01 3300 112 000	Daycare Aide Salaries	45,000.00	8,538.93	163.57	(28,608.17)
112 SALARIES AIDE/PARA		45,000.00	8,538.93	163.57	(28,608.17)
01 3300 210 000	DAYCARE GROUP INSURANCE NON-INSTR	20,000.00	834.43	31.94	13,612.62
210 GROUP INSURANCE NON-INSTR		20,000.00	834.43	31.94	13,612.62
01 3300 211 000	Daycare GROUP INS TCHR/PROF	3,500.00	0.00	8.23	3,211.94
211 GROUP INS TCHR/PROF		3,500.00	0.00	8.23	3,211.94
01 3300 212 000	Daycare GROUP INSURANCE AIDE/PARA	28,350.00	3,463.02	103.56	(1,008.36)
212 GROUP INSURANCE AIDE/PARA		28,350.00	3,463.02	103.56	(1,008.36)
01 3300 220 000	DAYCARE SOCIAL SECURITY NON-INSTR	1,200.00	313.11	216.68	(1,400.21)
220 SOCIAL SECURITY NON-INSTR		1,200.00	313.11	216.68	(1,400.21)
01 3300 221 000	Daycare SOCIAL SECURITY TCHR/PROF	9,500.00	0.00	0.90	9,414.93

Account Number	Account Description	Revised Budget	Expended During Month	% of Budget	Unencumbered Balance
221 SOCIAL SECURITY TCHR/PROF		9,500.00	0.00	0.90	9,414.93
01 3300 222 000	Daycare SOCIAL SECURITY AIDE/PARA	3,500.00	539.17	134.81	(1,218.30)
222 SOCIAL SECURITY AIDE/PARA		3,500.00	539.17	134.81	(1,218.30)
01 3300 230 000	DAYCARE RETIREMENT NON-INSTR	12,450.00	407.38	27.15	9,069.42
230 RETIREMENT NON-INSTR		12,450.00	407.38	27.15	9,069.42
01 3300 231 000	Daycare RETIREMENT TCHR/PROF	15,000.00	0.00	0.74	14,888.61
231 RETIREMENT TCHR/PROF		15,000.00	0.00	0.74	14,888.61
01 3300 232 000	Daycare RETIREMENT AIDE/PARA	4,500.00	843.45	160.63	(2,728.21)
232 RETIREMENT AIDE/PARA		4,500.00	843.45	160.63	(2,728.21)
01 3300 280 000	DAYCARE LTD/STD NON-INSTR	800.00	28.25	27.60	579.22
280 LTD/STD NON-INSTR		800.00	28.25	27.60	579.22
01 3300 281 000	Daycare LTD/STD Teacher	100.00	0.00	5.22	94.78
281 LTD/STD TCHR/PROF		100.00	0.00	5.22	94.78
01 3300 282 000	Daycare LTD/STD Aide/Para	300.00	59.72	167.44	(202.32)
282 LTD/STD AIDE/PARA		300.00	59.72	167.44	(202.32)
01 3300 310 000	Daycare Bank Fees	0.00	0.00	0.00	(25.00)
310 OFFICIAL ADMIN SERVICES		0.00	0.00	0.00	(25.00)
01 3300 330 000	Daycare STAFF DEVELOPMENT/TRAINING	2,000.00	0.00	44.26	1,114.85
330 STAFF DEVELOPMENT/TRAINING		2,000.00	0.00	44.26	1,114.85
01 3300 400 000	Daycare Supplies & Materials	0.00	0.00	0.00	0.00
400 SUPPLIES AND MATERIALS		0.00	0.00	0.00	0.00
01 3300 490 000	Daycare Food	11,800.00	0.00	45.20	6,465.82
490 OTHER SUPPLIES AND MATERIALS		11,800.00	0.00	45.20	6,465.82
01 3300 580 000	Daycare Travel Expenses	0.00	0.00	0.00	(238.65)
580 TRAVEL EXPENSES		0.00	0.00	0.00	(238.65)
01 3300 610 000	Daycare Supplies	4,300.00	0.00	71.05	1,244.78
610 SUPPLIES		4,300.00	0.00	71.05	1,244.78
01 3300 733 000	Daycare FURNITURE/FIXTURES	1,000.00	0.00	0.00	1,000.00
733 FURNITURE/FIXTURES		1,000.00	0.00	0.00	1,000.00
01 3300 890 000	Daycare Misc Expenditures	1,500.00	68.35	2,162.82	(30,942.29)
890 MISC EXPENDITURES		1,500.00	68.35	2,162.82	(30,942.29)
3300 COMMUNITY SERV OPER		304,800.00	19,220.06	67.53	98,973.62
3400 FOUNDATION GRANT					
01 3400 610 000	Foundation Grant Expenditures	0.00	0.00	0.00	0.00
610 SUPPLIES		0.00	0.00	0.00	0.00
3400 FOUNDATION GRANT		0.00	0.00	0.00	0.00
3535 HIGH ABILITY LEARNERS					
01 3535 111 003	High Ability Learners	0.00	0.00	0.00	0.00
111 SALARIES TCHR/PROF		0.00	0.00	0.00	0.00
01 3535 211 003	HAL Group Insurance	0.00	0.00	0.00	0.00
211 GROUP INS TCHR/PROF		0.00	0.00	0.00	0.00
01 3535 221 003	HAL Social Security	0.00	0.00	0.00	0.00
221 SOCIAL SECURITY TCHR/PROF		0.00	0.00	0.00	0.00

Account Number	Account Description	Revised Budget	Expended During Month	% of Budget	Unencumbered Balance
01 3535 231 003	HAL Retirement	0.00	0.00	0.00	0.00
231 RETIREMENT TCHR/PROF		0.00	0.00	0.00	0.00
01 3535 237 003	Increased Retirement Contribution Rate	0.00	0.00	0.00	0.00
237 Inc Ret Contribution Rate		0.00	0.00	0.00	0.00
01 3535 281 003	HAL LTD/STD	0.00	0.00	0.00	0.00
281 LTD/STD TCHR/PROF		0.00	0.00	0.00	0.00
01 3535 330 003	HAL STAFF DEV/TRNG	0.00	0.00	0.00	0.00
330 STAFF DEVELOPMENT/TRAINING		0.00	0.00	0.00	0.00
01 3535 610 003	HAL Supplies	0.00	204.00	0.00	(564.29)
610 SUPPLIES		0.00	204.00	0.00	(564.29)
01 3535 650 003	High Ability Software	0.00	0.00	0.00	0.00
650 TECH SUPPLIES		0.00	0.00	0.00	0.00
01 3535 733 003	HAL Furniture & Equipment	0.00	0.00	0.00	0.00
733 FURNITURE/FIXTURES		0.00	0.00	0.00	0.00
3535 HIGH ABILITY LEARNERS		0.00	204.00	0.00	(564.29)
3541 EARLY CHILDHOOD ENDOWMENT GRANTS					
01 3541 111 003	Sixpence Coordinator Salaries	15,724.00	0.00	0.00	15,724.00
111 SALARIES TCHR/PROF		15,724.00	0.00	0.00	15,724.00
01 3541 112 003	SIXPENCE SALARIES AIDE	54,016.00	3,653.65	54.11	24,786.80
112 SALARIES AIDE/PARA		54,016.00	3,653.65	54.11	24,786.80
01 3541 211 003	Sixpence Coord Group Insurance	5,474.00	0.00	0.00	5,474.00
211 GROUP INS TCHR/PROF		5,474.00	0.00	0.00	5,474.00
01 3541 212 003	GROUP INSURANCE - AIDE	0.00	0.00	0.00	0.00
212 GROUP INSURANCE AIDE/PARA		0.00	0.00	0.00	0.00
01 3541 221 003	Coord. Social Security	1,160.00	0.00	0.00	1,160.00
221 SOCIAL SECURITY TCHR/PROF		1,160.00	0.00	0.00	1,160.00
01 3541 222 003	SOCIAL SECURITY AIDE	4,149.00	281.85	54.35	1,894.20
222 SOCIAL SECURITY AIDE/PARA		4,149.00	281.85	54.35	1,894.20
01 3541 231 003	Coord. Retirement	1,553.00	0.00	0.00	1,553.00
231 RETIREMENT TCHR/PROF		1,553.00	0.00	0.00	1,553.00
01 3541 232 003	SIXPENCE RETIREMENT - AIDE	5,336.00	360.90	54.11	2,448.80
232 RETIREMENT AIDE/PARA		5,336.00	360.90	54.11	2,448.80
01 3541 237 003	Increased Retirement Contribution Rate	0.00	0.00	0.00	0.00
237 Inc Ret Contribution Rate		0.00	0.00	0.00	0.00
01 3541 256 003	SIXPENCE TUITION REIMB	0.00	0.00	0.00	0.00
256 PROF TUITION REIMB		0.00	0.00	0.00	0.00
01 3541 281 003	Coordinator LTD/STD	98.00	0.00	0.00	98.00
281 LTD/STD TCHR/PROF		98.00	0.00	0.00	98.00
01 3541 282 003	LTD/STD AIDE	217.00	30.63	112.92	(28.04)
282 LTD/STD AIDE/PARA		217.00	30.63	112.92	(28.04)
01 3541 330 003	Sixpence Travel/Staff Development	594.00	0.00	486.97	(2,298.58)
330 STAFF DEVELOPMENT/TRAINING		594.00	0.00	486.97	(2,298.58)
01 3541 333 003	Sixpence Mileage to Staff	0.00	0.00	0.00	0.00
333 MILEAGE TO STAFF		0.00	0.00	0.00	0.00

Account Number	Account Description	Revised Budget	Expended During Month	% of Budget	Unencumbered Balance
01 3541 340 003	Sixpence Professional Services	0.00	346.99	0.00	(106.99)
340 OTHER PROFESSIONAL SERVICES		0.00	346.99	0.00	(106.99)
01 3541 580 003	Sixpence Travel Expenses	901.00	43.10	103.18	(28.67)
580 TRAVEL EXPENSES		901.00	43.10	103.18	(28.67)
01 3541 610 003	Sixpence Supplies/Family Inv	3,853.00	1,137.84	122.52	(867.87)
610 SUPPLIES		3,853.00	1,137.84	122.52	(867.87)
01 3541 733 003	Sixpence Furniture and Equipment	0.00	0.00	0.00	0.00
733 FURNITURE/FIXTURES		0.00	0.00	0.00	0.00
01 3541 890 000	SIXPENCE OTHER EXP	427.00	78.47	124.86	(106.14)
890 MISC EXPENDITURES		427.00	78.47	124.86	(106.14)
3541 EARLY CHILDHOOD ENDOWMENT GRANTS		93,502.00	5,933.43	46.84	49,702.51
3570 Teacher Eval Grant					
01 3570 610 000	Teacher Eval Grant	0.00	0.00	0.00	0.00
610 SUPPLIES		0.00	0.00	0.00	0.00
3570 Teacher Eval Grant		0.00	0.00	0.00	0.00
4300 OTHER PROFESSIONAL SERVICES					
01 4300 340 000	PROFESSIONAL SERVICES-ARCHIT/ENGINEER	0.00	0.00	0.00	0.00
340 OTHER PROFESSIONAL SERVICES		0.00	0.00	0.00	0.00
4300 OTHER PROFESSIONAL SERVICES		0.00	0.00	0.00	0.00
4411 IDEA PART B EARLY INTERVENING SERVICES					
01 4411 610 003	IDEA Part B-Early Interven. (RtI)	0.00	0.00	0.00	0.00
610 SUPPLIES		0.00	0.00	0.00	0.00
4411 IDEA PART B EARLY INTERVENING SERVICES		0.00	0.00	0.00	0.00
4412 IDEA PART B PROPORTIONATE SHARE					
01 4412 591 003	IDEA Prof. Services	0.00	0.00	0.00	0.00
591 PURCHASED SERVICES		0.00	0.00	0.00	0.00
4412 IDEA PART B PROPORTIONATE SHARE		0.00	0.00	0.00	0.00
4900 OTHER FEDERAL EXPENDITURES					
01 4900 610 003	Drug Education - Supplies	0.00	0.00	0.00	0.00
610 SUPPLIES		0.00	0.00	0.00	0.00
4900 OTHER FEDERAL EXPENDITURES		0.00	0.00	0.00	0.00
6200 FEDERAL-TITLE I PART A ESSA					
01 6200 111 002	Title I SALARIES MS TCHR/PROF	9,695.00	3,586.73	295.97	(18,998.84)
01 6200 111 003	Title I, Part A ELEM SALARIES	26,156.00	2,783.73	85.14	3,886.16
111 SALARIES TCHR/PROF		35,851.00	6,370.46	142.15	(15,112.68)
01 6200 112 003	Title I - Aide Salaries	0.00	0.00	0.00	0.00
112 SALARIES AIDE/PARA		0.00	0.00	0.00	0.00
01 6200 113 003	Title I Substitute Salaries	0.00	0.00	0.00	0.00
113 SALARIES SUB TCHR		0.00	0.00	0.00	0.00
01 6200 211 002	Title I GROUP INS MS TCHR/PROF	1,444.00	524.26	290.46	(2,750.21)
01 6200 211 003	Title I Group Insurance	8,197.00	677.42	66.12	2,777.39
211 GROUP INS TCHR/PROF		9,641.00	1,201.68	99.72	27.18
01 6200 221 002	Title I MS SOC SEC TCHR/PROF	715.00	271.33	303.59	(1,455.66)
01 6200 221 003	Title I Social Security TCHR	1,948.00	212.02	87.07	251.82
221 SOCIAL SECURITY TCHR/PROF		2,663.00	483.35	145.21	(1,203.84)

Account Number	Account Description	Revised Budget	Expended During Month	% of Budget	Unencumbered Balance
01 6200 223 003	Title I SOC SEC SUB TCHR	0.00	0.00	0.00	0.00
223 SOCIAL SECURITY SUB TCHR		0.00	0.00	0.00	0.00
01 6200 231 002	Title I RET MS TCHR/PROF	729.00	354.29	388.80	(2,105.32)
01 6200 231 003	Title I Retirement EL	2,584.00	274.97	85.13	384.24
231 RETIREMENT TCHR/PROF		3,313.00	629.26	151.95	(1,721.08)
01 6200 237 002	MS Inc Ret Contribution Rate	229.00	0.00	0.00	229.00
01 6200 237 003	Increased Retirement Contribution Rate	0.00	0.00	0.00	0.00
237 Inc Ret Contribution Rate		229.00	0.00	0.00	229.00
01 6200 281 002	Title I MS LTD/STD TCHR/PROF	65.00	31.59	388.80	(187.72)
01 6200 281 003	Title I LTD/STD	170.00	24.53	115.41	(26.19)
281 LTD/STD TCHR/PROF		235.00	56.12	191.03	(213.91)
01 6200 330 003	Title I Staff Dev/Training	0.00	0.00	0.00	0.00
330 STAFF DEVELOPMENT/TRAINING		0.00	0.00	0.00	0.00
01 6200 560 003	Title I Computer Hardware	0.00	0.00	0.00	0.00
560 COMPUTER HARDWARE		0.00	0.00	0.00	0.00
01 6200 580 003	Title I Travel Expenses	0.00	0.00	0.00	0.00
580 TRAVEL EXPENSES		0.00	0.00	0.00	0.00
01 6200 610 003	Title I Supplies	199.00	0.00	0.00	199.00
610 SUPPLIES		199.00	0.00	0.00	199.00
01 6200 650 003	Title I Computer Software	35.00	0.00	0.00	35.00
650 TECH SUPPLIES		35.00	0.00	0.00	35.00
01 6200 733 003	Title I Furniture & Equipment	0.00	0.00	0.00	0.00
733 FURNITURE/FIXTURES		0.00	0.00	0.00	0.00
01 6200 890 003	Title I Misc. Expenses	0.00	0.00	0.00	0.00
890 MISC EXPENDITURES		0.00	0.00	0.00	0.00
6200 FEDERAL-TITLE I PART A ESSA		52,166.00	8,740.87	134.05	(17,761.33)
6406 FEDERAL-IDEA PART B (611) BASE AGE 3-4					
01 6406 340 000	SPED-IDEA- 3-5 other PROF SERV	0.00	0.00	0.00	0.00
340 OTHER PROFESSIONAL SERVICES		0.00	0.00	0.00	0.00
01 6406 591 003	IDEA Preschool 3-5 Prf Serv	0.00	0.00	0.00	0.00
591 PURCHASED SERVICES		0.00	0.00	0.00	0.00
6406 FEDERAL-IDEA PART B (611) BASE AGE 3-4		0.00	0.00	0.00	0.00
6408 FEDERAL-IDEA PART B (611) BASE AGE 0-4					
01 6408 111 003	IDEA Part B Base Salary (prek BAF)	6,662.00	1,636.25	203.50	(6,895.50)
111 SALARIES TCHR/PROF		6,662.00	1,636.25	203.50	(6,895.50)
01 6408 112 003	IDEA Part B Base Aide (prek BAF)	23,291.00	6,389.13	215.66	(26,938.38)
112 SALARIES AIDE/PARA		23,291.00	6,389.13	215.66	(26,938.38)
01 6408 211 003	IDEA Part B Base Ins. (prek BAF)	1,389.00	470.28	280.53	(2,507.61)
211 GROUP INS TCHR/PROF		1,389.00	470.28	280.53	(2,507.61)
01 6408 212 003	GROUP INSURANCE AIDE/PARA	1,036.00	1,378.99	996.39	(9,286.57)
212 GROUP INSURANCE AIDE/PARA		1,036.00	1,378.99	996.39	(9,286.57)
01 6408 221 003	IDEA Part B Base Soc.Sec. (prek BA	510.00	125.50	203.89	(529.83)
221 SOCIAL SECURITY TCHR/PROF		510.00	125.50	203.89	(529.83)
01 6408 222 003	IDEA SOC SEC PARA	1,787.00	464.10	208.56	(1,939.95)
222 SOCIAL SECURITY AIDE/PARA		1,787.00	464.10	208.56	(1,939.95)

Account Number	Account Description	Revised Budget	Expended During Month	% of Budget	Unencumbered Balance
01 6408 231 003	IDEA Part B Base Ret. (prek BAF)	501.00	161.62	267.30	(838.19)
231 RETIREMENT TCHR/PROF		501.00	161.62	267.30	(838.19)
01 6408 232 003	IDEA RETIREMT PARA	2,199.00	631.10	225.63	(2,762.56)
232 RETIREMENT AIDE/PARA		2,199.00	631.10	225.63	(2,762.56)
01 6408 237 003	Increased Retirement Contribution Rate	157.00	0.00	0.00	157.00
237 Inc Ret Contribution Rate		157.00	0.00	0.00	157.00
01 6408 281 003	IDEA Part B Base LTD (prek BAF)	34.00	13.06	318.26	(74.21)
281 LTD/STD TCHR/PROF		34.00	13.06	318.26	(74.21)
01 6408 282 003	IDEA LTD/STD PARA	96.00	31.49	233.91	(128.55)
282 LTD/STD AIDE/PARA		96.00	31.49	233.91	(128.55)
01 6408 340 003	IDEA 0-4 YO Prof Services	6,897.00	1,032.29	151.12	(3,525.81)
340 OTHER PROFESSIONAL SERVICES		6,897.00	1,032.29	151.12	(3,525.81)
01 6408 591 003	IDEA Part B 0-2 YO Profl Services B	4,726.00	2,352.79	222.79	(5,803.05)
591 PURCHASED SERVICES		4,726.00	2,352.79	222.79	(5,803.05)
01 6408 610 003	IDEA BAF SUPPLIES	0.00	0.00	0.00	0.00
610 SUPPLIES		0.00	0.00	0.00	0.00
01 6408 732 003	IDEA Part B - Vehicle Aq.	0.00	0.00	0.00	0.00
732 VEHICLES		0.00	0.00	0.00	0.00
6408 FEDERAL-IDEA PART B (611) BASE AGE 0-4		49,285.00	14,686.60	223.92	(61,073.21)
6410 FEDERAL-IDEA PART E/P (619					
01 6410 112 003	IDEA E/P - Salaries	0.00	0.00	0.00	0.00
112 SALARIES AIDE/PARA		0.00	0.00	0.00	0.00
01 6410 340 003	SPED IDEA E/P 619	0.00	0.00	0.00	0.00
340 OTHER PROFESSIONAL SERVICES		0.00	0.00	0.00	0.00
01 6410 560 003	Sped IDEA - Computer Hard.	0.00	0.00	0.00	0.00
560 COMPUTER HARDWARE		0.00	0.00	0.00	0.00
01 6410 591 003	IDEA E/P 3-5 YO Contracted Services	0.00	0.00	0.00	0.00
591 PURCHASED SERVICES		0.00	0.00	0.00	0.00
01 6410 610 003	IDEA E/P Supplies	0.00	0.00	0.00	0.00
610 SUPPLIES		0.00	0.00	0.00	0.00
6410 FEDERAL-IDEA PART E/P (619		0.00	0.00	0.00	0.00
6412 IDEA Non-Public					
01 6412 111 003	IDEA Non-Public SALARIES	3,172.00	779.17	181.77	(2,593.86)
111 SALARIES TCHR/PROF		3,172.00	779.17	181.77	(2,593.86)
01 6412 211 003	GROUP INSURANCE TCHR/PROF	661.00	223.95	250.72	(996.23)
211 GROUP INS TCHR/PROF		661.00	223.95	250.72	(996.23)
01 6412 221 003	IDEA SOCIAL SECURITY TCHR/PROF	243.00	59.76	181.98	(199.22)
221 SOCIAL SECURITY TCHR/PROF		243.00	59.76	181.98	(199.22)
01 6412 231 003	IDEA RETIREMENT TCHR/PROF	313.00	76.96	181.96	(256.54)
231 RETIREMENT TCHR/PROF		313.00	76.96	181.96	(256.54)
01 6412 237 003	IDEA Inc Ret Contribution Rate	0.00	0.00	0.00	0.00
237 Inc Ret Contribution Rate		0.00	0.00	0.00	0.00
01 6412 281 003	IDEA LTD/STD TCHR/PROF	16.00	6.22	287.69	(30.03)

Account Number	Account Description	Revised Budget	Expended During Month	% of Budget	Unencumbered Balance
281 LTD/STD TCHR/PROF		16.00	6.22	287.69	(30.03)
6412 IDEA Non-Public		4,405.00	1,146.06	192.53	(4,075.88)
6421 IDEA Part-B (611) ARP Birth-21					
01 6421 591 000	IDEA Part-B SA Speech/Audiology	0.00	0.00	0.00	0.00
591 PURCHASED SERVICES		0.00	0.00	0.00	0.00
6421 IDEA Part-B (611) ARP Birth-21		0.00	0.00	0.00	0.00
6422 IDEA Preschool (619) ARP					
01 6422 340 003	IDEA 0-4 Prof Services	0.00	0.00	0.00	0.00
340 OTHER PROFESSIONAL SERVICES		0.00	0.00	0.00	0.00
6422 IDEA Preschool (619) ARP		0.00	0.00	0.00	0.00
6969 Title IV ESSA/SSAE Grant					
01 6969 111 000	TITLE IV SALARIES TCHR/PROF	0.00	0.00	0.00	0.00
111 SALARIES TCHR/PROF		0.00	0.00	0.00	0.00
01 6969 211 000	TITLE IV GROUP INS TCHR/PROF	0.00	0.00	0.00	0.00
211 GROUP INS TCHR/PROF		0.00	0.00	0.00	0.00
01 6969 221 000	TITLE IV SOCIAL SEC TCHR/PROF	0.00	0.00	0.00	0.00
221 SOCIAL SECURITY TCHR/PROF		0.00	0.00	0.00	0.00
01 6969 231 000	TITLE IV RETIREMENT TCHR/PROF	0.00	0.00	0.00	0.00
231 RETIREMENT TCHR/PROF		0.00	0.00	0.00	0.00
01 6969 281 000	TITLE IV LTD/STD TCHR/PROF	0.00	0.00	0.00	0.00
281 LTD/STD TCHR/PROF		0.00	0.00	0.00	0.00
01 6969 340 000	Title IV ESSA/SSAE Grant	0.00	0.00	0.00	0.00
340 OTHER PROFESSIONAL SERVICES		0.00	0.00	0.00	0.00
01 6969 490 000	Title IV SSAE Grant Other Materials	0.00	0.00	0.00	0.00
490 OTHER SUPPLIES AND MATERIALS		0.00	0.00	0.00	0.00
01 6969 610 000	Title IV SSAE Grant Supplies	0.00	0.00	0.00	0.00
610 SUPPLIES		0.00	0.00	0.00	0.00
6969 Title IV ESSA/SSAE Grant		0.00	0.00	0.00	0.00
6988 ARP - ESSER III After School					
01 6988 111 000	ARP-ESSER III AFTERschl Teacher Salaries	11,157.00	3,710.00	174.29	(8,288.00)
111 SALARIES TCHR/PROF		11,157.00	3,710.00	174.29	(8,288.00)
01 6988 112 000	ARP ESSER III AFTERSCH-AIDE/PARA	528.00	551.25	426.65	(1,724.70)
112 SALARIES AIDE/PARA		528.00	551.25	426.65	(1,724.70)
01 6988 211 000	ARP-ESSER III AFTERschl GROUP INS TCHR/PROF	0.00	0.00	0.00	0.00
211 GROUP INS TCHR/PROF		0.00	0.00	0.00	0.00
01 6988 212 000	ARP-ESSERIII AFTERschl GROUP INS AIDE	0.00	0.00	0.00	0.00
212 GROUP INSURANCE AIDE/PARA		0.00	0.00	0.00	0.00
01 6988 221 000	ARP-ESSER III AFTERschl SOC SEC TCHR/PROF	854.00	283.82	174.20	(633.65)
221 SOCIAL SECURITY TCHR/PROF		854.00	283.82	174.20	(633.65)
01 6988 222 000	ARP-ESSER III AFTERschl SOC SEC AIDE/PARA	40.00	42.17	430.83	(132.33)
222 SOCIAL SECURITY AIDE/PARA		40.00	42.17	430.83	(132.33)

Account Number	Account Description	Revised Budget	Expended During Month	% of Budget	Unencumbered Balance
01 6988 231 000	ARP-ESSER III AFTERschl RETIREMENT TCHR/PROF	759.00	366.46	253.07	(1,161.80)
231 RETIREMENT TCHR/PROF		759.00	366.46	253.07	(1,161.80)
01 6988 232 000	ARP-ESSER III AFTERschl RETIREMENT AIDE/PARA	17.00	54.45	1,308.88	(205.51)
232 RETIREMENT AIDE/PARA		17.00	54.45	1,308.88	(205.51)
01 6988 237 000	ESSERS III Inc Ret Contribution Rate	239.00	0.00	0.00	239.00
237 Inc Ret Contribution Rate		239.00	0.00	0.00	239.00
01 6988 281 000	ARP-ESSER III AFTERschl LTD/STD TCHR/PROF	0.00	0.00	0.00	0.00
281 LTD/STD TCHR/PROF		0.00	0.00	0.00	0.00
01 6988 282 000	ARP-ESSER III AFTERschl LTD/STD AIDE/PARA	0.00	0.00	0.00	0.00
282 LTD/STD AIDE/PARA		0.00	0.00	0.00	0.00
01 6988 330 000	ARP-ESSERIII AFTERschl STAFF DEV/TRNG	650.00	1,402.57	418.86	(2,072.57)
330 STAFF DEVELOPMENT/TRAINING		650.00	1,402.57	418.86	(2,072.57)
01 6988 580 000	After School TRAVEL EXPENSES	0.00	0.00	0.00	(1,064.72)
580 TRAVEL EXPENSES		0.00	0.00	0.00	(1,064.72)
01 6988 610 000	ARP-ESSER III AFTERschl SUPPLIES	16,080.00	944.81	105.70	(917.13)
610 SUPPLIES		16,080.00	944.81	105.70	(917.13)
6988 ARP - ESSER III After School		30,324.00	7,355.53	152.64	(15,961.41)
6989 ARP-ESSER III SUMMER SCHOOL					
01 6989 111 000	ARP-ESSER III ELC summer TEACHER	3,464.00	0.00	86.42	470.40
111 SALARIES TCHR/PROF		3,464.00	0.00	86.42	470.40
01 6989 112 000	ARP-ESSER III ELC summer AIDE	275.00	0.00	0.00	275.00
112 SALARIES AIDE/PARA		275.00	0.00	0.00	275.00
01 6989 211 000	ARP-ESSER III summer GROUP INS TCHR/PROF	0.00	0.00	0.00	0.00
211 GROUP INS TCHR/PROF		0.00	0.00	0.00	0.00
01 6989 212 000	ARP-ESSER III ELC summer GROUP INS AIDE	0.00	0.00	0.00	0.00
212 GROUP INSURANCE AIDE/PARA		0.00	0.00	0.00	0.00
01 6989 221 000	ARP-ESSER III ELC summer SOC SEC TCHR	265.00	0.00	86.42	35.99
221 SOCIAL SECURITY TCHR/PROF		265.00	0.00	86.42	35.99
01 6989 222 000	ARP ESSER III ELC summer SOC SEC AIDE	21.00	0.00	0.00	21.00
222 SOCIAL SECURITY AIDE/PARA		21.00	0.00	0.00	21.00
01 6989 231 000	ARP-ESSER III ELC summer RETIREMENT TEACHER	342.00	0.00	86.46	46.31
231 RETIREMENT TCHR/PROF		342.00	0.00	86.46	46.31
01 6989 232 000	ARP ESSER III ELC summer RETIREMNT AIDE	23.00	0.00	0.00	23.00
232 RETIREMENT AIDE/PARA		23.00	0.00	0.00	23.00
01 6989 237 000	ESSER III Summer Inc Ret Contribution Rate	0.00	0.00	0.00	0.00
237 Inc Ret Contribution Rate		0.00	0.00	0.00	0.00

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01 6989 281 000	ARP-ESSER III summer LTD/STD TCHR/PROF	0.00	0.00	0.00	0.00
281 LTD/STD TCHR/PROF		0.00	0.00	0.00	0.00
01 6989 282 000	ARP-ESSER III summer LTD/STD AIDE/PARA	0.00	0.00	0.00	0.00
282 LTD/STD AIDE/PARA		0.00	0.00	0.00	0.00
01 6989 330 000	ESSER III Summer Staff Dev/Training	173.00	0.00	0.00	173.00
330 STAFF DEVELOPMENT/TRAINING		173.00	0.00	0.00	173.00
01 6989 610 000	ARP ESSER III ELC summer SUPPLIES	9,550.00	500.00	35.26	6,182.27
610 SUPPLIES		9,550.00	500.00	35.26	6,182.27
6989 ARP-ESSER III SUMMER SCHOOL		14,113.00	500.00	48.79	7,226.97
6992 FEDERAL-REAP					
01 6992 610 003	REAP Grant Expend	0.00	0.00	0.00	0.00
610 SUPPLIES		0.00	0.00	0.00	0.00
6992 FEDERAL-REAP		0.00	0.00	0.00	0.00
6996 COVID / ESSER					
01 6996 111 000	ESSERS I SALARIES TCHR/PROF	0.00	0.00	0.00	0.00
111 SALARIES TCHR/PROF		0.00	0.00	0.00	0.00
01 6996 112 000	COVID CARES ACT SALARIES	0.00	0.00	0.00	0.00
112 SALARIES AIDE/PARA		0.00	0.00	0.00	0.00
01 6996 132 000	COVID OVERTIME AIDE/PARA	0.00	0.00	0.00	0.00
132 OVERTIME AIDE/PARA		0.00	0.00	0.00	0.00
01 6996 210 000	COVID GROUP INS NON-INSTR	0.00	0.00	0.00	0.00
210 GROUP INSURANCE NON-INSTR		0.00	0.00	0.00	0.00
01 6996 211 000	ESSERS I GROUP INS TCHR/PROF	0.00	0.00	0.00	0.00
211 GROUP INS TCHR/PROF		0.00	0.00	0.00	0.00
01 6996 221 000	ESSERS I SOC SEC TCHR/PROF	0.00	0.00	0.00	0.00
221 SOCIAL SECURITY TCHR/PROF		0.00	0.00	0.00	0.00
01 6996 222 000	COVID SOC SEC AIDE/PARA	0.00	0.00	0.00	0.00
222 SOCIAL SECURITY AIDE/PARA		0.00	0.00	0.00	0.00
01 6996 231 000	ESSERS I RET TCHR/PROF	0.00	0.00	0.00	0.00
231 RETIREMENT TCHR/PROF		0.00	0.00	0.00	0.00
01 6996 232 000	COVID RETIREMT AIDE/PARA	0.00	0.00	0.00	0.00
232 RETIREMENT AIDE/PARA		0.00	0.00	0.00	0.00
01 6996 281 000	ESSERS I LTD/STD TCHR/PROF	0.00	0.00	0.00	0.00
281 LTD/STD TCHR/PROF		0.00	0.00	0.00	0.00
01 6996 282 000	COVID LTD/STD AIDE/PARA	0.00	0.00	0.00	0.00
282 LTD/STD AIDE/PARA		0.00	0.00	0.00	0.00
01 6996 320 000	ESSERS I EDUC SERV SUPPORT	0.00	0.00	0.00	0.00
320 PROF EDUC SERVICES		0.00	0.00	0.00	0.00
01 6996 610 000	COVID/ESSER SUPPLIES	0.00	0.00	0.00	0.00
610 SUPPLIES		0.00	0.00	0.00	0.00
01 6996 643 000	COVID WEB/CLOUD BASED SOFTWARE	0.00	0.00	0.00	0.00
643 WEB/CLOUD BASED SOFTWARE		0.00	0.00	0.00	0.00

Account Number	Account Description	Revised Budget	Expended During Month	% of Budget	Unencumbered Balance
01 6996 733 000	ESSERS/CARES ACT FURNITURE/FIXTURES	0.00	0.00	0.00	0.00
733 FURNITURE/FIXTURES		0.00	0.00	0.00	0.00
6996 COVID / ESSER		0.00	0.00	0.00	0.00
6997 ESSER II - CARES ACT					
01 6997 111 000	ESSERS II SALARIES TCHR/PROF	0.00	0.00	0.00	0.00
111 SALARIES TCHR/PROF		0.00	0.00	0.00	0.00
01 6997 211 000	ESSERS II GROUP INS TCHR/PROF	0.00	0.00	0.00	0.00
211 GROUP INS TCHR/PROF		0.00	0.00	0.00	0.00
01 6997 221 000	ESSERS II SOC SEC TCHR/PROF	0.00	0.00	0.00	0.00
221 SOCIAL SECURITY TCHR/PROF		0.00	0.00	0.00	0.00
01 6997 231 000	ESSERS II RETIREMENT TCHR/PROF	0.00	0.00	0.00	0.00
231 RETIREMENT TCHR/PROF		0.00	0.00	0.00	0.00
01 6997 237 000	ESSER II Inc Ret Contribution Rate	0.00	0.00	0.00	0.00
237 Inc Ret Contribution Rate		0.00	0.00	0.00	0.00
01 6997 281 000	ESSERS II LTD/STD TCHR/PROF	0.00	0.00	0.00	0.00
281 LTD/STD TCHR/PROF		0.00	0.00	0.00	0.00
01 6997 330 000	ESSERS II -STAFF DEV/TRAINING	0.00	0.00	0.00	0.00
330 STAFF DEVELOPMENT/TRAINING		0.00	0.00	0.00	0.00
01 6997 610 000	ESSERS II SUPPLIES	0.00	0.00	0.00	0.00
610 SUPPLIES		0.00	0.00	0.00	0.00
01 6997 650 000	ESSERS II - TECH SUPPLIES	0.00	0.00	0.00	0.00
650 TECH SUPPLIES		0.00	0.00	0.00	0.00
01 6997 733 000	ESSERS II (Cares Act)FURNITURE/FIXTURES	0.00	0.00	0.00	0.00
733 FURNITURE/FIXTURES		0.00	0.00	0.00	0.00
01 6997 734 000	TECH HARDWARE / CAPITAL	0.00	0.00	0.00	0.00
734 TECH HARDWARE		0.00	0.00	0.00	0.00
6997 ESSER II - CARES ACT		0.00	0.00	0.00	0.00
6998 ESSERS III Cares Act Funding					
01 6998 111 000	ARP-ESSER III TCHR	28,069.00	4,148.83	118.25	(5,121.64)
111 SALARIES TCHR/PROF		28,069.00	4,148.83	118.25	(5,121.64)
01 6998 112 000	ARP-ESSER III AIDE	0.00	0.00	0.00	0.00
112 SALARIES AIDE/PARA		0.00	0.00	0.00	0.00
01 6998 211 000	ESSERS III GROUP INS TCHR/PROF	10,489.00	699.31	46.30	5,632.08
211 GROUP INS TCHR/PROF		10,489.00	699.31	46.30	5,632.08
01 6998 221 000	ARP-ESSER III TCHRSocSec	2,128.00	319.87	120.25	(430.96)
221 SOCIAL SECURITY TCHR/PROF		2,128.00	319.87	120.25	(430.96)
01 6998 222 000	ARP-ESSER III AIDESocSec	0.00	0.00	0.00	0.00
222 SOCIAL SECURITY AIDE/PARA		0.00	0.00	0.00	0.00
01 6998 231 000	ARP-ESSER III TchrRET	2,109.00	409.81	155.45	(1,169.48)
231 RETIREMENT TCHR/PROF		2,109.00	409.81	155.45	(1,169.48)
01 6998 232 000	ARP-ESSER III AideRET	0.00	0.00	0.00	0.00
232 RETIREMENT AIDE/PARA		0.00	0.00	0.00	0.00

Account Number	Account Description	Revised Budget	Expended During Month	% of Budget	Unencumbered Balance
01 6998 237 000	ESSERS III Care Inc Ret Contribution Rate	663.00	0.00	0.00	663.00
237 Inc Ret Contribution Rate		663.00	0.00	0.00	663.00
01 6998 281 000	ESSERS III LTD/STD TCHR/PROF	210.00	32.48	123.73	(49.84)
281 LTD/STD TCHR/PROF		210.00	32.48	123.73	(49.84)
01 6998 282 000	ESSERIII LTD/STD AIDE	0.00	0.00	0.00	0.00
282 LTD/STD AIDE/PARA		0.00	0.00	0.00	0.00
01 6998 330 000	ESSERS III (Cares) Staff Developmt	0.00	0.00	0.00	0.00
330 STAFF DEVELOPMENT/TRAINING		0.00	0.00	0.00	0.00
01 6998 490 000	ESSERS III CONSTRUCTION SERV.	2,279.00	0.00	288.92	(4,305.57)
490 OTHER SUPPLIES AND MATERIALS		2,279.00	0.00	288.92	(4,305.57)
01 6998 610 000	ARP-ESSER III Supplies	20,216.00	0.00	9.62	18,271.90
610 SUPPLIES		20,216.00	0.00	9.62	18,271.90
01 6998 733 000	ESSERS III (Cares)FURNITURE/FIXTURES	0.00	0.00	0.00	0.00
733 FURNITURE/FIXTURES		0.00	0.00	0.00	0.00
01 6998 734 000	ESSERS III ARP TECH HARD/CAP ASSTS	4,474.00	0.00	288.98	(8,455.10)
734 TECH HARDWARE		4,474.00	0.00	288.98	(8,455.10)
01 6998 890 000	ESSER III MISC EXP	0.00	0.00	0.00	0.00
890 MISC EXPENDITURES		0.00	0.00	0.00	0.00
6998 ESSERS III Cares Act Funding		70,637.00	5,610.30	92.87	5,034.39
8000 TRANSFERS (OUTGOING)					
01 8000 912 000	TRANSFER TO HOT LUNCH	0.00	0.00	0.00	0.00
912 TRANSFER TO LUNCH FUND		0.00	0.00	0.00	0.00
01 8000 913 000	TRANSFER TO ACTIVITY ACCT	0.00	0.00	0.00	(35,450.00)
913 TRANSFER TO ACTIVITY FUND		0.00	0.00	0.00	(35,450.00)
01 8000 917 000	TRANSFER TO EE BEN FUND	0.00	0.00	0.00	0.00
917 TRANSFER TO EE BEN FUND		0.00	0.00	0.00	0.00
8000 TRANSFERS (OUTGOING)		0.00	0.00	0.00	(35,450.00)
9000 NON-PROGRAM EXPENDITURES					
01 9000 110 000	Kitchen Payroll	0.00	6,596.10	0.00	(60,617.66)
110 SALARIES NON-INSTR		0.00	6,596.10	0.00	(60,617.66)
01 9000 210 000	KITCHEN GROUP INS	0.00	3,101.07	0.00	(26,630.86)
210 GROUP INSURANCE NON-INSTR		0.00	3,101.07	0.00	(26,630.86)
01 9000 220 000	KITCHEN SOCIAL SECURITY	0.00	370.31	0.00	(3,612.44)
220 SOCIAL SECURITY NON-INSTR		0.00	370.31	0.00	(3,612.44)
01 9000 230 000	KITCHEN RETIREMENT	0.00	651.55	0.00	(5,615.89)
230 RETIREMENT NON-INSTR		0.00	651.55	0.00	(5,615.89)
01 9000 237 000	Increased Retirement Contribution Rate	0.00	0.00	0.00	0.00
237 Inc Ret Contribution Rate		0.00	0.00	0.00	0.00
01 9000 260 000	UNEMPLOYMENT PMTS	0.00	0.00	0.00	0.00
260 UNEMPLOYMENT PMTS		0.00	0.00	0.00	0.00
01 9000 280 000	KITCHEN LTD	0.00	42.58	0.00	(347.09)
280 LTD/STD NON-INSTR		0.00	42.58	0.00	(347.09)

Account Number	Account Description	Revised Budget	Expended During Month	% of Budget	Unencumbered Balance
01 9000 900 000	MISC EXP-expected carryover	0.00	0.00	0.00	0.00
900 OTHER		0.00	0.00	0.00	0.00
9000 NON-PROGRAM EXPENDITURES		0.00	10,761.61	0.00	(96,823.94)
9003 REPAYMENT OF INTERFUND LOAN FR BLDG					
01 9003 001 000	INTERFUND LOANS	0.00	0.00	0.00	(20,000.00)
001 InterFund LOANS		0.00	0.00	0.00	(20,000.00)
9003 REPAYMENT OF INTERFUND LOAN FR BLDG		0.00	0.00	0.00	(20,000.00)
01 General Fund		9,425,235.00	673,973.14	61.72	3,608,375.13

Account Number	Account Description	Revised Budget	Expended During Month	% of Budget	Unencumbered Balance
Grand Total:		9,425,235.00	673,973.14	61.72	3,608,375.13

HTRS Grades 7-12
Principal's Report
Kim Caniglia
April 14, 2025

Providing aTitan learning environment that is **P**ositive **R**espectful **I**ntentional **D**etermined and **E**ngaged.

HTRS 7-12 Enrollment
7th - 18
8th - 19
9th - 30
10th - 22
11th - 19
12th - 19
Other - 2
Total = 129

- March 11, 2025 - Richardson County Spelling Bee@HTRS -Drake Blacketer took 2nd place
- March 17-21, 2025 - Community breakfast was served during Ag Week by FFA.
- March 18, 2025 - STEAM night was a great evening of inventions and learning, a big thank you goes out to Jaime Frey for organizing.
- March 21-22, 2025 - Mr. Merwin took the 8th graders to the Lego League Championship - it was a learning year and they brought back many notes for competing next year.
- March 25, 2025 was ACT and PreACT testing. - Mrs. Rogers & Mrs. Standerford did a great job of organizing all the testing.
- March 27, 2025 - JAG officers attended Legislative Day at the Capitol.
- March 28, 2025 - Speech went to State with Macy Vrtiska winning D1 Informative Speaking, and runner up in Persuasive. Elie Bstandig finished 7th in poetry. Jakob Manning was 8th in Extemp and 9th in Persuasive.
- April 2, 3,& 4 - FFA Farm Business Management and Agriscience Teams competed at State.
- April 8, 2025 - JAG students visited the Cooper Nuclear Power Plant.
- April 8, 2025 - Mrs. Rogers organized the Post-Secondary Prep Day. The day was successful with college and career tables, guest speakers and mock interviews.
- April 9, 2025 - The Red Cross BloodMobile in honor of Steve Hilgenfeld collected 35 units.
- April 10, 2025 - FFA Officer Interviews occurred.
- April 17, 2025 - FFA Banquet & food will be in the Old Gym.

- April 24, 2025 - Senior Class Field Trip to Kansas City
- April 25, 2025 - Awards Night
- April 28, 2025 - NHS Induction
- May 5-9, 2025 - Teacher Appreciation Week
- May 10, 2025 - Graduation at 2:00 PM.
- May 20, 2025 - Last Day of School

Activities Report

- The high school track team has had 3 meets so far this year. We've had many students place in events and multiple students have placed first. We are working to make improvements to the track. This year we bought new starting blocks and new pole vault standards.
- On March 21, 2025, HTRS hosted a middle school band competition. Seven schools participated in the event. Mr. Coffey did a wonderful job organizing the event. The staff did a great job helping with various jobs during the day.
- On March 28, 2025, Mrs. Howe took several math students to compete in the Peru State Mathematics Challenge. The Geometry team of Ty Dunekacke, PJ Howe and Boxuan Zhu placed first in the Division 2 Geometry competition . Jakob Kessler placed 3rd in the Division 2 Precalculus Individual competition.
- The cheer team is busy preparing for next year. Cheer tryouts were held on April 10, 2025. We will have 12 cheerleaders for next year.
- The HTRS Junior High Track Meet took place on April 10, 2025 in Pawnee City. Six schools participated in the track meet. Our high school track athletes and coaches did a fantastic job helping run the event.
- The golf team has participated in two meets so far. We will host the HTRS Invite on April 15th at Kirkman's Cove.
- Senior and Junior High Quiz Bowl started this past month. Both competed at the ESU 4 quiz bowl at Peru State. The junior high participated in the Pioneer Conference Quiz bowl at Southern. The B team placed 2nd in the Silver Division. Unfortunately, the HS Pioneer Conference Quiz Bowl at Diller-Odell was cancelled due to the Blizzard on March 19, 2025.

HTRS grades 7-12 will focus on a learning environment that is inclusive and supports a Positive, Respectful, Intentional, Determined and Engaged (PRIDE) school culture.

Educationally yours,
Kimberly L. Caniglia

April Board Report

Elementary PreK - 6th Grade Enrollment

- PreK 3 - 16 students
- PreK 4 - 10 students
- Kindergarten - 21 students
- 1st Grade - 20 students
- 2nd Grade - 19 students
- 3rd Grade - 24 students
- 4th Grade - 18 students
- 5th Grade - 32 students
- 6th Grade - 20 students

Total - 180 students

Science Team

- Getting quotes for the textbooks

Assessments

ACT/PreACT/PreACT 8/9

- OVER!!

NSCAS State Test

- March 24 - May 2
- The schedule has been sent out
- Grades 3 - 8 - Reading & Math
- Grades 5 & 8 - Science

MAP Test

- Teachers will schedule testing for these grades
- K - 2 - Reading & Math

Field Trips

- April 11 - 1st Grade - Children's Museum & Lincoln Children's Zoo
- April 16 - 2nd Grade - Omaha Henry Doorly Zoo
- April 23 - 4th Grade - State Capital & Morrill Hall Lincoln
- May 1 - 5th Grade - Kiewit Luminarium
- May 2 - Kindergarten - Omaha Henry Doorly Zoo
- May 8 - 6th Grade - Kansas City Royals Baseball Game - Weather Presentation
- 3rd Grade - took a fall trip to the Rose Theatre in Omaha

Music Concerts

- May 6 - K - 4 Concert @ 6:00 PM
- May 6 - 5 - 8 Concert @ 7:00 PM

AR End of Year Party - May 15 (K - 2) & May 16 (3 - 6)

- Students who met their AR goal all four quarters
- Attend the movie @ Auburn State Theatre
- Students receive popcorn and pop during the movie

Elementary Awards

- May 20 - K - 6
- Parents are invited

#TitanPride

NASB BOARD QUICKS

APRIL 2025

A MONTHLY E-UPDATE OF KEY DATES FROM THE NEBRASKA ASSOCIATION OF SCHOOL BOARDS

2,000,000 Nebraskans | 329,000 Students | 1,700 Locally Elected School Board Members | 260 Member Districts/ESUs | ONE NEBRASKA

To register for an NASB event, click on the 'My Membership' link, then navigate to the 'Events' dropdown and select 'Register'.
If you do not have an email and password to log in or have forgotten it, please contact NASB at 402-423-4951 for assistance.
All Dates & Locations Tentative & Subject to Change

JOIN US!

Events & Networking - https://members.nasbonline.org/events

Where Will NASBe This Month?*

Atlanta
ESU 6
Kearney
Lincoln
Norfolk
Norris
Pawnee City
Paxton
Sidney
Sterling
Summerland
The Capitol
Thedford
Wood River

For ... Advocacy, Board Retreats, Engagement, Events, National Conference, Search, Strategic Planning, and more!

*Items currently scheduled.

APRIL 2025

Budget & Finance Workshop - Wednesday, April 9 - Norfolk

Budget & Finance Workshop - Wednesday, April 16 - Kearney

Board Academy Collaboration Lunch & Learn - Wednesday, April 16 - Webinar

Federal Advocacy Update - Wednesday, April 23 - Webinar

National Walk at Lunch Day - Wednesday, April 30

MAY 2025

To the Class of 2025 ... We know that you're just getting started!

JUNE 2025

Final Day of the 2025 Legislative Session, Monday, June 9

NASB Member Golf Outing - Wednesday, June 11 - Kearney

Email sendorf@NASBonline.org for more information

School Law Seminar - June 11-12 - Kearney

Continued on Page 2

NASB Nebraska Association of SCHOOL BOARDS

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NASB provides programs, services, and advocacy to strengthen public education for all Nebraskans. Learn more at www.NASBonline.org

NASB BOARD QUICKS

A MONTHLY E-UPDATE OF KEY DATES FROM THE NEBRASKA ASSOCIATION OF SCHOOL BOARDS

APRIL 2025

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JULY 2025

Board Academy Collaboration Lunch & Learn - Date TBD - Webinar

Leadership Workshops - July 28 in Gering, July 29 in Kearney, July 30 in Lincoln

AUGUST-DECEMBER 2025

Area Membership Meetings - Labor Relations - Board Academy Collaboration Lunch & Learn
State Education Conference - New Board Member Workshop

YOUR 2025 PLATINUM AFFILIATES

If your business would like to become an Affiliate Member of NASB, please visit: https://members.nasbonline.org/about-us/affiliate-members

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THIRD RAIL CONTENT

Leadership | Innovation | Vision | Engagement | #liveNASB | #weLIVEhere

NEBRASKA'S COLLEGE AND CAREER READY

STANDARDS FOR ENGLISH LANGUAGE ARTS

Approved by the Nebraska State Board of Education on September 2, 2021

Matthew L. Blomstedt, Ph.D., Commissioner of Education

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Approved by the Nebraska State Board of Education on September 2, 2021

Acknowledgements

The standards within this document were developed by a team of Nebraska educators. These educators represent the diversity of students served by Nebraska's K-12 schools, a variety of content and grade-level expertise, and geographic locations across the state. In addition, a panel of subject matter experts reviewed and provided guidance on the recommended revisions. The standards were developed during the 2020-2021 academic year and approved by the Nebraska State Board of Education in September 2021. The Nebraska Department of Education would like to express warm gratitude to these educators for their knowledge, expertise, and dedication to Nebraska's K-12 students.

Angie Aguallo, ELA Teacher, Scottsbluff Public Schools
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Introduction

The ability to use language for the pursuit of knowledge, for purposeful expression, and for active participation in civic life requires academic content standards that are clearly defined and increasingly rigorous across grade levels. The Nebraska English Language Arts standards encompass a wide range of essential skills in the areas of reading, writing, speaking, and listening. The standards, both individually and as an integrated whole, describe not only expectations for college, career, and civic readiness, but the 21st century literacies necessary for critical and innovative thinking and problem solving. The progression of skills within each strand are research and evidence-based and designed to prepare Nebraska's students for post-secondary and workforce demands.

Content Area Standards Overview

Nebraska Revised Statute 79-760.01 requires the State Board of Education to adopt measurable academic content standards for the areas of reading, writing, mathematics, science, and social studies. Standards describe grade-level expectations for given content areas and provide a framework upon which Nebraska districts develop, establish, and implement curriculum. For effective teaching and learning to occur, the content area standards should drive local decisions related to instructional materials, resources, and interim, formative, and summative assessments.

The Nebraska Department of Education has identified quality criteria in the development of content area standards. These criteria ensure that standards are grounded in a strong research base of human cognition, motivation, and teaching and learning and describe essential knowledge and skills for college, career, and civic readiness. The English Language Arts standards, written by teams of Nebraska educators and reviewed by literacy experts, were developed with the following of indicators of quality:

Measurable. Standards provide benchmarks against which student progress toward learning goals can be measured.
Appropriately challenging. Standards must build in complexity so that by the end of grade 12, students are prepared for postsecondary education and the workforce.
Connected. Student learning is most effective when it connects knowledge and skills to related topics and real-world applications.
Clearly worded. Content area standards must effectively communicate what students should know and be able to do.
Scaffolded. Indicators in the Nebraska content area standards scaffold student learning by sequencing connected knowledge and skills across grades so that students build and deepen understanding and ability over time.
Specific. Specificity assures that the language used in standards and indicators is sufficiently detailed to be accurately interpreted by educators.

English Language Arts Standards Design

Nebraska's English Language Arts Standards reflect the tiered structure common across all Nebraska content area standards. *Grade-level standards* include broad, overarching content-based statements that describe the basic cognitive or affective expectations of student learning. They also reflect, across all grade levels, the long-term goals for learning associated with college- and career-readiness. *Indicators* further describe what students must know and be able to do to meet the standard as well as provide guidance related to classroom instruction. In addition to standards and indicators, some of the Nebraska Standards for English Language Arts provide examples. The "e.g." statements, where appropriate, provide guidance relative to topics that may be included in a locally determined curriculum.

Nebraska's standards are organized with three levels of specificity:

- **K-12 Comprehensive Statements**—Identify broad, general statements that are not grade-level specific and cover big ideas in the English Language Arts (Foundations of Reading, Reading Prose and Poetry, Reading Informational Text, Vocabulary, Writing, and Speaking and Listening).
- **Grade-Level Expectations**—Statements that identify what students should know and be able to do by the end of each identified grade/band. These statements are found within the categories of each strand, for example, Reading Prose and Poetry and Reading Informational Text strands are organized into four categories: *Central Ideas and Details, Author's Craft, Knowledge and Ideas*, and *Range of Reading and Level of Text Complexity*. Each of these categories includes a statement that describes the expectations for proficiency and remain consistent through grade levels.
- **Curricular Indicators**—Specific information to distinguish expectations between grade levels. They are considered an integral part of the standard to be taught.

Coding

The standards are organized using a coding system that includes the content area, grade level, an abbreviation for the strand, the category within the strand, and the number within the strand. Lowercase letters represent indicators for some of the standards. *Note—not all standards include indicators*.

Example: LA.K.F.1.a

LA= Content Area
K= Kindergarten
F= Foundations of Reading
1= Concepts of Print
a= Indicator

Approved by the Nebraska State Board of Education on September 2, 2021

K-12 Comprehensive English Language Arts Standards

Strand	Comprehensive Standard
Foundations of Reading (F)	Students will develop and apply decoding and language comprehension skills and strategies to comprehend and learn from increasingly complex texts.
Reading Prose and Poetry (RP)	Students will learn and apply reading skills and strategies to comprehend grade-level literary texts.
Reading Informational Text (RI)	Students will learn and apply reading skills and strategies to comprehend grade-level informational texts.
Vocabulary (V)	Student will build and use conversational, academic, and discipline-specific, grade-level vocabulary.
Writing (W) and Foundations of Writing (FW)	Students will learn and apply writing skills and strategies to communicate effectively for a variety of purposes.
Speaking and Listening (SL)	Students will learn and apply speaking and listening skills and strategies to communicate effectively for a variety of audiences and purposes.

Spiraled, Vertical Progressions. The revised 2021 Nebraska English Language Arts Standards are formatted to support educators in both grade-level and vertical instructional planning. In addition to organization by grade level, the standards and indicators are formatted into spiraled, vertical articulations. This design demonstrates the interrelated nature of skills in the English Language Arts and their progression through the grade levels. The purpose of presenting the standards into vertical charts is to provide educators with a practical tool for the development of a locally-determined, standards-aligned curriculum.

For each standard in the areas of Foundations of Reading, Reading Prose and Poetry, Reading Informational Text, Writing*, Vocabulary, and Speaking and Listening, the standards and indicators are listed in a table format from the 11-12 grade band and ending at Kindergarten.

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Text at the Center

The graphic below illustrates an integrated model of literacy. Although the standards are organized into the essential components of Foundations of Reading, Reading Comprehension, Writing, Vocabulary, and Speaking and Listening for conceptual clarity, the strands are closely interrelated. For example, students should engage in meaningful writing tasks in response to the complex texts they are reading. Likewise, many of the skills associated with research are applicable to both writing and speaking tasks. The hallmark of effective ELA instruction is in the English Language Arts is to demonstrate this interrelatedness through thoughtful planning in daily lessons and in the scope and sequence of knowledge and skills over the course of a year.

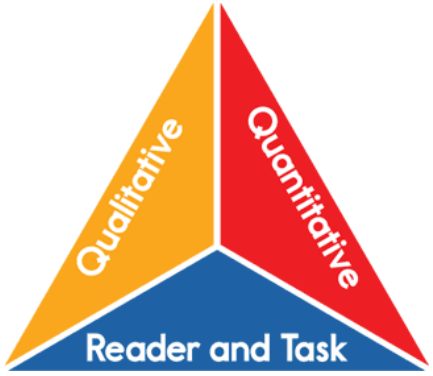
The 2021 revised College and Career Ready Standards for English Language Arts illustrate a text-centered approach to instruction. All students become proficient through deliberate practice. Practice means that students engage in an abundance of reading during the literacy block, both on- and off-grade-level, combined with thoughtful instruction so that all students have access to grade-level, complex texts. Students should have ample opportunity to express their understanding of meaning through discussion and writing. High-quality, grade-level complex texts can also provide the basis for instruction in other domains such as vocabulary acquisition and grammar, usage, and mechanics skills.

Students should spend significant time actively reading content-rich, complex text. Close reading of complex text is concentrated, demanding work that helps students discover how to learn from reading and grow their knowledge, vocabulary, and understanding of syntax.

Students should engage in a volume of reading to build knowledge and be exposed to academic language in all content areas. That volume of reading needs to be at a range of complexity levels so that every student can eventually read independently and proficiently. Much of this volume should be with information-rich text, either full-length books or conceptually connected shorter texts (groups of texts that cohere together to create a picture of a topic). A text-centered approach provides rich ELA/literacy classroom experiences and builds confident, joyful readers.

Why text complexity matters. Nearly half of American students graduating from high school will require some level of remediation to successfully read and understand the texts they will encounter as they enter college or the workforce. By the time many students complete their K-12 education, they are not able to meet the reading requirements they will face after graduation. An extensive body of research has emerged to explore the role of text complexity as it relates to students' ability to independently and proficiently comprehend the kinds of texts required in postsecondary work or their chosen career fields. A 2006 ACT study *Reading Between the Lines* examined student performance on reading comprehension measures to understand why some students performed below benchmark. The report indicated that the skills differentiating students who met the benchmark for reading proficiency from those who did not was their ability to answer correctly questions about more complex text.

The role of standards. The revised standards emphasize the range and complexity of texts that move students to proficiency as they progress through the grades. Below is the 3-part model for measuring the complexity of texts.



Qualitative measures. These include dimensions of text such as its purpose, levels of meaning, structure, conventions of language, and the knowledge demands they place upon the reader.

Quantitative measures. These measures refer to aspects of text complexity that can be objectively measured, for example, word length and frequency, sentence length, and text cohesion.

Reader and Task considerations. While quantitative and qualitative elements of complexity focus on the text itself, the *Reader and Task* dimension considers individual readers and variables such as their motivation, background knowledge, and the purpose and difficulty of the task associated with a given text. Assessments in this dimension rely on professional judgment and expertise of classroom teachers as they consider their students and the subject matter at hand.

Lexile ranges. Measures of text complexity must be aligned with college and career readiness expectations for all students. Qualitative scales of text complexity should be anchored at one end by descriptions of texts representative of those required in typical first-year, credit-bearing college courses and in workforce training programs. Similarly, quantitative measures should identify the college- and career-ready reading level as one endpoint of the scale. *Please see Appendix A for associated Lexile ranges by grade band.*

Distribution of literary and informational text types. The 2009 reading framework for the National Assessment of Educational Progress (NAEP) requires a high and increasing proportion of informational text on its assessments as students advance through the grades. The revised standards for English Language Arts are aligned to this framework so that all students are equipped to meet the text complexity demands of college and career readiness.

Grade	Literary	Informational
4	50%	50%
8	45%	55%
12	30%	70%

Source: National Assessment Governing Board. 2008.
Reading Framework for the 2009 National Assessment of Educational Progress.

Distribution of communicative purposes by grade in the 2011 NAEP Writing Framework. NAEP likewise outlines a distribution across the grades of the core purposes and types of student writing. The Framework recognizes these modes as mutually reinforcing writing capacities—writing to persuade, to explain, and to convey real or imagined experiences. A body of evidence related to the demands of college and career readiness requires shifting emphasis so that in grades 9-12, the overwhelming focus of writing is on arguments and informative/explanatory text types.

Grade	To Persuade	To Explain	To Convey Experience
4	30%	35%	35%
8	35%	35%	30%
12	40%	40%	20%

Source: National Assessment Governing Board. 2007.
Writing framework for the 2011 National Assessment of Educational Progress, pre-publication edition. Iowa City, IA: ACT, Inc.

Shared responsibility for literacy development. ELA teachers have a unique and specialized role in developing students' literacy skills, including systematic instruction of the foundations of reading and writing. But the comprehensive nature of the standards—reading, writing, language development, vocabulary acquisition, speaking and listening—and their applicability to student success in other content areas, requires that they be a shared responsibility within the school. An interdisciplinary approach to literacy assures students receive explicit instruction in reading and writing with a wide range of discipline-specific texts and tasks.

The Nebraska Instructional Materials Collaborative

Every Nebraska student deserves the opportunity to learn from high-quality, standards-aligned instructional materials to prepare for success in college, career, and civic life. While the revised standards lay out a roadmap for the acquisition of 21st century literacy skills, high-quality instructional materials, along with a well-crafted, locally determined curriculum, are essential to assuring students meet grade-level benchmarks.

The Nebraska Instructional Materials Collaborative promotes and advances equity by providing tools and resources so that all Nebraska students have access to high-quality materials. This includes learning the content outlined in Nebraska's college- and career-ready standards but also includes opportunities for students to discover and explore their passions within the context of postsecondary interests. Research demonstrates that English language learners, students with disabilities, low-income, and students of color are less likely to have access to high quality content or textbooks in the classroom. This inequity, in part, accounts for the significant achievement gap between these students and their peers. The NIMC is committed to help address this gap.

Developing a vision. As districts consider instructional materials, a key first step is establishing a district-wide vision for excellent literacy instruction in which all students have access to grade-appropriate assignments, strong instruction, deep engagement, and teachers with high expectations.

The implementation of high-quality instructional materials is a critical to assuring students have access to the grade-level texts, tasks, and instruction that will prepare them for future success. The Nebraska Instructional Materials Collaborative provides reviews of ELA materials based upon:

- the text quality and complexity and their alignment to standards with tasks grounded in evidence;
- the knowledge-building of texts, vocabulary, and tasks;
- and instructional supports and usability measures.

In addition to review tools, the NIMC provides an abundance of resources such as subject-specific guidance for navigating the selection and implementation process, supporting research, professional development resources, communication tools, archived webinars, upcoming events, FAQs, and a statewide map of HQIMs in use by Nebraska districts, To learn more please visit the Nebraska Instructional Materials Collaborative website.

Social Emotional Learning

Social and emotional learning (SEL) is the process through which children and adults understand and manage emotions, set and achieve positive goals, feel and show empathy for others, establish and maintain positive relationships, and make responsible decisions. Because SEL plays a critical role in learning and human development, the revised standards for English Language Arts recognize it as an integral part of rigorous and meaningful curriculum and instruction.

The CASEL Framework. The Collaborative for Academic, Social, and Emotional Learning (CASEL) is a widely used framework that identifies five core competencies:

Self-awareness: The ability to accurately recognize one's emotions and thoughts and their influence on behavior. This includes accurately assessing one's strengths and limitations and possessing a well-grounded sense of confidence and optimism.

Self-management: The ability to regulate one's emotions, thoughts, and behaviors effectively in different situations. This includes managing stress, controlling impulses, motivating oneself, and setting and working toward achieving personal and academic goals.

Social awareness: The ability to take the perspective of and empathize with others from diverse backgrounds and cultures, to understand social and ethical norms for behavior, and to recognize family, school, and community resources and supports.

Relationship skills: The ability to establish and maintain healthy and rewarding relationships with diverse individuals and groups. This includes communicating clearly, listening actively, cooperating, resisting inappropriate social pressure, negotiating conflict constructively, and seeking and offering help when needed.

Responsible decision-making: The ability to make constructive and respectful choices about personal behavior and social interactions based on consideration of ethical standards, safety concerns, social norms, the realistic evaluation of consequences of various actions, and the well-being of self and others.

Foundations of Reading

A sequence of explicit, systematic phonics instruction provides the foundation for literacy. Nebraska's 2021 College and Career Ready *Foundations of Reading* standards align with the body of research known as the science of reading. A systematic approach to the foundational skills—*Concepts of Print, Phonological Awareness*, *Phonics and Word Analysis*, and *Fluency*—supports emergent readers as they develop proficiency during the early years.

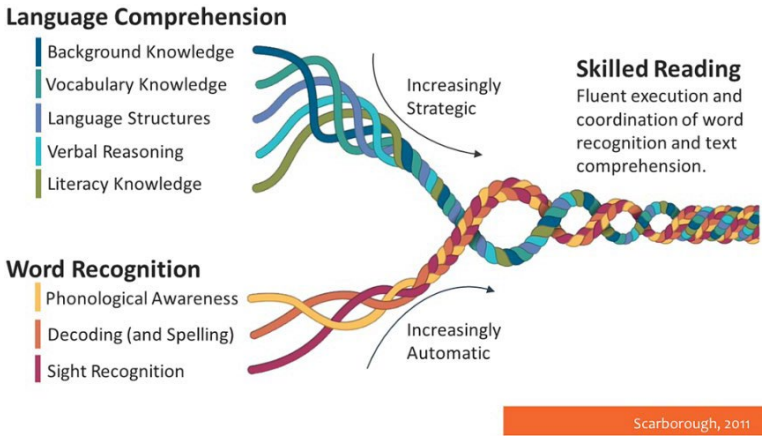
Concepts of print. Print concepts refers to the awareness of *how print works*. Examples include that print reads from left to right, that words are separated by spaces, and basic knowledge of the parts of a book.

Phonological awareness. Phonological or phonemic awareness is the ability to recognize and manipulate the sounds in spoken language. Young children begin developing phonological awareness by enjoying and reciting rhyming words and alliterative phrases from familiar stories, songs, or nursery rhymes.

Phonics and word analysis. The ability to match the sounds of spoken language with individual letters or groups of letters is known as *phonics*. Instruction focuses on common letter-sound correspondences, strategies for sounding out letters, and blending sounds into words. Word analysis instruction focuses on recognizing base words, prefixes, and suffixes in increasingly complex words.

Fluency. Fluency is the ability to read with speed, accuracy, and appropriate expression. As the ability to decode, or master letter-sound relationships, improves, so does a student's ability to read smoothly and clearly. Fluency is considered the "bridge" to reading comprehension; a student is considered a proficient reader when both fluency and reading comprehension are at grade level.

The graphic below, known as Scarborough's Rope, represents the complexities involved in learning to read and illustrates the interconnectedness of foundational reading skills. The Reading Rope is comprised of upper and lower "strands" related to language comprehension and word recognition. The elements of word recognition work together as a young reader develops automaticity with decoding and fluency with reading aloud. Language comprehension skills that include background knowledge, vocabulary, and knowledge of language structures, complement development in the lower strand. Over time, increasingly strategic instruction and opportunities for practice assure students grow into proficient readers.



The extent to which students master foundational skills determines their later ability to understand complex, grade-level texts in a variety of subject areas. While many students progress through learning targets naturally and with ease, as literacy expert and author Dr. Louisa Moats explains, "Teaching reading to a student who does not learn easily or naturally is a complex and challenging professional enterprise that requires deep knowledge of content of the cognitive and language factors that shape student learning, and of pedagogical detail."

The Nebraska State Board of Education supports and encourages systemic efforts to improve early literacy for all students, working to ensure that all students become successful readers and writers prepared for college, career, and civic life. To learn more about instructional resources, including for readers who struggle, please visit https://www.education.ne.gov/nebraskareads/.

Key Features of the Standards

Reading: Text complexity and the growth of comprehension. The Reading standards place equal emphasis on the sophistication of what students read and the skill with which they read. The standards are designed to demonstrate a grade-by-grade "staircase" of increasing text complexity that rises from beginning reading to the college and career readiness level. Whatever they are reading, students must also show a steadily growing ability to discern more from and make fuller use of text, including making an increasing number of connections among ideas and between texts, considering a wider range of textual evidence, and becoming more sensitive to inconsistencies, ambiguities, and poor reasoning in texts.

Writing: Text types, responding to reading, and research. The revised standards acknowledge the fact that whereas some writing skills, such as the ability to plan, revise, edit, and publish, are applicable to many types of writing, other skills are more properly defined in terms of specific writing types: arguments, informative/explanatory texts, and literary forms. The *Modes of Writing* standards and indicators convey the importance of the writing-reading connection by requiring students to draw upon and write about evidence from literary and informational texts. Because of the centrality of writing to most forms of inquiry, research standards are prominently included in this strand, though skills important to research are infused throughout this document.

Production of writing: Conventions, effective use, and vocabulary. The *Production of Writing* strand includes the many skills that comprise essential "rules" of standard written and spoken English, but they also approach language as a matter of craft and informed choice among alternatives. These standards and indicators also recognize the sentence as the building block of writing and build in sophistication as they progress through the grades. The V*ocabulary* standards complement the sequence of grammar, usage, and mechanics with their focus on understanding words and phrases, their relationships, and their nuances and on acquiring new vocabulary, particularly general academic and domain-specific words and phrases.

Speaking and Listening: Flexible communication and collaboration Including but not limited to skills necessary for formal presentations. The *Speaking and Listening* standards require students to develop a range of broadly useful oral communication and interpersonal skills. Students must learn to work together, express and listen carefully to ideas, integrate information from oral, visual, quantitative, and media sources, evaluate what they hear, use media and visual displays strategically to help achieve communicative purposes, and adapt speech to context and task.

Kindergarten Standards

Approved by the Nebraska State Board of Education on September 2, 2021

FOUNDATIONS OF READING

Concepts of Print | Demonstrate knowledge of the organization and basic concepts of print.
LA.K.F.1 Demonstrate knowledge of the organization and basic concepts of print.

a. Identify all upper and lowercase letters of the alphabet in isolation and in connected text.
b. Recognize that spoken words are represented in written language by specific sequences of letters, and that print carries meaning.
c. Demonstrate understanding that words are separated by spaces in print; demonstrate understanding of one-to-one correspondence between voice and print.
d. Demonstrate knowledge that print reads from left to right, top to bottom, and page by page.

Phonological Awareness | Demonstrate phonological awareness through oral activities.
LA.K.F.2 Demonstrate understanding of spoken words, syllables, and sounds (phonemes).

a. Segment and count spoken sentences into words.
b. Recognize and begin to produce oral rhymes.
c. Count, produce, and segment spoken words into syllables and identify syllable parts.
d. Blend onsets and rimes to form simple words (e.g., v-an, gr-ab).
e. Delete part of a syllable within a spoken word including compound words (e.g., "Say 'parsnip.' Say it again but don't say 'par;' e.g., "Say 'cowboy.' Say it again but don't say 'cow'").
f. Isolate and pronounce the initial, medial vowel, and final sounds (phonemes) in two- and three-phoneme (VC or CVC) words, excluding CVC words ending with /l/, /r/, or /x/.

Phonics and Word Analysis | Demonstrate phonetic and word analysis knowledge and apply decoding skills to isolated words and in connected text.
LA.K.F.3 Know and apply phonics and word analysis skills in decoding and encoding (spelling) words.

a. Demonstrate basic knowledge of one-to-one sound to letter correspondences by producing the primary or many of the most frequent sounds for each consonant.
b. Demonstrate the long and short sounds with common spellings (graphemes) for the five major vowels.
c. Decode consonant-vowel-consonant (CVC) words.
d. Encode consonant-vowel-consonant (CVC) words.
e. Distinguish between similarly spelled words by identifying the sounds of the letters that differ.

Fluency | Read grade-level texts with sufficient accuracy and fluency to support comprehension.
LA.K.F.4 Develop accuracy, phrasing, and expression/prosody while reading a variety of grade-level texts to support comprehension.

a. Recognize upper and lowercase letters automatically and accurately.
b. Read decodable consonant-vowel-consonant (CVC) words with automaticity and accuracy.
c. Read grade level high-frequency words with automaticity and accuracy (e.g. Fry or Dolch words or those included in instructional materials).

Instructional Considerations

- In recognizing and producing oral rhymes, students should indicate the location of the rhyme, i.e. at the end of a line of print.
- Students can demonstrate understanding of one-to-one correspondence between voice and print by pointing to each word in a sentence as it is read aloud.
- *Phonological awareness* refers to oral skills and to the syllable, onset-rime, and phoneme levels and does not involve print or letter knowledge.
- Many high-frequency words at the primary grade levels are either irregularly spelled or temporarily irregular, thus students have not yet learned the phonics rule that would enable them to decode the word. Those words that are decodable should be introduced to students using appropriate phonics rules. High-frequency words should be introduced utilizing the regular sound-spelling patterns found within the word, not only as words to be memorized.
- *Reading fluency* refers to efficient, effective word recognition skills that permit a reader to construct the meaning of text. "Fluency is manifested in accurate, rapid, expressive oral reading and is applied during, and makes possible, silent reading comprehension," (Pikulski & Chard, 2005).

READING PROSE AND POETRY

Central Ideas and Details | Citing relevant and thorough textual evidence to support ideas, evaluate the development of themes or central ideas in grade-level literary texts.
LA.K.RP.1 With prompting and support, orally retell familiar stories, including key details, and demonstrate understanding of their central message or lesson.
LA.K.RP.2 With prompting and support, identify main character(s), setting, and important events in a literary text.

Author's Craft | Citing relevant and thorough evidence to support ideas, evaluate the development and interaction of individuals, ideas, and events in grade-level literary text.
LA.K.RP.3 With prompting and support, define the role of author and illustrator in a literary text.
LA.K.RP.4 With prompting and support, identify the basic characteristics of literary text.

Knowledge and Ideas | Citing relevant and thorough textual evidence to support ideas, evaluate how an author's perspective or use of point of view shapes the style and meaning of grade-level literary text.
LA.K.RP.5 With prompting and support, compare and contrast the experiences of characters in familiar stories.
LA.K.RP.6 With prompting and support, ask and answer questions about key details in a literary text.
LA.K.RP.7 With prompting and support, make connections between own experiences and other cultures in literary texts.

Range of Reading and Level of Text Complexity | Read and comprehend complex, grade-level literary texts independently and proficiently.
LA.K.RP.8 Actively engage in group reading activities with purpose and understanding.

Instructional Considerations

- Making predictions and drawing conclusions, known as *forward inferencing*, occur when readers draw from textual information provided up to that point in the text; confirming predictions using textual evidence is a necessary step after making predictions about a topic or events.
- At this grade level, descriptions should be both oral and written as students respond to questions or engage in discussion.
- In describing settings or characters, students should explain what in the text the descriptions are based upon.
- Students should be made aware that not all narratives contain a central message or lesson.
- At all grade levels, students should read paired, conceptually-related (by topic, theme, and/or genre) literary and informational texts.

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READING INFORMATIONAL TEXT

Central Ideas and Details | Citing relevant and thorough textual evidence to support ideas, evaluate the development of themes or central ideas in grade-level informational texts.
LA.K.RI.1 With prompting and support, identify the main topic and key details in an informational text.
LA.K.RI.2 With prompting and support, identify key individuals, events, or pieces of information in an informational text.

Author's Craft | Citing relevant and thorough evidence to support ideas, evaluate the development and interaction of individuals, ideas, and events in grade-level informational texts.
LA.K.RI.3 With prompting and support, define the role of author and illustrator in presenting the ideas or information in a text.
LA.K.RI.4 With prompting and support, use text features (titles, headings, visuals) to predict or confirm the topic of a text.

Knowledge and Ideas | Citing relevant and thorough textual evidence to support ideas, evaluate how an author's perspective or use of point of view shapes the style and meaning of grade-level informational texts.
LA.K.RI.5 With prompting and support, identify basic similarities and differences between two informational texts on the same topic.
LA.K.RI.6 With prompting and support, explain the difference between facts and opinions about a topic.
LA.K.RI.7 With prompting and support, make connections between own experiences and other cultures in informational texts.

Range of Reading and Level of Text Complexity | Read and comprehend complex, grade-level informational texts independently and proficiently.
LA.K.RI.8 Actively engage in group reading activities with purpose and understanding.

Instructional Considerations

- A text's topic is its general subject, which is typically a word or short phrase describing what the text is about, for example, "zoo animals."
- Making predictions and drawing conclusions, known as *forward inferencing*, occur when readers draw from textual information provided up to that point in the text; confirming predictions using textual evidence is a necessary step after making predictions about a topic or events.
- At this grade level, students may explain orally statements of fact or opinion either in response to questions or while engaging in discussion of text.

V O C A B U L A R Y

Acquisition and Use | Build and use a range of conversational, academic, and discipline-specific grade-level vocabulary and apply to reading, writing, speaking, and listening.
LA.K.V.1 Recognize and use conversational and grade-level academic vocabulary.

a. With prompting and support, identify new meanings of familiar words (e.g., park, ring, fly).
b. With prompting and support, use commonly occurring inflections and affixes to determine the meaning of unknown words.
c. With prompting and support, determine the meanings of key words and phrases using provided reference materials and classroom resources.

Context and Connotation | Determine or clarify the meaning of unknown and multiple-meaning words and phrases, choosing flexibly from a range of strategies.
LA.K.V.2 Interpret an author's use of figurative, connotative, and technical language in grade-level literary and informational text.

a. With prompting and support, sort common words and phrases into conceptual categories to develop an understanding of word relationships.
b. With prompting and support, deepen understanding of words by identifying and relating them to their opposites.
c. With prompting and support, ask and answer questions about key words and phrases to determine their meaning.
d. With prompting and support, identify and explain descriptive words and phrases that suggest feelings or appeal to the senses.

Instructional Considerations

- *Academic vocabulary* refers to words likely to appear in a variety of content area texts, at or above grade-level, and typically requires explicit instruction. Students should be encouraged to use newly acquired terms frequently in speaking and writing.
- The vast majority of academic vocabulary taught should derive from complex texts—a careful review of texts for challenging words that are central to understanding the meaning of the text, including figurative language, should determine which vocabulary is taught explicitly (sometimes in advance of reading).
- Include a word study component that includes prefixes, root words, and suffixes to accompany text-based methods of vocabulary development.
- Reading aloud to students using texts that are two grade levels higher than their reading level is an evidence-based practice for activating prior knowledge and building vocabulary.

WRITING

Foundations of Writing | Apply handwriting skills to communicate ideas and information.
LA.K.FW.1 Demonstrate basic handwriting skills.

a. Identify and match upper and lowercase manuscript letters.
b. Print many upper and lowercase manuscript letters using reference materials and classroom resources.
c. Write left to right and use appropriate spacing between letters and words.

LA.K.FW.2 Demonstrate sound-letter concepts when writing.

a. Segment phonemes orally in single-syllable words.
b. Demonstrate understanding that syllables are organized around vowel sounds.

Production of Writing | Use a recursive writing process to produce clear and coherent writing appropriate to the discipline, audience, and/or context.
LA.K.W.1 With prompting and support, form and use complete simple sentences in shared language activities.

a. Capitalize the first word in a sentence and the pronoun *I*.
b. Recognize and name end punctuation.
c. Identify nouns (e.g., singular and plural) and simple verbs (e.g., action).
d. Form regular plural nouns by adding /s/ or /es/.
e. Use interrogatives to ask questions.
f. Use subject-verb agreement in simple sentences.

LA.K.W.2 With prompting and support, use a recursive writing process to develop, strengthen, and produce writing appropriate to the discipline, audience, and/or context.

a. Use prewriting activities and resources to generate ideas.
b. Adapt writing processes to sustain engagement in short and long-term writing tasks of increasing length and complexity.
c. Use feedback from others to improve writing and/or add details.
d. Use or decipher multiple formats of print and digital text (e.g., manuscript, font, graphics, symbols).
e. Use appropriate digital/multimedia tools to produce, enhance, and/or publish writing individually or with peers.

Modes of Writing | Write in a variety of modes for a variety of purposes and audiences across disciplines.
LA.K.W.3 With prompting and support, narrate personal or fictional events in a sequential order using a combination of drawing, dictating, and/or writing.

LA.K.W.4 With prompting and support, express an opinion about a topic or text with one supporting reason using a combination of drawing, dictating, and/or writing.

LA.K.W.5 With prompting and support, write informative/explanatory pieces about a topic or text with one supporting fact using a combination of drawing, dictating, and/or writing.

LA.K.W.6 With prompting and support, identify information from provided sources to answer a question using a combination of drawing, dictating, and/or writing.

Instructional Considerations

- The standards contain four broad modes of writing—**Narrative**, **Opinion (K-5)**, **Informative/Explanatory**, and **Research**.
- *Narrative* forms include but are not limited to: short stories, personal narratives, fables, myths, tall tales, fairy tales, plays, poetry, autobiography, biography, essays, screenplays, narrative nonfiction, realistic fiction, historical accounts, memoirs, nonlinear narratives, legends, epics, and ballads.
- *Opinion*, or argumentative, forms include but are not limited to: personal opinion pieces, appeals, editorials, proposals, personal essays, speeches, letters, literary analyses, and persuasive and op-ed pieces.
- *Informative/explanatory* forms include, but are not limited to: descriptive essays, comparative analyses, historical reports, manuals, process pieces, journal, magazine, and newspaper articles, memorandums, scientific reports, compare/contrast, problem/solution, and cause/effect essays.
- At this grade level, written pieces may be a combination of words, pictures, and dictated text.
- At this grade level, some personal opinion may be included in informational pieces.
- *The improvement of writing* refers to the editing of both drawing and writing.

SPEAKING AND LISTENING

Comprehension and Collaboration | Communicate effectively and appropriately in collaborative activities for a variety of tasks, purposes, and audiences to express ideas, share knowledge, and generate new understandings.
LA.K.SL.1 With prompting and support, participate with peers and adults in structured discussions and routines about Kindergarten topics and texts.

a. Ask pertinent questions to acquire or confirm information.
b. Demonstrate interpretation of verbal and non-verbal messages in a conversation.
c. Converse with peers and adults in an all-inclusive manner to foster positive relationships while respecting diverse perspectives.
d. Develop attentive listening skills (e.g., eye contact, nonverbal cues, recalling).
e. Complete a task following one/two-step directions.

Presentation of Knowledge and Ideas | Present information, findings, and supporting evidence in which the organization, development, and style are appropriate to the discipline, audience, and/or context.
LA.K.SL.2 With prompting and support, describe familiar people, places, things, and events, and provide additional detail.

a. Demonstrate appropriate speaking techniques (e.g., appropriate eye contact, adequate volume, clear pronunciation) for a variety of purposes and situations.
b. Convey a personal perspective with clear reasons.
c. Explain the purpose of information being presented.
d. Demonstrate awareness of and sensitivity to the appropriate use of words (e.g., helpful/hurtful words).
e. Use appropriate visual and/or digital tools to support verbal communication.

Instructional Considerations

- Instruction of speaking and listening skills should be purposeful, directed, and specific as well as integrated throughout structured classroom activities and routines.
- At this grade level, students should be encouraged to reply to questions both orally and in writing using complete sentences.
- Appropriate visual and/or digital tools include, but are not limited to: graphic images, drawings, artwork, photographs, audio and video pieces, charts, tables, sound effects, animation, and infographics.

Grade 1 Standards

Approved by the Nebraska State Board of Education on September 2, 2021

FOUNDATIONS OF READING

Concepts of Print | Demonstrate knowledge of the organization and basic concepts of print.
LA.1.F.1 Demonstrate knowledge of the organization and basic concepts of print.

a. Recognize the distinguishing features of a sentence.

Phonological Awareness |Demonstrate phonological awareness through oral activities.
understanding of spoken words, syllables, and sounds (phonemes).
LA.1.F.2 Demonstrate understanding of spoken words, syllables, and sounds (phonemes).

a. Identify, segment and blend phonemes in single syllable spoken three and four phoneme words including words with blends.
b. Delete initial and final phonemes in words.
c. Substitute phonemes in spoken words to build new words in single-syllable words with no blends.
d. Add or substitute individual sounds (phonemes in simple, one-syllable words to make new words), (e.g., "Say 'map.' Say it again and instead of /p/ say /t/. What is the new word? 'Mat'").

Phonics and Word Analysis | Demonstrate phonetic and word analysis knowledge and apply decoding skills to isolated words and in connected text.
LA.1.F.3 Know and apply phonics and word analysis skills in decoding and encoding (spelling) words.

a. Decode and encode words using knowledge of sound-spelling correspondence for common consonant digraphs, tri-graphs, and blends.
b. Decode and encode simple words with r-controlled vowels.
c. Decode and encode regularly spelled one-syllable words.
d. Decode and encode final -e and common vowel team conventions for representing long vowel sounds.
e. Decode and encode two-syllable words with regular patterns by breaking the words into syllables.
f. Decode and encode words with inflectional endings.
g. Use knowledge that every syllable must have a vowel sound to determine the number of syllables in a printed word.
h. Recognize and read grade-appropriate, irregularly spelled words.

Fluency | Read grade-level texts with sufficient accuracy and fluency to support comprehension.
LA.1.F.4 Develop accuracy, phrasing, and expression/prosody while reading a variety of grade-level texts to support comprehension.

a. Read decodable text accurately with appropriate rate, intonation, and expression/prosody to reflect meaning.
b. Read grade level high-frequency words with automaticity and accuracy (e.g., Fry or Dolch words or those included in instructional materials).

Instructional Considerations

- *Phonological awareness* refers to oral skills and to the syllable, onset-rime, and phoneme levels and does not involve print or letter knowledge.
- *Phonics* refers to the relationship between graphemes (letters or letter combinations) and phonemes (speech sounds).
- Many high-frequency words at the primary grade levels are either irregularly spelled or temporarily irregular, thus students have not yet learned the phonics rule that would enable them to decode the word. Those words that are decodable should be introduced to students using appropriate phonics rules. High-frequency words should be introduced utilizing the regular sound-spelling patterns found within the word, not only as words to be memorized.
- *Reading fluency* refers to efficient, effective word recognition skills that permit a reader to construct the meaning of text. "Fluency is manifested in accurate, rapid, expressive oral reading and is applied during, and makes possible, silent reading comprehension," (Pikulski & Chard, 2005).
- Students at this grade level should practice reading fluently with texts within the grade band for quantitative complexity measures and appropriate in content and qualitative measures.

READING PROSE AND POETRY

Central Ideas and Details | Citing relevant and thorough textual evidence to support ideas, evaluate the development of themes or central ideas in grade-level literary texts.
LA.1.RP.1 Retell familiar stories, including key details, and demonstrate understanding of their central message or lesson from a literary text.
LA.1.RP.2 Identify the main character(s), setting, and important events, drawing on key details in a literary text.

Author's Craft | Citing relevant and thorough evidence to support ideas, evaluate the development and interaction of individuals, ideas, and events in grade-level literary texts.
LA.1.RP.3 Explain the difference between the roles of author and narrator or speaker in a literary text.
LA.1.RP.4 Identify the basic characteristics of literary text, drawing on a wide range of text types.

Knowledge and Ideas | Citing relevant and thorough textual evidence to support ideas, evaluate how an author's perspective or use of point of view shapes the style and meaning of grade-level literary texts.
LA.1.RP.5 Compare and contrast the experiences of characters in familiar stories.
LA.1.RP.6 Ask and answer questions about key details in a literary text.
LA.1.RP.7 Make connections between own experiences and other cultures in literary texts.

Range of Reading and Level of Text Complexity | Read and comprehend complex, grade-level literary texts independently and proficiently.
LA.1.RP.8 With prompting and support, read and comprehend a wide range of literary texts of appropriate complexity for Grade 1.

Instructional Considerations

- Making predictions and drawing conclusions, known as *forward inferencing*, occur when readers draw from textual information provided up to that point in the text; confirming predictions using textual evidence is a necessary step after making predictions about a topic or events.
- At this grade level, descriptions should be both oral and written as students respond to questions or engage in discussion.
- In describing settings or characters, students should explain what in the text the descriptions are based upon.
- Students should be made aware that not all narratives contain a central message or lesson.
- At all grade levels, students should read paired, conceptually-related (by topic, theme, and/or genre) literary and informational texts.

READING INFORMATIONAL TEXT

Central Ideas and Details | Citing relevant and thorough textual evidence to support ideas, evaluate the development of themes or central ideas in grade-level informational texts.
LA.1.RI.1 Identify the main topic and key details in an informational text.
LA.1.RI.2 Identify key individuals, events, or pieces of information in an informational text.

Author's Craft | Citing relevant and thorough evidence to support ideas, evaluate the development and interaction of individuals, ideas, and events in grade-level informational texts.
LA.1.RI.3 Define the role of the author and illustrator in presenting the ideas or information in a text.
LA.1.RI.4 Use text features (titles, headings, visuals) to predict or confirm the topic of a text.

Knowledge and Ideas | Citing relevant and thorough textual evidence to support ideas, evaluate how an author's perspective or use of point of view shapes the style and meaning of grade-level informational texts.
LA.1.RI.5 Identify basic similarities and differences between two informational texts on the same topic.
LA.1.RI.6 Identify an author's opinion(s) about a text.
LA.1.RI.7 Make connections between own experiences and other cultures in informational texts.

Range of Reading and Level of Text Complexity | Read and comprehend complex, grade-level informational texts independently and proficiently.
LA.1.RI.8 With prompting and support, read and comprehend a wide range of informational texts of appropriate complexity for Grade 1.

Instructional Considerations

- A text's topic is its general subject, which is typically a word or short phrase describing what the text is about, for example, "zoo animals."
- Making predictions and drawing conclusions, known as *forward inferencing*, occur when readers draw from textual information provided up to that point in the text; confirming predictions using textual evidence is a necessary step after making predictions about a topic or events.
- At this grade level, students should explain both orally and in writing statements of fact or opinion, either in response to questions or while engaging in discussion of text.
- Simple graphic organizers (Venn diagrams, t-charts) will support students in understanding similarities and differences.

VOCABULARY

Acquisition and Use | Build and use a range of conversational, academic, and discipline-specific grade-level vocabulary and apply to reading, writing, speaking, and listening.

LA.1.V.1 Build and use a range of conversational, academic, and discipline-specific grade-level vocabulary.

a. Use sentence-level context clues to determine the meaning of a word or phrase.
b. Use commonly occurring affixes to determine the meaning of unknown words.
c. Identify commonly occurring root words and their inflectional forms.
d. Determine the meanings of key words and phrases using provided reference materials and classroom resources.

Context and Connotation | Determine or clarify the meaning of unknown and multiple-meaning words and phrases, choosing flexibly from a range of strategies.

LA.1.V.2 Interpret an author's use of figurative, connotative, and technical language in grade-level literary and informational text.

a. Sort common words and phrases into conceptual categories to develop an understanding of word relationships.
b. Define words by their category and simple attributes (e.g., a duck is a bird that swims).
c. Ask and answer questions about key words and phrases to determine their meaning.
d. Distinguish nuances of meaning between common verbs (e.g., glance, stare) and adjectives differing in intensity (e.g., large, gigantic).

Instructional Considerations

- *Academic vocabulary* refers to words likely to appear in a variety of content area texts, at or above grade-level, and typically requires explicit instruction. Students should be encouraged to use newly acquired terms frequently in speaking and writing.
- The vast majority of academic vocabulary taught should derive from complex texts—a careful review of texts for challenging words that are central to understanding the meaning of the text, including figurative language, should determine which vocabulary is taught explicitly (sometimes in advance of reading).
- Include a word study component that includes prefixes, root words, and suffixes to accompany text-based methods of vocabulary development.
- Reading aloud to students using texts that are two grade levels higher than their reading level is an evidence-based practice for activating prior knowledge and building vocabulary.

WRITING

Foundations of Writing | Apply handwriting skills to legibly communicate ideas and information.

LA.1.FW.1 Demonstrate and apply handwriting skills.

a. Print all upper and lowercase manuscript letters using correct formation.
b. Write the common grapheme (letter or letter group) for each phoneme.
c. Use appropriate spacing between letters and words.

LA.1.FW.2 Demonstrate sound-letter concepts when writing.

a. Segment phonemes in two- and three-phoneme syllables.
b. Write letters used to represent vowel phonemes and those used to represent consonants; demonstrate understanding that every syllable has a vowel.

Production of Writing | Use a recursive writing process to produce clear and coherent writing appropriate to the discipline, audience, and/or context.

LA.1.W.1 Write and expand grammatically correct simple sentences and paragraphs.

a. Capitalize proper nouns (e.g., days of the week, names of people).
b. Use end punctuation, commas in dates, and commas to separate single words in a series.
c. Identify and use nouns (e.g., common, proper), pronouns (e.g., personal and possessive), verbs (e.g., past, present), and descriptive adjectives.
d. Form and use regular and frequently occurring irregular plural nouns.
e. Use subject-verb agreement in simple and compound sentences.

LA.1.W.2 Develop, strengthen, and produce writing appropriate to the audience, purpose, and discipline.

a. Use prewriting activities and resources to generate and organize ideas.
b. Adapt writing processes to sustain engagement in short and long-term writing tasks of increasing length and complexity.
c. Use feedback from others to improve writing and/or add details.
d. Use or decipher multiple formats of print and digital text (e.g., manuscript, font, graphics, symbols).
e. Use appropriate print and digital/multimedia tools to produce, enhance, and/or publish writing individually or in collaboration with peers.

Modes of Writing | Write in a variety of modes for a variety of purposes and audiences across disciplines.

LA.1.W.3 With prompting and support, write personal or fictional creative and/or expressive pieces that retell two or more appropriately sequenced events.

a. Include some relevant details.
b. Use time order words to signal sequence of events.
c. Provide a sense of closure.

LA.1.W.4 With prompting and support, express an opinion about a topic or text and provide a supporting reason.

a. Introduce a topic or text.
b. State an opinion and provide a reason to support the opinion.
c. Provide a sense of closure.

LA.1.W.5 With prompting and support, write informative/explanatory pieces about a topic or text with supporting facts and details.

a. Introduce a topic.
b. Develop a topic using supporting facts and details.
c. Use words and phrases related to the topic.
d. Provide a sense of closure.

LA.1.W.6 With prompting and support, identify information from provided sources to answer a question.

a. Retell or recall information from provided sources.
b. Use provided print and/or digital tools to gather information and ideas to answer questions.
c. Sort evidence and information into categories.
d. Demonstrate academic integrity by referencing sources in writing and speaking.
e. Practice safe behaviors when communicating and interacting with others digitally (e.g., safe information to share, utilize appropriate sites and materials).

Instructional Considerations

- *Grammar*, or the rules by which sentences are constructed, is contrasted from *usage*, which is the way words and phrases are commonly used. All dialects of language are grammatical and follow rules; exceptions to the uses of language that do not conform to standard English should be given instructional consideration. *Mechanics* refers to the norms of written language only and includes spelling, punctuation, and capitalization. Mechanics may change according to time, place, and purpose.
- The standards contain four broad modes of writing—**Narrative**, **Opinion (K-5)**, **Informative/Explanatory**, and **Research**.
- *Narrative* forms include but are not limited to: short stories, personal narratives, fables, myths, tall tales, fairy tales, plays, poetry, autobiography, biography, essays, screenplays, narrative nonfiction, realistic fiction, historical accounts, memoirs, nonlinear narratives, legends, epics, and ballads.
- *Opinion*, or argumentative, forms include but are not limited to: personal opinion pieces, appeals, editorials, proposals, personal essays, speeches, letters, literary analyses, and persuasive and op-ed pieces.
- *Informative/explanatory* forms include, but are not limited to: descriptive essays, comparative analyses, historical reports, manuals, process pieces, journal, magazine, and newspaper articles, memorandums, scientific reports, compare/contrast, problem/solution, and cause/effect essays.

SPEAKING AND LISTENING

Comprehension and Collaboration | Communicate effectively and appropriately in collaborative activities for a variety of tasks, purposes, and audiences to express ideas, share knowledge, and generate new understandings.
LA.1.SL.1 Participate with peers and adults in structured discussions and routines about 1st grade topics and texts.

a. Ask pertinent questions to acquire or confirm information.
b. Demonstrate interpretation of verbal and non-verbal messages in a conversation.
c. Converse with peers and adults in an all-inclusive manner to foster positive relationships while respecting diverse perspectives.
d. Develop attentive listening skills (e.g., eye contact, nonverbal cues, recalling).
e. Complete a task following one/two-step directions.

Presentation of Knowledge and Ideas | Present information, findings, and supporting evidence in which the organization, development, and style are appropriate to the discipline, audience, and/or context.
LA.1.SL.2 Tell a story or recount experiences with appropriate facts and pertinent descriptive details.

a. Demonstrate appropriate speaking techniques (e.g., appropriate eye contact, adequate volume, clear pronunciation) for a variety of purposes and situations, including interpreting 1st grade texts.
b. Convey a personal perspective with clear reasons.
c. With prompting and support, explain the purpose of information being presented.
d. Demonstrate awareness of and sensitivity to the appropriate use of words (e.g., helpful/hurtful words).
e. Use appropriate visual and/or digital tools to support verbal communication.

Instructional Considerations

- Instruction of speaking and listening skills should be purposeful, directed, and specific as well as integrated throughout structured classroom activities and routines.
- At this grade level, students should be encouraged to reply to questions both orally and in writing using complete sentences.
- Appropriate visual and/or digital tools include, but are not limited to: graphic images, drawings, artwork, photographs, audio and video pieces, charts, tables, sound effects, animation, and infographics.

Grade 2 Standards

Approved by the Nebraska State Board of Education on September 2, 2021

FOUNDATIONS OF READING

Concepts of Print | Demonstrate knowledge of the organization and basic concepts of print.
LA.2.F.1 Demonstrate knowledge of the organization and basic concepts of print.

a. Recognize the distinguishing features of a paragraph including that multiple sentences may be used to form a paragraph and the author may indent or skip a line to signal a new paragraph.

Phonological Awareness |Demonstrate phonological awareness through oral activities.
LA.2.F.2 Demonstrate understanding of advanced phonemic awareness skills in spoken words, syllables, and sounds (phonemes).

a. Identify, segment, and blend phonemes in single syllable spoken five and six phoneme words including words with blends, digraphs, and trigraphs.
b. Substitute sounds in words with five or more phonemes.
c. Delete initial and final phonemes in words including words with blends.

Phonics and Word Analysis | Demonstrate phonetic and word analysis knowledge and apply decoding skills to isolated words and in connected text.
LA.2.F.3 Know and apply phonics and word analysis skills in decoding and encoding (spelling) words.

a. Decode words with variable vowel teams and vowel diphthongs.
b. Decode regularly spelled two-syllable words with long vowels.
c. Decode words with open and closed syllables and consonant -le.
d. Decode words with common Anglo roots and suffixes.
e. Decode words with silent letter combinations.

Fluency | Read grade-level texts with sufficient accuracy and fluency to support comprehension.
LA.2.F.4 Develop accuracy, phrasing, and expression/prosody while reading a variety of grade-level texts to support comprehension.

a. Read a variety of texts accurately using appropriate rate, expression, and intonation to reflect meaning.
b. Read grade level high-frequency words with automaticity and accuracy (e.g., Fry or Dolch words or those included in instructional materials).

Instructional Considerations

- *Phonological awareness* refers to oral skills and to the syllable, onset-rime, and phoneme levels and does not involve print or letter knowledge.
- *Phonics* refers to the relationship between graphemes (letters or letter combinations) and phonemes (speech sounds).
- Many high-frequency words at the primary grade levels are either irregularly spelled or temporarily irregular, thus students have not yet learned the phonics rule that would enable them to decode the word. Those words that are decodable should be introduced to students using appropriate phonics rules. High-frequency words should be introduced utilizing the regular sound-spelling patterns found within the word, not only as words to be memorized.
- *Reading fluency* refers to efficient, effective word recognition skills that permit a reader to construct the meaning of text. "Fluency is manifested in accurate, rapid, expressive oral reading and is applied during, and makes possible, silent reading comprehension," (Pikulski & Chard, 2005).
- Students at this grade level should practice reading fluently with texts within the grade band for quantitative complexity measures and appropriate in content and qualitative measures.

READING PROSE AND POETRY

Central Ideas and Details | Citing relevant and thorough textual evidence to support ideas, evaluate the development of themes or central ideas in grade-level literary text.
LA.2.RP.1 Recount narratives and determine their central message, lesson, or moral.
LA.2.RP.2 Describe characters and how they interact with one another.

Author's Craft | Citing relevant and thorough evidence to support ideas, evaluate the development and interaction of individuals, ideas, and events in grade-level literary text.
LA.2.RP.3 Determine and explain who is telling a story within and across literary texts.
LA.2.RP.4 Describe the basic structure of a literary text, including how literary elements are introduced and developed and conflicts are resolved.

Knowledge and Ideas | Citing relevant and thorough textual evidence to support ideas, evaluate how an author's perspective or use of point of view shapes the style and meaning of grade-level literary text.
LA.2.RP.5 Compare and contrast two or more versions of the same literary text by different authors or from different cultures.
LA.2.RP.6 Ask and answer literal (e.g., recall/details) and simple inferential (e.g., why or how) questions about key details in a literary text.
LA.2.RP.7 Compare and contrast topics in a variety of literary texts to build knowledge of cultures (e.g., history, values, beliefs, and behaviors).

Range of Reading and Level of Text Complexity | Read and comprehend complex, grade-level literary text independently and proficiently.
LA.2.RP.8 With scaffolding as needed, read and comprehend a wide range of literary texts of appropriate complexity for Grade 2.

Instructional Considerations

- Making predictions and drawing conclusions, known as *forward inferencing*, occur when readers draw from textual information provided up to that point in the text; confirming predictions using text evidence is a necessary step.
- In describing settings or characters, students should explain what in the text the descriptions are based upon.
- Students should be made aware that not all narratives contain a central message or lesson.
- At all grade levels, students should read paired, conceptually-related (by topic, theme, and/or genre) literary and informational texts.

READING INFORMATIONAL TEXT

Central Ideas and Details | Citing relevant and thorough textual evidence to support ideas, evaluate the development of themes or central ideas in grade-level informational text.
LA.2.RI.1 Identify the main topic and key details in a multi-paragraph text.
LA.2.RI.2 Describe the connections between individuals, historical events, scientific ideas, or steps in a process.

Author's Craft | Citing relevant and thorough evidence to support ideas, evaluate the development and interaction of individuals, ideas, and events in grade-level informational text.
LA.2.RI.3 Determine and explain the author's purpose in an informational text, including what the author wants to answer, explain, or describe.
LA.2.RI.4 Explain how text features (titles, headings, table of contents, glossaries, captions, graphs, maps, and/or other visuals) contribute to the meaning of texts.

Knowledge and Ideas | Citing relevant and thorough textual evidence to support ideas, evaluate how an author's perspective or use of point of view shapes the style and meaning of grade-level informational text.
LA.2.RI.5 Compare and contrast the two most important ideas presented by two informational texts on the same topic.
LA.2.RI.6 Explain an author's opinion(s) and supporting evidence from the text.
LA.2.RI.7 Compare and contrast topics in a variety of informational texts to build knowledge of cultures (e.g., history, values, beliefs, and behaviors).

Range of Reading and Level of Text Complexity | Read and comprehend complex, grade-level informational text independently and proficiently.
LA.2.RI.8 With scaffolding as needed, read and comprehend a wide range of informational texts of appropriate complexity for Grade 2.

Instructional Considerations

- Making predictions and drawing conclusions, known as *forward inferencing*, occur when readers draw from textual information provided up to that point in the text; confirming predictions using textual evidence is a necessary step after making predictions about a topic or events.
- At this grade level, students should explain both orally and in writing statements of fact or opinion, either in response to questions or while engaging in discussion of text.
- Simple graphic organizers (Venn diagrams, t-charts) will support students in understanding similarities and differences.

VOCABULARY

Acquisition and Use | Build and use a range of conversational, academic, and discipline-specific grade-level vocabulary and apply to reading, writing, speaking, and listening.

LA.2.V.1 Recognize and use conversational and grade-level academic vocabulary.

a. Use sentence-level context clues to determine the meaning of a word or phrase.
b. Use commonly occurring prefixes and suffixes to determine the meaning of unknown words (e.g., happy/unhappy).
c. Use known root words to determine the meaning of unknown words (e.g., addition, additional).
d. Determine the meaning of compound words by using knowledge of individual words (e.g., birdhouse).
e. Determine the meanings of key words and phrases using provided reference materials and classroom resources.

Context and Connotation | Determine or clarify the meaning of unknown and multiple-meaning words and phrases, choosing flexibly from a range of strategies.

LA.2.V.2 Interpret an author's use of figurative, connotative, and technical language in grade-level literary and informational text.

a. Ask and answer questions about key words and phrases to determine their meaning.
b. Distinguish nuances of meaning between closely related verbs (e.g., toss, throw) and closely related adjectives (e.g., thin, slender).

Instructional Considerations

- *Academic vocabulary* refers to words likely to appear in a variety of content area texts, at or above grade-level, and typically requires explicit instruction. Students should be encouraged to use newly acquired terms frequently in speaking and writing.
- The vast majority of academic vocabulary taught should derive from complex texts—a careful review of texts for challenging words that are central to understanding the meaning of the text, including figurative language, should determine which vocabulary is taught explicitly (sometimes in advance of reading).
- Include a word study component that includes prefixes, root words, and suffixes to accompany text-based methods of vocabulary development.
- Reading aloud to students using texts that are two grade levels higher than their reading level is an evidence-based practice for activating prior knowledge and building vocabulary.

WRITING

Foundations of Writing | Apply handwriting skills to communicate ideas and information.

LA.2.FW.1 Demonstrate and apply handwriting skills.

a. Write legibly using correct formation of letters with automaticity and proper spacing between words.

LA.2.FW.2 Demonstrate sound-letter concepts when writing.

a. Write common graphemes (letters or letter groups) for each phoneme.

Production of Writing | Use a recursive writing process to produce clear and coherent writing appropriate to the discipline, audience, and/or context.

LA.2.W.1 Write and expand grammatically correct sentences (e.g. declarative, imperative, interrogative, exclamatory) and paragraphs.

a. Capitalize proper nouns (e.g., holidays, countries, product names).
b. Use commas in greetings and closings of letters; use apostrophes to form contractions and frequently occurring possessives.
c. Identify and explain the use of nouns (e.g., collective and irregular plural), pronouns (e.g., demonstrative), verbs (e.g., past tense irregular), simple prepositions, and frequently occurring conjunctions.
d. Maintain consistent verb tense across sentences or paragraphs.

LA.2.W.2 Use a recursive writing process to develop, strengthen, and produce writing appropriate to the audience, purpose, and discipline.

a. Use prewriting activities and resources to plan, organize, and draft writing.
b. Adapt writing processes to sustain engagement in short and long-term writing tasks of increasing length and complexity.
c. Improve and clarify the content, structure, and organization of writing by revising, considering feedback from adults and peers.
d. Improve and clarify writing by editing and proofreading, considering feedback from adults and peers.
e. Use or decipher multiple formats of print and digital text (e.g., manuscript, font, graphics, symbols).
f. Use appropriate print and digital/multimedia tools to produce, enhance, and/or publish writing individually or in collaboration with peers.

Modes of Writing | Write in a variety of modes for a variety of purposes and audiences across disciplines.

LA.2.W.3 Write personal or fictional narratives that retell two or more appropriately sequenced events.

a. Include relevant details about characters and settings.
b. Use time order words to signal a sequence of events.
c. Provide a sense of closure.

LA.2.W.4 Express an opinion and provide supporting reasons.

a. Introduce a topic or text.
b. State an opinion and provide reasons to support the opinion.
c. Provide a concluding statement or section.

LA.2.W.5 Write informative/explanatory pieces about a topic or text with supporting facts and details.

a. Introduce a topic or text.
b. Develop a topic with facts, details, and definitions.
c. Use words and phrases related to the topic.
d. Provide a concluding statement or section.

LA.2.W.6 Locate information from provided sources to answer questions about a topic.

a. Retell information from provided sources to support ideas while avoiding plagiarism.
b. Identify print and digital tools to gather information and ideas and answer questions.
c. Sort evidence and information into categories.
d. Demonstrate academic integrity by referencing sources in writing and speaking.
e. Practice safe and ethical behaviors when communicating and interacting with others digitally (e.g., safe information to share, utilize appropriate sites and materials, appropriate language use, respect diverse perspectives).

Instructional Considerations

- *Grammar*, or the rules by which sentences are constructed, is contrasted from *usage*, which is the way words and phrases are commonly used. All dialects of language are grammatical and follow rules; exceptions to the uses of language that do not conform to standard English should be given instructional consideration. *Mechanics* refers to the norms of written language only and includes spelling, punctuation, and capitalization. Mechanics may change according to time, place, and purpose.
- The standards contain four broad modes of writing—**Narrative**, **Opinion (K-5)**, **Informative/Explanatory**, and **Research**.
- *Narrative* forms include but are not limited to: short stories, personal narratives, fables, myths, tall tales, fairy tales, plays, poetry, autobiography, biography, essays, screenplays, narrative nonfiction, realistic fiction, historical accounts, memoirs, nonlinear narratives, legends, epics, and ballads.
- *Opinion*, or argumentative, forms include but are not limited to: personal opinion pieces, appeals, editorials, proposals, personal essays, speeches, letters, literary analyses, and persuasive and op-ed pieces.
- *Informative/explanatory* forms include, but are not limited to: descriptive essays, comparative analyses, historical reports, manuals, process pieces, journal, magazine, and newspaper articles, memorandums, scientific reports, compare/contrast, problem/solution, and cause/effect essays.

SPEAKING AND LISTENING

Comprehension and Collaboration | Communicate effectively and appropriately in collaborative activities for a variety of tasks, purposes, and audiences to express ideas, share knowledge, and generate new understandings.

LA.2.SL.1 Participate with peers and adults in structured discussions and routines about 2nd grade topics and texts.

a. Ask pertinent questions to acquire or confirm information.
b. Demonstrate interpretation of verbal and non-verbal messages in a conversation.
c. Converse with peers and adults in an all-inclusive manner to foster positive relationships while respecting diverse perspectives.
d. Develop active and attentive listening skills (e.g., eye contact, nonverbal cues, recalling).
e. Complete a task following multi-step directions.

Presentation of Knowledge and Ideas | Present information, findings, and supporting evidence in which the organization, development, and style are appropriate to the discipline, audience, and/or context.

LA.2.SL.2 Tell a story or recount an experience with appropriate facts and pertinent descriptive details.

a. Demonstrate appropriate speaking techniques (e.g., appropriate eye contact, adequate volume, clear pronunciation) for a variety of purposes and situations, including interpreting 2nd grade texts.
b. Convey a personal perspective with clear reasons.
c. Explain the purpose and credibility of information being presented.
d. Demonstrate awareness of and sensitivity to the appropriate use of words (e.g., helpful/hurtful words).
e. Use appropriate visual and/or digital tools to support verbal communication.

Instructional Considerations

- Instruction of speaking and listening skills should be purposeful, directed, and specific as well as integrated throughout structured classroom activities and routines.
- At this grade level, students should be encouraged to reply to questions both orally and in writing using complete sentences.
- Appropriate visual and/or digital tools include, but are not limited to: graphic images, drawings, artwork, photographs, audio and video pieces, charts, tables, sound effects, animation, and infographics.

Grade 3 Standards

Approved by the Nebraska State Board of Education on September 2, 2021

FOUNDATIONS OF READING

Concepts of Print | Demonstrate knowledge of the organization and basic concepts of print.

Mastered at Grade 2 and blended with other skills at this grade level.

Phonological Awareness |Demonstrate phonological awareness through oral activities.

Mastered at Grade 2 and blended with other skills at this grade level.

Phonics and Word Analysis | Demonstrate phonetic and word analysis knowledge and apply decoding skills to isolated words and in connected text.

LA.3.F.3 Know and apply phonics and word analysis skills in decoding and encoding (spelling) words.

a. Decode words with common Latin suffixes.
b. Decode words with common derivational suffixes and describe how they turn words into different parts of speech.
c. Decode multisyllabic words.

Fluency | Read grade-level texts with sufficient accuracy and fluency to support comprehension.

LA.3.F.4 Develop accuracy, phrasing, and expression/prosody while reading a variety of grade-level text to support comprehension.

a. Read a variety of text accurately using appropriate rate, expression/prosody and intonation to reflect the meaning of text.
b. Adjust pace and prosody based on the purpose, complexity, form, and/or style of a text.
c. Read grade level high-frequency words with automaticity and accuracy (e.g., Fry or Dolch words or those included in instructional materials).

Approved by the Nebraska State Board of Education on September 2, 2021

Instructional Considerations

- *Phonics* refers to the relationship between graphemes (letters or letter combinations) and phonemes (speech sounds).
- Many high-frequency words at the primary grade levels are either irregularly spelled or temporarily irregular, thus students have not yet learned the phonics rule that would enable them to decode the word. Those words that are decodable should be introduced to students using appropriate phonics rules. High-frequency words should be introduced utilizing the regular sound-spelling patterns found within the word, not only as words to be memorized.
- *Reading fluency* refers to efficient, effective word recognition skills that permit a reader to construct the meaning of text. "Fluency is manifested in accurate, rapid, expressive oral reading and is applied during, and makes possible, silent reading comprehension," (Pikulski & Chard, 2005).
- Students at this grade level should practice reading fluently with texts within the grade band for quantitative complexity measures and appropriate in content and qualitative measures.
- *Prosody* refers to the patterns of pausing to reflect the meaning of text while reading aloud.

READING PROSE AND POETRY

Central Ideas and Details | Citing relevant and thorough textual evidence to support ideas, evaluate the development of themes or central ideas in grade-level literary texts.
LA.3.RP.1 Identify the central message or lesson in a literary text and explain how key details support that idea.
LA.3.RP.2 Explain how characters respond to major events and challenges in a literary text.

Author's Craft | Citing relevant and thorough evidence to support ideas, evaluate the development and interaction of individuals, ideas, and events in grade-level literary and informational text.
LA.3.RP.3 Determine and explain the point of view in a literary text.
LA.3.RP.4 Explain how sections of a literary text (e.g., chapters, scenes, stanzas) build on one another and contribute to meaning.

Knowledge and Ideas | Citing relevant and thorough textual evidence to support ideas, evaluate how an author's perspective or use of point of view shapes the style and meaning of grade-level literary text.
LA.3.RP.5 Compare and contrast the themes, settings, and plots of literary texts written by the same author about the same or similar characters (e.g., books from a series).
LA.3.RP.6 Explain what the text says explicitly and draw inferences when asking and answering questions.
LA.3.RP.7 Compare and contrast themes, topics, and/or patterns of events in a range of literary texts.

Range of Reading and Level of Text Complexity | Read and comprehend complex, grade-level literary text independently and proficiently.
LA.3.RP.8 Read and comprehend a wide range of literary texts of appropriate complexity for Grade 3 independently and proficiently.

Instructional Considerations

- In describing settings or characters, students should explain what in the text the descriptions are based upon.
- Students should be made aware that not all narratives contain a central message or lesson.
- At all grade levels, students should read paired, conceptually-related (by topic, theme, and/or genre) literary and informational texts.
- *Point of view* refers to the vantage point from which a narrative is told.

READING INFORMATIONAL TEXT

Central Ideas and Details | Citing relevant and thorough textual evidence to support ideas, evaluate the development of themes or central ideas in grade-level informational text.
LA.3.RI.1 Identify the central idea and explain how key details support that idea.
LA.3.RI.2 Explain the relationship between individuals, historical events, scientific ideas or concepts, or steps in a process.

Author's Craft | Citing relevant and thorough evidence to support ideas, evaluate the development and interaction of individuals, ideas, and events in grade-level informational text.
LA.3.RI.3 Determine and explain the author's purpose in an informational text.
LA.3.RI.4 Explain how text features (titles, headings, table of contents, glossaries, captions, graphs, maps, and/or other visuals) contribute to meaning.

Knowledge and Ideas | Citing relevant and thorough textual evidence to support ideas, evaluate how an author's perspective or use of point of view shapes the style and meaning of grade-level informational text.
LA.3.RI.5 Compare and contrast the two most important ideas and key details presented by multiple informational texts on the same topic.
LA.3.RI.6 Identify an author's claim(s) and explain how the author supports the claim(s) in the text.
LA.3.RI.7 Compare and contrast topics and/or patterns of events in a range of informational texts.

Range of Reading and Level of Text Complexity | Read and comprehend complex, grade-level informational text independently and proficiently.
LA.3.RI.8 Read and comprehend a wide range of informational texts of appropriate complexity for Grade 3 independently and proficiently.

Instructional Considerations

- A *claim* refers to an author's primary argument and is supported by textual evidence.
- *Author's craft* refers to the techniques an author uses to develop and support a claim.
- *Point of view* refers to the vantage point from which a story is told, while *perspective* is an author's attitude or belief that is based on personal knowledge and/or experience.

V O C A B U L A R Y

Acquisition and Use | Build and use a range of conversational, academic, and discipline-specific grade-level vocabulary and apply to reading, writing, speaking, and listening.

LA.3.V.1 Acquire and use grade-level academic vocabulary appropriately.

a. Use sentence-level context clues to determine the meaning of a word or phrase.
b. Use affixes to determine the meaning of unknown words (e.g., comfortable, uncomfortable).
c. Use known root words to determine the meaning of unknown words (e.g., company, companion).
d. Determine the meanings of key words and phrases using reference materials and classroom resources.

Context and Connotation | Determine or clarify the meaning of unknown and multiple-meaning words and phrases, choosing flexibly from a range of strategies.

LA.3.V.2 Interpret an author's use of figurative, connotative, and technical language in grade-level literary and informational text.

a. Distinguish between literal and nonliteral meanings of words and phrases in context (e.g., take steps).
b. Identify real-life connections between words and their use (e.g., describe people who are friendly or helpful).
c. Distinguish nuances of meaning between related words that describe states of mind or degrees of certainty (e.g., believed, suspected).

Instructional Considerations

- *Academic vocabulary* refers to words likely to appear in a variety of content area texts, at or above grade-level, and typically requires explicit instruction. Students should be encouraged to use newly acquired terms frequently in speaking and writing.
- The vast majority of academic vocabulary taught should derive from complex texts—a careful review of texts for challenging words that are central to understanding the meaning of the text, including figurative language, should determine which vocabulary is taught explicitly (sometimes in advance of reading).
- Include a word study component that includes prefixes, root words, and suffixes to accompany text-based methods of vocabulary development.
- Reading aloud to students using texts that are two grade levels higher than their reading level is an evidence-based practice for activating prior knowledge and building vocabulary.

WRITING

Production of Writing | Use a recursive writing process to produce clear and coherent writing appropriate to the discipline, audience, and/or context.

LA.3.W.1 Write paragraphs using a variety of sentence types.

a. Capitalize proper nouns (e.g., historic periods, nationalities, languages), proper adjectives (e.g., South American), and appropriate words in titles.
b. Use commas in addresses and commas and quotation marks in dialogue; use an apostrophe to form and use possessives.
c. Use frequently occurring nouns (e.g., concrete and abstract), verbs (regular and irregular), and simple verb tenses.
d. Distinguish between and use coordinating and subordinating conjunctions and independent and dependent clauses.
e. Explain the function of adjectives and adverbs in simple, compound, and complex sentences.
f. Use correct subject-verb and pronoun-antecedent agreement in speaking and writing.
g. Use frequently occurring prepositions and prepositional phrases.

LA.3.W.2 Use a recursive writing process to develop, strengthen, and produce writing appropriate to the audience, purpose, and discipline.

a. Use prewriting activities and resources to plan, organize, and draft writing.
b. Adapt writing processes to sustain engagement in short and long-term writing tasks of increasing length and complexity.
c. Improve and clarify the content, structure, and organization of writing by revising, considering feedback from adults and peers.
d. Improve and clarify writing by editing and proofreading, considering feedback from adults and peers.
e. Use or decipher multiple formats of print and digital text (e.g., manuscript, cursive, font, graphics, symbols).
f. Use appropriate print and digital/multimedia tools to produce, enhance, and/or publish writing individually or in collaboration with peers.

Modes of Writing | Write in a variety of modes for a variety of purposes and audiences across disciplines.

LA.3.W.3 Write creative and/or expressive pieces that describe a well-developed event or experience.

a. Engage and orient the ready by establishing a situation and introducing a narrator and/or character(s).
b. Include descriptive details about characters, events, or settings.
c. Use words and phrases to signal a sequence of events.
d. Provide a closure related to the creative or expressive event or experience.

LA.3.W.4 Write opinion pieces with supporting reasons and/or evidence.

a. Introduce a topic or text, state an opinion, and develop a structure that includes reasons and/or evidence.
b. Use linking words and phrases to connect opinions and reasons.
c. Provide a concluding statement or section related to the opinion.

LA.3.W.5 Write informative/explanatory pieces to examine a topic or text and convey ideas and information.

a. Introduce a topic and group related information together, including illustrations when useful to provide clarity.
b. Develop the topic with information (e.g., facts, definitions, details) clearly related to the topic.
c. Use linking words and phrases and key vocabulary to connect ideas and categories of information.
d. Provide a concluding statement or section related to the topic.

LA.3.W.6 Locate evidence from literary and/or informational text sources to answer questions about a topic.

a. Paraphrase information from sources to support ideas while avoiding plagiarism.
b. Identify print and digital tools to gather information and ideas to answer questions.
c. Sort evidence into categories using an appropriate note-taking format to collect and organize information.
d. Demonstrate academic integrity by avoiding overreliance on any one source and referencing sources in writing and speaking; provide a list of sources.
e. Practice safe and ethical behaviors when communicating and interacting with others digitally (e.g., safe information to share, utilize appropriate sites and materials, appropriate language use, respect diverse perspectives).

Instructional Considerations

- *Grammar*, or the rules by which sentences are constructed, is contrasted from *usage*, which is the way words and phrases are commonly used. All dialects of language are grammatical and follow rules; exceptions to the uses of language that do not conform to standard English should be given instructional consideration. *Mechanics* refers to the norms of written language only and includes spelling, punctuation, and capitalization. Mechanics may change according to time, place, and purpose.
- The standards contain four broad modes of writing—**Narrative**, **Opinion (K-5)**, **Informative/Explanatory**, and **Research**.
- *Narrative* forms include but are not limited to: short stories, personal narratives, fables, myths, tall tales, fairy tales, plays, poetry, autobiography, biography, essays, screenplays, narrative nonfiction, realistic fiction, historical accounts, memoirs, nonlinear narratives, legends, epics, and ballads.
- *Opinion*, or argumentative, forms include but are not limited to: personal opinion pieces, appeals, editorials, proposals, personal essays, speeches, letters, literary analyses, and persuasive and op-ed pieces.
- *Informative/explanatory* forms include, but are not limited to: descriptive essays, comparative analyses, historical reports, manuals, process pieces, journal, magazine, and newspaper articles, memorandums, scientific reports, compare/contrast, problem/solution, and cause/effect essays.

SPEAKING AND LISTENING

Comprehension and Collaboration | Communicate effectively and appropriately in collaborative activities for a variety of tasks, purposes, and audiences to express ideas, share knowledge, and generate new understandings.

LA.3.SL.1 Prepare for and participate in structured discussions and collaborations about 3rd grade topics and texts.

a. Ask relevant questions to build on ideas and acquire or confirm information.
b. Demonstrate interpretation of verbal and non-verbal messages in a discussion or collaboration.
c. Converse with peers and adults in an all-inclusive manner to foster positive relationships while respecting diverse perspectives.
d. Demonstrate active and attentive listening skills (e.g., eye contact, nonverbal cues, recalling, questioning).
e. Complete a task following multi-step directions.

Presentation of Knowledge and Ideas | Present information, findings, and supporting evidence in which the organization, development, and style are appropriate to the discipline, audience, and/or context.

LA.3.SL.2 Report on a topic or text, tell a story, or recount an experience with appropriate facts and relevant, descriptive details.

a. Demonstrate appropriate speaking techniques (e.g., appropriate eye contact, adequate volume, clear pronunciation) for a variety of purposes and situations, including interpreting 3rd grade texts.
b. Convey a perspective with clear reasoning and support.
c. Identify the purpose and credibility of information being presented.
d. Demonstrate awareness of and sensitivity to the appropriate use of words (e.g., stereotypes, multiple meanings of words).
e. Use appropriate visual and/or digital tools to enhance verbal communication and add interest.

Instructional Considerations

- Instruction of speaking and listening skills should be purposeful, directed, and specific as well as integrated throughout structured classroom activities and routines.
- At this grade level, students should be encouraged to reply to questions both orally and in writing using complete sentences.
- Appropriate visual and/or digital tools include, but are not limited to: graphic images, drawings, artwork, photographs, audio and video pieces, charts, tables, sound effects, animation, and infographics.

Grade 4 Standards

Approved by the Nebraska State Board of Education on September 2, 2021

FOUNDATIONS OF READING

Concepts of Print | Demonstrate knowledge of the organization and basic concepts of print.

Mastered at Grade 2 and blended with other skills at this grade level.

Phonological Awareness |Demonstrate phonological awareness through oral activities.

Mastered at Grade 2 and blended with other skills at this grade level.

Phonics and Word Analysis | Demonstrate phonetic and word analysis knowledge and apply decoding skills to isolated words and in connected text.

LA.4.F.3 Know and apply phonics and word analysis skills in decoding and encoding (spelling) words.

a. Decode words with common Latin derived words including Latin plurals.
b. Use combined knowledge of letter-sound correspondences, syllabication patterns, and morphology (e.g., roots and affixes) to read accurately unfamiliar multisyllabic words in and out of context.

Fluency | Read grade-level texts with sufficient accuracy and fluency to support comprehension.

LA.4.F.4 Develop accuracy, phrasing, and expression/prosody while reading a variety of grade-level text to support comprehension.

a. Read a variety of text accurately using appropriate rate, expression/prosody and intonation to reflect the meaning of text.
b. Adjust pace and prosody based on the purpose, complexity, form, and/or style of a text.

Instructional Considerations

- *Phonics* refers to the relationship between graphemes (letters or letter combinations) and phonemes (speech sounds).
- Many high-frequency words at the primary grade levels are either irregularly spelled or temporarily irregular, thus students have not yet learned the phonics rule that would enable them to decode the word. Those words that are decodable should be introduced to students using appropriate phonics rules. High-frequency words should be introduced utilizing the regular sound-spelling patterns found within the word, not only as words to be memorized.
- *Reading fluency* refers to efficient, effective word recognition skills that permit a reader to construct the meaning of text. "Fluency is manifested in accurate, rapid, expressive oral reading and is applied during, and makes possible, silent reading comprehension," (Pikulski & Chard, 2005).
- Students at this grade level should practice reading fluently with texts within the grade band for quantitative complexity measures and appropriate in content and qualitative measures.
- *Prosody* refers to the patterns of pausing to reflect the meaning of text while reading aloud.

READING PROSE AND POETRY

Central Ideas and Details | Citing relevant and thorough textual evidence to support ideas, evaluate the development of themes or central ideas in grade-level literary text.
LA.4.RP.1 Determine a theme in a literary text and how it is conveyed through key details.
LA.4.RP.2 Analyze a character, setting, or event in a literary text, drawing on specific details such as a character's thoughts, words, or actions.

Author's Craft | Citing relevant and thorough evidence to support ideas, evaluate the development and interaction of individuals, ideas, and events in grade-level literary text.
LA.4.RP.3 Distinguish reader perspective from the perspective and point of view of the narrator or the characters in a literary text.
LA.4.RP.4 Compare and contrast the structural elements of literary texts (e.g., dramas, narratives, and poems).

Knowledge and Ideas | Citing relevant and thorough textual evidence to support ideas, evaluate how an author's perspective or use of point of view shapes the style and meaning of grade-level literary text.
LA.4.RP.5 Compare and contrast the treatment of similar themes and topics and patterns of events in literary texts by different authors or from different cultures.
LA.4.RP.6 Explain what the text says explicitly and draw inferences when asking or answering questions, quoting or paraphrasing specific evidence from the text as appropriate.
LA.4.RP.7 Explain an author or narrator/speaker's treatment of similar themes and/or patterns of events in a wide range of literary texts.

Range of Reading and Level of Text Complexity | Read and comprehend complex, grade-level literary text independently and proficiently.
LA.4.RP.8 Read and comprehend a wide range of literary texts of appropriate complexity for Grade 4 independently and proficiently.

Instructional Considerations

- *Point of view* refers to the vantage point from which a story is told, while *perspective* is an author's attitude or belief that is based largely on personal knowledge and experience.
- At all grade levels, students should read paired, conceptually-related (by topic, theme, and/or genre) literary and informational texts.
- *Author's craft* refers to the techniques an author uses to develop and support a theme.

READING INFORMATIONAL TEXT

Central Ideas and Details | Citing relevant and thorough textual evidence to support ideas, evaluate the development of themes or central ideas in grade-level informational text.
LA.4.RI.1 Determine the central idea of an informational text and how it is conveyed through key details.
LA.4.RI.2 Analyze an individual, event, scientific idea or concept, or steps in a process.

Author's Craft | Citing relevant and thorough evidence to support ideas, evaluate the development and interaction of individuals, ideas, and events in grade-level informational text.
LA.4.RI.3 Compare and contrast authors' perspectives in multiple informational texts of the same topic.
LA.4.RI.4 Describe the overall structure of an informational text and how it contributes to meaning.

Knowledge and Ideas | Citing relevant and thorough textual evidence to support ideas, evaluate how an author's perspective or use of point of view shapes the style and meaning of grade-level informational text.
LA.4.RI.5 Integrate information from multiple informational texts on the same topic in order to demonstrate knowledge of the topic.
LA.4.RI.6 Identify an author's claim(s) and explain how the author supports the claim in the text.
LA.4.RI.7 Explain an author or speaker's treatment of similar topics and/or patterns of events in a wide range of informational texts.

Range of Reading and Level of Text Complexity | Read and comprehend complex, grade-level informational text independently and proficiently.
LA.4.RI.8 Read and comprehend a wide range of informational texts of appropriate complexity for Grade 4 independently and proficiently.

Instructional Considerations

- A *claim* refers to an author's primary argument and is supported by textual evidence.
- *Author's craft* refers to the techniques an author uses to develop and support a claim.
- *Point of view* refers to the vantage point from which a story is told, while *perspective* is an author's attitude or belief that is based on personal knowledge and/or experience.
- *Text structure* refers to the primary way an author organizes information in a text. Student should be made aware that authors sometimes use different structures for different sections within a larger piece.

VOCABULARY

Acquisition and Use | Build and use a range of conversational, academic, and discipline-specific grade-level vocabulary and apply to reading, writing, speaking, and listening.

LA.4.V.1 Acquire and use grade-level academic vocabulary appropriately.

a. Use context clues (e.g., definitions, examples, or restatements) to determine the meanings of words and phrases.
b. Use commonly occurring Latin affixes and roots to determine the meanings of words and phrases (e.g., photograph, autograph).
c. Determine or clarify the meanings or pronunciations of words using reference materials and classroom resources.

Context and Connotation | Determine or clarify the meaning of unknown and multiple-meaning words and phrases, choosing flexibly from a range of strategies.

LA.4.V.2 Interpret an author's use of figurative, connotative, and technical language in grade-level literary and informational text.

a. Explain the meaning of commonly occurring similes and metaphors (e.g., light as a feather) in grade-level text.
b. Recognize and explain the meaning of commonly occurring idioms and adages.
c. Use knowledge of words by relating them to their antonyms and synonyms.

Instructional Considerations

- *Academic vocabulary* refers to words likely to appear in a variety of content area texts, at or above grade-level, and typically requires explicit instruction. Students should be encouraged to use newly acquired terms frequently in speaking and writing.
- The vast majority of academic vocabulary taught should derive from complex texts—a careful review of texts for challenging words that are central to understanding the meaning of the text, including figurative language, should determine which vocabulary is taught explicitly (sometimes in advance of reading).
- Include a word study component that includes prefixes, root words, and suffixes to accompany text-based methods of vocabulary development.
- Reading aloud to students using texts that are two grade levels higher than their reading level is an evidence-based practice for activating prior knowledge and building vocabulary.

WRITING

Production of Writing | Use a recursive writing process to produce clear and coherent writing appropriate to the discipline, audience, and/or context.

LA.4.W.1 Create grammatically correct sentences and paragraphs using a variety of sentence types and phrasing.

a. Capitalize proper nouns (e.g., organizations, geographic regions, monuments and landmarks).
b. Use commas and quotation marks to indicate direct speech and quotations from a text; use a comma before a coordinating conjunction in a compound sentence and with dependent clauses.
c. Identify and use simple appositive phrases.
d. Identify and use frequently occurring pronouns (e.g., subject, object), adverbs (e.g., relative), and verbs (e.g., helping and linking).
e. Distinguish between frequently confused words (e.g., to, too, two; there, their, they're).
f. Identify and revise fragment and run-on sentences in speaking and writing.

LA.4.W.2 Use a recursive writing process to develop, strengthen, and produce writing appropriate to the audience, purpose, and discipline.

a. Use prewriting activities and resources to plan, organize, and draft writing.
b. Adapt writing processes to sustain engagement in short and long-term writing tasks of increasing length and complexity.
c. Improve and clarify the content, structure, and organization of writing by revising, considering feedback from adults and peers.
d. Improve and clarify writing by editing and proofreading, considering feedback from adults and peers.
e. Use or decipher multiple formats of print and digital text (e.g., manuscript, cursive, font, graphics, symbols).
f. Use appropriate print and digital/multimedia tools to produce, enhance, and/or publish writing individually or in collaboration with peers.

Modes of Writing | Write in a variety of modes for a variety of purposes and audiences across disciplines.

LA.4.W.3 Write creative and/or expressive pieces that describe a well-developed event or experience.

a. Establish a situation and introduce a narrator and/or character(s).
b. Use precise words and phrases, descriptive/sensory details, and dialogue to develop characters, events, and settings.
c. Use transitional words and phrases to organize a sequence of events that unfolds naturally.
d. Provide a conclusion related to the creative or expressive event or experience.

LA.4.W.4 Write opinion pieces that explain a perspective with supporting reasons and/or evidence.

a. Introduce a topic or text clearly, state an opinion, and develop a structure that includes reasons and/or evidence.
b. Use facts and details to support reasons and/or evidence.
c. Use linking words and phrases to connect ideas.
d. Provide a concluding statement or section related to the opinion.

LA.4.W.5 Write informative/explanatory pieces to examine a topic or text and convey ideas and information.

a. Introduce a topic clearly and group related information into paragraphs and sections including text features, illustrations, and/or multimedia elements.
b. Develop the topic with information (e.g., facts, definitions, details, quotations) related to the topic.
c. Use linking words and phrases and key vocabulary to connect ideas and categories of information.
d. Provide a concluding statement or section related to the information or explanation(s).

LA.4.W.6 Locate and summarize relevant evidence from literary and/or informational text sources to answer questions about a topic.

a. Paraphrase information and evidence to support ideas while avoiding plagiarism.
b. Identify print and digital tools to gather information and evidence.
c. Sort evidence into categories using an appropriate note-taking format to collect and organize information.
d. Demonstrate academic integrity by avoiding overreliance on any one source and referencing sources in writing and speaking; provide a list of sources.
e. Practice safe and ethical behaviors when communicating and interacting with others digitally (e.g. safe information to share, utilize appropriate sites and materials, appropriate language use, respect diverse perspectives).

Instructional Considerations

- *Grammar*, or the rules by which sentences are constructed, is contrasted from *usage*, which is the way words and phrases are commonly used. All dialects of language are grammatical and follow rules; exceptions to the uses of language that do not conform to standard English should be given instructional consideration. *Mechanics* refers to the norms of written language only and includes spelling, punctuation, and capitalization. Mechanics may change according to time, place, and purpose.
- The standards contain four broad modes of writing—**Narrative**, **Opinion (K-5)**, **Informative/Explanatory**, and **Research**.
- *Narrative* forms include but are not limited to: short stories, personal narratives, fables, myths, tall tales, fairy tales, plays, poetry, autobiography, biography, essays, screenplays, narrative nonfiction, realistic fiction, historical accounts, memoirs, nonlinear narratives, legends, epics, and ballads.
- *Opinion*, or argumentative, forms include but are not limited to: personal opinion pieces, appeals, editorials, proposals, personal essays, speeches, letters, literary analyses, and persuasive and op-ed pieces.
- *Informative/explanatory* forms include, but are not limited to: descriptive essays, comparative analyses, historical reports, manuals, process pieces, journal, magazine, and newspaper articles, memorandums, scientific reports, compare/contrast, problem/solution, and cause/effect essays.

SPEAKING AND LISTENING

Comprehension and Collaboration | Communicate effectively and appropriately in collaborative activities for a variety of tasks, purposes, and audiences to express ideas, share knowledge, and generate new understandings.
LA.4.SL.1 Prepare for and participate in structured discussions and collaborations about 4th grade topics and texts.

a. Ask relevant questions to build on ideas or acquire or confirm information.
b. Demonstrate interpretation of verbal and non-verbal messages in a conversation.
c. Converse with peers and adults in an all-inclusive manner to foster positive relationships while respecting diverse perspectives.
d. Demonstrate active and attentive listening skills (e.g., eye contact, nonverbal cues, recalling, questioning).
e. Complete a task following multi-step directions.

Presentation of Knowledge and Ideas | Present information, findings, and supporting evidence in which the organization, development, and style are appropriate to the discipline, audience, and/or context.
LA.4.SL.2 Report on a topic or text, tell a story, or recount an experience in an organized manner with appropriate facts and relevant, descriptive details to support themes or central ideas.

a. Demonstrate appropriate speaking techniques (e.g., appropriate eye contact, adequate volume, clear pronunciation) for a variety of purposes and situations, including interpreting 4th grade texts.
b. Convey a perspective with clear reasoning and support.
c. Identify the purpose and credibility of information being presented.
d. Demonstrate awareness of and sensitivity to the appropriate use of words (e.g., stereotypes, multiple meanings of words).
e. Use appropriate visual and/or digital tools to enhance verbal communication and add interest.

Instructional Considerations

- Instruction of speaking and listening skills should be purposeful, directed, and specific as well as integrated throughout structured classroom activities and routines.
- At this grade level, students should be encouraged to reply to questions both orally and in writing using complete sentences.
- Appropriate visual and/or digital tools include, but are not limited to: graphic images, drawings, artwork, photographs, audio and video pieces, charts, tables, sound effects, animation, and infographics.

Grade 5 Standards

Approved by the Nebraska State Board of Education on September 2, 2021

FOUNDATIONS OF READING

Concepts of Print | Demonstrate knowledge of the organization and basic concepts of print.

Mastered at Grade 2 and blended with other skills at this grade level.

Phonological Awareness | Demonstrate phonological awareness through oral activities.

Mastered at Grade 2 and blended with other skills at this grade level.

Phonics and Word Analysis | Demonstrate phonetic and word analysis knowledge and apply decoding skills to isolated words and in connected text.

LA.5.F.3 Know and apply phonics and word analysis skills in decoding and encoding (spelling) words.

a. Decode words with common Greek derived words.
b. Use combined knowledge of letter-sound correspondences, syllabication patterns, and morphology (e.g., roots and affixes) to decode unfamiliar multisyllabic words in and out of context.

Fluency | Read grade-level texts with sufficient accuracy and fluency to support comprehension.

LA.5.F.4 Develop accuracy, phrasing, and expression/prosody while reading a variety of grade-level texts to support comprehension.

a. Read a variety of texts accurately using appropriate rate, expression/prosody, and intonation to reflect meaning.
b. Adjust pace and prosody based on the purpose, complexity, form, and/or style of a text.

Instructional Considerations

- *Phonics* refers to the relationship between graphemes (letters or letter combinations) and phonemes (speech sounds).
- Many high-frequency words at the primary grade levels are either irregularly spelled or temporarily irregular, thus students have not yet learned the phonics rule that would enable them to decode the word. Those words that are decodable should be introduced to students using appropriate phonics rules. High-frequency words should be introduced utilizing the regular sound-spelling patterns found within the word, not only as words to be memorized.
- *Reading fluency* refers to efficient, effective word recognition skills that permit a reader to construct the meaning of text. "Fluency is manifested in accurate, rapid, expressive oral reading and is applied during, and makes possible, silent reading comprehension," (Pikulski & Chard, 2005).
- Students at this grade level should practice reading fluently with texts within the grade band for quantitative complexity measures and appropriate in content and qualitative measures.
- *Prosody* refers to the patterns of pausing to reflect the meaning of text while reading aloud.

READING PROSE AND POETRY

Central Ideas and Details | Citing relevant and thorough textual evidence to support ideas, evaluate the development of themes or central ideas in grade-level literary text.
LA.5.RP.1 Explain the theme in a literary text and how it is conveyed through key details.
LA.5.RP.2 Compare and contrast two or more characters, settings, or events in a literary text or texts.

Author's Craft | Citing relevant and thorough evidence to support ideas, evaluate the development and interaction of individuals, ideas, and events in grade-level literary text.
LA.5.RP.3 Describe how a narrator or speaker's point of view influences the meaning of a literary text.
LA.5.RP.4 Explain how a sequence of chapters, scenes, or stanzas fit together to provide the overall structure of literary texts.

Knowledge and Ideas | Citing relevant and thorough textual evidence to support ideas, evaluate how an author's perspective or use of point of view shapes the style and meaning of grade-level literary text.
LA.5.RP.5 Compare and contrast the treatment of themes and topics in literary texts of the same genre.
LA.5.RP.6 Analyze a literary text to answer and develop inferential questions to enhance the comprehension of self and others, quoting or paraphrasing specific evidence from the text.
LA.5.RP.7 Explain the relationships between two or more characters, events, or ideas in a range of literary texts.

Range of Reading and Level of Text Complexity | Read and comprehend complex, grade-level literary text independently and proficiently.
LA.5.RP.8 Read and comprehend a wide range of literary texts of appropriate complexity for Grade 5 independently and proficiently.

Instructional Considerations

- *Point of view* refers to the vantage point from which a story is told, while *perspective* is an author's attitude or belief that is based largely on personal knowledge and experience.
- At all grade levels, students should read paired, conceptually-related (by topic, theme, and/or genre) literary and informational texts.
- *Author's craft* refers to the techniques an author uses to develop and support a theme.

READING INFORMATIONAL TEXT

Central Ideas and Details | Citing relevant and thorough textual evidence to support ideas, evaluate the development of themes or central ideas in grade-level literary and informational texts.
LA.5.RI.1 Explain the central idea in an informational text and how it is conveyed through key details.
LA.5.RI.2 Compare and contrast two or more individuals, events, scientific ideas or concepts, or steps in a process, drawing on supporting details from an informational text or texts.

Author's Craft | Citing relevant and thorough evidence to support ideas, evaluate the development and interaction of individuals, ideas, and events in grade-level informational text.
LA.5.RI.3 Determine the author's purpose(s) and describe how the author's perspective (e.g., beliefs, assumptions, biases) influences the meaning of an informational text.
LA.5.RI.4 Explain how text features (titles, headings, table of contents, glossaries, captions, graphs, maps, and/or other visuals) contribute to the meaning of texts.

Knowledge and Ideas | Citing relevant and thorough textual evidence to support ideas, evaluate how an author's perspective or use of point of view shapes the style and meaning of grade-level literary and informational text.
LA.5.RI.5 Integrate information from multiple texts on the same topic in order to demonstrate knowledge of the topic.
LA.5.RI.6 Analyze the development of an author's claim(s) and how supporting evidence is used to support the claim(s).
LA.5.RI.7 Explain the relationships between two or more individuals, events, ideas, or concepts in a range of informational texts.

Range of Reading and Level of Text Complexity | Read and comprehend complex, grade-level informational text independently and proficiently.
LA.5.RI.8 Read and comprehend a wide range of informational text of appropriate complexity for Grade 5 independently and proficiently.

Instructional Considerations

- A *claim* refers to an author's primary argument and is supported by textual evidence.
- *Author's craft* refers to the techniques an author uses to develop and support a claim.
- *Point of view* refers to the vantage point from which a story is told, while *perspective* is an author's attitude or belief that is based on personal knowledge and/or experience.

- *Text structure* refers to the primary way an author organizes information in a text. Student should be made aware that authors sometimes use different structures for different sections within a larger piece.

V O C A B U L A R Y

Acquisition and Use | Build and use a range of conversational, academic, and discipline-specific grade-level vocabulary and apply to reading, writing, speaking, and listening.
LA.5.V.1 Acquire and use grade-level academic vocabulary appropriately.

a. Use context clues (e.g., cause/effect relationships and comparisons in text) to determine the meanings of words and phrases.
b. Use commonly occurring Greek and Latin affixes and roots to determine the meanings of words.
c. Determine or clarify the precise meanings or pronunciations of words and phrases using reference materials and classroom resources.

Context and Connotation | Determine or clarify the meaning of unknown and multiple-meaning words and phrases, choosing flexibly from a range of strategies.
LA.5.V.2 Interpret an author's use of figurative, connotative, and technical language in grade-level literary and informational text.

a. Interpret figurative language, including similes and metaphors, in context.
b. Recognize and explain the meaning of commonly occurring idioms, adages, and proverbs.
c. Demonstrate knowledge of relationships between particular words (e.g., synonyms, antonyms, homographs) to better understand each of the words.

Instructional Considerations

- *Academic vocabulary* refers to words likely to appear in a variety of content area texts, at or above grade-level, and typically requires explicit instruction. Students should be encouraged to use newly acquired terms frequently in speaking and writing.
- The vast majority of academic vocabulary taught should derive from complex texts—a careful review of texts for challenging words that are central to understanding the meaning of the text, including figurative language, should determine which vocabulary is taught explicitly (sometimes in advance of reading).
- Include a word study component that includes prefixes, root words, and suffixes to accompany text-based methods of vocabulary development.
- Reading aloud to students using texts that are two grade levels higher than their reading level is an evidence-based practice for activating prior knowledge and building vocabulary.

WRITING

Production of Writing | Use a recursive writing process to produce clear and coherent writing appropriate to the discipline, audience, and/or context.

LA.5.W.1 Create grammatically correct multi-paragraph compositions with varied sentence structures.

a. Apply knowledge of rules for capitalization; use underlining, quotation marks, or italics to indicate titles of works.
b. Use a comma to separate an introductory element from the rest of a sentence, to separate clauses, to set off a question, and to indicate direct address.
c. Explain the function of and use frequently occurring interjections, verb tenses (e.g., perfect), and correlative conjunctions.
d. Distinguish between and use types of adjectives (e.g., comparative, superlative).
e. Identify and revise fragment and run-on sentences and inappropriate shifts in verb tenses.

LA.5.W.2 Use a recursive writing process to develop, strengthen, and produce writing appropriate to the audience, purpose, and discipline.

a. Use prewriting activities and resources to plan, organize, and draft writing.
b. Adapt writing processes to sustain engagement in short and long-term writing tasks of increasing length and complexity.
c. Improve and clarify the content, structure, and organization of writing by revising, considering feedback from adults and peers.
d. Improve and clarify writing by editing and proofreading, considering feedback from adults and peers.
e. Use or decipher multiple formats of print and digital text (e.g., manuscript, cursive, font, graphics, symbols).
f. Use appropriate print and digital/multimedia tools to produce, enhance, and/or publish writing individually or in collaboration with peers.

Modes of Writing | Write in a variety of modes for a variety of purposes and audiences across disciplines.

LA.5.W.3 Write creative and/or expressive pieces that describe a well-developed event or experience.

a. Establish a situation and introduce a narrator and/or characters.
b. Use precise words and phrases, descriptive/sensory details, dialogue, and sensory language to convey thoughts, feelings, experiences, and events.
c. Use a variety of transitional words and phrases to organize a sequence of events that unfolds naturally.
d. Provide a conclusion related to the creative or expressive event or experience.

LA.5.W.4 Write opinion pieces that explain a perspective with supporting reasons and evidence.

a. Introduce a topic or text clearly, state an opinion or perspective, and develop a structure in which ideas are grouped logically.
b. Use facts and details to support reasons and/or evidence.
c. Use words, phrases, and key vocabulary to connect ideas.
d. Provide a concluding statement or section related to the perspective.

LA.5.W.5 Write informative/explanatory pieces to examine a topic or text and clearly convey ideas and information.

a. Introduce a topic clearly and provide a general focus, grouping information logically and including text features, illustrations, and/or multimedia elements.
b. Develop the topic with information (e.g., facts, definitions, details, quotations) related to the topic.
c. Use linking words and phrases and key vocabulary to connect ideas and categories of information.
d. Provide a concluding statement or section related to the information or explanation(s).

LA.5.W.6 Locate and summarize relevant information and evidence from literary and informational text sources to answer questions about a topic.

a. Paraphrase information and evidence to support ideas while avoiding plagiarism.
b. Locate and evaluate credibility of evidence (e.g., motivation and/or potential bias of an information product) from print and digital sources to generate and answer questions and create new understandings.
c. Sort evidence into categories using an appropriate note-taking format to collect and organize information.
d. Demonstrate academic integrity by avoiding overreliance on any one source and referencing sources in writing and speaking; provide a list of sources using a standard format.
e. Practice safe and ethical behaviors when communicating and interacting with others digitally (e.g., safe information to share, utilize appropriate sites and materials, appropriate language use, respect diverse perspectives).

Instructional Considerations

- *Grammar*, or the rules by which sentences are constructed, is contrasted from *usage*, which is the way words and phrases are commonly used. All dialects of language are grammatical and follow rules; exceptions to the uses of language that do not conform to standard English should be given instructional consideration. *Mechanics* refers to the norms of written language only and includes spelling, punctuation, and capitalization. Mechanics may change according to time, place, and purpose.
- The standards contain four broad modes of writing—**Narrative**, **Opinion (K-5)**, **Informative/Explanatory**, and **Research**.
- *Narrative* forms include but are not limited to: short stories, personal narratives, fables, myths, tall tales, fairy tales, plays, poetry, autobiography, biography, essays, screenplays, narrative nonfiction, realistic fiction, historical accounts, memoirs, nonlinear narratives, legends, epics, and ballads.
- *Opinion*, or argumentative, forms include but are not limited to: personal opinion pieces, appeals, editorials, proposals, personal essays, speeches, letters, literary analyses, and persuasive and op-ed pieces.
- *Informative/explanatory* forms include, but are not limited to: descriptive essays, comparative analyses, historical reports, manuals, process pieces, journal, magazine, and newspaper articles, memorandums, scientific reports, compare/contrast, problem/solution, and cause/effect essays.

SPEAKING AND LISTENING

Comprehension and Collaboration | Communicate effectively and appropriately in collaborative activities for a variety of tasks, purposes, and audiences to express ideas, share knowledge, and generate new understandings.

LA.5.SL.1 Prepare for and participate in structured discussions and collaborations about 5th grade topics and texts.

a. Ask relevant questions to build on ideas, clarify own ideas, or acquire or confirm information.
b. Demonstrate interpretation of verbal and non-verbal messages in a conversation.
c. Converse with peers and adults an all-inclusive manner to foster positive relationships while respecting diverse perspectives.
d. Demonstrate active and attentive listening skills (e.g., eye contact, nonverbal cues, taking notes, recalling, questioning).
e. Complete a task following multi-step directions.

Presentation of Knowledge and Ideas | Present information, findings, and supporting evidence in which the organization, development, and style are appropriate to the discipline, audience, and/or context.

LA.5.SL.2 Report on a topic or text, or present an opinion, sequencing ideas logically and using appropriate facts and relevant, descriptive details to support themes or central ideas.

a. Demonstrate appropriate speaking techniques (e.g., appropriate eye contact, adequate volume, clear pronunciation) for a variety of purposes and situations, including interpreting 5th grade texts.
b. Convey a perspective with clear reasoning and support.
c. Identify the purpose and credibility of information being presented.
d. Demonstrate awareness of and sensitivity to the appropriate use of words (e.g., stereotypes, multiple meanings of words).
e. Use appropriate visual and/or digital tools to enhance verbal communication and add interest.

Instructional Considerations

- Instruction of speaking and listening skills should be purposeful, directed, and specific as well as integrated throughout structured classroom activities and routines.
- At this grade level, students should be encouraged to reply to questions both orally and in writing using complete sentences.
- Appropriate visual and/or digital tools include, but are not limited to: graphic images, drawings, artwork, photographs, audio and video pieces, charts, tables, sound effects, animation, and infographics.

Grade 6 Standards

Approved by the Nebraska State Board of Education on September 2, 2021

READING PROSE AND POETRY

Central Ideas and Details | Citing relevant and thorough textual evidence to support ideas, evaluate the development of themes or central ideas in grade-level literary text.
LA.6.RP.1 Determine the implied or explicit theme of a literary text and how it develops over the course of a text.
LA.6.RP.2 Explain how a plot unfolds as well as how the characters respond to events or changes as the plot moves toward a resolution.

Author's Craft | Citing relevant and thorough evidence to support ideas, evaluate the development and interaction of individuals, ideas, and events in grade-level literary text.
LA.6.RP.3 Explain how an author establishes and conveys the point(s) of view of a narrator or speaker in a literary text.
LA.6.RP.4 Analyze how a sequence of chapters, scenes, or stanzas contribute to the development of literary elements (e.g. theme, setting, or plot).

Knowledge and Ideas | Citing relevant and thorough textual evidence to support ideas, evaluate how an author's perspective or use of point of view shapes the style and meaning of grade-level literary and informational text.
LA.6.RP.5 Compare and contrast texts in different forms or genres (e.g., stories and poems, historical novels, fantasy stories) and their treatment of similar themes and topics.
LA.6.RP.6 Analyze a literary text to answer and develop inferential and evaluative questions to enhance the comprehension of self and others, quoting or paraphrasing specific evidence from the text.
LA.6.RP.7 Compare and contrast regional, national, and/or multicultural perspectives within and across literary texts.

Range of Reading and Level of Text Complexity | Read and comprehend complex, grade-level literary and informational texts independently and proficiently.
LA.6.RP.8 Read and comprehend a wide range of literary text of appropriate complexity for the 6-8 grade band proficiently, with scaffolding as needed at the high end of the range.

Instructional Considerations

- *Point of view* refers to the vantage point from which a story is told, while *perspective* is an author's attitude or belief that is based largely on personal knowledge and experience.
- At all grade levels, students should read paired, conceptually-related (by topic, theme, and/or genre) literary and informational texts.
- *Author's craft* refers to the techniques an author uses to develop and support a theme.

READING INFORMATIONAL TEXT

Central Ideas and Details | Citing relevant and thorough textual evidence to support ideas, evaluate the development of themes or central ideas in grade-level informational text.
LA.6.RI.1 Determine the implied or explicit central idea of an informational text and how it develops over the course of a text.

LA.6.RI.2 Explain how a key individual, event, or idea or concept is introduced and developed, drawing on specific supporting details in an informational text.

Author's Craft | Citing relevant and thorough evidence to support ideas, evaluate the development and interaction of individuals, ideas, and events in grade-level informational text.
LA.6.RI.3 Explain how an author establishes and conveys a perspective or purpose in an informational text.
LA.6.RI.4 Analyze how a particular sentence, paragraph, chapter, or section fits into the overall structure of a text and contributes to the development of the ideas.

Knowledge and Ideas | Citing relevant and thorough textual evidence to support ideas, evaluate how an author's perspective or use of point of view shapes the style and meaning of grade-level informational text.
LA.6.RI.5 Compare and contrast one author's presentation of information with that of another.
LA.6.RI.6 Analyze the development of an argument and identify the type(s) of reasoning used to support the argument.
LA.6.RI.7 Compare and contrast regional, national, and/or multicultural perspectives within and across informational texts.

Range of Reading and Level of Text Complexity | Read and comprehend complex, grade-level informational text independently and proficiently.
LA.6.RI.8 Read and comprehend a wide range of informational texts of appropriate complexity for the 6-8 grade band proficiently, with scaffolding as needed at the high end of the range.

Instructional Considerations

- A *claim* refers to an author's primary argument and is supported by textual evidence.
- *Author's craft* refers to the techniques an author uses to develop and support a claim.
- *Point of view* refers to the vantage point from which a story is told, while *perspective* is an author's attitude or belief that is based on personal knowledge and/or experience.
- *Text structure* refers to the primary way an author organizes information in a text. Students at this grade level should be able to identify different structures for different sections within a larger piece.

V O C A B U L A R Y

Acquisition and Use | Build and use a range of conversational, academic, and discipline-specific grade-level vocabulary and apply to reading, writing, speaking, and listening.

LA.6.V.1 Integrate grade-level academic vocabulary appropriately for a variety of tasks and purposes.

a. Use context clues (e.g. the overall meaning of a sentence or paragraph; a word's position or function in a sentence) to determine the meanings of words and phrases.
b. Use commonly occurring Greek and Latin affixes and roots to determine the meanings of words (e.g., audience, audible).
c. Consult reference materials to determine or clarify the precise meanings, pronunciations, or parts of speech of words.

Context and Connotation | Determine or clarify the meaning of unknown and multiple-meaning words and phrases, choosing flexibly from a range of strategies.

LA.6.V.2 Interpret an author's use of figurative, connotative, and technical language in grade-level literary and informational text.

a. Interpret figures of speech (e.g., literary, biblical, or mythological allusions) in context.
b. Determine the relationship between words (e.g., cause/effect, part/whole, item/category).
c. Distinguish between the connotations of words with similar denotations (e.g., economical, thrifty).

Instructional Considerations

- *Academic vocabulary* refers to words likely to appear in a variety of content area texts, at or above grade-level, and typically requires explicit instruction. Students should be encouraged to use newly acquired terms frequently in speaking and writing.
- The vast majority of academic vocabulary taught should derive from complex texts—a careful review of texts for challenging words that are central to understanding the meaning of the text, including figurative language, should determine which vocabulary is taught explicitly (sometimes in advance of reading).
- Include a word study component that includes prefixes, root words, and suffixes to accompany text-based methods of vocabulary development.
- Reading aloud to students using texts that are two grade levels higher than their reading level is an evidence-based practice for activating prior knowledge and building vocabulary.

WRITING

Production of Writing | Use a recursive writing process to produce clear and coherent writing appropriate to the discipline, audience, and/or context.

LA.6.W.1 Create grammatically correct multi-paragraph compositions with varied sentence structures.

a. Apply knowledge of rules for capitalization.
b. Use punctuation (e.g., commas, parentheses, dashes) to set off non-restrictive clauses.
c. Use a colon to introduce items in a series; use a semicolon to combine independent clauses.
d. Explain the function of articles (e.g., definite and indefinite) and apply knowledge to writing.
e. Identify and use verb tenses (e.g., progressive).
f. Distinguish between and use different types of phrases (e.g., prepositional and appositive).
g. Identify and revise fragment and run-on sentences and inappropriate shifts in verb tenses.

LA.6.W.2 Use a recursive writing process to develop, strengthen, and produce writing appropriate to the audience, purpose, and discipline.

a. Use prewriting activities and inquiry tools to plan, organize, and draft writing.
b. Adapt writing processes to sustain engagement in short and long-term writing tasks of increasing length and complexity.
c. Improve and clarify the content, structure, and organization of writing by revising, considering feedback from adults and peers.
d. Improve and clarify writing by editing and proofreading, considering feedback from adults and peers.
e. Use appropriate print and digital/multimedia tools to produce, enhance, and/or publish writing individually or in collaboration with peers.

Modes of Writing | Write in a variety of modes for a variety of purposes and audiences across disciplines.

LA.6.W.3 Write in a variety of literary forms to convey real or imagined experiences or events in which the development and structure are appropriate to the task, purpose, and audience.

a. Engage and orient the reader by establishing a context and introducing a narrator and/or character(s) and point of view; organize an event sequence that unfolds naturally and logically.
b. Use literary techniques (e.g. dialogue, pacing, description) to develop characters, events, settings, and conflicts.
c. Use a variety of transitional words and phrases to signal shifts from one character, time frame, or setting to another.

d. Use precise words and phrases, descriptive/sensory details, and figurative language to express personal or narrative voice.
e. Provide a conclusion that is clearly related to and appropriately reflects on the literary experiences or events.

LA.6.W.4 Write arguments that explain a perspective with supporting reasons and evidence.
a. Introduce a claim clearly and develop a structure in which the ideas are grouped logically.
b. Use relevant evidence from two or more credible sources.
c. Use words, phrases, and key vocabulary to clarify the relationship between claim(s) and supporting evidence.
d. Provide a concluding statement or section that follows from the argument presented.

LA.6.W.5 Write informative/explanatory pieces to examine a topic or text and clearly convey ideas and information.
a. Introduce a topic clearly and provide a general focus, grouping information logically and including text features, illustrations, and/or multimedia elements.
b. Develop a topic with information (e.g., facts, definitions, concrete details, quotations, examples) related to the topic.
c. Use appropriate transitions and key vocabulary to clarify relationships among ideas and concepts.
d. Provide a concluding statement or section that follows from the information or explanation(s).

LA.6.W.6 Gather and use credible evidence from trustworthy sources and assess its relevance in answering a research question.
a. Paraphrase and quote evidence to support ideas while avoiding plagiarism.
b. Locate and evaluate credibility of evidence (e.g., motivation and/or potential bias of an information product) from print and digital sources to generate and answer questions and create new understandings.
c. Select and use appropriate note-taking formats to collect and organize information.
d. Demonstrate academic integrity by avoiding overreliance on any one source and referencing sources in writing and speaking; provide a list of sources using a standard format.
e. Practice safe and ethical behaviors when communicating and interacting with others digitally (e.g., safe information to share, utilize appropriate sites and materials, appropriate language use, respect diverse perspectives).

Instructional Considerations

- *Grammar*, or the rules by which sentences are constructed, is contrasted from *usage*, which is the way words and phrases are commonly used. All dialects of language are grammatical and follow rules; exceptions to the uses of language that do not conform to standard English should be given instructional consideration. *Mechanics* refers to the norms of written language only and includes spelling, punctuation, and capitalization. Mechanics may change according to time, place, and purpose.
- The standards contain four broad modes of writing—**Narrative**, **Opinion (K-5)**, **Informative/Explanatory**, and **Research**.
- *Narrative* forms include but are not limited to: short stories, personal narratives, fables, myths, tall tales, fairy tales, plays, poetry, autobiography, biography, essays, screenplays, narrative nonfiction, realistic fiction, historical accounts, memoirs, nonlinear narratives, legends, epics, and ballads.
- *Opinion*, or argumentative, forms include but are not limited to: personal opinion pieces, appeals, editorials, proposals, personal essays, speeches, letters, literary analyses, and persuasive and op-ed pieces.
- *Informative/explanatory* forms include, but are not limited to: descriptive essays, comparative analyses, historical reports, manuals, process pieces, journal, magazine, and newspaper articles, memorandums, scientific reports, compare/contrast, problem/solution, and cause/effect essays.

SPEAKING AND LISTENING

Comprehension and Collaboration | Communicate effectively and appropriately in collaborative activities for a variety of tasks, purposes, and audiences to express ideas, share knowledge, and generate new understandings.

LA.6.SL.1 Prepare for and participate in structured discussions and collaborations about 6th grade topics and texts.

a. Ask relevant questions to build on ideas, clarify own ideas, or acquire or confirm information.
b. Demonstrate interpretation of verbal and non-verbal messages in a conversation.
c. Converse with diverse individuals in an all-inclusive manner to foster positive relationships while respecting diverse perspectives.
d. Demonstrate active and attentive listening skills (e.g., eye contact, nonverbal cues, taking notes, summarizing, questioning).
e. Complete a task following multi-step directions.

Presentation of Knowledge and Ideas | Present information, findings, and supporting evidence in which the organization, development, and style are appropriate to the discipline, audience, and/or context.

LA.6.SL.2 Present claims and findings, sequencing ideas logically and using relevant descriptions, facts, and details to clarify themes or central ideas.

a. Demonstrate and adjust speaking techniques (e.g., appropriate eye contact, pacing, adequate volume, clear pronunciation) for a variety of purposes and situations, including interpreting 6th grade texts.
b. Convey a perspective with clear reasoning and support.
c. Analyze the purpose and credibility of information being presented.
d. Demonstrate awareness of and sensitivity to the appropriate use of words (e.g., stereotypes, connotations, subtleties of language).
e. Use appropriate visual and/or digital tools to enhance verbal communication and add interest.

Instructional Considerations

- Instruction of speaking and listening skills should be purposeful, directed, and specific as well as integrated throughout structured classroom activities and routines.
- At this grade level, students should be encouraged to reply to questions both orally and in writing using complete sentences.
- Appropriate visual and/or digital tools include, but are not limited to: graphic images, drawings, artwork, photographs, audio and video pieces, charts, tables, sound effects, animation, and infographics.

Grade 7 Standards

Approved by the Nebraska State Board of Education on September 2, 2021

READING PROSE AND POETRY

Central Ideas and Details | Citing relevant and thorough textual evidence to support ideas, evaluate the development of themes or central ideas in grade-level literary text.

LA.7.RP.1 Determine two or more implied or explicit themes in a literary text and how they are supported with key details.

LA.7.RP.2 Analyze how particular events, lines of dialogue, or descriptive details develop the plot, reveal aspects of characters, or create meaning.

Author's Craft | Citing relevant and thorough evidence to support ideas, evaluate the development and interaction of individuals, ideas, and events in grade-level literary text.

LA.7.RP.3 Analyze how an author establishes, conveys, and contrasts the points of view of different characters or narrators in a literary text.

LA.7.RP.4 Analyze the structure of a literary text, and how the structure contributes to its theme(s) and meaning.

Knowledge and Ideas | Citing relevant and thorough textual evidence to support ideas, evaluate how an author's perspective or use of point of view shapes the style and meaning of grade-level literary text.

LA.7.RP.5 Compare and contrast a fictional portrayal of a time, place, or character and a historical account of the same period.

LA.7.RP.6 Synthesize the implied or stated theme(s) in a literary text to draw conclusions and deepen understanding of self and others.

LA.7.RP.7 Compare and contrast regional, national, and/or multicultural perspectives by explaining how an author or narrator/speaker introduces, illustrates, or describes characters or individuals, events, and ideas within and across literary texts.

Range of Reading and Level of Text Complexity | Read and comprehend complex, grade-level literary text independently and proficiently.

LA.7.RP.8 Read and comprehend a wide range of literary texts of appropriate complexity for the 6-8 grade band proficiently, with scaffolding as needed at the high end of the range.

Instructional Considerations

- *Point of view* refers to the vantage point from which a story is told, while *perspective* is an author's attitude or belief that is based largely on personal knowledge and experience.
- At all grade levels, students should read paired, conceptually-related (by topic, theme, and/or genre) literary and informational texts.
- *Author's craft* refers to the techniques an author uses to develop and support a theme.

READING INFORMATIONAL TEXT

Central Ideas and Details | Citing relevant and thorough textual evidence to support ideas, evaluate the development of themes or central ideas in grade-level informational text.

LA.7.RI.1 Determine two or more implied or explicit central ideas of an informational text and how they are supported with key details.

LA.7.RI.2 Analyze the relationships and interactions between individuals, events, and/or ideas or concepts, drawing on specific supporting details in an informational text.

Author's Craft | Citing relevant and thorough evidence to support ideas, evaluate the development and interaction of individuals, ideas, and events in grade-level informational text.

LA.7.RI.3 Analyze how an author establishes or conveys a perspective or purpose and distinguishes it from that of others.

LA.7.RI.4 Analyze how the major sections of text contribute to the development of ideas in an informational text.

Knowledge and Ideas | Citing relevant and thorough textual evidence to support ideas, evaluate how an author's perspective or use of point of view shapes the style and meaning of grade-level informational text.

LA.7.RI.5 Compare and contrast how two or more authors provide conflicting information on the same topic, including where the texts disagree on matters of evidence or interpretation.

LA.7.RI.6 Analyze the development of an argument and identify the type(s) of reasoning used to support the argument.

LA.7.RI.7 Compare and contrast regional, national, and/or multicultural perspectives by explaining how an author or narrator/speaker introduces, illustrates, or describes characters or individuals, events, and ideas within and across informational texts.

Range of Reading and Level of Text Complexity | Read and comprehend complex, grade-level informational text independently and proficiently.

LA.7.RI.8 Read and comprehend a wide range of informational texts of appropriate complexity for the 6-8 grade band proficiently, with scaffolding as needed at the high end of the range.

Instructional Considerations

- A *claim* refers to an author's primary argument and is supported by textual evidence.
- *Author's craft* refers to the techniques an author uses to develop and support a claim.
- *Point of view* refers to the vantage point from which a story is told, while *perspective* is an author's attitude or belief that is based on personal knowledge and/or experience.
- *Text structure* refers to the primary way an author organizes information in a text. Students at this grade level should be able to identify different structures for different sections within a larger piece.

V O C A B U L A R Y

Acquisition and Use | Build and use a range of conversational, academic, and discipline-specific grade-level vocabulary and apply to reading, writing, speaking, and listening.

LA.7.V.1 Integrate grade-level academic vocabulary appropriately for a variety of tasks and purposes.

a. Use context clues (e.g., the overall meaning of a sentence or paragraph; a word's position or function in a sentence) to determine the meanings of words and phrases.
b. Use commonly occurring Greek and Latin affixes and roots to determine the meanings of words (e.g., audience, audible).
c. Consult general and specialized reference materials to determine or clarify the precise meanings, pronunciations, or parts of speech of words.

Context and Connotation | Determine or clarify the meaning of unknown and multiple-meaning words and phrases, choosing flexibly from a range of strategies.

LA.7.V.2 Interpret an author's use of figurative, connotative, and technical language in grade-level literary and informational text.

a. Interpret figures of speech (e.g., literary, biblical, or mythological allusions) in context.
b. Determine the relationship between words (e.g., cause/effect, part/whole, item/category).
c. Distinguish between the connotations of words with similar denotations (e.g., polite, diplomatic).

Instructional Considerations

- *Academic vocabulary* refers to words likely to appear in a variety of content area texts, at or above grade-level, and typically requires explicit instruction. Students should be encouraged to use newly acquired terms frequently in speaking and writing.
- The vast majority of academic vocabulary taught should derive from complex texts—a careful review of texts for challenging words that are central to understanding the meaning of the text, including figurative language, should determine which vocabulary is taught explicitly (sometimes in advance of reading).
- Include a word study component that includes prefixes, root words, and suffixes to accompany text-based methods of vocabulary development.
- Reading aloud to students using texts that are two grade levels higher than their reading level is an evidence-based practice for activating prior knowledge and building vocabulary.

WRITING

Production of Writing | Use a recursive writing process to produce clear and coherent writing appropriate to the discipline, audience, and/or context.

LA.7.W.1 Create grammatically correct multi-paragraph compositions with varied sentence structures.

a. Apply knowledge of rules for capitalization.
b. Use a comma to separate coordinate adjectives.
c. Distinguish between and use types of clauses (e.g., noun, relative, adverbial), modifiers (e.g., misplaced and dangling), and adjectives (coordinate and cumulative).
d. Use a variety of prepositional and appositive phrases in sentences and paragraphs.
e. Identify and revise fragment and run-on sentences and inappropriate shifts in verb tenses.

LA.7.W.2 Use a recursive writing process to develop, strengthen, and produce writing appropriate to the audience, purpose, and discipline.

a. Use prewriting activities and inquiry tools to plan, organize, and draft writing.
b. Adapt writing processes to sustain engagement in short and long-term writing tasks of increasing length and complexity.
c. Improve and clarify the content, structure, and organization of writing by revising, considering feedback from adults and peers.
d. Improve and clarify writing by editing and proofreading, considering feedback from adults and peers.
e. Use appropriate print and digital/multimedia tools to produce, enhance, and/or publish writing individually or in collaboration with peers.

Modes of Writing | Write in a variety of modes for a variety of purposes and audiences across disciplines.

LA.7.W.3 Write in a variety of literary forms to convey real or imagined experiences or events in which the development and structure are appropriate to the task, purpose, and audience.

a. Engage and orient the reader by establishing a context and introducing a narrator and/or character(s), establishing and maintaining a point of view, and organizing an event sequence that unfolds naturally and logically.
b. Use literary techniques (e.g., dialogue, pacing, description) to develop characters, events, settings, and conflicts.
c. Use a variety of transitional words and phrases to signal shifts from one character, time frame, or setting to another.

d. Use precise words and phrases, descriptive/sensory details, and figurative language to express personal or narrative voice.
e. Provide a conclusion that is clearly related to and appropriately reflects on the literary experiences or events.

LA.7.W.4 Write arguments that develop a perspective with supporting reasons and evidence, organized as appropriate to the task, purpose, and audience.

a. Develop a structure to sequence ideas appropriately; introduce a clear claim where appropriate.
b. Explain and cite relevant evidence from multiple credible sources.
c. Use words, phrases, and key vocabulary to create cohesion and clarify the relationship between claim(s) and supporting evidence.
d. Provide a concluding statement or section that follows from and supports the argument(s) presented.

LA.7.W.5 Write informative/explanatory pieces to examine a topic or text and clearly convey ideas and information.

a. Introduce a topic clearly and provide a specific focus, grouping information logically and including text features, illustrations, and/or multimedia elements.
b. Develop a topic with information (e.g., facts, definitions, concrete details, quotations, examples) related to the topic.
c. Use appropriate transitions and key vocabulary to clarify relationships among ideas and concepts.
d. Provide a concluding statement or section that follows from the information or explanation(s).

LA.7.W.6 Gather and use credible evidence from multiple trustworthy sources and assess its relevance in answering the research question.

a. Integrate evidence into writing by quoting or paraphrasing data and conclusions while avoiding plagiarism.
b. Locate and evaluate the credibility of evidence (e.g., motivation and/or potential bias of an information product) from print and digital sources to generate and answer questions and create new understandings.
c. Select and use appropriate note-taking formats to collect and organize information.
d. Demonstrate academic integrity by avoiding overreliance on any one source and citing sources within text (e.g., parenthetical and numerical); provide a list of sources using a standard format.
e. Practice safe and ethical behaviors when communicating and interacting with others digitally (e.g., safe information to share, utilize appropriate sites and materials, appropriate language use, respect diverse perspectives).

Instructional Considerations

- *Grammar*, or the rules by which sentences are constructed, is contrasted from *usage*, which is the way words and phrases are commonly used. All dialects of language are grammatical and follow rules; exceptions to the uses of language that do not conform to standard English should be given instructional consideration. *Mechanics* refers to the norms of written language only and includes spelling, punctuation, and capitalization. Mechanics may change according to time, place, and purpose.
- The standards contain four broad modes of writing—**Narrative**, **Opinion (K-5)**, **Informative/Explanatory**, and **Research**.
- *Narrative* forms include but are not limited to: short stories, personal narratives, fables, myths, tall tales, fairy tales, plays, poetry, autobiography, biography, essays, screenplays, narrative nonfiction, realistic fiction, historical accounts, memoirs, nonlinear narratives, legends, epics, and ballads.
- *Opinion*, or argumentative, forms include but are not limited to: personal opinion pieces, appeals, editorials, proposals, personal essays, speeches, letters, literary analyses, and persuasive and op-ed pieces.
- *Informative/explanatory* forms include, but are not limited to: descriptive essays, comparative analyses, historical reports, manuals, process pieces, journal, magazine, and newspaper articles, memorandums, scientific reports, compare/contrast, problem/solution, and cause/effect essays.

SPEAKING AND LISTENING

Comprehension and Collaboration | Communicate effectively and appropriately in collaborative activities for a variety of tasks, purposes, and audiences to express ideas, share knowledge, and generate new understandings.

LA.7.SL.1 Prepare for and participate in structured discussions and collaborations about 7th grade topics and texts.

a. Ask relevant questions to build on ideas, clarify own ideas, or acquire or confirm information.
b. Demonstrate interpretation of verbal and non-verbal messages in a conversation.
c. Converse with peers and adults in an all-inclusive manner to foster positive relationships while respecting diverse perspectives.
d. Demonstrate active and attentive listening skills (e.g., eye contact, nonverbal cues, taking notes, summarizing, questioning).
e. Complete a task following multi-step directions.

Presentation of Knowledge and Ideas | Present information, findings, and supporting evidence in which the organization, development, and style are appropriate to the discipline, audience, and/or context.

LA.7.SL.2 Present claims and findings, emphasizing key ideas in a focused, coherent manner with relevant descriptions, facts, details, and examples to clarify themes or central ideas.

a. Demonstrate and adjust speaking techniques (e.g., appropriate eye contact, pacing, adequate volume, clear pronunciation) for a variety of purposes and situations, including interpreting 7th grade texts.
b. Convey a perspective with clear reasoning and valid evidence.
c. Analyze the purpose and credibility of information being presented.
d. Demonstrate awareness of and sensitivity to the appropriate use of words (e.g., stereotypes, multiple meanings of words).
e. Use appropriate visual and/or digital tools to enhance verbal communication and add interest.

Instructional Considerations

- Instruction of speaking and listening skills should be purposeful, directed, and specific as well as integrated throughout structured classroom activities and routines.
- At this grade level, students should be encouraged to reply to questions both orally and in writing using complete sentences.
- Appropriate visual and/or digital tools include, but are not limited to: graphic images, drawings, artwork, photographs, audio and video pieces, charts, tables, sound effects, animation, and infographics.

Grade 8 Standards

Approved by the Nebraska State Board of Education on September 2, 2021

READING PROSE AND POETRY

Central Ideas and Details | Citing relevant and thorough textual evidence to support ideas, evaluate the development of themes or central ideas in grade-level literary text.
LA.8.RP.1 Determine two or more implied or explicit themes of a text and how they develop over the course of a literary text, including their relationship to supporting ideas.
LA.8.RP.2 Analyze how particular events, lines of dialogue, or descriptive details develop the plot, reveal aspects of characters, or create meaning.

Author's Craft | Citing relevant and thorough evidence to support ideas, evaluate the development and interaction of individuals, ideas, and events in grade-level literary text.
LA.8.RP.3 Analyze how an author establishes, conveys, and contrasts the points of view of the audience and the characters to create effects such as suspense, humor, or dramatic irony in a literary text.
LA.8.RP.4 Compare and contrast the structure of two or more literary texts and how their structures contribute to style and meaning.

Knowledge and Ideas | Citing relevant and thorough textual evidence to support ideas, evaluate how an author's perspective or use of point of view shapes the style and meaning of grade-level literary text.
LA.8.RP.5 Analyze how a modern work of fiction draws on themes, patterns of events, or character types from myths, traditional stories, or religious works.
LA.8.RP.6 Synthesize the implied or stated theme(s) in a literary text to draw conclusions and deepen understanding of self and others.
LA.8.RP.7 Analyze regional, national, international, and/or multicultural perspectives to make connections among and distinctions between characters or ideas within and across a range of literary texts.

Range of Reading and Level of Text Complexity | Read and comprehend complex, grade-level literary text independently and proficiently.
LA.8.RP.8 Read and comprehend a wide range of literary texts of appropriate complexity at the high end of the 6-8 grade band independently and proficiently.

Instructional Considerations

- Students at this grade level should understand distinctions between *universal*, *implied*, and *explicit* themes.
- *Point of view* refers to the vantage point from which a story is told, while *perspective* is an author's attitude or belief that is based largely on personal knowledge and experience.
- At all grade levels, students should read paired, conceptually-related (by topic, theme, and/or genre) literary and informational texts.
- *Author's craft* refers to the techniques an author uses to develop and support a theme.

READING INFORMATIONAL TEXT

Central Ideas and Details | Citing relevant and thorough textual evidence to support ideas, evaluate the development of themes or central ideas in grade-level informational text.
LA.8.RI.1 Determine two or more implied or explicit central ideas and how they develop over the course of an informational text, including their relationship to supporting ideas.
LA.8.RI.2 Analyze how particular events, interactions between individuals, or key facts and details contribute to meaning.

Author's Craft | Citing relevant and thorough evidence to support ideas, evaluate the development and interaction of individuals, ideas, and events in grade-level informational text.
LA.8.RI.3 Analyze how an author establishes, conveys, and contrasts perspective or purpose in a text and how the author acknowledges and responds to conflicting evidence or viewpoints.
LA.8.RI.4 Compare and contrast the structure of a specific paragraph in an informational text, including the role of particular sentences in developing and refining a key concept.

Knowledge and Ideas | Citing relevant and thorough textual evidence to support ideas, evaluate how an author's perspective or use of point of view shapes the style and meaning of grade-level informational text.
LA.8.RI.5 Analyze how two or more texts provide conflicting information on the same topic, including where the texts disagree on matters of evidence or interpretation.
LA.8.RI.6 Analyze the development of an argument and evaluate the effectiveness of the type(s) of reasoning used to support the argument.
LA.8.RI.7 Analyze regional, national, international, and/or multicultural perspectives to make connections among and distinctions between individuals or ideas within and across a range of informational texts.

Range of Reading and Level of Text Complexity | Read and comprehend complex, grade-level informational text independently and proficiently.

LA.8.RI.8 Read and comprehend a wide range of informational texts of appropriate complexity at the high end of the 6-8 grade band independently and proficiently.

Instructional Considerations

- A *claim* refers to an author's primary argument and is supported by textual evidence.
- *Author's craft* refers to the techniques an author uses to develop and support a claim.
- *Point of view* refers to the vantage point from which a story is told, while *perspective* is an author's attitude or belief that is based on personal knowledge and/or experience.
- *Text structure* refers to the primary way an author organizes information in a text. Students at this grade level should be able to identify different structures for different sections within a larger piece.

VOCABULARY

Acquisition and Use | Build and use a range of conversational, academic, and discipline-specific grade-level vocabulary and apply to reading, writing, speaking, and listening.

LA.8.V.1 Integrate grade-level academic vocabulary appropriately for a variety of tasks and purposes.

a. Use context clues (e.g. the overall meaning of a sentence or paragraph; a word's position or function in a sentence) to determine the meanings of words and phrases.
b. Use commonly occurring Greek and Latin affixes and roots to determine the meanings of words (e.g., recede, precede).
c. Consult general and specialized reference materials to determine or clarify the precise meanings, pronunciations, or parts of speech of words.

Context and Connotation | Determine or clarify the meaning of unknown and multiple-meaning words and phrases, choosing flexibly from a range of strategies.

LA.8.V.2 Interpret an author's use of figurative, connotative, and technical language in grade-level literary and informational text.

a. Interpret figures of speech (e.g., verbal irony, puns) in context.
b. Determine the relationship between particular words to better understand each of the words.
c. Distinguish between the connotations of words with similar denotations (e.g., willful, resolute).

Instructional Considerations

- *Academic vocabulary* refers to words likely to appear in a variety of content area texts, at or above grade-level, and typically requires explicit instruction. Students should be encouraged to use newly acquired terms frequently in speaking and writing.
- The vast majority of academic vocabulary taught should derive from complex texts—a careful review of texts for challenging words that are central to understanding the meaning of the text, including figurative language, should determine which vocabulary is taught explicitly (sometimes in advance of reading).
- Include a word study component that includes prefixes, root words, and suffixes to accompany text-based methods of vocabulary development.
- Reading aloud to students using texts that are two grade levels higher than their reading level is an evidence-based practice for activating prior knowledge and building vocabulary.

WRITING

Production of Writing | Use a recursive writing process to produce clear and coherent writing appropriate to the discipline, audience, and/or context.

LA.8.W.1 Create grammatically correct multi-paragraph compositions with varied sentence structures.

a. Apply knowledge of rules for capitalization.
b. Use punctuation (comma, ellipsis, dashes) to indicate a pause or break and an ellipsis to indicate an omission.
c. Explain the function of and use different types of verbals in sentences (e.g., gerunds, participles, infinitives).
d. Distinguish between and use active and passive voice, formal and informal tone, and types of grammatical mood (e.g. indicative, subjunctive, conditional, imperative).
e. Use appropriate parallel structure in words, phrases, and clauses.
f. Identify and revise fragment and run-on sentences and inappropriate shifts in verb tense, number, voice, and mood.

LA.8.W.2 Use a recursive writing process to develop, strengthen, and produce writing appropriate to the audience, purpose, and discipline.

a. Identify and use resources and inquiry tools to plan, organize, and draft writing.
b. Adapt writing processes to sustain engagement in short and long-term writing tasks of increasing length and complexity.
c. Improve and clarify the content, structure, and organization of writing by revising, considering feedback from adults and peers.
d. Improve and clarify writing by editing and proofreading, considering feedback from adults and peers.
e. Use appropriate print and digital/multimedia tools to produce, enhance, and/or publish writing individually or in collaboration with peers.

Modes of Writing | Write in a variety of modes for a variety of purposes and audiences across disciplines.

LA.8.W.3 Write in a variety of literary forms to convey real or imagined experiences or events in which the development and structure are appropriate to the task, purpose, and audience.

a. Engage and orient the reader by establishing a conflict, situation, or observation, introducing a narrator and/or character(s), and establishing and maintaining point(s) of view; organize an event sequence that unfolds naturally and logically.

b. Use literary techniques (e.g., dialogue, pacing, description, multiple plot lines) to develop experiences, events, characters, and settings.
c. Use a variety of techniques to sequence events so that they build on one another to create a coherent whole.
d. Use precise words and phrases, descriptive/sensory details, and figurative language to establish mood and tone and convey a vivid picture.
e. Provide a conclusion that is clearly related to and reflects upon what is experienced, observed, or left unresolved over the course of the piece.

LA.8.W.4 Write arguments that develop a perspective with supporting reasons and evidence, organized as appropriate to the task, purpose, and audience.

a. Develop a structure to sequence ideas appropriately; introduce a clear claim where appropriate.
b. Introduce claim(s), acknowledge and distinguish the claim(s) from alternate or supporting claims, and develop a structure in which ideas are grouped logically.
c. Explain and cite relevant evidence from multiple credible sources.
d. Use words, phrases, and key vocabulary to create cohesion and clarify the relationship between the claim(s) and supporting evidence.
e. Adapt style and tone appropriate to the norms and conventions of the task and discipline.
f. Provide a conclusion that follows from and supports the argument(s) presented.

LA.8.W.5 Write informative/explanatory pieces to clearly convey ideas and information in which the development and structure are appropriate to the task, purpose, and audience.

a. Introduce a topic clearly and provide a specific focus; organize ideas, concepts, and information into broader categories or sections including text features, illustrations, and/or multimedia elements.
b. Develop the topic with relevant facts, definitions, concrete details, quotations, and/or other information and examples.
c. Use appropriate transitions and domain-specific vocabulary to clarify relationships among ideas and concepts.
d. Provide a concluding statement or section that follows from the information or explanation(s).

LA.8.W.6 Gather and use credible evidence from multiple trustworthy sources and assess its relevance in answering the research question(s).

a. Integrate evidence into writing by quoting or paraphrasing data and conclusions while avoiding plagiarism.

b. Locate and evaluate the credibility of evidence (e.g., the expertise or motivation of the creator of an information product, potential bias and/or deception) from print and digital sources to generate and answer questions and create new understandings.
c. Select and use appropriate note-taking formats to collect and organize information.
d. Demonstrate academic integrity by avoiding overreliance on any one source and citing sources within text (e.g., parenthetical and numerical); provide a list of sources using a standard format.
e. Practice safe and ethical behaviors when communicating and interacting with others digitally (e.g., safe information to share, utilize appropriate sites and materials, appropriate language use, respect diverse perspectives).

Instructional Considerations

- *Grammar*, or the rules by which sentences are constructed, is contrasted from *usage*, which is the way words and phrases are commonly used. All dialects of language are grammatical and follow rules; exceptions to the uses of language that do not conform to standard English should be given instructional consideration. *Mechanics* refers to the norms of written language only and includes spelling, punctuation, and capitalization. Mechanics may change according to time, place, and purpose.
- The standards contain four broad modes of writing—**Narrative**, **Opinion (K-5)**, **Informative/Explanatory**, and **Research**.
- *Narrative* forms include but are not limited to: short stories, personal narratives, fables, myths, tall tales, fairy tales, plays, poetry, autobiography, biography, essays, screenplays, narrative nonfiction, realistic fiction, historical accounts, memoirs, nonlinear narratives, legends, epics, and ballads.
- *Opinion*, or argumentative, forms include but are not limited to: personal opinion pieces, appeals, editorials, proposals, personal essays, speeches, letters, literary analyses, and persuasive and op-ed pieces.
- *Informative/explanatory* forms include, but are not limited to: descriptive essays, comparative analyses, historical reports, manuals, process pieces, journal, magazine, and newspaper articles, memorandums, scientific reports, compare/contrast, problem/solution, and cause/effect essays.

SPEAKING AND LISTENING

Comprehension and Collaboration | Communicate effectively and appropriately in collaborative activities for a variety of tasks, purposes, and audiences to express ideas, share knowledge, and generate new understandings.
LA.8.SL.1 Initiate and participate in structured discussions and collaborations about 8th grade topics and texts.

a. Ask relevant questions to build on ideas, clarify own ideas, or acquire or confirm information.
b. Demonstrate interpretation of verbal and non-verbal messages in a conversation.
c. Converse with peers and adults in an all-inclusive manner to foster positive relationships while respecting diverse perspectives.
d. Demonstrate active and attentive listening skills (e.g., eye contact, nonverbal cues, taking notes, summarizing, questioning).
e. Complete a task following complex, multi-step directions.

Presentation of Knowledge and Ideas | Present information, findings, and supporting evidence in which the organization, development, and style are appropriate to the discipline, audience, and/or context.
LA.8.SL.2 Present claims and findings, emphasizing key ideas in a focused, coherent manner with relevant descriptions, facts, details, and examples to clarify themes or central ideas.

a. Demonstrate and adjust speaking techniques (e.g., appropriate eye contact, pacing, adequate volume, clear pronunciation) for a variety of purposes and situations, including interpreting 8th grade texts.
b. Convey a perspective with clear reasoning and valid evidence.
c. Analyze the purpose of information being presented and evaluate its motives (e.g., social, commercial, political).
d. Demonstrate awareness of and sensitivity to the appropriate use of words (e.g., stereotypes, multiple meanings of words).
e. Select and use appropriate visual and/or digital tools to enhance verbal communication and add interest.

Instructional Considerations

- Instruction of speaking and listening skills should be purposeful, directed, and specific as well as integrated throughout structured classroom activities and routines.
- At this grade level, students should be encouraged to reply to questions both orally and in writing using complete sentences.
- Appropriate visual and/or digital tools include, but are not limited to: graphic images, drawings, artwork, photographs, audio and video pieces, charts, tables, sound effects, animation, and infographics.

Grades 9-10 Standards

READING PROSE AND POETRY

Central Ideas and Details | Citing relevant and thorough textual evidence to support ideas, evaluate the development of themes or central ideas in grade-level literary text.
LA.10.RP.1 Analyze the development of two or more implied or explicit themes over the course of a literary text or texts.
LA.10.RP.2 Analyze how the development of characters, settings, and important events contribute to the meaning of the work as a whole.

Author's Craft | Citing relevant and thorough evidence to support ideas, evaluate the development and interaction of individuals, ideas, and events in grade-level literary text.
LA.10.RP.3 Analyze how the author's choices related to perspective or point of view contribute to the meaning, significance, or aesthetic of a literary text.
LA.10.RP.4 Analyze how an author uses text structure, including the manipulation of time (e.g., foreshadowing, flashbacks) to create literary effects such as mystery, tension, and suspense.

Knowledge and Ideas | Citing relevant and thorough textual evidence to support ideas, evaluate how an author's perspective or use of point of view shapes the style and meaning of grade-level literary text.
LA.10.RP.5 Analyze how an author draws on and transforms source material in a specific work (e.g., how Shakespeare treats a theme or topic from the Bible).
LA.10.RP.6 Analyze the implied or stated theme(s) in a literary text to draw conclusions, deepen understanding of self and others, and generate questions for further inquiry.
LA.10.RP.7 Analyze multiple perspectives within and across a wide range of literary texts.

Range of Reading and Level of Text Complexity | Read and comprehend complex, grade-level literary text independently and proficiently.
LA.10.RP.8 Read and comprehend a wide range of literary texts of appropriate complexity at the high end of the 9-10 grade band proficiently, with scaffolding as needed at the high end of the range.

Instructional Considerations

- Students at this grade level should understand distinctions between *universal*, *implied*, and *explicit* themes.
- *Point of view* refers to the vantage point from which a story is told, while *perspective* is an author's attitude or belief that is based largely on personal knowledge and experience.
- At all grade levels, students should read paired, conceptually-related (by topic, theme, and/or genre) literary and informational texts.
- *Author's craft* refers to the techniques an author uses to develop and support a theme.

READING INFORMATIONAL TEXT

Central Ideas and Details | Citing relevant and thorough textual evidence to support ideas, evaluate the development of themes or central ideas in grade-level informational text.
LA.10.RI.1 Analyze the development of two or more implied or explicit central ideas over the course of an informational text or texts.
LA.10.RI.2 Analyze how the interaction of individuals, important events, and key ideas contribute to the meaning of the work as a whole.

Author's Craft | Citing relevant and thorough evidence to support ideas, evaluate the development and interaction of individuals, ideas, and events in grade-level informational text.
LA.10.RI.3 Analyze an author's perspective or purpose in a text and analyze how an author uses rhetoric to advance that point of view or purpose.
LA.10.RI.4 Analyze in detail how an author's ideas or claims are developed and refined by particular sentences, paragraphs, or larger portions of a text (e.g., a section or chapter).

Knowledge and Ideas | Citing relevant and thorough textual evidence to support ideas, evaluate how an author's perspective or use of point of view shapes the style and meaning of grade-level informational text.
LA.10.RI.5 Analyze informational texts of historical and/or cultural significance, including their treatment of related topics and concepts.
LA.10.RI.6 Compare and contrast the development of different arguments on the same topic, evaluating the effectiveness and validity of the claims.
LA.10.RI.7 Analyze how an author or speaker unfolds a series of events, ideas, or perspectives within and across a wide range of informational texts.

Range of Reading and Level of Text Complexity | Read and comprehend complex, grade-level informational text independently and proficiently.

LA.10.RI.8 Read and comprehend a wide range of informational texts of appropriate complexity at the high end of the 9-10 grade band proficiently, with scaffolding as needed at the high end of the range.

Instructional Considerations

- A *claim* refers to an author's primary argument and is supported by textual evidence.
- *Author's craft* refers to the techniques an author uses to develop and support a claim.
- *Point of view* refers to the vantage point from which a story is told, while *perspective* is an author's attitude or belief that is based on personal knowledge and/or experience.
- *Text structure* refers to the primary way an author organizes information in a text. Students at this grade level should be able to identify different structures for different sections within a larger piece.

VOCABULARY

Acquisition and Use | Build and use a range of conversational, academic, and discipline-specific grade-level vocabulary and apply to reading, writing, speaking, and listening.

LA.10.V.1 Integrate grade-level academic vocabulary appropriately for a variety of tasks and purposes.

a. Use context clues (e.g., the overall meaning of a sentence or paragraph; a word's position or function in a sentence) to determine the meanings of words and phrases.
b. Identify and correctly use patterns of word changes that indicate different meanings or parts of speech (e.g., analyze, analysis).
c. Consult general and specialized reference materials to determine or clarify the precise meanings, pronunciations, parts of speech, or etymology of words.

Context and Connotation | Determine or clarify the meaning of unknown and multiple-meaning words and phrases, choosing flexibly from a range of strategies.

LA.10.V.2 Interpret an author's use of figurative, connotative, and technical language in grade-level literary and informational text.

a. Interpret figures of speech (e.g., euphemism, oxymoron) in context and analyze their role in text.
b. Analyze nuances in the meanings of words with similar denotations.

Instructional Considerations

- *Academic vocabulary* refers to words likely to appear in a variety of content area texts, at or above grade-level, and typically requires explicit instruction. Students should be encouraged to use newly acquired terms frequently in speaking and writing.
- The vast majority of academic vocabulary taught should derive from complex texts—a careful review of texts for challenging words that are central to understanding the meaning of the text, including figurative language, should determine which vocabulary is taught explicitly (sometimes in advance of reading).
- Include a word study component that includes prefixes, root words, and suffixes to accompany text-based methods of vocabulary development.
- Reading aloud to students using texts that are two grade levels higher than their reading level is an evidence-based practice for activating prior knowledge and building vocabulary.

WRITING

Production of Writing | Use a recursive writing process to produce clear and coherent writing appropriate to the discipline, audience, and/or context.

LA.10.W.1 Compose grammatically correct multi-paragraph compositions to convey meaning and add variety, interest, and fluency to written and spoken language.

a. Apply knowledge of rules for capitalization.
b. Use a colon to introduce a quotation, definition, or to expand on information in a sentence; use a semicolon with a conjunctive adverb.
c. Apply knowledge of function and usage to revise personal writing while resolving issues of complex or contested usage, consulting appropriate and reliable reference materials.
d. Select and use verbs with appropriate voice and mood.
e. Identify and revise fragment and run-on sentences and inappropriate shifts in verb tense, number, voice, mood, and parallel structure.

LA.10.W.2 Use a recursive writing process to develop, strengthen, and produce writing appropriate to the audience, purpose, and discipline.

a. Identify and use resources and inquiry tools to plan, organize, and draft writing.
b. Adapt writing processes to sustain engagement in short and long-term writing tasks of increasing length and complexity.
c. Improve and clarify writing by revising, considering feedback from adults and peers to address the needs of a particular audience and enhance the purpose and structure.
d. Improve and clarify writing by editing and proofreading to enhance style appropriate to audience, purpose, and task.
e. Use appropriate print and digital/multimedia tools to produce, enhance, and/or publish writing individually or in collaboration with peers.

Modes of Writing | Write in a variety of modes for a variety of purposes and audiences across disciplines.

LA.10.W.3 Write in a variety of literary forms to convey real or imagined experiences or events, themes, and perspectives in which the development, structure, and style are appropriate to the task, purpose, and audience.

a. Engage and orient the reader by setting out a problem, situation, or observation, establishing multiple points of view, and introducing a narrator and/or characters; create a smooth progression of experiences or events.
b. Use literary techniques, such as dialogue, pacing, description, reflection, and multiple plot lines, to develop experiences, events, settings, and/or characters.
c. Use a variety of techniques to sequence events so that they build on one another to create a coherent whole.
d. Use precise words and phrases, telling details, and sensory language to convey a vivid picture of the experiences, events, setting, and/or characters and to establish mood and tone.
e. Provide a conclusion that follows from and reflects upon what is experienced, observed, resolved or left unresolved, and what new implications or questions are raised over the course of the piece.

LA.10.W.4 Write arguments that develop a perspective with supporting reasons and evidence, organized as appropriate to the task, purpose, and audience.

a. Develop a structure to sequence ideas logically; introduce a clear claim where appropriate, and/or distinguish the claim(s) from alternate or supporting claims.
b. Demonstrate understanding and engagement with multiple viewpoints and sources to create and support nuanced claims as a recursive process of inquiry and exploration.
c. Use words, phrases, key vocabulary, and varied syntax to clarify relationships between claim(s), counterclaim(s), and supporting evidence.
d. Adapt style and tone appropriate to the norms and conventions of the task and discipline.
e. Provide a conclusion that follows from and supports the argument(s) presented.

LA.10.W.5 Write informative/explanatory pieces to clearly convey ideas, information, and concepts in which the development and structure are appropriate to the task, discipline, purpose, and audience.

a. Introduce a topic clearly and provide a specific focus; organize complex ideas, concepts, and information to make clear connections and distinctions including text features, illustrations, and/or multimedia elements.
b. Develop the topic with relevant, sufficient facts, extended definitions, concrete details, quotations, and/or other information and examples.
c. Use appropriate and varied transitions, domain-specific vocabulary, and varied syntax to manage the complexity of the topic.
d. Establish and maintain a formal style and objective tone while attending to the norms and conventions of the discipline.

e. Provide a conclusion that follows from and supports the information or explanations and articulates the implications and/or significance of the topic.

LA.10.W.6 Gather and use credible evidence from multiple authoritative sources and assess its relevance in answering the research question(s).

a. Integrate information and evidence into writing selectively, accurately quoting or paraphrasing data and conclusions to maintain the flow of ideas while avoiding plagiarism.
b. Locate and evaluate the credibility of evidence (e.g., the expertise or motivation of the creator of an information product, potential bias and/or deception, and social, political, and/or historical perspectives) from print and digital sources to generate and answer questions and create new understandings.
c. Select and use appropriate note-taking formats to collect and organize information.
d. Demonstrate academic integrity by avoiding overreliance on any one source; cite sources using a variety of in-text citations to enhance fluency; develop a list of sources that conforms to a style guide appropriate to the discipline (e.g. MLA, APA, Chicago).
e. Practice safe and ethical behaviors when communicating and interacting with others digitally (e.g. safe information to share, utilize appropriate sites and materials, appropriate language use, respect diverse perspectives).

Instructional Considerations

- *Grammar*, or the rules by which sentences are constructed, is contrasted from *usage*, which is the way words and phrases are commonly used. All dialects of language are grammatical and follow rules; exceptions to the uses of language that do not conform to standard English should be given instructional consideration. *Mechanics* refers to the norms of written language only and includes spelling, punctuation, and capitalization. Mechanics may change according to time, place, and purpose.
- The standards contain four broad modes of writing—**Narrative**, **Opinion (K-5)**, **Informative/Explanatory**, and **Research**.
- *Narrative* forms include but are not limited to: short stories, personal narratives, fables, myths, tall tales, fairy tales, plays, poetry, autobiography, biography, essays, screenplays, narrative nonfiction, realistic fiction, historical accounts, memoirs, nonlinear narratives, legends, epics, and ballads.
- *Opinion*, or argumentative, forms include but are not limited to: personal opinion pieces, appeals, editorials, proposals, personal essays, speeches, letters, literary analyses, and persuasive and op-ed pieces.
- *Informative/explanatory* forms include, but are not limited to: descriptive essays, comparative analyses, historical reports, manuals, process pieces, journal, magazine, and newspaper articles, memorandums, scientific reports, compare/contrast, problem/solution, and cause/effect essays.

SPEAKING AND LISTENING

Comprehension and Collaboration | Communicate effectively and appropriately in collaborative activities for a variety of tasks, purposes, and audiences to express ideas, share knowledge, and generate new understandings.
LA.10.SL.1 Initiate and participate in structured discussions and collaborations about grade-level topics and texts.

a. Ask relevant questions to build on ideas, clarify own ideas, or acquire or confirm information.
b. Demonstrate interpretation of verbal and non-verbal messages in a conversation.
c. Converse with peers and adults in an all-inclusive manner to foster positive relationships while respecting diverse perspectives.
d. Demonstrate active and attentive listening skills (e.g., eye contact, nonverbal cues, taking notes, summarizing, questioning).
e. Complete a task following complex, multi-step directions.

Presentation of Knowledge and Ideas | Present information, findings, and supporting evidence and in which the organization, development, and style are appropriate to the discipline, audience, and/or context.
LA.10.SL.2 Present information, findings, and supporting evidence clearly and concisely and in which the organization, development, and style are appropriate to a variety of tasks, purposes, and audiences.

a. Demonstrate and adjust speaking techniques (e.g., appropriate eye contact, pacing, nonverbal cues, intonation) for a variety of purposes and situations, including interpreting grade-level texts.
b. Convey a perspective with clear reasoning and valid evidence.
c. Analyze the purpose of information being presented, evaluate its motives (e.g., social, commercial, political), and determine its credibility.
d. Demonstrate awareness of and sensitivity to the appropriate use of words (e.g., stereotypes, multiple meanings of words).
e. Select and use appropriate visual and/or digital tools to enhance verbal communication and add interest.

Instructional Considerations

- Instruction of speaking and listening skills should be purposeful, directed, and specific as well as integrated throughout structured classroom activities and routines.
- Appropriate visual and/or digital tools include, but are not limited to: graphic images, drawings, artwork, photographs, audio and video pieces, charts, tables, sound effects, animation, and infographics.

Grades 11-12 Standards

READING PROSE AND POETRY

Central Ideas and Details | Citing relevant and thorough textual evidence to support ideas, evaluate the development of themes or central ideas in grade-level literary text.
LA.12.RP.1 Evaluate the development of two or more implied or explicit themes over the course of a literary text or texts.
LA.12.RP.2 Analyze the development and interaction of literary elements such as characterization, setting, and plot, and how they contribute to the meaning of the work as a whole.

Author's Craft | Citing relevant and thorough evidence to support ideas, evaluate the development and interaction of individuals, ideas, and events in grade-level literary text.
LA.12.RP.3 Evaluate an author's use of point of view and how it contributes to the meaning, significance, or aesthetic of a literary text.
LA.12.RP.4 Evaluate how an author develops structure in a literary text to contribute to its overall meaning and aesthetic impact.

Knowledge and Ideas | Citing relevant and thorough textual evidence to support ideas, evaluate how an author's perspective or use of point of view shapes the style and meaning of grade-level literary text.
LA.12.RP.5 Apply knowledge of eighteenth-, nineteenth- and early-twentieth-century foundational works of literature, including how two or more texts from the same period treat similar themes or topics.
LA.12.RP.6 Evaluate themes within and across literary texts to draw conclusions, deepen understanding of self and others, and generate questions for further inquiry.
LA.12.RP.7 Analyze and evaluate multiple perspectives within and across a wide range of literary texts.

Range of Reading and Level of Text Complexity | Read and comprehend complex, grade-level literary text independently and proficiently.
LA.12.RP.8 Read and comprehend a wide range of literary texts in the 12-CCR grade band independently and proficiently.

Instructional Considerations

- Students at this grade level should understand distinctions between *universal*, *implied*, and *explicit* themes.
- *Point of view* refers to the vantage point from which a story is told, while *perspective* is an author's attitude or belief that is based largely on personal knowledge and experience.
- At all grade levels, students should read paired, conceptually-related (by topic, theme, and/or genre) literary and informational texts.
- *Author's craft* refers to the techniques an author uses to develop and support a theme.

READING INFORMATIONAL TEXT

Central Ideas and Details | Citing relevant and thorough textual evidence to support ideas, evaluate the development of themes or central ideas in grade-level informational text.
LA.12.RI.1 Evaluate the development of central ideas over the course of an informational text or texts.
LA.12.RI.2 Synthesize and evaluate how the interaction of individuals, important events, and key ideas contribute to the meaning of the work as a whole.

Author's Craft | Citing relevant and thorough evidence to support ideas, evaluate the development and interaction of individuals, ideas, and events in grade-level informational text.
LA.12.RI.3 Evaluate an author's perspective or purpose and how it contributes to the meaning, significance, or aesthetic of an informational text.
LA.12.RI.4 Evaluate the effectiveness of the structure an author uses in an exposition or argument, including whether the structure makes the points clear, convincing, and engaging.

Knowledge and Ideas | Citing relevant and thorough textual evidence to support ideas, evaluate how an author's perspective or use of point of view shapes the style and meaning of grade-level informational text.
LA.12.RI.5 Analyze seventeenth-, eighteenth-, and nineteenth-century works of historical and literary significance for their central ideas, purposes, and rhetorical style.
LA.12.RI.6 Compare and contrast the development of multiple arguments in texts of related topics, evaluating the effectiveness and validity of the claims.
LA.12.RI.7 Analyze and evaluate multiple perspectives within and across a wide range of informational texts.

Range of Reading and Level of Text Complexity | Read and comprehend complex, grade-level informational text independently and proficiently.

LA.12.RI.8 Read and comprehend a wide range of informational texts in the 12-CCR grade band independently and proficiently.

Instructional Considerations

- A *claim* refers to an author's primary argument and is supported by textual evidence.
- *Author's craft* refers to the techniques an author uses to develop and support a claim.
- *Point of view* refers to the vantage point from which a story is told, while *perspective* is an author's attitude or belief that is based on personal knowledge and/or experience.
- *Text structure* refers to the primary way an author organizes information in a text. Students at this grade level should be able to identify different structures for different sections within a larger piece.

V O C A B U L A R Y

Acquisition and Use | Build and use a range of conversational, academic, and discipline-specific grade-level vocabulary and apply to reading, writing, speaking, and listening.

LA.12.V.1 Integrate grade-level academic vocabulary appropriately for a variety of tasks and purposes.

a. Use context clues (e.g., the overall meaning of a sentence or paragraph; a word's position or function in a sentence) to determine the meanings of words and phrases.
b. Identify and correctly use patterns of word changes that indicate different meanings or parts of speech (e.g., conceive, conception, conceivable).
c. Consult general and specialized reference materials to determine or clarify the precise meanings, pronunciations, parts of speech, etymology, or standard usage of words.

Context and Connotation | Determine or clarify the meaning of unknown and multiple-meaning words and phrases, choosing flexibly from a range of strategies.

LA.12.V.2 Interpret an author's use of figurative, connotative, and technical language in grade-level literary and informational text.

a. Interpret figures of speech (e.g., hyperbole, paradox) in context and analyze their role in text.
b. Analyze nuances in the meanings of words with similar denotations.

Instructional Considerations

- *Academic vocabulary* refers to words likely to appear in a variety of content area texts, at or above grade-level, and typically requires explicit instruction. Students should be encouraged to use newly acquired terms frequently in speaking and writing.
- The vast majority of academic vocabulary taught should derive from complex texts—a careful review of texts for challenging words that are central to understanding the meaning of the text, including figurative language, should determine which vocabulary is taught explicitly (sometimes in advance of reading).
- Include a word study component that includes prefixes, root words, and suffixes to accompany text-based methods of vocabulary development.
- Reading aloud to students using texts that are two grade levels higher than their reading level is an evidence-based practice for activating prior knowledge and building vocabulary.

WRITING

Production of Writing | Use a recursive writing process to produce clear and coherent writing appropriate to the discipline, audience, and/or context.

LA.12.W.1 Compose grammatically correct multi-paragraph compositions to convey meaning and to add variety, interest, and fluency to written and spoken language.

a. Demonstrate understanding that usage is a matter of convention, can evolve, and is sometimes contested.
b. Apply knowledge of function and usage to revise personal and peer writing while resolving issues of complex or contested usage, consulting appropriate and reliable reference materials.

LA.12.W.2 Use a recursive writing process to develop, strengthen, and produce writing appropriate to the audience, purpose, and discipline.

a. Identify and use resources and inquiry tools to plan, organize, and draft writing.
b. Adapt writing processes to sustain engagement in short and long-term writing tasks of increasing length and complexity.
c. Improve and clarify writing by revising, considering feedback from adults and peers to address the needs of a particular audience and enhance the purpose and structure.
d. Improve and clarify writing by editing and proofreading to enhance style appropriate to audience, purpose, and task.
e. Use appropriate print and digital/multimedia tools to produce, enhance, and/or publish writing individually or in collaboration with peers.

Modes of Writing | Write in a variety of modes for multiple purposes and audiences across disciplines.

LA.12.W.3 Write in a variety of literary forms to convey real or imagined experiences or events, themes, and perspectives in which the development, structure, and style are appropriate to the task, purpose, and discipline.

a. Engage and orient the reader by setting out a problem, situation, or observation, establishing multiple points of view, and introducing a narrator and/or characters; create a smooth progression of experiences or events.
b. Use literary techniques, such as dialogue, pacing, description, reflection, and multiple plot lines, to develop experiences, events, settings, and/or characters.
c. Use a variety of techniques to sequence events so that they build on one another to create a coherent whole.
d. Use precise words and phrases, telling details, and sensory language to convey a vivid picture of the experiences, events, setting, and/or characters and to set mood and tone.

e. Provide a conclusion that follows from and reflects upon what is experienced, observed, resolved or left unresolved, and what new implications or questions are raised over the course of the piece.

LA.12.W.4 Write arguments that develop a perspective with supporting reasons and evidence, organized as appropriate to the task, purpose, and audience.

a. Develop a structure to sequence ideas logically; introduce a clear claim where appropriate, and/or distinguish the claim(s) from alternate or supporting claims.
b. Demonstrate understanding and engagement with multiple viewpoints and sources to create and support nuanced claims as a recursive process of inquiry and exploration.
c. Use words, phrases, key vocabulary, and varied syntax to clarify relationships between claim(s), counterclaim(s), and supporting evidence.
d. Adapt style and tone appropriate to the norms and conventions of the task and discipline.
e. Provide a conclusion that follows from and supports the argument(s) presented.

LA.12.W.5 Write informative/explanatory pieces to clearly convey ideas, information, and concepts in which the development and structure are appropriate to the task, discipline, purpose, and audience.

a. Introduce a topic clearly and provide a specific focus; organize complex ideas, concepts, and information to make clear connections and distinctions including text features, illustrations, and/or multimedia elements.
b. Develop the topic thoroughly with relevant, sufficient facts, extended definitions, concrete details, quotations, and/or other information and examples.
c. Use appropriate and varied transitions, domain-specific vocabulary, and varied syntax to manage the complexity of the topic.
d. Establish and maintain a formal style and objective tone while attending to the norms and conventions of the discipline.
e. Provide a conclusion that follows from and supports the information or explanations and articulates the implications and/or significance of the topic.

LA.12.W.6 Gather and use credible evidence from multiple authoritative sources, evaluate the strengths and limitations of sources in terms of the task, purpose, and audience, and assess their relevance in answering the research question(s).

a. Integrate information and evidence into writing selectively, accurately quoting or paraphrasing data and conclusions to maintain the flow of ideas while avoiding plagiarism.

b. Locate and evaluate the credibility of evidence (e.g., the expertise or motivation of the creator of an information product, potential bias and/or deception, and social, political, and/or historical perspectives) from print and digital sources to generate and answer questions and create new understandings.
c. Select and use appropriate note-taking formats to collect and organize information.
d. Demonstrate academic integrity by avoiding overreliance on any one source; cite sources using a variety of in-text citations to enhance fluency; develop a list of sources that conforms to a style guide appropriate to the discipline (e.g., MLA, APA, Chicago).
e. Practice safe and ethical behaviors when communicating and interacting with others digitally (e.g. safe information to share, utilize appropriate sites and materials, appropriate language use, respect diverse perspectives).

Instructional Considerations

- *Grammar*, or the rules by which sentences are constructed, is contrasted from *usage*, which is the way words and phrases are commonly used. All dialects of language are grammatical and follow rules; exceptions to the uses of language that do not conform to standard English should be given instructional consideration. *Mechanics* refers to the norms of written language only and includes spelling, punctuation, and capitalization. Mechanics may change according to time, place, and purpose.
- The standards contain four broad modes of writing—**Narrative**, **Opinion (K-5)**, **Informative/Explanatory**, and **Research**.
- *Narrative* forms include but are not limited to: short stories, personal narratives, fables, myths, tall tales, fairy tales, plays, poetry, autobiography, biography, essays, screenplays, narrative nonfiction, realistic fiction, historical accounts, memoirs, nonlinear narratives, legends, epics, and ballads.
- *Opinion*, or argumentative, forms include but are not limited to: personal opinion pieces, appeals, editorials, proposals, personal essays, speeches, letters, literary analyses, and persuasive and op-ed pieces.
- *Informative/explanatory* forms include, but are not limited to: descriptive essays, comparative analyses, historical reports, manuals, process pieces, journal, magazine, and newspaper articles, memorandums, scientific reports, compare/contrast, problem/solution, and cause/effect essays.

SPEAKING AND LISTENING

Comprehension and Collaboration | Communicate effectively and appropriately in collaborative activities for a variety of tasks, purposes, and audiences to express ideas, share knowledge, and generate new understandings.

LA.12.SL.1 Communicate effectively and appropriately in collaborative activities for a variety of tasks, purposes, and audiences to express ideas, share knowledge, and generate new understandings.

a. Ask relevant questions to build on ideas, clarify own ideas, or acquire or confirm information.
b. Demonstrate interpretation of verbal and non-verbal messages in a conversation.
c. Converse with peers and adults in an all-inclusive manner to foster positive relationships while respecting diverse perspectives.
d. Demonstrate active and attentive listening skills (e.g., eye contact, nonverbal cues, taking notes, summarizing, questioning).
e. Complete a task following complex, multi-step directions.

Presentation of Knowledge and Ideas | Present information, findings, and supporting evidence and in which the organization, development, and style are appropriate to the discipline, audience, and/or context.

LA.12.SL.2 Present information, findings, and supporting evidence effectively and in which the organization, development, and style are appropriate to a variety of tasks, purposes, and audiences.

a. Demonstrate and adjust speaking techniques (e.g., appropriate eye contact, pacing, nonverbal cues, intonation) for a variety of purposes and situations, including interpreting grade-level texts.
b. Convey a perspective with clear reasoning and valid evidence.
c. Evaluate the purpose of information being presented, its motives (e.g., social, commercial, political), and determine its credibility.
d. Demonstrate awareness of and sensitivity to the appropriate use of words (e.g., stereotypes, multiple meanings of words).
e. Make strategic use of appropriate visual and/or digital tools to enhance understanding of findings, reasoning, and evidence for specific audiences.

Instructional Considerations

- Instruction of speaking and listening skills should be purposeful, directed, and specific as well as integrated throughout structured classroom activities and routines.
- Appropriate visual and/or digital tools include, but are not limited to: graphic images, drawings, artwork, photographs, audio and video pieces, charts, tables, sound effects, animation, and infographics.

Grades K-12 Vertical Progressions

K-5 Foundations of Reading Concepts of Print: Standard 1	
Concepts of Print | Demonstrate knowledge of the organization and basic concepts of print.	
Grade	**Indicator(s)**
5	*Mastered at Grade 2 and blended with other skills at this grade level.*
4	*Mastered at Grade 2 and blended with other skills at this grade level.*
3	*Mastered at Grade 2 and blended with other skills at this grade level.*
2	**LA.2.F.1** Demonstrate knowledge of the organization and basic concepts of print. a. Recognize the distinguishing features of a paragraph including that multiple sentences may be used to form a paragraph and the author may indent or skip a line to signal a new paragraph.
1	**LA.1.F.1** Demonstrate knowledge of the organization and basic concepts of print. a. Recognize the distinguishing features of a sentence.
K	**LA.K.F.1** Demonstrate knowledge of the organization and basic concepts of print. a. Identify all upper and lowercase letters of the alphabet in isolation and in connected text. b. Recognize that spoken words are represented in written language by specific sequences of letters, and that print carries meaning. c. Demonstrate understanding that words are separated by spaces in print; demonstrate understanding of one-to-one correspondence between voice and print. d. Demonstrate knowledge that print reads from left to right, top to bottom, and page by page.

K-5 Foundations of Reading Phonological Awareness: Standard 2	
Phonological Awareness | Demonstrate phonological awareness through oral activities.	
Grade	**Indicator(s)**
5	*Mastered at Grade 2 and blended with other skills at this grade level.*
4	*Mastered at Grade 2 and blended with other skills at this grade level.*
3	*Mastered at Grade 2 and blended with other skills at this grade level.*
2	**LA.2.F.2** Demonstrate understanding of advanced phonemic awareness skills in spoken words, syllables, and sounds (phonemes). a. Identify, segment, and blend phonemes in single-syllable, spoken five- and six-phoneme words including words with blends, digraphs, and trigraphs. b. Substitute sounds in words with five or more phonemes. c. Delete initial and final phonemes in words including words with blends.
1	**LA.1.F.2** Demonstrate understanding of spoken words, syllables, and sounds (phonemes). a. Identify, segment and blend phonemes in single syllable spoken three- and four-phoneme words including words with blends. b. Delete initial and final phonemes in words. c. Substitute phonemes in spoken words to build new words in single-syllable words with no blends. d. Add or substitute individual sounds (phonemes in simple, one-syllable words) to make new words (e.g., "Say 'map.' Say it again and instead of /p/ say /t/. What is the new word? 'Mat'").
K	**LA.K.F.2** Demonstrate understanding of spoken words, syllables, and sounds (phonemes). a. Segment and count spoken sentences into words. b. Recognize and begin to produce oral rhymes. c. Count, produce, and segment spoken words into syllables and identify syllable parts. d. Blend onsets and rimes to form simple words (e.g., v-an, gr-ab). e. Delete part of a syllable within a spoken word including compound words (e.g., "Say 'parsnip.' Say it again but don't say 'par;' e.g., "Say 'cowboy.' Say it again but don't say 'cow'"). f. Isolate and pronounce the initial, medial vowel, and final sounds (phonemes) in two- and three-phoneme (VC or CVC) words, excluding CVC words ending with /l/, /r/, or /x/.

K-5 Foundations of Reading
Phonics and Word Analysis: Standard 3

Phonics and Word Analysis | Demonstrate phonetic and word analysis knowledge and apply decoding skills to isolated words and in connected text.

Grade	Indicators
5	**LA.5.F.3** Know and apply phonics and word analysis skills in decoding and encoding (spelling) words. a. Decode words with common Greek derived words. b. Use combined knowledge of letter-sound correspondences, syllabication patterns, and morphology (e.g., roots and affixes) to decode accurately unfamiliar multisyllabic words in and out of context.
4	**LA.4.F.3** Know and apply phonics and word analysis skills in decoding and encoding (spelling) words. a. Decode words with common Latin derived words including Latin plurals. b. Use combined knowledge of letter-sound correspondences, syllabication patterns, and morphology (e.g., roots and affixes) to read accurately unfamiliar multisyllabic words in and out of context.
3	**LA.3.F.3** Know and apply phonics and word analysis skills in decoding and encoding (spelling) words. a. Decode words with common Latin suffixes. b. Decode words with common derivational suffixes and describe how they turn words into different parts of speech. c. Decode multisyllabic words.
2	**LA.2.F.3** Know and apply phonics and word analysis skills in decoding and encoding (spelling) words. a. Decode words with variable vowel teams and vowel diphthongs. b. Decode regularly spelled two-syllable words with long vowels. c. Decode words with open and closed syllables and consonant -le. d. Decode words with common Anglo roots and affixes. e. Decode words with silent letter combinations.
1	**LA.1.F.3** Know and apply phonics and word analysis skills in decoding and encoding (spelling) words. a. Decode and encode words using knowledge of sound-spelling correspondence for common consonant digraphs, tri-graphs, and blends. b. Decode and encode simple words with r-controlled vowels. c. Decode and encode regularly spelled one-syllable words. d. Decode and encode final -e and common vowel team conventions for representing long vowel sounds. e. Decode and encode two-syllable words with regular patterns by breaking the words into syllables. f. Decode and encode words with inflectional endings. g. Use knowledge that every syllable must have a vowel sound to determine the number of syllables in a printed word. h. Recognize and read grade-appropriate, irregularly spelled words.
K	**LA.K.F.3** Know and apply phonics and word analysis skills in decoding and encoding (spelling) words. a. Demonstrate basic knowledge of one-to-one sound-to-letter correspondences by producing the primary or many of the most frequent sounds for each consonant. b. Demonstrate the long and short sounds with common spellings (graphemes) for the five major vowels.

	c. Decode consonant-vowel-consonant (CVC) words. d. Encode consonant-vowel-consonant (CVC) words. e. Distinguish between similarly spelled words by identifying the sounds of the letters that differ.

K-5 Foundations of Reading Fluency: Standard 4	
Fluency | Read grade-level texts with sufficient accuracy and fluency to support comprehension.	
Grade	**Indicators**
5	**LA.5.F.4** Develop accuracy, phrasing, and expression/prosody while reading a variety of grade-level texts to support comprehension. a. Read a variety of texts accurately using appropriate rate, expression/prosody, and intonation to reflect meaning. b. Adjust pace and prosody based on the purpose, complexity, form, and/or style of a text.
4	**LA.4.F.4** Develop accuracy, phrasing, and expression/prosody while reading a variety of grade-level texts to support comprehension. a. Read a variety of texts accurately using appropriate rate, expression/prosody, and intonation to reflect meaning of text. b. Adjust pace and prosody based on the purpose, complexity, form, and/or style of text.
3	**LA.3.F.4** Develop accuracy, phrasing, and expression/prosody while reading a variety of grade-level texts to support comprehension. a. Read a variety of texts accurately using appropriate rate, expression/prosody, and intonation to reflect the meaning of text. b. Adjust pace and prosody based on the purpose, complexity, form, and/or style of text. c. Read grade level high-frequency words with automaticity and accuracy (e.g., Fry or Dolch words or those included in instructional materials).
2	**LA.2.F.4** Develop accuracy, phrasing, and expression/prosody while reading a variety of grade-level text to support comprehension. a. Read a variety of texts accurately using appropriate rate, expression, and intonation to reflect meaning. b. Read grade level high-frequency words with automaticity and accuracy (e.g., Fry or Dolch words or those included in instructional materials).
1	**LA.1.F.4** Develop accuracy, phrasing, and expression/prosody while reading a variety of grade-level text to support comprehension. a. Read decodable text accurately with appropriate rate, intonation, and expression/prosody to reflect meaning. b. Read grade level high-frequency words with automaticity and accuracy (e.g., Fry or Dolch words or those included in instructional materials).
K	**LA.K.F.4** Develop accuracy, phrasing, and expression/prosody while reading a variety of grade-level text to support comprehension. a. Recognize upper and lowercase letters automatically and accurately. b. Read decodable consonant-vowel-consonant (CVC) words with automaticity and accuracy. c. Read grade level high-frequency words with automaticity and accuracy (e.g., Fry or Dolch words or those included in instructional materials).

K-12 Reading Comprehension Central Ideas and Details: Standard 1		
Central Ideas and Details | Citing relevant and thorough textual evidence to support ideas, evaluate the development of themes or central ideas in grade-level literary and informational texts.		
Grade	**Prose and Poetry**	**Informational Text**
11-12	**LA.12.RP.1** Evaluate the development of two or more implied or explicit themes over the course of a literary text or texts.	**LA.12.RI.1** Evaluate the development of central ideas over the course of an informational text or texts.
9-10	**LA.10.RP.1** Analyze the development of two or more implied or explicit themes over the course of a literary text or texts.	**LA.10.RI.1** Analyze the development of two or more implied or explicit central ideas over the course of an informational text or texts.
8	**LA.8.RP.1** Determine two or more implied or explicit themes of a text and how they develop over the course of a literary text, including their relationship to supporting ideas.	**LA.8.RI.1** Determine two or more implied or explicit central ideas of a text and how they develop over the course of an informational text, including their relationship to supporting ideas.
7	**LA.7.RP.1** Determine two or more implied or explicit themes in a literary text and how they are supported with key details.	**LA.7.RI.1** Determine two or more implied or explicit central ideas of an informational text and how they are supported with key details.
6	**LA.6.RP.1** Determine the implied or explicit theme of a literary text and how it develops over the course of a text.	**LA.6.RI.1** Determine the implied or explicit central idea of an informational text and how it develops over the course of a text.
5	**LA.5.RP.1** Explain the theme in a literary text and how it is conveyed through key details.	**LA.5.RI.1** Explain the central idea in an informational text and how it is conveyed through key details.
4	**LA.4.RP.1** Determine a theme in a literary text and how it is conveyed through key details.	**LA.4.RI.1** Determine the central idea of an informational text and how it is conveyed through key details.
3	**LA.3.RP.1** Identify the central message or lesson in a literary text and explain how key details support that idea.	~~**LA.3.RI.3** Determine and explain the author's purpose in an informational text.~~ **LA.3.RI.1 Identify the central idea and explain how key details support that idea**
2	**LA.2.RP.1** Recount narratives and determine their central message, lesson, or moral.	**LA.2.RI.1** Identify the main topic and key details in a multi-paragraph text.
1	**LA.1.RP.1** Retell familiar stories, including key details, and demonstrate understanding of their central message or lesson from a literary text.	**LA.1.RI.1** Identify the main topic and key details in an informational text.
K	**LA.K.RP.1** With prompting and support, orally retell familiar stories, including key details, and demonstrate understanding of their central message or lesson.	**LA.K.RI.1** With prompting and support, identify the main topic and key details in an informational text.

K-12 Reading Comprehension
Central Ideas and Details: Standard 2

Central Ideas and Details | Citing relevant and thorough textual evidence to support ideas, evaluate the development of themes or central ideas in grade-level literary and informational texts.

Grade	Prose and Poetry	Informational Text
11-12	**LA.12.RP.2** Analyze the development and interaction of literary elements such as characterization, setting, and plot, and how they contribute to the meaning of the work as a whole.	**LA.12.RI.2** Synthesize and evaluate how the interaction of individuals, important events, and key ideas contribute to the meaning of the work as a whole.
9-10	**LA.10.RP.2** Analyze how the development of characters, settings, and important events contribute to the meaning of the work as a whole.	**LA.10.RI.2** Analyze how the interaction of individuals, important events, and key ideas contribute to the meaning of the work as a whole.
8	**LA.8.RP.2** Analyze how particular events, lines of dialogue, or descriptive details develop the plot, reveal aspects of characters, or create meaning.	**LA.8.RI.2** Analyze how particular events, interactions between individuals, or key facts and details contribute to meaning.
7	**LA.7.RP.2** Analyze how particular events, lines of dialogue, or descriptive details develop the plot, reveal aspects of characters, or create meaning.	**LA.7.RI.2** Analyze the relationships and interactions between individuals, events, and/or ideas or concepts, drawing on specific supporting details in an informational text.
6	**LA.6.RP.2** Explain how a plot unfolds in a literary text as well as how the characters respond to events or changes as the plot moves toward a resolution.	**LA.6.RI.2** Explain how a key individual, event, or idea or concept is introduced and developed, drawing on specific supporting details in an informational text.
5	**LA.5.RP.2** Compare and contrast two or more characters, settings, or events in a literary text or texts.	**LA.5.RI.2** Compare and contrast two or more individuals, events, scientific ideas or concepts, or steps in a process, drawing on supporting details from a text or texts.
4	**LA.4.RP.2** Analyze a character, setting, or event in a literary text, drawing on specific details such as a character's thoughts, words, or actions.	**LA.4.RI.2** Analyze an individual, event, scientific idea or concept, or steps in a process.
3	**LA.3.RP.2** Explain how characters respond to major events and challenges in a literary text.	**LA.3.RI.2** Explain the relationship between individuals, historical events, scientific ideas or concepts, or steps in a process.
2	**LA.2.RP.2** Describe characters and how they interact with one another.	**LA.2.RI.2** Describe the connections between individuals, historical events, scientific ideas, or steps in a process.
1	**LA.1.RP.2** Identify the main character(s), setting, and important events, drawing on key details in a literary text.	**LA.1.RI.2** Identify key individuals, events, or pieces of information in an informational text.
K	**LA.K.RP.2** With prompting and support, identify main character(s), setting, and important events in a literary text.	**LA.K.RI.1** With prompting and support, identify the main topic and key details in an informational text.

K-12 Reading Comprehension Author's Craft: Standard 3		
Author's Craft | Citing relevant and thorough evidence to support ideas, evaluate the development and interaction of individuals, ideas, and events in grade-level literary and informational text.		
Grade	**Prose and Poetry**	**Informational Text**
11-12	**LA.12.RP.3** Evaluate an author's use of point of view and how it contributes to the meaning, significance, or aesthetic of a literary text.	**LA.12.RI.3** Evaluate an author's perspective or purpose and how it contributes to the meaning, significance, or aesthetic of an informational text.
9-10	**LA.10.RP.3** Analyze how the author's choices related to perspective or point of view contribute to the meaning, significance, or aesthetic of a literary text.	**LA.10.RI.3** Analyze an author's perspective or purpose in a text and analyze how an author uses rhetoric to advance that point of view or purpose.
8	**LA.8.RP.3** Analyze how an author establishes, conveys, and contrasts the points of view of the audience and the characters to create effects such as suspense, humor, or dramatic irony in a literary text.	**LA.8.RI.3** Analyze how an author establishes, conveys, and contrasts perspective or purpose in a text and how the author acknowledges and responds to conflicting evidence or viewpoints.
7	**LA.7.RP.3** Analyze how an author establishes, conveys, and contrasts the points of view of different characters or narrators in a literary text.	**LA.7.RI.3** Analyze how an author establishes or conveys a perspective or purpose and distinguishes it from that of others.
6	**LA.6.RP.3** Explain how an author establishes and conveys the point(s) of view of a narrator or speaker in a literary text.	**LA.6.RI.3** Explain how an author establishes and conveys a perspective or purpose in an informational text.
5	**LA.5.RP.3** Describe how a narrator or speaker's point of view influences the meaning of a literary text.	**LA.5.RI.3** Determine the author's purpose(s) and describe how the author's perspective (e.g., beliefs, assumptions, biases) influences the meaning of an informational text.
4	**LA.4.RP.3** Distinguish reader perspective from the perspective and point of view of the narrator or the characters in a literary text.	**LA.4.RI.3** Compare and contrast authors' perspectives in multiple informational texts of the same topic.
3	**LA.3.RP.3** Determine and explain the point of view in a literary text.	**LA.3.RI.3** Determine and explain the author's purpose in an informational text.
2	**LA.2.RP.3** Determine and explain who is telling a story within and across literary texts.	**LA.2.RI.3** Determine and explain the author's purpose in an informational text, including what the author wants to answer, explain, or describe.
1	**LA.1.RP.3** Explain the difference between the roles of author and narrator or speaker in a literary text.	**LA.1.RI.3** Define the role of the author and illustrator in presenting the ideas or information in a text.
K	**LA.K.RP.3** With prompting and support, define the role of author and illustrator in a literary text.	**LA.K.RI.3** With prompting and support, define the role of author and illustrator in presenting the ideas or information in a text.

K-12 Reading Comprehension Author's Craft: Standard 4		
Author's Craft | Citing relevant and thorough evidence to support ideas, evaluate the development and interaction of individuals, ideas, and events in grade-level literary and informational text.		
Grade	**Prose and Poetry**	**Informational Text**
11-12	**LA.12.RP.4** Evaluate how an author develops structure in a literary text to contribute to its overall meaning and aesthetic impact.	**LA.12.RI.4** Evaluate the effectiveness of the structure an author uses in an exposition or argument, including whether the structure makes the points clear, convincing, and engaging.
9-10	**LA.10.RP.4** Analyze how an author uses text structure, including the manipulation of time (e.g., foreshadowing, flashbacks) to create literary effects such as mystery, tension, and suspense.	**LA.10.RI.4** Analyze in detail how an author's ideas or claims are developed and refined by particular sentences, paragraphs, or larger portions of a text (e.g., a section or chapter).
8	**LA.8.RP.4** Compare and contrast the structure of two or more literary texts and how their structures contribute to style and meaning.	**LA.8.RI.4** Compare and contrast the structure of a specific paragraph in an informational text, including the role of particular sentences in developing and refining a key concept.
7	**LA.7.RP.4** Analyze the structure of a literary text, and how the structure contributes to its theme(s) and meaning.	**LA.7.RI.4** Analyze how the major sections of text contribute to the development of ideas in an informational text.
6	**LA.6.RP.4** Analyze how a sequence of chapters, scenes, or stanzas contribute to the development of literary elements (e.g., theme, setting, or plot).	**LA.6.RI.4** Analyze how a particular sentence, paragraph, chapter, or section fits into the overall structure of a text and contributes to the development of the ideas.
5	**LA.5.RP.4** Explain how a sequence of chapters, scenes, or stanzas fit together to provide the overall structure of literary texts.	**LA.5.RI.4** Explain how text features (titles, headings, table of contents, glossaries, captions, graphs, maps, and/or other visuals) contribute to the meaning of texts.
4	**LA.4.RP.4** Compare and contrast the structural elements of literary texts (e.g., dramas, narratives, and poems).	**LA.4.RI.4** Describe the overall structure of an informational text and how it contributes to meaning.
3	**LA.3.RP.4** Explain how sections of a literary text (e.g., chapters, scenes, stanzas) build on one another and contribute to meaning.	**LA.3.RI.4** Explain how text features (titles, headings, table of contents, glossaries, captions, graphs, maps, and/or other visuals) contribute to meaning.
2	**LA.2.RP.4** Describe the basic structure of a literary text, including how literary elements are introduced and developed and conflicts are resolved.	**LA.2.RI.4** Explain how text features (titles, headings, table of contents, glossaries, captions, graphs, maps, and/or other visuals) contribute to the meaning of texts.
1	**LA.1.RP.4** Identify the basic characteristics of literary text, drawing on a wide range of text types.	**LA.1.RI.4** Use text features (titles, headings, visuals) to predict or confirm the topic of a text.
K	**LA.K.RP.4** With prompting and support, identify the basic characteristics of literary text.	**LA.K.RI.4** With prompting and support, use text features (titles, headings, visuals) to predict or confirm the topic of a text.

K-12 Reading Comprehension Knowledge and Ideas: Standard 5		
Knowledge and Ideas | Citing relevant and thorough textual evidence to support ideas, evaluate how an author's perspective or use of point of view shapes the style and meaning of grade-level literary and informational text.		
Grade	**Prose and Poetry**	**Informational Text**
11-12	**LA.12.RP.5** Apply knowledge of eighteenth-, nineteenth- and early-twentieth-century foundational works of literature, including how two or more texts from the same period treat similar themes or topics.	**LA.12.RI.5** Analyze seventeenth-, eighteenth-, and nineteenth-century works of historical and literary significance for their central ideas, purposes, and rhetorical style.
9-10	**LA.10.RP.5** Analyze how an author draws on and transforms source material in a specific work (e.g., how Shakespeare treats a theme or topic from the Bible).	**LA.10.RI.5** Analyze informational texts of historical and/or cultural significance, including their treatment of related topics and concepts.
8	**LA.8.RP.5** Analyze how a modern work of fiction draws on themes, patterns of events, or character types from myths, traditional stories, or religious works.	**LA.8.RI.5** Analyze how two or more texts provide conflicting information on the same topic, including where the texts disagree on matters of evidence or interpretation.
7	**LA.7.RP.5** Compare and contrast a fictional portrayal of a time, place, or character and a historical account of the same period.	**LA.7.RI.5** Compare and contrast how two or more authors provide conflicting information on the same topic, including where the texts disagree on matters of evidence or interpretation.
6	**LA.6.RP.5** Compare and contrast texts in different forms or genres (e.g., stories and poems, historical novels, fantasy stories) and their treatment of similar themes and topics.	**LA.6.RI.5** Compare and contrast one author's presentation of information with that of another.
5	**LA.5.RP.5** Compare and contrast the treatment of themes and topics in literary texts of the same genre.	**LA.5.RI.5** Integrate information from multiple texts on the same topic in order to demonstrate knowledge of the topic.
4	**LA.4.RP.5** Compare and contrast the treatment of similar themes and topics and patterns of events in literary texts by different authors or from different cultures.	**LA.4.RI.5** Integrate information from multiple informational texts on the same topic in order to demonstrate knowledge of the topic.
3	**LA.3.RP.5** Compare and contrast the themes, settings, and plots of literary texts written by the same author about the same or similar characters (e.g. books from a series).	**LA.3.RI.5** Compare and contrast the two most important ideas and key details presented by multiple informational texts on the same topic.
2	**LA.2.RP.** Compare and contrast two or more versions of the same literary text by different authors or from different cultures.	**LA.2.RI.5** Compare and contrast the two most important ideas presented by two informational texts on the same topic.
1	**LA.1.RP.5** Compare and contrast the experiences of characters in familiar stories.	**LA.1.RI.5** Identify basic similarities and differences between two informational texts on the same topic.
K	**LA.K.RP.5** With prompting and support, compare and contrast the experiences of characters in familiar stories.	**LA.K.RI.5** With prompting and support, identify basic similarities and differences between two informational texts on the same topic.

K-12 Reading Comprehension Knowledge and Ideas: Standard 6		
Knowledge and Ideas | Citing relevant and thorough textual evidence to support ideas, evaluate how an author's perspective or use of point of view shapes the style and meaning of grade-level literary and informational text.		
Grade	**Prose and Poetry**	**Informational Text**
11-12	**LA.12.RP.6** Evaluate themes within and across literary texts to draw conclusions, deepen understanding of self and others, and generate questions for further inquiry.	**LA.12.RI.6** Compare and contrast the development of multiple arguments in texts of related topics, evaluating the effectiveness and validity of the claims.
9-10	**LA.10.RP.6** Analyze the implied or stated theme(s) in a literary text to draw conclusions, deepen understanding of self and others, and generate questions for further inquiry.	**LA.10.RI.6** Compare and contrast the development of different arguments on the same topic, evaluating the effectiveness and validity of the claims.
8	**LA.8.RP.6** Synthesize the implied or stated theme(s) in a literary text to draw conclusions and deepen understanding of self and others.	**LA.8.RI.6** Analyze the development of an argument and evaluate the effectiveness of the type(s) of reasoning used to support the argument.
7	**LA.7.RP.6** Synthesize the implied or stated theme(s) in a literary text to draw conclusions and deepen understanding of self and others.	**LA.7.RI.6** Analyze the development of an argument and identify the type(s) of reasoning used to support the argument.
6	**LA.6.RP.6** Analyze a literary text to answer and develop inferential and evaluative questions to enhance the comprehension of self and others, quoting or paraphrasing specific evidence from the text.	**LA.6.RI.6** Analyze the development of an argument and identify the type(s) of reasoning used to support the argument.
5	**LA.5.RP.6** Analyze a literary text to answer and develop inferential questions to enhance the comprehension of self and others, quoting or paraphrasing specific evidence from the text.	**LA.5.RI.6** Analyze the development of an author's claim(s) and how supporting evidence is used to support the claim(s).
4	**LA.4.RP.6** Explain what the text says explicitly and draw inferences when asking or answering questions, quoting or paraphrasing specific evidence from the text as appropriate.	**LA.4.RI.6** Identify an author's claim(s) and explain how the author supports the claim in the text.
3	**LA.3.RP.6** Explain what the text says explicitly and draw inferences when asking and answering questions.	**LA.3.RI.6** Identify an author's claim(s) and explain how the author supports the claim in the text.
2	**LA.2.RP.6** Ask and answer literal (e.g., recall/details) and simple inferential (e.g., why or how) questions about key details in a literary text.	**LA.2.RI.6** Explain an author's opinion(s) and supporting evidence from the text.
1	**LA.1.RP.6** Ask and answer questions about key details in a literary text.	**LA.1.RI.6** Identify an author's opinion(s) about a text.
K	**LA.K.RP.6** With prompting and support, ask and answer questions about key details in a literary text.	**LA.K.RI.6** With prompting and support, explain the difference between facts and opinions about a topic.

K-12 Reading Comprehension Knowledge and Ideas: Standard 7		
Knowledge and Ideas | Citing relevant and thorough textual evidence to support ideas, evaluate how an author's perspective or use of point of view shapes the style and meaning of grade-level literary and informational text.		
Grade	**Prose and Poetry**	**Informational Text**
11-12	**LA.12.RP.7** Analyze and evaluate multiple perspectives within and across a wide range of literary texts.	**LA.12.RI.7** Analyze and evaluate multiple perspectives within and across a wide range of informational texts.
9-10	**LA.10.RP.7** Analyze multiple perspectives within and across a wide range of literary texts.	**LA.10.RI.7** Analyze how an author or speaker unfolds a series of events, ideas, or perspectives within and across a wide range of informational texts.
8	**LA.8.RP.7** Analyze regional, national, international, and/or multicultural perspectives to make connections among and distinctions between characters or ideas within and across a range of literary texts.	**LA.8.RI.7** Analyze regional, national, international, and/or multicultural perspectives to make connections among and distinctions between individuals or ideas within and across a range of informational texts.
7	**LA.7.RP.7** Compare and contrast regional, national, and/or multicultural perspectives by explaining how an author or narrator/speaker introduces, illustrates, or describes characters or individuals, events, and ideas within and across literary texts.	**LA.7.RI.7** Compare and contrast regional, national, and/or multicultural perspectives by explaining how an author or narrator/speaker introduces, illustrates, or describes characters or individuals, events, and ideas within and across informational texts.
6	**LA.6.RP.7** Compare and contrast regional, national, and/or multicultural perspectives within and across literary texts.	**LA.6.RI.7** Compare and contrast regional, national, and/or multicultural perspectives within and across informational texts.
5	**LA.5.RP.7** Explain the relationships between two or more characters, events, or ideas in a range of literary texts.	**LA.5.RI.7** Explain the relationships between two or more individuals, events, ideas, or concepts in a range of informational texts.
4	**LA.4.RP.7** Explain an author or narrator/speaker's treatment of similar themes and/or patterns of events in a wide range of literary texts.	**LA.4.RI.7** Explain an author or speaker's treatment of similar topics, and/or patterns of events in a wide range of informational texts.
3	**LA.3.RP.7** Compare and contrast themes, topics, and/or patterns of events in a range of literary texts.	**LA.3.RI.7** Compare and contrast topics and/or patterns of events in a range of informational texts.
2	**LA.2.RP.7** Compare and contrast topics in a variety of literary texts to build knowledge of cultures (e.g., history, values, beliefs, and behaviors).	**LA.2.RI.7** Compare and contrast topics in a variety of informational texts to build knowledge of cultures (e.g., history, values, beliefs, and behaviors).
1	**LA.1.RP.7** Make connections between own experiences and other cultures in literary texts.	**LA.1.RI.7** Make connections between own experiences and other cultures in informational texts.
K	**LA.K.RP.7** With prompting and support, make connections between own experiences and other cultures in literary texts.	**LA.K.RI.7** With prompting and support, make connections between own experiences and other cultures in informational texts.

K-12 Reading Comprehension Range of Reading and Level of Text Complexity		
Range of Reading and Level of Text Complexity | Read and comprehend complex, grade-level literary and informational texts independently and proficiently.		
Grade	**Prose and Poetry**	**Informational Text**
11-12	**LA.12.RP.8** Read and comprehend a wide range of literary texts in the 12-CCR grade band independently and proficiently.	**LA.12.RI.8** Read and comprehend a wide range of informational texts in the 12-CCR grade band independently and proficiently.
9-10	**LA.10.RP.8** Read and comprehend a wide range of literary texts of appropriate complexity at the high end of the 9-10 grade band proficiently, with scaffolding as needed at the high end of the range.	**LA.10.RI.8** Read and comprehend a wide range of informational texts of appropriate complexity at the high end of the 9-10 grade band proficiently, with scaffolding as needed at the high end of the range.
8	**LA.8.RP.8** Read and comprehend a wide range of literary texts of appropriate complexity for the 6-8 grade band proficiently, with scaffolding as needed at the high end of the range.	**LA.8.RI.8** Read and comprehend a wide range of informational texts of appropriate complexity for the 6-8 grade band proficiently, with scaffolding as needed at the high end of the range.
7	**LA.7.RP.8** Read and comprehend a wide range of literary texts of appropriate complexity for the 6-8 grade band proficiently, with scaffolding as needed at the high end of the range.	**LA.7.RI.8** Read and comprehend a wide range of informational texts of appropriate complexity for the 6-8 grade band proficiently, with scaffolding as needed at the high end of the range.
6	**LA.6.RP.8** Read and comprehend a wide range of literary and informational texts of appropriate complexity for the 6-8 grade band proficiently, with scaffolding as needed at the high end of the range.	**LA.6.RI.8** Read and comprehend a wide range of informational texts of appropriate complexity for the 6-8 grade band proficiently, with scaffolding as needed at the high end of the range.
5	**LA.5.RP.8** Read and comprehend a wide range of literary texts of appropriate complexity for Grade 5 independently and proficiently.	**LA.5.RI.8** Read and comprehend a wide range of informational texts of appropriate complexity for Grade 5 independently and proficiently.
4	**LA.4.RP.8** Read and comprehend a wide range of literary texts of appropriate complexity for Grade 4 independently and proficiently.	**LA.4.RI.8** Read and comprehend a wide range of informational texts of appropriate complexity for Grade 4 independently and proficiently.
3	**LA.3.RP.8** Read and comprehend a wide range of literary texts of appropriate complexity for Grade 3 independently and proficiently.	**LA.3.RI.8** Read and comprehend a wide range of informational texts of appropriate complexity for Grade 3 independently and proficiently.
2	**LA.2.RP.8** With scaffolding as needed, read and comprehend a wide range of literary texts of appropriate complexity for Grade 2.	**LA.2.RI.8** With scaffolding as needed, read and comprehend a wide range of informational texts of appropriate complexity for Grade 2.
1	**LA.1.RP.8** With prompting and support, read and comprehend a wide range of literary texts of appropriate complexity for Grade 1.	**LA.1.RI.8** With prompting and support, read and comprehend a wide range of informational texts of appropriate complexity for Grade 1.
K	**LA.K.RP.8** Actively engage in group reading activities with purpose and understanding.	**LA.K.RI.8** Actively engage in group reading activities with purpose and understanding.

K-12 Vocabulary Acquisition and Use: Standard 1	
Acquisition and Use | Build and use a range of conversational, academic, and discipline-specific grade-level vocabulary and apply to reading, writing, speaking, and listening.	
Grade	**Indicators**
11-12	**LA.12.V.1** Integrate grade-level academic vocabulary appropriately for a variety of tasks and purposes. a. Use context clues (e.g., the overall meaning of a sentence or paragraph; a word's position or function in a sentence) to determine the meanings of words and phrases. b. Identify and correctly use patterns of word changes that indicate different meanings or parts of speech (e.g., conceive, conception, conceivable). c. Consult general and specialized reference materials to determine or clarify the precise meanings, pronunciations, parts of speech, etymology, or standard usage of words.
9-10	**LA.10.V.1** Integrate grade-level academic vocabulary appropriately for a variety of tasks and purposes. a. Use context clues (e.g., the overall meaning of a sentence or paragraph; a word's position or function in a sentence) to determine the meanings of words and phrases. b. Identify and correctly use patterns of word changes that indicate different meanings or parts of speech (e.g., analyze, analysis). c. Consult general and specialized reference materials to determine or clarify the precise meanings, pronunciations, parts of speech, or etymology of words.
8	**LA.8.V.1** Integrate grade-level academic vocabulary appropriately for a variety of tasks and purposes. a. Use context clues (e.g., the overall meaning of a sentence or paragraph; a word's position or function in a sentence) to determine the meanings of words and phrases. b. Use commonly occurring Greek and Latin affixes and roots to determine the meanings of words (e.g., recede, precede). c. Consult general and specialized reference materials to determine or clarify the precise meanings, pronunciations, or parts of speech of words.
7	**LA.7.V.1** Integrate grade-level academic vocabulary appropriately for a variety of tasks and purposes. a. Use context clues (e.g., the overall meaning of a sentence or paragraph; a word's position or function in a sentence) to determine the meanings of words and phrases. b. Use commonly occurring Greek and Latin affixes and roots to determine the meanings of words (e.g., audience, audible). c. Consult general and specialized reference materials to determine or clarify the precise meanings, pronunciations, or parts of speech of words.
6	**LA.6.V.1** Integrate grade-level academic vocabulary appropriately for a variety of tasks and purposes. a. Use context clues (e.g., the overall meaning of a sentence or paragraph; a word's position or function in a sentence) to determine the meanings of words and phrases. b. Use commonly occurring Greek and Latin affixes and roots to determine the meanings of words (e.g., audience, audible). c. Consult reference materials to determine or clarify the precise meanings, pronunciations, or parts of speech of words.

5	**LA.5.V.1** Acquire and use grade-level academic vocabulary appropriately. a. Use context clues (e.g., cause/effect relationships and comparisons in text) to determine the meanings of words and phrases. b. Use commonly occurring Greek and Latin affixes and roots to determine the meanings of words. c. Determine or clarify the precise meanings or pronunciations of words and phrases using reference materials and classroom resources.
4	**LA.4.V.1** Acquire and use grade-level academic vocabulary appropriately. a. Use context clues (e.g., definitions, examples, or restatements) in text to determine the meanings of words and phrases. b. Use commonly occurring Latin affixes and roots to determine the meanings of words and phrases (e.g., photograph, autograph). c. Determine or clarify the meanings or pronunciations of words using reference materials and classroom resources.
3	**LA.3.V.1** Acquire and use grade-level academic vocabulary appropriately. a. Use sentence-level context clues to determine the meaning of a word or phrase. b. Use affixes to determine the meaning of unknown words (e.g., comfortable, uncomfortable). c. Use known root words to determine the meaning of unknown words (e.g., company, companion). d. Determine the meanings of key words and phrases using reference materials and classroom resources.
2	**LA.2.V.1** Recognize and use conversational and grade-level academic vocabulary. a. Use sentence-level context clues to determine the meaning of a word or phrase. b. Use commonly occurring prefixes and suffixes to determine the meaning of unknown words (e.g., happy/unhappy). c. Use known root words to determine the meaning of unknown words (e.g., addition, additional). d. Determine the meaning of compound words by using knowledge of individual words (e.g., birdhouse). e. Determine the meanings of key words and phrases using provided reference materials and classroom resources.
1	**LA.1.V.1** Recognize and use conversational and grade-level academic vocabulary. a. Use sentence-level context clues to determine the meaning of a word or phrase. b. Use commonly occurring affixes to determine the meaning of unknown words. c. Identify commonly occurring root words and their inflectional forms. d. Determine the meanings of key words and phrases using provided reference materials and classroom resources.
K	**LA.K.V.1** Recognize and use conversational and grade-level academic vocabulary. a. With prompting and support, identify new meanings of familiar words (e.g., park, ring, fly). b. With prompting and support, use commonly occurring inflections and affixes to determine the meaning of unknown words. c. With prompting and support, determine the meanings of key words and phrases using provided reference materials and classroom resources.

K-12 Vocabulary Connotation and Context: Standard 2	
Context and Connotation | Determine or clarify the meaning of unknown and multiple-meaning words and phrases, choosing flexibly from a range of strategies.	
Grade	**Indicators**
11-12	**LA.12.V.2** Interpret an author's use of figurative, connotative, and technical language in grade-level literary and informational text. a. Interpret figures of speech (e.g., hyperbole, paradox) in context and analyze their role in text. b. Analyze nuances in the meanings of words with similar denotations.
9-10	**LA.10.V.2** Interpret an author's use of figurative, connotative, and technical language in grade-level literary and informational text. a. Interpret figures of speech (e.g., euphemism, oxymoron) in context and analyze their role in text. b. Analyze nuances in the meanings of words with similar denotations.
8	**LA.8.V.2** Interpret an author's use of figurative, connotative, and technical language in grade-level literary and informational text. a. Interpret figures of speech (e.g., verbal irony, puns) in context. b. Determine the relationship between particular words to better understand each of the words. c. Distinguish between the connotations of words with similar denotations (e.g., willful, resolute).
7	**LA.7.V.2** Interpret an author's use of figurative, connotative, and technical language in grade-level literary and informational text. a. Interpret figures of speech (e.g., literary, biblical, or mythological allusions) in context. b. Determine the relationship between words (e.g., cause/effect, part/whole, item/category). c. Distinguish between the connotations of words with similar denotations (e.g., polite, diplomatic).
6	**LA.6.V.2** Interpret an author's use of figurative, connotative, and technical language in grade-level literary and informational text. a. Interpret figures of speech (e.g., literary, biblical, or mythological allusions) in context. b. Determine the relationship between words (e.g., cause/effect, part/whole, item/category). c. Distinguish between the connotations of words with similar denotations (e.g., economical, thrifty).

5	**LA.5.V.2** Interpret an author's use of figurative, connotative, and technical language in grade-level literary and informational text. a. Interpret figurative language, including similes and metaphors, in context. b. Recognize and explain the meaning of commonly occurring idioms, adages, and proverbs. c. Demonstrate knowledge of relationships between particular words (e.g., synonyms, antonyms, homographs) to better understand each of the words.
4	**LA.4.V.2** Interpret an author's use of figurative, connotative, and technical language in grade-level literary and informational text. a. Explain the meaning of commonly occurring similes and metaphors (e.g., light as a feather) in grade-level text. b. Recognize and explain the meaning of commonly occurring idioms and adages. c. Use knowledge of words by relating them to their antonyms and synonyms.
3	**LA.3.V.2** Interpret an author's use of figurative, connotative, and technical language in grade-level literary and informational text. a. Distinguish between literal and nonliteral meanings of words and phrases in context (e.g., take steps). b. Identify real-life connections between words and their use (e.g., describe people who are friendly or helpful). c. Distinguish nuances of meaning between related words that describe states of mind or degrees of certainty (e.g., believed, suspected).
2	**LA.2.V.2** Interpret an author's use of figurative, connotative, and technical language in grade-level literary and informational text. a. Ask and answer questions about key words and phrases to determine their meaning. b. Distinguish nuances of meaning between closely related verbs (e.g., toss, throw) and closely related adjectives (e.g., thin, slender).
1	**LA.1.V.2** Interpret an author's use of figurative, connotative, and technical language in grade-level literary and informational text. a. Sort common words and phrases into conceptual categories to develop an understanding of word relationships. b. Define words by their category and simple attributes (i.e., a duck is a bird that swims). c. Ask and answer questions about key words and phrases to determine their meaning. d. Distinguish nuances of meaning between common verbs (e.g., glance, stare) and adjectives differing in intensity (e.g., large, gigantic).
K	**LA.K.V.2** Interpret an author's use of figurative, connotative, and technical language in grade-level literary and informational text. a. With prompting and support, sort common words and phrases into conceptual categories to develop an understanding of word relationships. b. With prompting and support, deepen understanding of words by identifying and relating them to their opposites. c. With prompting and support, ask and answer questions about key words and phrases to determine their meaning. d. With prompting and support, identify and explain descriptive words and phrases that suggest feelings or appeal to the senses.

K-5 Foundations of Writing Standard 1	
Foundations of Writing | Apply handwriting skills to communicate ideas and information.	
Grade	**Indicators**
5	*Mastered at Grade 2 and blended with other skills at this grade level.*
4	*Mastered at Grade 2 and blended with other skills at this grade level.*
3	*Mastered at Grade 2 and blended with other skills at this grade level.*
2	**LA.2.FW.1** Demonstrate and apply handwriting skills. a. Write legibly using correct formation of letters with automaticity and proper spacing between words.
1	**LA.1.FW.1** Demonstrate and apply handwriting skills. a. Print all upper and lowercase manuscript letters using correct formation. b. Write the common grapheme (letter or letter group) for each phoneme. c. Use appropriate spacing between letters and words.
K	**LA.K.FW.1** Demonstrate basic handwriting skills. a. Identify and match upper and lowercase manuscript letters. b. Print many upper and lowercase manuscript letters using reference materials and classroom resources. c. Write left to right and use appropriate spacing between letters and words.

K-5 Foundations of Writing Standard 2	
Foundations of Writing | Apply handwriting skills to communicate ideas and information.	
Grade	**Indicators**
5	*Mastered at Grade 2 and blended with other skills at this grade level.*
4	*Mastered at Grade 2 and blended with other skills at this grade level.*
3	*Mastered at Grade 2 and blended with other skills at this grade level.*
2	**LA.2.FW.2** Demonstrate sound-letter concepts when writing. a. Write common graphemes (letters or letter groups) for each phoneme.
1	**LA.1.FW.2** Demonstrate sound-letter concepts when writing. a. Segment phonemes in two- and three-phoneme syllables. b. Write letters used to represent vowel phonemes and those used to represent consonants; demonstrate understanding that every syllable has a vowel.
K	**LA.K.FW.2** Demonstrate sound-letter concepts when writing. a. Segment phonemes orally in single-syllable words. b. Demonstrate understanding that syllables are organized around vowel sounds.

K-12 Writing Production of Writing: Standard 1	
Production of Writing | Use a recursive writing process to produce clear and coherent writing appropriate to the discipline, audience, and/or context.	
Grade	**Indicators**
11-12	**LA.12.W.1** Compose grammatically correct multi-paragraph compositions to convey meaning and to add variety, interest, and fluency to written and spoken language. a. Demonstrate understanding that usage is a matter of convention, can evolve, and is sometimes contested. b. Apply knowledge of function and usage to revise personal and peer writing while resolving issues of complex or contested usage, consulting appropriate and reliable reference materials.
9-10	**LA.10.W.1** Compose grammatically correct multi-paragraph compositions to convey meaning and add variety, interest, and fluency to written and spoken language. a. Apply knowledge of rules for capitalization. b. Use a colon to introduce a quotation, definition, or to expand on information in a sentence; use a semicolon with a conjunctive adverb. c. Apply knowledge of function and usage to revise personal writing while resolving issues of complex or contested usage, consulting appropriate and reliable reference materials. d. Select and use verbs with appropriate voice and mood. e. Identify and revise fragment and run-on sentences and inappropriate shifts in verb tense, number, voice, mood, and parallel structure.
8	**LA.8.W.1** Create grammatically correct multi-paragraph compositions with varied sentence structures. a. Apply knowledge of rules for capitalization. b. Use punctuation (comma, ellipsis, dashes) to indicate a pause or break and an ellipsis to indicate an omission. c. Explain the function of and use different types of verbals in sentences (e.g., gerunds, participles, infinitives). d. Distinguish between and use active and passive voice, formal and informal tone, and types of grammatical mood (e.g., indicative, subjunctive, conditional, imperative). e. Use appropriate parallel structure in words, phrases, and clauses. f. Identify and revise fragment and run-on sentences and inappropriate shifts in verb tense, number, voice, and mood.
7	**LA.7.W.1** Create grammatically correct multi-paragraph compositions with varied sentence structures. a. Apply knowledge of rules for capitalization. b. Use a comma to separate coordinate adjectives. c. Distinguish between and use types of clauses (e.g., noun, relative, adverbial), modifiers (e.g., misplaced and dangling), and adjectives (coordinate and cumulative). d. Use a variety of prepositional and appositive phrases in sentences and paragraphs. e. Identify and revise fragment and run-on sentences and inappropriate shifts in verb tenses.
6	**LA.6.W.1** Create grammatically correct multi-paragraph compositions with varied sentence structures. a. Apply knowledge of rules for capitalization.

	b. Use punctuation (e.g., commas, parentheses, dashes) to set off non-restrictive clauses. c. Use a colon to introduce items in a series; use a semicolon to combine independent clauses. d. Explain the function of articles (e.g., definite and indefinite) and apply knowledge to writing. e. Identify and use verb tenses (e.g., progressive). f. Distinguish between and use different types of phrases (e.g., prepositional and appositive). g. Identify and revise fragment and run-on sentences and inappropriate shifts in verb tenses.
5	**LA.5.W.1** Create grammatically correct multi-paragraph compositions with varied sentence structures. a. Apply knowledge of rules for capitalization; use underlining, quotation marks, or italics to indicate titles of works. b. Use a comma to separate an introductory element from the rest of a sentence, to separate clauses, to set off a question tag, and to indicate direct address. c. Explain the function of and use frequently occurring interjections, verb tenses (e.g., perfect), and correlative conjunctions. d. Distinguish between and use types of adjectives (e.g., comparative, superlative). e. Identify and revise fragment and run-on sentences and inappropriate shifts in verb tenses.
4	**LA.4.W.1** Create grammatically correct sentences and paragraphs using a variety of sentence types and phrasing. a. Capitalize proper nouns (e.g., organizations, geographic regions, monuments and landmarks). b. Use commas and quotation marks to indicate direct speech and quotations from a text; use a comma before a coordinating conjunction in a compound sentence and with dependent clauses. c. Identify and use simple appositive phrases. d. Identify and use frequently occurring pronouns (e.g., subject, object), adverbs (e.g., relative), and verbs (e.g., helping and linking). e. Distinguish between frequently confused words (e.g., to, too, two; there, their, they're). f. Identify and revise fragment and run-on sentences in speaking and writing.
3	**LA.3.W.1** Write paragraphs using a variety of sentence types. a. Capitalize proper nouns (e.g., historic periods, nationalities, languages), proper adjectives (e.g., South American), and appropriate words in titles. b. Use commas in addresses and commas and quotation marks in dialogue; use an apostrophe to form and use possessives. c. Use frequently occurring nouns (e.g., concrete and abstract), verbs (regular and irregular), and simple verb tenses. d. Distinguish between and use coordinating and subordinating conjunctions and independent and dependent clauses. e. Explain the function of adjectives and adverbs in simple, compound, and complex sentences. f. Use correct subject-verb and pronoun-antecedent agreement in speaking and writing. g. Use frequently occurring prepositions and prepositional phrases.
2	**LA.2.W.1** Write and expand grammatically correct sentences (e.g. declarative, imperative, interrogative, exclamatory) and paragraphs. d. Capitalize proper nouns (e.g., holidays, countries, product names).

	e. Use commas in greetings and closings of letters; use apostrophes to form contractions and frequently occurring possessives. f. Identify and explain the use of nouns (e.g., collective and irregular plural), pronouns (e.g., demonstrative), verbs (e.g., past tense irregular), simple prepositions, and frequently occurring conjunctions. g. Maintain consistent verb tense across sentences or paragraphs.
1	**LA.1.W.1** Write and expand grammatically correct simple sentences and paragraphs. a. Capitalize proper nouns (e.g., days of the week, names of people). b. Use end punctuation, commas in dates, and commas to separate single words in a series. c. Identify and use nouns (e.g., common, proper), pronouns (e.g., personal and possessive), verbs (e.g., past, present), and descriptive adjectives. d. Form and use regular and frequently occurring irregular plural nouns. e. Use subject-verb agreement in simple and compound sentences.
K	**LA.K.W.1** With prompting and support, form and use complete simple sentences in shared language activities. a. Capitalize the first word in a sentence and the pronoun I. b. Recognize and name end punctuation. c. Identify nouns (e.g., singular and plural) and simple verbs (e.g., action). d. Form regular plural nouns by adding /s/ or /es/. e. Use interrogatives to ask questions. f. Use subject-verb agreement in simple sentences.

K-12 Writing Production of Writing: Standard 2	
Production of Writing | Use a recursive writing process to produce clear and coherent writing appropriate to the discipline, audience, and/or context.	
Grade	**Indicators**
11-12	**LA.12.W.2** Use a recursive writing process to develop, strengthen, and produce writing appropriate to the audience, purpose, and discipline. a. Identify and use resources and inquiry tools to plan, organize, and draft writing. b. Adapt writing processes to sustain engagement in short and long-term writing tasks of increasing length and complexity. c. Improve and clarify writing by revising, considering feedback from adults and peers to address the needs of a particular audience and enhance the purpose and structure. d. Improve and clarify writing by editing and proofreading to enhance style appropriate to audience, purpose, and task. e. Use appropriate print and digital/multimedia tools to produce, enhance, and/or publish writing individually or in collaboration with peers.
9-10	**LA.10.W.2** Use a recursive writing process to develop, strengthen, and produce writing appropriate to the audience, purpose, and discipline. a. Identify and use resources and inquiry tools to plan, organize, and draft writing. b. Adapt writing processes to sustain engagement in short and long-term writing tasks of increasing length and complexity. c. Improve and clarify writing by revising, considering feedback from adults and peers to address the needs of a particular audience and enhance the purpose and structure. d. Improve and clarify writing by editing and proofreading to enhance style appropriate to audience, purpose, and task. e. Use appropriate print and digital/multimedia tools to produce, enhance, and/or publish writing individually or in collaboration with peers.
8	**LA.8.W.2** Use a recursive writing process to develop, strengthen, and produce writing appropriate to the audience, purpose, and discipline. a. Identify and use resources and inquiry tools to plan, organize, and draft writing. b. Adapt writing processes to sustain engagement in short and long-term writing tasks of increasing length and complexity. c. Improve and clarify the content, structure, and organization of writing by revising, considering feedback from adults and peers. d. Improve and clarify writing by editing and proofreading, considering feedback from adults and peers. e. Use appropriate print and digital/multimedia tools to produce, enhance, and/or publish writing individually or in collaboration with peers. Modes of Writing | Write in a variety of modes for a variety of purposes and audiences across disciplines.
7	**LA.7.W.2** Use a recursive writing process to develop, strengthen, and produce writing appropriate to the audience, purpose, and discipline. a. Use prewriting activities and inquiry tools to plan, organize, and draft writing. b. Adapt writing processes to sustain engagement in short and long-term writing tasks of increasing length and complexity. c. Improve and clarify the content, structure, and organization of writing by revising, considering feedback from adults and peers. d. Improve and clarify writing by editing and proofreading, considering feedback from adults and peers.

	e. Use appropriate print and digital/multimedia tools to produce, enhance, and/or publish writing individually or in collaboration with peers.
6	**LA.6.W.2** Use a recursive writing process to develop, strengthen, and produce writing appropriate to the audience, purpose, and discipline. a. Use prewriting activities and inquiry tools to plan, organize, and draft writing. b. Adapt writing processes to sustain engagement in short and long-term writing tasks of increasing length and complexity. c. Improve and clarify the content, structure, and organization of writing by revising, considering feedback from adults and peers. d. Improve and clarify writing by editing and proofreading, considering feedback from adults and peers. e. Use appropriate print and digital/multimedia tools to produce, enhance, and/or publish writing individually or in collaboration with peers.
5	**LA.5.W.2** Use a recursive writing process to develop, strengthen, and produce writing appropriate to the audience, purpose, and discipline. a. Use prewriting activities and resources to plan, organize, and draft writing. b. Adapt writing processes to sustain engagement in short and long-term writing tasks of increasing length and complexity. c. Improve and clarify the content, structure, and organization of writing by revising, considering feedback from adults and peers. d. Improve and clarify writing by editing and proofreading, considering feedback from adults and peers. e. Use or decipher multiple formats of print and digital text (e.g., manuscript, cursive, font, graphics, symbols). f. Use appropriate print and digital/multimedia tools to produce, enhance, and/or publish writing individually or in collaboration with peers.
4	**LA.4.W.2** Use a recursive writing process to develop, strengthen, and produce writing appropriate to the audience, purpose, and discipline. a. Use prewriting activities and resources to plan, organize, and draft writing. b. Adapt writing processes to sustain engagement in short and long-term writing tasks of increasing length and complexity. c. Improve and clarify the content, structure, and organization of writing by revising, considering feedback from adults and peers. d. Improve and clarify writing by editing and proofreading, considering feedback from adults and peers. e. Use or decipher multiple formats of print and digital text (e.g., manuscript, cursive, font, graphics, symbols). f. Use appropriate print and digital/multimedia tools to produce, enhance, and/or publish writing individually or in collaboration with peers. Modes of Writing | Write in a variety of modes for a variety of purposes and audiences across disciplines.
3	**LA.3.W.2** Use a recursive writing process to develop, strengthen, and produce writing appropriate to the audience, purpose, and discipline. a. Use prewriting activities and resources to plan, organize, and draft writing. b. Adapt writing processes to sustain engagement in short and long-term writing tasks of increasing length and complexity. c. Improve and clarify the content, structure, and organization of writing by revising, considering feedback from adults and peers. d. Improve and clarify writing by editing and proofreading, considering feedback from adults and peers. e. Use or decipher multiple formats of print and digital text (e.g., manuscript, cursive, font, graphics, symbols).

	f. Use appropriate print and digital/multimedia tools to produce, enhance, and/or publish writing individually or in collaboration with peers. Modes of Writing | Write in a variety of modes for a variety of purposes and audiences across disciplines.
2	**LA.2.W.2** Use a recursive writing process to develop, strengthen, and produce writing appropriate to the audience, purpose, and discipline. a. Use prewriting activities and resources to plan, organize, and draft writing. b. Adapt writing processes to sustain engagement in short and long-term writing tasks of increasing length and complexity. c. Improve and clarify the content, structure, and organization of writing by revising, considering feedback from adults and peers. d. Improve and clarify writing by editing and proofreading, considering feedback from adults and peers. e. Use or decipher multiple formats of print and digital text (e.g., manuscript, font, graphics, symbols). f. Use appropriate print and digital/multimedia tools to produce, enhance, and/or publish writing individually or in collaboration with peers.
1	**LA.1.W.2** Develop, strengthen, and produce writing appropriate to the audience, purpose, and discipline. a. Use prewriting activities and resources to generate and organize ideas. b. Adapt writing processes to sustain engagement in short and long-term writing tasks of increasing length and complexity. c. Use feedback from others to improve writing and/or add details. d. Use or decipher multiple formats of print and digital text (e.g., manuscript, font, graphics, symbols). e. Use appropriate print and digital/multimedia tools to produce, enhance, and/or publish writing individually or in collaboration with peers.
K	**LA.K.W.2** With prompting and support, use a recursive writing process to develop, strengthen, and produce writing appropriate to the discipline, audience, and/or context. a. Use prewriting activities and resources to generate ideas. b. Adapt writing processes to sustain engagement in short and long-term writing tasks of increasing length and complexity. c. Use feedback from others to improve writing and/or add details. d. Use or decipher multiple formats of print and digital text (e.g., manuscript, font, graphics, symbols). e. Use appropriate digital/multimedia tools to produce, enhance, and/or publish writing individually or with peers.

K-12 Writing Modes of Writing: Standard 3	
Modes of Writing | Write in a variety of modes for a variety of purposes and audiences across disciplines.	
Grade	**Indicators**
11-12	**LA.12.W.3** Write in a variety of literary forms to convey real or imagined experiences or events, themes, and perspectives in which the development, structure, and style are appropriate to the task, purpose, and discipline. a. Engage and orient the reader by setting out a problem, situation, or observation, establishing multiple points of view, and introducing a narrator and/or characters; create a smooth progression of experiences or events. b. Use literary techniques, such as dialogue, pacing, description, reflection, and multiple plot lines, to develop experiences, events, settings, and/or characters. c. Use a variety of techniques to sequence events so that they build on one another to create a coherent whole. d. Use precise words and phrases, telling details, and sensory language to convey a vivid picture of the experiences, events, setting, and/or characters and to set mood and tone. e. Provide a conclusion that follows from and reflects upon what is experienced, observed, resolved or left unresolved, and what new implications or questions are raised over the course of the piece.
9-10	**LA.10.W.3** Write in a variety of literary forms to convey real or imagined experiences or events, themes, and perspectives in which the development, structure, and style are appropriate to the task, purpose, and audience. a. Engage and orient the reader by setting out a problem, situation, or observation, establishing multiple points of view, and introducing a narrator and/or characters; create a smooth progression of experiences or events. b. Use literary techniques, such as dialogue, pacing, description, reflection, and multiple plot lines, to develop experiences, events, settings, and/or characters. c. Use a variety of techniques to sequence events so that they build on one another to create a coherent whole. d. Use precise words and phrases, telling details, and sensory language to convey a vivid picture of the experiences, events, setting, and/or characters and to establish mood and tone. e. Provide a conclusion that follows from and reflects upon what is experienced, observed, resolved or left unresolved, and what new implications or questions are raised over the course of the piece.
8	**LA.8.W.3** Write in a variety of literary forms to convey real or imagined experiences or events in which the development and structure are appropriate to the task, purpose, and audience. a. Engage and orient the reader by establishing a conflict, situation, or observation, introducing a narrator and/or character(s), and establishing and maintaining point(s) of view; organize an event sequence that unfolds naturally and logically. b. Use literary techniques (e.g., dialogue, pacing, description, multiple plot lines) to develop experiences, events, characters, and settings). c. Use a variety of techniques to sequence events so that they build on one another to create a coherent whole. d. Use precise words and phrases, descriptive/sensory details, and figurative language to establish mood and tone and convey a vivid picture.

	e. Provide a conclusion that is clearly related to and reflects upon what is experienced, observed, or left unresolved over the course of the piece.
7	**LA.7.W.3** Write in a variety of literary forms to convey real or imagined experiences or events in which the development and structure are appropriate to the task, purpose, and audience. a. Engage and orient the reader by establishing a context and introducing a narrator and/or character(s), establishing and maintaining a point of view; organize an event sequence that unfolds naturally and logically. b. Use literary techniques (e.g., dialogue, pacing, description) to develop characters, events, settings, and conflicts. c. Use a variety of transitional words and phrases to signal shifts from one character, time frame, or setting to another. d. Use precise words and phrases, descriptive/sensory details, and figurative language to express personal or narrative voice. e. Provide a conclusion that is clearly related to and appropriately reflects on the literary experiences or events.
6	**LA.6.W.3** Write in a variety of literary forms to convey real or imagined experiences or events in which the development and structure are appropriate to the task, purpose, and audience. a. Engage and orient the reader by establishing a context and introducing a narrator and/or character(s) and point of view; organize an event sequence that unfolds naturally and logically. b. Use literary techniques (e.g., dialogue, pacing, description) to develop characters, events, settings, and conflicts. c. Use a variety of transitional words and phrases to signal shifts from one character, time frame, or setting to another. d. Use precise words and phrases, descriptive/sensory details, and figurative language to express personal or narrative voice. e. Provide a conclusion that is clearly related to and appropriately reflects on the literary experiences or events.
5	**LA.5.W.3** Write creative and/or expressive pieces that describe a well-developed event or experience. a. Establish a situation and introduce a narrator and/or characters. b. Use precise words and phrases, descriptive/sensory details, dialogue, and sensory language to convey thoughts, feelings, experiences, and events. c. Use a variety of transitional words and phrases to organize a sequence of events that unfolds naturally. d. Provide a conclusion related to the creative or expressive event or experience.
4	**LA.4.W.3** Write creative and/or expressive pieces that describe a well-developed event or experience. a. Establish a situation and introduce a narrator and/or character(s). b. Use precise words and phrases, descriptive/sensory details, and dialogue to develop characters, events, and settings. c. Use transitional words and phrases to organize a sequence of events that unfolds naturally. d. Provide a conclusion related to the creative or expressive event or experience.
3	**LA.3.W.3** Write creative and/or expressive pieces that describe a well-developed event or experience. a. Engage and orient the ready by establishing a situation and introducing a narrator and/or character(s). b. Include descriptive details about characters, events, or settings. c. Use words and phrases to signal sequence of events.

	d. Provide a closure related to the creative or expressive event or experience.
2	**LA.2.W.3** Write personal or fictional narratives that retell two or more appropriately sequenced events. a. Include relevant details about characters and settings. b. Use time order words to signal sequence of events. c. Provide a sense of closure.
1	**LA.1.W.3** With prompting and support, write personal or fictional creative and/or expressive pieces that retell two or more appropriately sequenced events. a. Include some relevant details. b. Use time order words to signal sequence of events. c. Provide a sense of closure.
K	**LA.K.W.3** With prompting and support, narrate personal or fictional events in a sequential order using a combination of drawing, dictating, and/or writing.

K-12 Writing Modes of Writing: Standard 4	
Modes of Writing | Write in a variety of modes for a variety of purposes and audiences across disciplines.	
Grade	**Indicators**
11-12	**LA.12.W.4** Write arguments that develop a perspective with supporting reasons and evidence, organized as appropriate to the task, purpose, and audience. a. Develop a structure to sequence ideas logically; introduce a clear claim where appropriate, and/or distinguish the claim(s) from alternate or supporting claims. b. Demonstrate understanding and engagement with multiple viewpoints and sources to create and support nuanced claims as a recursive process of inquiry and exploration. c. Use words, phrases, key vocabulary, and varied syntax to clarify relationships between claim(s), counterclaim(s), and supporting evidence. d. Adapt style and tone appropriate to the norms and conventions of the task and discipline. e. Provide a conclusion that follows from and supports the argument(s) presented.
9-10	**LA.10.W.4** Write arguments that develop a perspective with supporting reasons and evidence, organized as appropriate to the task, purpose, and audience. a. Develop a structure to sequence ideas logically; introduce a clear claim where appropriate, and/or distinguish the claim(s) from alternate or supporting claims. b. Demonstrate understanding and engagement with multiple viewpoints and sources to create and support nuanced claims as a recursive process of inquiry and exploration. c. Use words, phrases, key vocabulary, and varied syntax to clarify relationships between claim(s), counterclaim(s), and supporting evidence. d. Adapt style and tone appropriate to the norms and conventions of the task and discipline. e. Provide a conclusion that follows from and supports the argument(s) presented.
8	**LA.8.W.4** Write arguments that develop a perspective with supporting reasons and evidence, organized as appropriate to the task, purpose, and audience. a. Develop a structure to sequence ideas appropriately; introduce a clear claim where appropriate. b. Introduce claim(s), acknowledge, and distinguish the claim(s) from alternate or supporting claims, and develop a structure in which ideas are grouped logically. c. Explain and cite relevant evidence from multiple credible sources. d. Use words, phrases, and key vocabulary to create cohesion and clarify the relationship between the claim(s) and supporting evidence. e. Adapt style and tone appropriate to the norms and conventions of the task and discipline. f. Provide a conclusion that follows from and supports the argument(s) presented.
7	**LA.7.W.4** Write arguments that develop a perspective with supporting reasons and evidence, organized as appropriate to the task, purpose, and audience. a. Develop a structure to sequence ideas appropriately; introduce a clear claim where appropriate. b. Explain and cite relevant evidence from multiple credible sources. c. Use words, phrases, and key vocabulary to create cohesion and clarify the relationship between claim(s) and supporting evidence. d. Provide a concluding statement or section that follows from and supports the argument(s) presented.

6	**LA.6.W.4** Write arguments that explain a perspective with supporting reasons and evidence. a. Introduce a claim clearly and develop a structure in which the ideas are grouped logically. b. Use relevant evidence from two or more credible sources. c. Use words, phrases, and key vocabulary to clarify the relationship between claim(s) and supporting evidence. d. Provide a concluding statement or section that follows from the argument presented.
5	**LA.5.W.4** Write opinion pieces that explain a perspective with supporting reasons and evidence. a. Introduce a topic or text clearly, state an opinion or perspective, and develop a structure in which ideas are grouped logically. b. Use facts and details to support reasons and/or evidence. c. Use words, phrases, and key vocabulary to connect ideas. d. Provide a concluding statement or section related to the perspective.
4	**LA.4.W.4** Write opinion pieces that explain a perspective with supporting reasons and/or evidence. a. Introduce a topic or text clearly, state an opinion, and develop a structure that includes reasons and/or evidence. b. Use facts and details to support reasons and/or evidence. c. Use linking words and phrases to connect ideas. d. Provide a concluding statement or section related to the opinion.
3	**LA.3.W.4** Write opinion pieces with supporting reasons and/or evidence. a. Introduce a topic or text, state an opinion, and develop a structure that includes reasons and/or evidence. b. Use linking words and phrases to connect opinions and reasons. c. Provide a concluding statement or section related to the opinion.
2	**LA.2.W.4** Express an opinion and provide supporting reasons. a. Introduce a topic or text. b. State an opinion and provide reasons to support the opinion. c. Provide a concluding statement or section.
1	**LA.1.W.4** With prompting and support, express an opinion about a topic or text and provide a supporting reason. a. Introduce a topic or text. b. State an opinion and provide a reason to support the opinion. c. Provide a sense of closure.
K	**LA.K.W.4** With prompting and support, express an opinion about a topic or text with one supporting reason using a combination of drawing, dictating, and/or writing.

K-12 Writing Modes of Writing: Standard 5	
Modes of Writing | Write in a variety of modes for a variety of purposes and audiences across disciplines.	
Grade	**Indicators**
11-12	**LA.12.W.5** Write informative/explanatory pieces to clearly convey ideas, information, and concepts in which the development and structure are appropriate to the task, discipline, purpose, and audience. a. Introduce a topic clearly and provide a specific focus; organize complex ideas, concepts, and information to make clear connections and distinctions including text features, illustrations, and/or multimedia elements. b. Develop the topic thoroughly with relevant, sufficient facts, extended definitions, concrete details, quotations, and/or other information and examples. c. Use appropriate and varied transitions, domain-specific vocabulary, and varied syntax to manage the complexity of the topic. d. Establish and maintain a formal style and objective tone while attending to the norms and conventions of the discipline. e. Provide a conclusion that follows from and supports the information or explanations and articulates the implications and/or significance of the topic.
9-10	**LA.10.W.5** Write informative/explanatory pieces to clearly convey ideas, information, and concepts in which the development and structure are appropriate to the task, discipline, purpose, and audience. a. Introduce a topic clearly and provide a specific focus; organize complex ideas, concepts, and information to make clear connections and distinctions including text features, illustrations, and/or multimedia elements. b. Develop the topic with relevant, sufficient facts, extended definitions, concrete details, quotations, and/or other information and examples. c. Use appropriate and varied transitions, domain-specific vocabulary, and varied syntax to manage the complexity of the topic. d. Establish and maintain a formal style and objective tone while attending to the norms and conventions of the discipline. e. Provide a conclusion that follows from and supports the information or explanations and articulates the implications and/or significance of the topic.
8	**LA.8.W.5** Write informative/explanatory pieces to clearly convey ideas and information in which the development and structure are appropriate to the task, purpose, and audience. a. Introduce a topic clearly and provide a specific focus; organize ideas, concepts, and information into broader categories or sections including text features, illustrations, and/or multimedia elements. b. Develop the topic with relevant facts, definitions, concrete details, quotations, and/or other information and examples. c. Use appropriate transitions and domain-specific vocabulary to clarify relationships among ideas and concepts. d. Provide a concluding statement or section that follows from the information or explanation(s).
7	**LA.7.W.5** Write informative/explanatory pieces to examine a topic or text and clearly convey ideas and information. a. Introduce a topic clearly and provide a specific focus, grouping information logically and including text features, illustrations, and/or multimedia elements.

	b. Develop a topic with information (e.g., facts, definitions, concrete details, quotations, examples) related to the topic. c. Use appropriate transitions and key vocabulary to clarify relationships among ideas and concepts. d. Provide a concluding statement or section that follows from the information or explanation(s).
6	**LA.6.W.5** Write informative/explanatory pieces to examine a topic or text and clearly convey ideas and information. a. Introduce a topic clearly and provide a general focus, grouping information logically and including text features, illustrations, and/or multimedia elements. b. Develop a topic with information (e.g., facts, definitions, concrete details, quotations, examples) related to the topic. c. Use appropriate transitions and key vocabulary to clarify relationships among ideas and concepts. d. Provide a concluding statement or section that follows from the information or explanation(s).
5	**LA.5.W.5** Write informative/explanatory pieces to examine a topic or text and clearly convey ideas and information. a. Introduce a topic clearly and provide a general focus, grouping information logically and including text features, illustrations, and/or multimedia elements. b. Develop the topic with information (e.g., facts, definitions, details, quotations) related to the topic c. Use linking words and phrases and key vocabulary to connect ideas and categories of information. d. Provide a concluding statement or section related to the information or explanation(s).
4	**LA.4.W.5** Write informative/explanatory pieces to examine a topic or text and convey ideas and information. a. Introduce a topic clearly and group related information into paragraphs and sections including text features, illustrations, and/or multimedia elements. b. Develop the topic with information (e.g., facts, definitions, details, quotations) related to the topic. c. Use linking words and phrases and key vocabulary to connect ideas and categories of information. d. Provide a concluding statement or section related to the information or explanation(s).
3	**LA.3.W.5** Write informative/explanatory pieces to examine a topic or text and convey ideas and information. a. Introduce a topic and group related information together, including illustrations when useful to provide clarity. b. Develop the topic with information (e.g., facts, definitions, details) clearly related to the topic. c. Use linking words and phrases and key vocabulary to connect ideas and categories of information. d. Provide a concluding statement or section related to the topic.
2	**LA.2.W.5** Write informative/explanatory pieces about a topic or text with supporting facts and details. a. Introduce a topic or text. b. Develop a topic with facts, details, and definitions. c. Use words and phrases related to the topic. d. Provide a concluding statement or section.

1	**LA.1.W.5** With prompting and support, write informative/explanatory pieces about a topic or text with supporting facts and details. a. Introduce a topic. b. Develop a topic using supporting facts and details. c. Use words and phrases related to the topic. d. Provide a sense of closure.
K	**LA.K.W.5** With prompting and support, write informative/explanatory pieces about a topic or text with one supporting fact using a combination of drawing, dictating, and/or writing.

K-12 Writing Modes of Writing: Standard 6	
Modes of Writing | Write in a variety of modes for a variety of purposes and audiences across disciplines.	
Grade	**Indicator**
11-12	**LA.12.W.6** Gather and use credible evidence from multiple authoritative sources, evaluate the strengths and limitations of sources in terms of the task, purpose, and audience, and assess their relevance in answering the research question(s). a. Integrate information and evidence into writing selectively, accurately quoting or paraphrasing data and conclusions to maintain the flow of ideas while avoiding plagiarism. b. Locate and evaluate the credibility of evidence (e.g., the expertise or motivation of the creator of an information product, potential bias and/or deception, and social, political, and/or historical perspectives) from print and digital sources to generate and answer questions and create new understandings. c. Select and use appropriate note-taking formats to collect and organize information. d. Demonstrate academic integrity by avoiding overreliance on any one source; cite sources using a variety of in-text citations to enhance fluency; develop a list of sources that conforms to a style guide appropriate to the discipline (e.g., MLA, APA, Chicago). e. Practice safe and ethical behaviors when communicating and interacting with others digitally (e.g., safe information to share, utilize appropriate sites and materials, appropriate language use, respect diverse perspectives).
9-10	**LA.10.W.6** Gather and use credible evidence from multiple authoritative sources and assess its relevance in answering the research question(s). a. Integrate information and evidence into writing selectively, accurately quoting or paraphrasing data and conclusions to maintain the flow of ideas while avoiding plagiarism. b. Locate and evaluate the credibility of evidence (e.g., the expertise or motivation of the creator of an information product, potential bias and/or deception, and social, political, and/or historical perspectives) from print and digital sources to generate and answer questions and create new understandings. c. Select and use appropriate note-taking formats to collect and organize information. d. Demonstrate academic integrity by avoiding overreliance on any one source; cite sources using a variety of in-text citations to enhance fluency; develop a list of sources that conforms to a style guide appropriate to the discipline (e.g., MLA, APA, Chicago). e. Practice safe and ethical behaviors when communicating and interacting with others digitally (e.g., safe information to share, utilize appropriate sites and materials, appropriate language use, respect diverse perspectives).
8	**LA.8.W.6** Gather and use credible evidence from multiple trustworthy sources and assess its relevance in answering the research question(s). a. Integrate evidence into writing by quoting or paraphrasing data and conclusions while avoiding plagiarism. b. Locate and evaluate the credibility of evidence (e.g., the expertise or motivation of the creator of an information product, potential bias and/or deception) from print and digital sources to generate and answer questions and create new understandings.

	c. Select and use appropriate note-taking formats to collect and organize information. d. Demonstrate academic integrity by avoiding overreliance on any one source and citing sources within text (e.g., parenthetical and numerical); provide a list of sources using a standard format. e. Practice safe and ethical behaviors when communicating and interacting with others digitally (e.g., safe information to share, utilize appropriate sites and materials, appropriate language use, respect diverse perspectives).
7	**LA.7.W.6** Gather and use credible evidence from multiple trustworthy sources and assess its relevance in answering the research question. a. Integrate evidence into writing by quoting or paraphrasing data and conclusions while avoiding plagiarism. b. Locate and evaluate the credibility of evidence (e.g., motivation and/or potential bias of an information product) from print and digital sources to generate and answer questions and create new understandings. c. Select and use appropriate note-taking formats to collect and organize information. d. Demonstrate academic integrity by avoiding overreliance on any one source and citing sources within text (e.g., parenthetical and numerical); provide a list of sources using a standard format. e. Practice safe and ethical behaviors when communicating and interacting with others digitally (e.g., safe information to share, utilize appropriate sites and materials, appropriate language use, respect diverse perspectives).
6	**LA.6.W.6** Gather and use credible evidence from trustworthy sources and assess its relevance in answering a research question. a. Paraphrase and quote evidence to support ideas while avoiding plagiarism. b. Locate and evaluate credibility of evidence (e.g., motivation and/or potential bias of an information product) from print and digital sources to generate and answer questions and create new understandings. c. Select and use appropriate note-taking formats to collect and organize information. d. Demonstrate academic integrity by avoiding overreliance on any one source and referencing sources in writing and speaking; provide a list of sources using a standard format. e. Practice safe and ethical behaviors when communicating and interacting with others digitally (e.g., safe information to share, utilize appropriate sites and materials, appropriate language use, respect diverse perspectives).
5	**LA.5.W.6** Locate and summarize relevant information and evidence from literary and informational text sources to answer questions about a topic. a. Paraphrase information and evidence to support ideas while avoiding plagiarism. b. Locate and evaluate credibility of evidence (e.g., motivation and/or potential bias of an information product) from print and digital sources to generate and answer questions and create new understandings. c. Sort evidence into categories using an appropriate note-taking format to collect and organize information. d. Demonstrate academic integrity by avoiding overreliance on any one source and referencing sources in writing and speaking; provide a list of sources using a standard format. e. Practice safe and ethical behaviors when communicating and interacting with others digitally (e.g., safe information to share, utilize appropriate sites and materials, appropriate language use, respect diverse perspectives).

4	**LA.4.W.6** Locate and summarize relevant evidence from literary and/or informational text sources to answer question(s) about a topic. a. Paraphrase information and evidence to support ideas while avoiding plagiarism. b. Identify print and digital tools to gather information and evidence. c. Sort evidence into categories using an appropriate note-taking format to collect and organize information. d. Demonstrate academic integrity by avoiding overreliance on any one source and referencing sources in writing and speaking; provide a list of sources. e. Practice safe and ethical behaviors when communicating and interacting with others digitally (e.g., safe information to share, utilize appropriate sites and materials, appropriate language use, respect diverse perspectives).
3	**LA.3.W.6** Locate evidence from literary and/or informational text sources to answer questions about a topic. a. Paraphrase information from sources to support ideas while avoiding plagiarism. b. Identify print and digital tools to gather information and ideas to answer questions. c. Sort evidence into categories using an appropriate note-taking format to collect and organize information. d. Demonstrate academic integrity by avoiding overreliance on any one source and referencing sources in writing and speaking; provide a list of sources. e. Practice safe and ethical behaviors when communicating and interacting with others digitally (e.g., safe information to share, utilize appropriate sites and materials, appropriate language use, respect diverse perspectives).
2	**LA.2.W.6** Locate information from provided sources to answer questions about a topic. a. Retell information from provided sources to support ideas while avoiding plagiarism. b. Identify print and digital tools to gather information and ideas and answer questions. c. Sort evidence and information into categories. d. Demonstrate academic integrity by referencing sources in writing and speaking. e. Practice safe and ethical behaviors when communicating and interacting with others digitally (e.g., safe information to share, utilize appropriate sites and materials, appropriate language use, respect diverse perspectives).
1	**LA.1.W.6** With prompting and support, identify information from provided sources to answer a question. a. Retell or recall information from provided sources. b. Use provided print and/or digital tools to gather information and ideas to answer questions. c. Sort evidence and information into categories. d. Demonstrate academic integrity by referencing sources in writing and speaking. e. Practice safe behaviors when communicating and interacting with others digitally (e.g., safe information to share, utilize appropriate sites and materials).
K	**LA.K.W.6** With prompting and support, identify information from provided sources to answer a question using a combination of drawing, dictating, and/or writing.

K-12 Speaking and Listening Comprehension and Collaboration: Standard 1	
Comprehension and Collaboration | Communicate effectively and appropriately in collaborative activities for a variety of tasks, purposes, and audiences to express ideas, share knowledge, and generate new understandings.	
11-12	**LA.12.SL.1** Communicate effectively and appropriately in collaborative activities for a variety of tasks, purposes, and audiences to express ideas, share knowledge, and generate new understandings. a. Ask relevant questions to build on ideas, clarify own ideas, or acquire or confirm information. b. Demonstrate interpretation of verbal and non-verbal messages in a conversation. c. Converse with peers and adults in an all-inclusive manner to foster positive relationships while respecting diverse perspectives. d. Demonstrate active and attentive listening skills (e.g., eye contact, nonverbal cues, taking notes, summarizing, questioning). e. Complete a task following complex, multi-step directions.
9-10	**LA.10.SL.1** Initiate and participate in structured discussions and collaborations about grade-level topics and texts. a. Ask relevant questions to build on ideas, clarify own ideas, or acquire or confirm information. b. Demonstrate interpretation of verbal and non-verbal messages in a conversation. c. Converse with peers and adults in an all-inclusive manner to foster positive relationships while respecting diverse perspectives. d. Demonstrate active and attentive listening skills (e.g., eye contact, nonverbal cues, taking notes, summarizing, questioning). e. Complete a task following complex, multi-step directions.
8	**LA.8.SL.1** Initiate and participate in structured discussions and collaborations about 8th grade topics and texts. a. Ask relevant questions to build on ideas, clarify own ideas, or acquire or confirm information. b. Demonstrate interpretation of verbal and non-verbal messages in a conversation. c. Converse with peers and adults in an all-inclusive manner to foster positive relationships while respecting diverse perspectives. d. Demonstrate active and attentive listening skills (e.g., eye contact, nonverbal cues, taking notes, summarizing, questioning). e. Complete a task following complex, multi-step directions. Presentation of Knowledge and Ideas | Present information, findings, and supporting evidence in which the organization, development, and style are appropriate to the discipline, audience, and/or context.
7	**LA.7.SL.1** Prepare for and participate in structured discussions and collaborations about 7th grade topics and texts. a. Ask relevant questions to build on ideas, clarify own ideas, or acquire or confirm information. b. Demonstrate interpretation of verbal and non-verbal messages in a conversation. c. Converse with peers and adults in an all-inclusive manner to foster positive relationships while respecting diverse perspectives. d. Demonstrate active and attentive listening skills (e.g., eye contact, nonverbal cues, taking notes, summarizing, questioning). e. Complete a task following multi-step directions.
6	**LA.6.SL.1** Prepare for and participate in structured discussions and collaborations about 6th grade topics and texts.

	a. Ask relevant questions to build on ideas, clarify own ideas, or acquire or confirm information. b. Demonstrate interpretation of verbal and non-verbal messages in a conversation. c. Converse with peers and adults in an all-inclusive manner to foster positive relationships while respecting diverse perspectives. d. Demonstrate active and attentive listening skills (e.g., eye contact, nonverbal cues, taking notes, summarizing, questioning). e. Complete a task following multi-step directions. Presentation of Knowledge and Ideas | Present information, findings, and supporting evidence in which the organization, development, and style are appropriate to the discipline, audience, and/or context.
5	**LA.5.SL.1** Prepare for and participate in structured discussions and collaborations about 5th grade topics and texts. a. Ask relevant questions to build on ideas, clarify own ideas, or acquire or confirm information. b. Demonstrate interpretation of verbal and non-verbal messages in a conversation. c. Converse with peers and adults in an all-inclusive manner to foster positive relationships while respecting diverse perspectives. d. Demonstrate active and attentive listening skills (e.g., eye contact, nonverbal cues, taking notes, recalling, questioning). e. Complete a task following multi-step directions.
4	**LA.4.SL.1** Prepare for and participate in structured discussions and collaborations about 4th grade topics and texts. a. Ask relevant questions to build on ideas or acquire or confirm information. b. Demonstrate interpretation of verbal and non-verbal messages in a conversation. c. Converse with peers and adults in an all-inclusive manner to foster positive relationships while respecting diverse perspectives. d. Demonstrate active and attentive listening skills (e.g., eye contact, nonverbal cues, recalling, questioning). e. Complete a task following multi-step directions.
3	**LA.3.SL.1** Prepare for and participate in structured discussions and collaborations about 3rd grade topics and texts. a. Ask relevant questions to build on ideas and acquire or confirm information. b. Demonstrate interpretation of verbal and non-verbal messages in a discussion or collaboration. c. Converse with peers and adults in an all-inclusive manner to foster positive relationships while respecting diverse perspectives. d. Demonstrate active and attentive listening skills (e.g., eye contact, nonverbal cues, recalling, questioning). e. Complete a task following multi-step directions.
2	**LA.2.SL.1** Tell a story or recount an experience with appropriate facts and pertinent descriptive details. a. Ask pertinent questions to acquire or confirm information. b. Demonstrate interpretation of verbal and non-verbal messages in a conversation. c. Converse with peers and adults in an all-inclusive manner to foster positive relationships while respecting diverse perspectives. d. Develop active and attentive listening skills (e.g., eye contact, nonverbal cues, recalling). e. Complete a task following multi-step directions.

1	**LA.1.SL.1** Participate with peers and adults in structured discussions and routines about 1st grade topics and texts. a. Ask pertinent questions to acquire or confirm information. b. Demonstrate interpretation of verbal and non-verbal messages in a conversation. c. Converse with peers and adults in an all-inclusive manner to foster positive relationships while respecting diverse perspectives. d. Develop attentive listening skills (e.g., eye contact, nonverbal cues, recalling). e. Complete a task following one/two-step directions.
K	**LA.K.SL.1** With prompting and support, participate with peers and adults in structured discussions and routines about Kindergarten topics and texts. a. Ask pertinent questions to acquire or confirm information. b. Demonstrate interpretation of verbal and non-verbal messages in a conversation. c. Converse with peers and adults in an all-inclusive manner to foster positive relationships while respecting diverse perspectives. d. Develop attentive listening skills (e.g., eye contact, nonverbal cues, recalling). e. Complete a task following one/two-step directions.

K-12 Speaking and Listening Presentation of Knowledge and Ideas: Standard 2	
Presentation of Knowledge and Ideas | Present information, findings, and supporting evidence and in which the organization, development, and style are appropriate to the discipline, audience, and/or context.	
11-12	**LA.12.SL.2** Present information, findings, and supporting evidence effectively and in which the organization, development, and style are appropriate to a variety of tasks, purposes, and audiences. a. Demonstrate and adjust speaking techniques (e.g., appropriate eye contact, pacing, nonverbal cues, intonation) for a variety of purposes and situations, including interpreting grade-level texts. b. Convey a perspective with clear reasoning and valid evidence. c. Evaluate the purpose of information being presented, its motives (e.g., social, commercial, political), and determine its credibility. d. Demonstrate awareness of and sensitivity to the appropriate use of words (e.g., stereotypes, multiple meanings of words). e. Make strategic use of appropriate visual and/or digital tools to enhance understanding of findings, reasoning, and evidence for specific audiences.
9-10	**LA.10.SL.2** Present information, findings, and supporting evidence clearly and concisely and in which the organization, development, and style are appropriate to a variety of tasks, purposes, and audiences. a. Demonstrate and adjust speaking techniques (e.g., appropriate eye contact, pacing, nonverbal cues, intonation) for a variety of purposes and situations, including interpreting grade-level texts. b. Convey a perspective with clear reasoning and valid evidence. c. Analyze the purpose of information being presented, evaluate its motives (e.g., social, commercial, political), and determine its credibility. d. Demonstrate awareness of and sensitivity to the appropriate use of words (e.g., stereotypes, multiple meanings of words). e. Select and use appropriate visual and/or digital tools to enhance verbal communication and add interest.
8	**LA.8.SL.2** Present claims and findings, emphasizing key ideas in a focused, coherent manner with relevant descriptions, facts, details, and examples to clarify themes or central ideas. a. Demonstrate and adjust speaking techniques (e.g., appropriate eye contact, pacing, adequate volume, clear pronunciation) for a variety of purposes and situations, including interpreting 8th grade texts. b. Convey a perspective with clear reasoning and valid evidence. c. Analyze the purpose of information being presented and evaluate its motives (e.g. social, commercial, political). d. Demonstrate awareness of and sensitivity to the appropriate use of words (e.g., stereotypes, multiple meanings of words). e. Select and use appropriate visual and/or digital tools to enhance verbal communication and add interest.
7	**LA.7.SL.2** Present claims and findings, emphasizing key ideas in a focused, coherent manner with relevant descriptions, facts, details, and examples to clarify themes or central ideas. a. Demonstrate and adjust speaking techniques (e.g., appropriate eye contact, pacing, adequate volume, clear pronunciation) for a variety of purposes and situations, including interpreting 7th grade texts. b. Convey a perspective with clear reasoning and valid evidence.

	c. Analyze the purpose and credibility of information being presented. d. Demonstrate awareness of and sensitivity to the appropriate use of words (e.g., stereotypes, multiple meanings of words). e. Use appropriate visual and/or digital tools to enhance verbal communication and add interest.
6	**LA.6.SL.2** Present claims and findings, sequencing ideas logically and using relevant descriptions, facts, and details to clarify themes or central ideas. a. Demonstrate and adjust speaking techniques (e.g., appropriate eye contact, pacing, adequate volume, clear pronunciation) for a variety of purposes and situations, including interpreting 6th grade texts. b. Convey a perspective with clear reasoning and support. c. Analyze the purpose and credibility of information being presented. d. Demonstrate awareness of and sensitivity to the appropriate use of words (e.g., stereotypes, connotations, subtleties of language). e. Use appropriate visual and/or digital tools to enhance verbal communication and add interest.
5	**LA.5.SL.2** Report on a topic or text, or present an opinion, sequencing ideas logically and using appropriate facts and relevant, descriptive details to support themes or central ideas. a. Demonstrate appropriate speaking techniques (e.g., appropriate eye contact, adequate volume, clear pronunciation) for a variety of purposes and situations, including interpreting 5th grade texts. b. Convey a perspective with clear reasoning and support. c. Identify the purpose and credibility of information being presented. d. Demonstrate awareness of and sensitivity to the appropriate use of words (e.g., stereotypes, multiple meanings of words). e. Use appropriate visual and/or digital tools to enhance verbal communication and add interest.
4	**LA.4.SL.2** Report on a topic or text, tell a story, or recount an experience in an organized manner with appropriate facts and relevant, descriptive details to support themes or central ideas. a. Demonstrate appropriate speaking techniques (e.g., appropriate eye contact, adequate volume, clear pronunciation) for a variety of purposes and situations, including interpreting 4th grade texts. b. Convey a perspective with clear reasoning and support. c. Identify the purpose and credibility of information being presented.
3	**LA.3.SL.2** Report on a topic or text, tell a story, or recount an experience with appropriate facts and relevant, descriptive details. a. Demonstrate appropriate speaking techniques (e.g., appropriate eye contact, adequate volume, clear pronunciation) for a variety of purposes and situations, including interpreting 3rd grade texts. b. Convey a perspective with clear reasoning and support. c. Identify the purpose and credibility of information being presented. d. Demonstrate awareness of and sensitivity to the appropriate use of words (e.g., stereotypes, multiple meanings of words). e. Use appropriate visual and/or digital tools to enhance verbal communication and add interest.
2	**LA.2.SL.2** Tell a story or recount an experience with appropriate facts and pertinent descriptive details. a. Demonstrate appropriate speaking techniques (e.g., appropriate eye contact, adequate volume, clear pronunciation) for a variety of purposes and situations, including interpreting 2nd grade texts. b. Convey a personal perspective with clear reasons.

	c. Explain the purpose and credibility of information being presented. d. Demonstrate awareness of and sensitivity to the appropriate use of words (e.g., helpful/hurtful words). e. Use appropriate visual and/or digital tools to support verbal communication.
1	**LA.1.SL.2** Tell a story or recount experiences with appropriate facts and pertinent descriptive details. a. Demonstrate appropriate speaking techniques (e.g., appropriate eye contact, adequate volume, clear pronunciation) for a variety of purposes and situations, including interpreting 1st grade texts. b. Convey a personal perspective with clear reasons. c. With prompting and support, explain the purpose of information being presented. d. Demonstrate awareness of and sensitivity to the appropriate use of words (e.g., helpful/hurtful words). e. Use appropriate visual and/or digital tools to support verbal communication.
K	**LA.K.SL.2** With prompting and support, describe familiar people, places, things, and events, and provide additional detail. a. Demonstrate appropriate speaking techniques (e.g., appropriate eye contact, adequate volume, clear pronunciation) for a variety of purposes and situations. b. Convey a personal perspective with clear reasons. c. Explain the purpose of information being presented. d. Demonstrate awareness of and sensitivity to the appropriate use of words (e.g., helpful/hurtful words). e. Use appropriate visual and/or digital tools to support verbal communication.

Appendix: Key Instructional Shifts for English Language Arts

Shifting instructional practice is central to improving teaching and learning. The 2021 revisions to Nebraska's College and Career Ready Standards for English Language Arts, per Nebraska revised statute 79-76.001, require a number of key shifts in classroom practice and consideration of curricular materials that are essential to realize the vision of excellent literacy instruction. This document provides an overview of the key instructional shifts for English Language Arts and the roles that teachers, students, and school leaders* have in the stages of their implementation.

ELA/Literacy Shift 1: Science of Reading/Foundations of Reading | The revised standards are designed around the *Science of Reading* which is a vast, interdisciplinary body of scientifically-based research about how young children learn to read. The *Foundations of Reading* standards and indicators at each grade level outline a carefully sequenced progression of skills that should inform instruction of phonology, sound-symbol association, syllables, morphology, syntax, and semantics. A systematic, cumulative approach ensures all students attain early literacy proficiency.

Teachers…	School leaders…	Students…
▪ Provide explicit instruction in print concepts, phonological awareness, phonics, and fluency. ▪ Provide frequent, meaningful opportunities for practice of newly acquired skills. ▪ Progress monitor with diagnostic assessments. ▪ Differentiate instruction for struggling readers.	▪ Provide systematic early literacy training based on the science of reading. ▪ Provide access to HQIMs and ongoing support for their implementation. ▪ Create structures that maximize core instruction during literacy blocks. ▪ Ensure school environments are print-rich.	▪ Orally practice in phonemic awareness activities. ▪ Engage in frequent, meaningful practice of emerging skills. ▪ Read high-quality decodable texts at school and at home. ▪ Self-select literary and informational texts based on their interests.

ELA/Literacy Shift 2: Staircase of Complexity | In order for students to be prepared for the complexity demands of the texts they will encounter in college, career, and personal life, each grade level requires a "step" of growth on the "staircase of complexity." High-quality, knowledge-building texts that are at or above grade level should form the center of instruction.

Teachers…	School leaders…	Students…
▪ Use anchor and supporting texts that increase in complexity over the year. ▪ Provide frequent, meaningful opportunities for close reading and re-reading. ▪ Provide rigorous tasks and opportunities to write and speak about content. ▪ Scaffold instruction for struggling readers.	▪ Develop and refine a district-wide, cohesive scope and sequence grounded in complex, knowledge-building texts. ▪ Provide deep, sustained professional learning on the implementation of HQIMs. ▪ Create structures for cross-curricular experiences with complex texts.	▪ Employ strategies for comprehending grade-level texts and their academic language. ▪ Increase time spent writing about the content of complex texts using academic language. ▪ Interact meaningfully with complex texts through robust discussion. ▪ Self-select texts at their own reading level.

ELA/Literacy Shift 3: Balancing Literary and Informational Texts | The revised standards reflect the unique but interrelated skills associated with successful comprehension of literary ("Prose and Poetry)," and informational text types. It is recommended students read a 50-50 balance of literary and informational texts, thereby building their knowledge of the world and content in science, social studies, the arts, and literature.

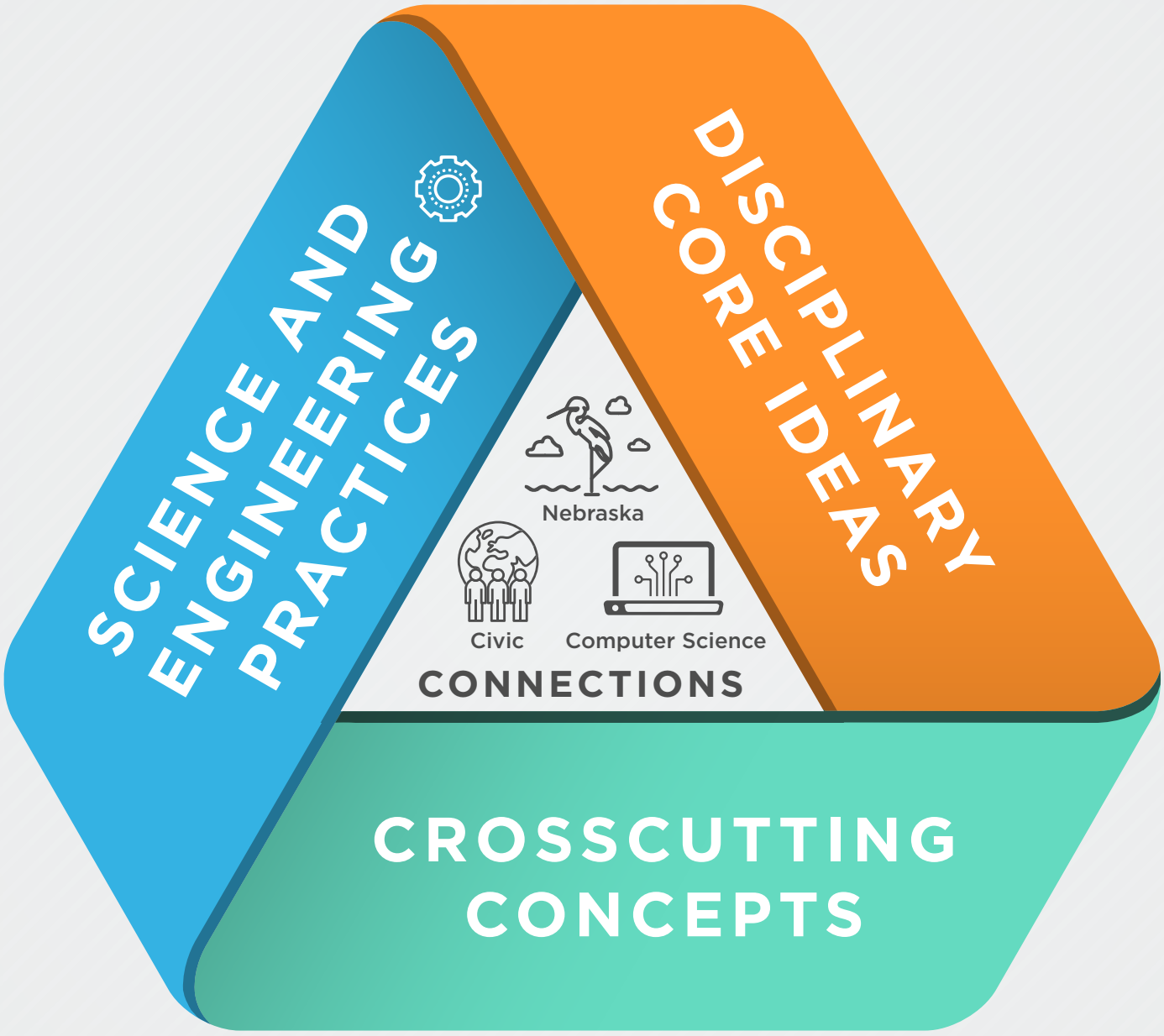
Teachers…	School leaders…	Students…
▪ Provide rich experiences with a variety of text types. ▪ Explicitly teach the unique characteristics and features of informational text. ▪ Use thematically-related text sets designed to build deep knowledge of topics. ▪ Read aloud to students to model expert, fluent reading of text. ▪ Scaffold instruction for struggling readers.	▪ Develop and refine a district-wide, cohesive scope and sequence grounded in complex, knowledge-building texts. ▪ Provide deep, sustained professional learning on the implementation of high-quality instructional materials. ▪ Develop structures and professional learning opportunities so that students access complex text in all content areas.	▪ Read a balance of literary and informational texts across content areas. ▪ Read a wide range of multimodal texts in which meaning is conveyed through visual, audio, gestural, tactile, and spatial means. ▪ Build vocabulary through a combination of conversation, direct instruction, and reading. ▪ Participate in frequent opportunities to write about content and practice the modes and structures of literary and informational text types.

ELA/Literacy Shift 4: Explicit Writing Instruction | The *Production of Writing* strand of the revised standards lays out an explicit sequence of evidence-based skills that lead to writing proficiency. The progression emphasizes sentence-level and paragraph composition so that students are able to craft cohesive writing pieces grounded in evidence from complex texts.

Teachers…	School leaders…	Students…
▪ Explicitly teach grammar, usage, and mechanic skills in the context of high-quality texts. ▪ Use high-quality instructional materials that provide a mix of on-demand and process writing tasks. ▪ Provide frequent opportunities for revising and editing pieces written by self and others. ▪ Design lessons in which students explicitly examine grammatical structures in meaningful, complex sentences. ▪ Design instruction in which students experience grammatical conventions in various contexts.	▪ Equip teachers with professional learning, high-quality materials, and evidence-based resources to support their knowledge of language. ▪ Ensure a district-wide scope and sequence reflects a carefully planned integration of language and content. ▪ Assess the frequency and quality of direct writing instruction in all classes. ▪ Support the implementation of formative, interim, and summative assessment that informs instruction.	▪ Write about the content of complex texts using academic language and conventions appropriate to the task, purpose, and audience. ▪ Recognize the sentence as the building block of all writing. ▪ Demonstrate their learning through a variety of written tasks. ▪ Engage in deliberate practice of emerging skills. ▪ Learn grammatical concepts through the construction and revision of their own writing and that of others.

NEBRASKA'S COLLEGE AND CAREER READY

STANDARDS FOR SCIENCE



Approved by the Nebraska State Board of Education on September 8, 2017

Nebraska's College and Career Ready Standards for Science 2017

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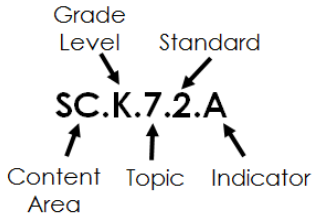
Content Area Standards Structure

The overall structure of Nebraska's College and Career Ready Standards for Science (CCR-Science) reflects the two-tier structure common across all Nebraska content area standards. The two levels within the structure include **standards** and **indicators**. At the broadest level, **standards** include broad, overarching content-based statements that describe the basic cognitive, affective, or psychomotor expectations of student learning. The standards, across all grade levels, reflect long-term goals for learning. **Indicators** further describe what students must know and be able to do to meet the standard. These performance-based statements provide clear expectations related to student learning in each content area. Additionally, indicators provide guidance related to the assessment of student learning. This guidance is articulated by including assessment boundary statements.

The CCR-Science standards describe the knowledge and skills that students should learn, but they do not prescribe particular curriculum, lessons, teaching techniques, or activities. Standards describe what students are expected to know and be able to do, while the local curriculum describes how teachers will help students master the standards. A wide variety of instructional resources may be used to meet the state content area standards. Decisions about curriculum and instruction are made locally by individual school districts and classroom teachers. The Nebraska Department of Education does not mandate the curriculum used within a local school.

In addition to a common structure for content area standards, a consistent numbering system is used for content area standards. The CCR-Science standards numbering system is as follows:



Organization and Structure of CCR-Science Standards

Nebraska's College and Career Ready Standards for Science (CCR-Science) are organized by grade level for grades K-8 and by grade span in high school. K-5 standards are organized to reflect the developmental nature of learning for elementary students and attend to the learning progressions that build foundational understandings of science. By the time students reach middle school (Grades 6-8), they build on this foundation in order to develop more sophisticated understandings of science concepts through high school. The topic progression for the CCR-Science standards is included in Appendix A.

Within each grade level/span the standards are organized around topics, and each standard addresses one topic. Each CCR-Science standard begins with the common stem: "Gather, analyze, and communicate…" This stem highlights long-term learning goals associated with rigorous science standards and provides guidance for high quality classroom instruction. To facilitate high-quality instruction, students actively gather evidence from multiple sources related to the science topics. This evidence is carefully analyzed in order to describe and explain natural phenomena, and then, students communicate their understanding of the content using a variety of tools and strategies. It is important to note that while topics are introduced in a spiraled model, they are connected; and deeper understanding at subsequent grade levels and spans requires foundational understanding of multiple topics.

The indicators reflect the three dimensions of science learning outlined in *A Framework for K-12 Science Education*[1]. Each CCR-Science indicator includes a disciplinary core idea, a crosscutting concept (underline), and a **science and engineering practice** (**bold**).

The disciplinary core ideas are the focused, limited set of science ideas identified in the *Framework* as necessary for ALL students throughout their education and beyond their K-12 school years to achieve scientific literacy. The limited number of disciplinary core ideas allows more time for students and

teachers to engage in the science and engineering practices as they deeply explore science ideas. To allow students to continually build on and revise their knowledge and abilities, the disciplinary core ideas are built on developmental learning progressions (Appendix A).

The crosscutting concepts are used to organize and make sense of disciplinary core ideas. They serve as tools that bridge disciplinary boundaries and deepen understanding of science content. With grade-appropriate proficiency, students are expected to use patterns; cause and effect; scale, proportion, and quantity; systems and system models; energy and matter; structure and function; and stability and change as they gather, analyze, and communicate scientific understanding. These crosscutting concepts provide structure for synthesizing knowledge from various fields into a coherent and scientifically based view of the world.

The **science and engineering practices** are used by students to demonstrate understanding of the disciplinary core ideas and crosscutting concepts. Engaging in the practices of science and engineering helps students understand the wide range of approaches used to investigate natural phenomena and develop solutions to challenges. Students are expected to demonstrate grade-appropriate proficiency in asking questions and defining problems; developing and using models; planning and carrying out investigations; analyzing and interpreting data; using mathematics and computational thinking; constructing explanations and designing solutions; engaging in argument from evidence; and obtaining, evaluating, and communicating information as they gather, analyze, and communicate scientific information.

Each science indicator focuses on one crosscutting concept and one **science and engineering practice** as an *example* to guide assessment. Instruction aimed toward preparing students should use crosscutting concepts and **science and engineering practices** that go beyond what is stated in the indicator to better reflect authentic science practice.

The following table lists the disciplinary core ideas, crosscutting concepts, and **science and engineering practices**:

Science and Engineering Practices	Disciplinary Core Ideas	Crosscutting Concepts
• **Asking Questions and Defining Problems** • **Developing and Using Models** • **Planning and Carrying Out Investigations** • **Analyzing and Interpreting Data** • **Using Mathematics and Computational Thinking** • **Constructing Explanations and Designing Solutions** • **Engaging in Argument from Evidence** • **Obtaining, Evaluating, and Communicating Information**	**LS1: From Molecules to Organisms: Structures and Processes** **LS2: Ecosystems: Interactions, Energy, and Dynamics** **LS3: Heredity: Inheritance and Variation of Traits** **LS4: Biological Evolution: Unity & Diversity** **PS1: Matter and Its Interactions** **PS2: Motion and Stability: Forces and Interactions** **PS3: Energy** **PS4: Waves and Their Applications in Technologies for Information Transfer** **ESS1: Earth's Place in the Universe** **ESS2: Earth's Systems** **ESS3: Earth and Human Activity** **ETS1: Engineering Design**	**Patterns** **Cause and Effect** **Scale, Proportion, and Quantity** **Systems and System Models** **Energy and Matter** **Structure and Function** **Stability and Change**

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Interdisciplinary Connections
The crosscutting concepts and **science and engineering practices** provide opportunities for developing strong interdisciplinary connections across all content areas (English Language Arts, mathematics, social studies, fine arts, career/technical education, etc.). Disciplinary core ideas can be a context for helping students master key competencies from other content areas while promoting essential career readiness skills, including communication, creativity, collaboration, and critical thinking.

Nebraska Connections
Opportunities to teach science using topics directly relevant to our state (e.g. Ogallala Aquifer, agriculture, Nebraska-specific flora and fauna, Nebraska's rich geologic history, etc.) are listed throughout the CCR-Science standards as "Nebraska Connections." These connections allow educators to use local, regional, and state-specific contexts for teaching, learning, and assessment. Educators should use these as recommendations for investigation with students. Additionally, assessment developers have the opportunity to use the Nebraska contexts to develop Nebraska-specific examples or scenarios from which students would demonstrate their general understanding. This approach provides the opportunity for educators to draw upon Nebraska's natural environment and rich history and resources in engineering design and scientific research to support student learning.

Civic Science Connections
Within the CCR-Science standards, opportunities to create civic science connections have been identified. These connections are designed to call-out the importance for students to engage in the study of civic ideals, principles, and practices through participation in the act of "citizen science." Citizen science is the public involvement in inquiry and discovery of new scientific knowledge. This engagement helps students build science knowledge and skills while improving social behavior, increasing student engagement, and strengthening community partnerships. Citizen science projects enlist K-12 students to collect or analyze data for real-world research studies. Citizen science in conjunction with the CCR-Science standards help bridge our K-12 students with stakeholders in the community, both locally and globally.

Computer Science Connections
Natural connections between science and computer science have been identified throughout the standards, especially in the middle level and in high school as students expand their ability to use computational thinking to develop complex models and simulations of natural and designed systems. Computers and other digital tools allow students to collect, record, organize, analyze, and communicate data as they engage in science learning.

Engineering, Technology, and Applications of Science Connections
Connections to engineering, technology, and applications of science are included at all grade levels and in all domains. These connections highlight the interdependence of science, engineering, and technology that drives the research, innovation, and development cycle where discoveries in science lead to new technologies developed using the engineering design process. Additionally, these connections call attention to the effects of scientific and technological advances on society and the environment.

Engineering Design

Performance indicators for the engineering design process are intentionally embedded in all grade levels. These indicators allow students to demonstrate their ability to define problems, develop possible solutions, and improve designs. ***These indicators should be reinforced whenever students are engaged in practicing engineering design during instruction.*** Having students engage in the engineering design process will prepare them to solve challenges both in and out of the classroom.

Instructional Shifts

While each indicator incorporates the three dimensions, this alone does not drive student outcomes; ultimately, student learning depends on how the standards are translated to instructional practices.

3-Dimensional teaching and learning: Effective science teaching, learning, and assessment should integrate disciplinary core ideas, crosscutting concepts, and **science and engineering practices**. Integration of the three dimensions will allow students to explain scientific phenomena, design solutions to real-world challenges, and build a foundation upon which they can continue to learn and to apply science knowledge and skills within and outside the K-12 education arena.

Integrated science: Natural phenomena serve as the context for the work of both scientists and engineers. As students explain natural phenomena and design solutions to real-world challenges they connect ideas across science domains. The crosscutting concepts serve as tools that bridge domain boundaries and allow students to deepen their understanding of disciplinary core ideas while using **science and engineering practices** as they explore natural phenomena.

Interdisciplinary approaches: The overlapping skills included in the **science and engineering practices** and the intellectual tools provided by the crosscutting concepts build meaningful and substantive connections to interdisciplinary knowledge and skills in all content areas (English Language Arts, mathematics, social studies, fine arts, career/technical education, etc.) This affords all students equitable access to learning and ensures all students are prepared for college, career, and citizenship.

Implementation and Educator Support

To support educators while they explore and implement the CCR-Science standards, the Nebraska Department of Education is developing a five-year implementation plan that includes; exploration, initial implementation, scale up, deep implementation, and sustainability. Included in the implementation plan will be guidance related to systems alignment, professional learning, curriculum, instruction, resources, and assessment. A new statewide summative assessment aligned to these standards will be operational in 2021.

[1] *A Framework for K-12 Science Education: Practices, Crosscutting Concepts, and Core Ideas.* Washington, DC: The National Academies Press, 2012.

KINDERGARTEN

The Kindergarten standards and indicators help students gather, analyze, and communicate evidence as they formulate answers to questions tailored to student interest and current topics that may include but are not limited to:

What happens if you change how hard you push or pull an object?
Students are able to apply an understanding of the effects of different strengths or different directions of pushes and pulls on the motion of an object to analyze a design solution.

Where do animals live and why do they live there?
Students are also expected to develop understanding of what plants and animals (including humans) need to survive and the relationship between their needs and where they live

What is the weather like today and how is it different from yesterday?
Students are expected to develop understanding of patterns and variations in local weather and the purpose of weather forecasting to prepare for and respond to, severe weather.

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SC.K.1 Forces and Interactions: Pushes and Pulls

SC.K.1.1 Gather, analyze, and communicate evidence of forces and their interactions.

SC.K.1.1.A **Plan and conduct an investigation to compare** the effects of different strengths or different directions of pushes and pulls on the motion of an object. Assessment is limited to different relative strengths or different directions, but not both at the same time. Assessment does not include non-contact pushes or pulls such as those produced by magnets.

SC.K.1.1.B **Analyze data to determine if a design solution** works as intended to change the speed or direction of an object with a push or a pull. Assessment does not include friction as a mechanism for change in speed.

SC.K.7 Interdependent Relationships in Ecosystems: Animals, Plants, and Their Environment

SC.K.7.2 Gather, analyze, and communicate evidence of interdependent relationships in ecosystems.

SC.K.7.2.A **Use observations to describe** patterns of what plants and animals (including humans) need to survive.

SC.K.7.2.B **Construct an argument supported by evidence for how** plants and animals (including humans) can change the environment to meet their needs.

SC.K.7.2.C **Use a model to represent** the relationship between the needs of different plants or animals (including humans) and the places they live.

NE plants and animals

SC.K.7.2.D **Communicate solutions** that will increase the positive impact of humans on the land, water, air, and/or other living things in the local environment.

NE conservation organizations and agricultural practices

SC.K.12 Weather and Climate

SC.K.12.3 Gather, analyze, and communicate evidence of weather and climate.

SC.K.12.3.A **Use and share observations** of local weather conditions to describe patterns over time. Assessment of quantitative observations limited to whole numbers and relative measures such as warmer/cooler.

SC.K.12.3.B **Ask questions to obtain information** about the purpose of weather forecasting to prepare for, and respond to, severe weather.

emphasis on blizzards, tornadoes, drought, and floods

SC.K.12.3.C **Make observations to determine** the effect of sunlight on Earth's surface.

SC.K.12.3.D **Use tools and materials to design and build a structure** that will reduce the warming effect of sunlight on an area.

SC.K.12.3.E **Ask questions, make observations, and gather information** about a situation people want to change to **define a simple problem that can be solved** through the development of a new or improved object or tool.

FIRST GRADE

The first grade standards and indicators help students gather, analyze, and communicate evidence as they formulate answers to questions tailored to student interest and current topics that may include but are not limited to:

What happens when materials vibrate?
Students are expected to develop understanding of the relationship between sound and vibrating materials.

What happens when there is no light?
Students are expected to develop understanding of the relationship between the availability of light and the ability to see objects. The idea that light travels from place to place can be understood by students at this level through determining the effect of placing objects made with different materials in the path of a beam of light.

What are some ways plants and animals meet their needs so they can survive and grow?
Students are also expected to develop understanding of how plants and animals use their external parts to help them survive, grow, and meet their needs as well as how the behaviors of parents and offspring help offspring survive.

How are parents and their children similar and different?
The understanding is developed that young plants and animals are like, but not exactly the same as, their parents.

What objects are in the sky and how do they seem to move?
Students are able to observe, describe, and predict some patterns of the movement of objects in the sky.

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SC.1.2 Waves: Light and Sound

SC.1.2.1 Gather, analyze, and communicate evidence of light and sound waves.

SC.1.2.1.A **Plan and conduct investigations** to provide evidence that vibrating materials can make sound and that sound can make materials vibrate.

SC.1.2.1.B **Make observations to construct** an evidence-based account that objects can be seen only when illuminated.

SC.1.2.1.C **Plan and conduct an investigation** to determine the effect of placing objects made with different materials in the path of a beam of light.
Assessment does not include the speed of light.

SC.1.2.1.D **Use tools and materials to design and build** a device that uses light or sound to solve the problem of communicating over a distance.
Assessment does not include technological details for how communication devices work.

SC.1.6 Structure, Function, and Information Processing

SC.1.6.2 Gather, analyze, and communicate evidence to show the relationship between structure and function in living things.

SC.1.6.2.A **Use materials to design a solution** to a human problem by mimicking how plants and/or animals use their external parts to help them survive, grow, and meet their needs.

NE plants and animals

SC.1.6.2.B **Develop a simple sketch, drawing, or physical model** to illustrate how the shape of an object helps it function as needed to solve a given problem.

SC.1.6.2.C **Read texts and use media to determine** patterns in a behavior of parents and offspring that help offspring survive.

NE plants and animals

SC.1.6.2.D **Make observations to construct an evidence-based account** that young plants and animals are like, but not exactly like, their parents.
Assessment does not include inheritance or animals that undergo metamorphosis or hybrids.

NE plants and animals

SC.1.11 Space Systems: Patterns and Cycles

SC.1.11.3 Gather, analyze, and communicate evidence of patterns and cycles of space systems.

SC.1.11.3.A **Use observations** of the sun, moon, and stars to describe patterns that can be predicted. Assessment of star patterns is limited to stars being seen at night and not during the day.

SC.1.11.3.B **Make observations** at different times of the year to relate the amount of daylight to the time of year. Assessment is limited to relative amounts of daylight, not quantifying the hours or time of daylight.

SECOND GRADE

The second grade standards and indicators help students gather, analyze, and communicate evidence as they formulate answers to questions tailored to student interest and current topics that may include but are not limited to:

How are materials similar and different from one another and how do the properties of the materials relate to their use?
An understanding of observable properties of materials is developed by students at this level through analysis and classification of different materials.

What do plants need to grow?
Students are expected to develop an understanding of what plants need to grow and how plants depend on animals for seed dispersal and pollination.

How many types of living things live in a place?
Students are expected to compare the diversity of life in different habitats.

How does land change and what causes it to change?
Students are able to apply their understanding of the idea that wind and water can change the shape of land to compare design solutions to slow or prevent such change.

What are the different kinds of land and bodies of water?
Students are able to use information and models to identify and represent the shapes and kinds of land and bodies of water in an area and where water is found on Earth.

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SC.2.3 Structure and Properties of Matter

SC.2.3.1 Gather, analyze, and communicate evidence of the structure, properties, and interactions of matter.

SC.2.3.1.A **Plan and conduct an investigation** to describe and classify different kinds of materials by their observable properties.

Soil properties

SC.2.3.1.B **Analyze data obtained from testing different materials** to determine which materials have the properties that are best suited for an intended purpose. Assessment of quantitative measurements is limited to length and weight.

SC.2.3.1.C **Analyze data** from tests of two objects **designed to solve the same problem** to compare the strengths and weaknesses of how each performs.

SC.2.3.1.D **Make observations to construct an evidence-based account** of how an object made of a small set of pieces can be disassembled and made into a new object.

SC.2.3.1.E **Construct an argument with evidence** that some changes caused by heating or cooling can be reversed and some cannot.

SC.2.7 Interdependent Relationships in Ecosystems

SC.2.7.2 Gather, analyze, and communicate evidence of interdependent relationships in ecosystems.

SC.2.7.2.A **Plan and conduct an investigation** to determine if plants need sunlight and water to grow. Assessment is limited to testing one variable at a time.

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SC.2.7.2.B **Develop a simple model** that mimics the function of an animal in dispersing seeds or pollinating plants.

SC.2.7.2.C **Make observations** of plants and animals **to compare** the diversity of life in different habitats. Assessment does not include specific animal and plant names in specific habitats.

NE habitats

SC.2.13 Earth's Systems: Processes That Shape the Earth

SC.2.13.3 Gather, analyze, and communicate evidence of the processes that shape the earth.

SC.2.13.3.A **Use information from several sources to provide evidence** that Earth events can occur quickly or slowly. Assessment does not include quantitative measurements of timescales.

Flooding and tornadoes quickly cause change; wind slowly formed the Sandhills

SC.2.13.3.B **Compare multiple solutions designed to** slow or prevent wind or water from changing the shape of the land.

Soil conservation

SC.2.13.3.C **Develop a model to represent** the shapes and kinds of land and bodies of water in an area. Assessment does not include quantitative scaling in models.

Manmade dams, sandbagging, windbreaks, terracing

SC.2.13.3.D **Obtain information to identify** where water is found on Earth and that it can be solid or liquid.

NE water bodies

THIRD GRADE

The third grade standards and indicators help students gather, analyze, and communicate evidence as they formulate answers to questions tailored to student interest and current topics that may include but are not limited to:

How do equal and unequal forces on an object affect the object?
Students are able to determine the effects of balanced and unbalanced forces on the motion of an object and the cause and effect relationships of electrical or magnetic interactions between two objects not in contact with each other.

How can magnets be used?
Students are able to apply their understanding of magnetic interactions to define a simple design problem that can be solved with magnets.

How do organisms vary in their traits?
Students are expected to develop an understanding of the similarities and differences of organisms' life cycles. Students develop an understanding that organisms have different inherited traits and that the environment can also affect the traits that an organism develops. In addition, students are able to construct an explanation using evidence for how the variations in characteristics among individuals of the same species may provide advantages in surviving, finding mates, and reproducing.

How are plants, animals, and environments of the past similar or different from current plants, animals, and environments?
Students are expected to develop an understanding of types of organisms that lived long ago, and also about the nature of their environments.

What happens to organisms when their environment changes?
Students are expected to develop an understanding of the idea that when the environment changes some organisms survive and reproduce, some move to new locations, some move into the transformed environment, and some die.

What is typical weather in different parts of the world and during different times of the year?
Students are able to organize and use data to describe typical weather conditions expected during a particular season.

How can the impact of weather-related hazards be reduced?
By applying their understanding of weather-related hazards, students are able to make a claim about the merit of a design solution that reduces the impacts of such hazards.

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SC.3.1 Forces and Interactions: Motion and Stability

SC.3.1.1 Gather, analyze, and communicate evidence of forces and their interactions.

SC.3.1.1.A **Plan and conduct an investigation** to provide evidence of the effects of balanced and unbalanced forces on the motion of an object.

Assessment is limited to one variable at a time: number, size, or direction of forces. Assessment does not include quantitative force size, only qualitative and relative. Assessment is limited to gravity being addressed as a force that pulls objects down.

SC.3.1.1.B **Make observations and/or measurements** of an object's motion to provide evidence that a pattern can be used to predict future motion.

Assessment does not include technical terms such as period and frequency.

SC.3.1.1.C **Ask questions** to determine cause and effect relationships of electrical or magnetic interactions between two objects not in contact with each other. Assessment is limited to forces produced by objects that can be manipulated by students, and electrical interactions, are limited to static electricity.

SC.3.1.1.D **Define a simple design problem** that can be solved by applying scientific ideas about magnets.

SC.3.7 Interdependent Relationships in Ecosystems

SC.3.7.2 Gather and analyze data to communicate an understanding of the interdependent relations in ecosystems.

SC.3.7.2.A **Construct an argument** that some animals form groups that help members survive.

NE animals

SC.3.7.2.B **Analyze and interpret data** from fossils to provide evidence of the organisms and environments in which they lived long ago. Assessment does not include identification of specific fossils or present plants and animals. Assessment is limited to major fossil types and relative ages.

NE fossils; NE geologic history

SC.3.7.2.C **Construct an argument** with evidence that in a particular habitat some organisms can survive well, some survive less well, and some cannot survive at all.

NE habitats

SC.3.7.2.D **Make a claim about the merit of a solution to a problem** caused when the environment changes and the types of plants and animals that live there may change. Assessment is limited to a single environmental change. Assessment does not include the greenhouse effect or climate change.

NE habitats

SC.3.7.2.E **Generate and compare multiple possible solutions to a problem** based on how well each is likely to meet the criteria and constraints of the problem.

SC.3.9 Inheritance and Variation: Life Cycles and Traits

SC.3.9.3 Gather and analyze data to communicate an understanding of inheritance and variation of traits though life cycles and environmental influences.

SC.3.9.3.A **Develop models** to describe that organisms have unique and diverse life cycles but all have in common birth, growth, reproduction, and death. Assessment of plant life cycles is limited to those of flowering plants. Assessment does not include details of human reproduction.

NE plants and animals

SC.3.9.3.B **Analyze and interpret data** to provide evidence that plants and animals have traits inherited from parents and that variation of these traits exists in a group of similar organisms. Assessment does not include genetic mechanisms of inheritance and prediction of traits. Assessment is limited to non-human examples.

NE plants and animals

SC.3.9.3.C **Use evidence to support the explanation** that traits can be influenced by the environment.

NE plants, animals, and habitats

SC.3.9.3.D **Use evidence to construct an explanation** for how the variation in characteristics among individuals of the same species may provide advantages in surviving, finding mates, and reproducing.

NE plants, animals, and habitats

SC.3.12 Weather and Climate

SC.3.12.4 Gather and analyze data to communicate an understanding of weather and climate.

SC.3.12.4.A **Represent data** in table, pictograph, and bar graph displays to describe typical weather conditions expected during a particular season. Assessment of graphical displays is limited to pictographs and bar graphs. Assessment does not include climate change.

NE weather and climate

SC.3.12.4.B **Obtain and combine information** to describe climates in different regions of the world.

SC.3.12.4.C **Make a claim about the merit of a design solution** that reduces the impacts of a weather-related hazard.

FOURTH GRADE

The fourth grade standards and indicators help students gather, analyze, and communicate evidence as they formulate answers to questions tailored to student interest and current topics that may include but are not limited to:

What are waves and what are some of the things they can do?
Students are able to use a model of waves to describe patterns of waves in terms of amplitude and wavelength, and that waves can cause objects to move.

What is energy and how is it related to motion?
Students are able to use evidence to construct an explanation of the relationship between the speed of an object and the energy of that object.

How is energy transferred?
Students are expected to develop an understanding that energy can be transferred from place to place by sound, light, heat, and electrical currents or from object to object through collisions.

How can energy be used to solve a problem?
They apply their understanding of energy to design, test, and refine a device that converts energy from one form to another.

How do internal and external structures support the survival, growth, behavior, and reproduction of plants and animals?
Students are expected to develop an understanding that plants and animals have internal and external structures that function to support survival, growth, behavior, and reproduction. By developing a model, students describe that an object can be seen when light reflected from its surface enters the eye.

How can water, ice, wind and vegetation change the land?
Students are expected to develop understanding of the effects of weathering or the rate of erosion by water, ice, wind or vegetation. They apply their knowledge of natural Earth processes to generate and compare multiple solutions to reduce the impacts of such processes on humans.

What patterns of Earth's features can be determined with the use of maps?
In order to describe patterns of Earth's features, students analyze and interpret data from maps.

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SC.4.2 Waves: Waves and Information

SC.4.2.1 Gather, analyze, and communicate evidence of waves and the information they transfer.

SC.4.2.1.A **Develop a model** of waves to describe patterns in terms of amplitude and wavelength and that waves can cause objects to move.
Assessment does not include interference effects, electromagnetic waves, non-periodic waves, or quantitative models of amplitude and wavelength.

SC.4.2.1.B **Generate and compare multiple solutions** that use patterns to transfer information.

SC.4.4 Energy: Conservation and Transfer

SC.4.4.2 Gather, analyze and communicate evidence of energy conservation and transfer.

SC.4.4.2.A Use evidence to **construct an explanation** relating the speed of an object to the energy of that object. Assessment does not include quantitative measures of changes in the speed of an object or on any precise or quantitative definition of energy.

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SC.4.4.2.B **Make observations** to provide evidence that energy can be transferred from place to place by sound, light, heat, and electrical currents. Assessment does not include quantitative measurements of energy.

NE energy producers

SC.4.4.2.C **Ask questions** and predict outcomes about the changes in energy that occur when objects collide. Assessment does not include quantitative measurements of energy.

SC.4.4.2.D Apply scientific ideas to **design, test, and refine a device** that converts energy from one form to another. Devices should be limited to those that convert motion energy to electric energy or use stored energy to cause motion or produce light or sound.

SC.4.4.2.E **Plan and carry out fair tests in which variables are controlled** and failure points are considered to identify aspects of a model or prototype that can be improved.

SC.4.4.2.F **Obtain and combine information** to describe that energy and fuels are derived from natural resources and that their uses affect the environment.

NE ethanol production

SC.4.6 Structure, Function, and Information Processing

SC.4.6.3 Gather and analyze data to communicate an understanding of structure, function and information processing of living things.

SC.4.6.3.A **Develop a model** to describe that light reflecting from objects and entering the eyes allows objects to be seen. Assessment does not include knowledge of specific colors reflected and seen, the cellular mechanisms of vision, or how the retina works.

SC.4.6.3.B **Construct an argument** that plants and animals have internal and external structures that function to support survival, growth, behavior, and reproduction. Assessment is limited to macroscopic structures within plant and animal systems.

NE plants and animals

SC.4.6.3.C **Use a model** to describe that animals receive different types of information through their senses, process the information in their brain, and respond to the information. Assessment does not include the mechanisms by which the brain stores and recalls information or the mechanisms of how sensory receptors function.

SC.4.13 Earth's Systems: Processes That Shape the Earth

SC.4.13.4 Gather and analyze data to communicate an understanding of Earth's systems and processes that shape the Earth.

SC.4.13.4.A **Identify evidence** from patterns in rock formations and fossils in rock layers to support an explanation for changes in a landscape over time. Assessment does not include specific knowledge of the mechanism of rock formation or memorization of specific rock formations and layers. Assessment is limited to relative time.

NE fossils and geologic history

SC.4.13.4.B **Make observations and/or measurements** to provide evidence of the effects of weathering or the rate of erosion by water, ice, wind, or vegetation. Assessment is limited to a single form of weathering or erosion.

SC.4.13.4.C **Analyze and interpret data** from maps to describe patterns of Earth's features.

SC.4.13.4.D **Generate and compare multiple solutions** to reduce the impacts of natural Earth processes on humans. Assessment is limited to earthquakes, floods, tsunamis, and volcanic eruptions.

FIFTH GRADE

The fifth grade standards and indicators help students gather, analyze, and communicate evidence as they formulate answers to questions tailored to student interest and current topics that may include but are not limited to:

When matter changes, does its weight (mass) change?
Students are able to describe that matter is made of particles too small to be seen through the development of a model. Students develop an understanding of the idea that regardless of the type of change that matter undergoes, the total weight of matter is conserved.

Can new substances be created by combining other substances?
Students determine whether the mixing of two or more substances results in new substance.

How does matter cycle through ecosystems and where does the energy in food come from and what is it used for?
Students develop an understanding of the idea that plants get the materials they need for growth chiefly from air and water. Using models, students can describe the movement of matter among plants, animals, decomposers, and the environment and that energy in animals' food was once energy from the sun.

How much water can be found in different places on Earth and how does water move through the Earth system?
Students describe and graph data to provide evidence about the distribution of water on Earth. Through the development of a model using an example students are able to describe ways the geosphere, biosphere, hydrosphere, and/or atmosphere interact. This model will also allow students to define a simple design problem that relates to the conservation of fresh water.

How do lengths and directions of shadows or relative lengths of day and night change from day to day, and how does the appearance of some stars change in different seasons?
Students are expected to develop an understanding of patterns of daily changes in length and direction of shadows, day and night, and the seasonal appearance of some stars in the night sky.

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SC.5.3 Structure and Properties of Matter

SC.5.3.1 Gather, analyze, and communicate evidence of structure and properties of matter.

SC.5.3.1.A **Develop a model** to describe that matter is made of particles too small to be seen. Assessment does not include the atomic-scale mechanism of evaporation and condensation or defining the unseen particles.

SC.5.3.1.B **Measure and graph quantities** to provide evidence that regardless of the type of change that occurs when heating, cooling, or mixing substances, the total weight of matter is conserved. Assessment does not include distinguishing mass and weight.

SC.5.3.1.C **Make observations and measurements** to identify materials based on their properties. Assessment does not include density or distinguishing mass and weight.

SC.5.3.1.D **Conduct an investigation** to determine whether the mixing of two or more substances results in new substances.

SC.5.8 Matter and Energy in Organisms and Ecosystems

SC.5.8.2 Gather and analyze data to communicate understanding of matter and energy in organisms and ecosystems.

SC.5.8.2.A **Use models** to describe that energy in animals' food (used for body repair, growth, and motion and to maintain body warmth) was once energy from the sun.

SC.5.8.2.B **Support an argument** that plants get the materials they need for growth chiefly from air and water.

SC.5.8.2.C **Develop a model** to describe the movement of matter among plants, animals, decomposers, and the environment. Assessment does not include molecular explanations or the biochemical mechanisms of photosynthesis.

NE ecosystems

SC.5.11 Space Systems: Earth's Stars and Solar System

SC.5.11.3 Gather and analyze data to communicate understanding of space systems: Earth's stars and solar system.

SC.5.11.3.A **Support an argument** that the gravitational force exerted by Earth on objects is directed down. Assessment does not include mathematical representation of gravitational force.

SC.5.11.3.B **Support an argument** that differences in the apparent brightness of the sun compared to other stars is due to their relative distances from Earth. Assessment is limited to relative distances, not sizes, of stars. Assessment does not include other factors that affect apparent brightness (such as stellar masses, age, and stage).

SC.5.11.3.C **Represent data in graphical displays** to reveal patterns of daily changes in the length and direction of shadows, day and night, and the seasonal appearance of some stars in the night sky. Assessment does not include causes of seasons.

SC.5.13 Earth's Systems

SC.5.13.4 Gather and analyze data to communicate understanding of Earth's systems.

SC.5.13.4.A **Develop a model** using an example to describe ways the geosphere, biosphere, hydrosphere, and/or atmosphere interact. Assessment is limited to the interactions of two systems at a time.

NE systems

SC.5.13.4.B **Describe and graph** the amounts of salt water and fresh water in various reservoirs to provide evidence about the distribution of water on Earth. Assessment is limited to oceans, lakes, rivers, glaciers, groundwater, and polar ice caps but does not include the atmosphere.

NE bodies of water

SC.5.13.4.C **Obtain and combine information** about ways individual communities use science ideas to protect the Earth's resources and environment.

NE conservation organizations

SC.5.13.4.D **Define a simple design problem** that can be solved by applying scientific ideas about the conservation of fresh water <u>on Earth</u>.

NE conservation organizations

SC.5.13.4.E **Define a simple design problem** reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost.

SIXTH GRADE

The sixth grade standards and indicators help students gather, analyze, and communicate evidence as they formulate answers to questions tailored to student interest and current topics that may include but are not limited to:

How can energy be transferred from one object or system to another?
Students are expected to know the difference between energy and temperature and begin to develop an understanding of the relationship between force and energy. Students are also expected to apply an understanding of design to the process of energy transfer.

How do the structures of organisms contribute to life's functions?
Students are expected to understand that all organisms are made of cells, that special structures are responsible for particular functions in organisms, and that for many organisms the body is a system of multiple interacting subsystems that form a hierarchy from cells to the body.

How do organisms grow, develop, and reproduce?
Students are expected to explain how select structures, functions, and behaviors of organisms change in predictable ways as they progress from birth to old age.

What factors interact and influence weather and climate?
Students are expected to construct and use models to develop an understanding of the factors that determine weather and climate.
A systems approach is also important here, examining the feedbacks between systems as energy from the sun is transferred between systems and circulates through the oceans and atmosphere.

How does water move through Earth's systems?
Students understand how Earth's geosystems operate by modeling the flow of energy and cycling of matter within and among different systems.

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SC.6.4 Energy

SC.6.4.1 Gather, analyze, and communicate evidence of energy.

SC.6.4.1.A Apply scientific principles to **design, construct, and test a device** that either minimizes or maximizes thermal energy transfer. Assessment does not include calculating the total amount of thermal energy transferred.

SC.6.4.1.B **Define the criteria and constraints of a design problem** with sufficient precision to ensure a successful solution, taking into account relevant scientific principle and potential impacts on people and the natural environment that may limit possible solutions.

SC.6.4.1.C **Plan an investigation** to determine the relationships among the energy transferred, the type of matter, the mass, and the change in the average kinetic energy of the particles as measured by the temperature of the sample. Assessment does not include calculating the total amount of thermal energy transferred.

SC.6.4.1.D **Construct, use, and present arguments** to support the claim that when the kinetic energy of an object changes, energy is transferred to or from the object. Assessment does not include calculations of energy.

SC.6.6 Structure and Function and Information Processing

SC.6.6.2 Gather, analyze, and communicate evidence of the relationship between structure and function in living things.

SC.6.6.2.A **Conduct an investigation** to provide evidence that living things are made of cells; either one cell or many different numbers and types of cells.

SC.6.6.2.B **Develop and use a model** to describe the function of a cell as a whole and ways parts of cells contribute to the function. Assessment of organelle structure/function relationships is limited to the cell wall and cell membrane. Assessment of the function of the other organelles is limited to their relationship to the whole cell. Assessment does not include the biochemical function of cells or cell parts.

SC.6.6.2.C **Use argument supported by evidence** for how the body is a system of interacting subsystems composed of groups of cells. Assessment does not include the mechanism of one body system independent of others. Assessment is limited to the circulatory, excretory, digestive, respiratory, muscular, and nervous systems.

SC.6.6.2.D **Gather and synthesize information** that sensory receptors respond to stimuli by sending messages to the brain for immediate behavior or storage as memories. Assessment does not include mechanisms for the transmission of this information.

SC.6.9 Growth, Development, and Reproduction of Organisms

SC.6.9.3 Gather, analyze, and communicate evidence of the inheritance and variation of traits.

SC.6.9.3.A **Construct an argument** based on evidence for how plant and animal adaptations affect the probability of successful reproduction.

monarchs/milkweed; seed dispersal in prairie grasses

SC.6.9.3.B **Construct a scientific explanation** based on evidence for how environmental and genetic factors influence the growth of organisms. Assessment does not include genetic mechanisms, gene regulation, or biochemical processes.

NE plants and animals

SC.6.9.3.C **Develop and use a model** to describe why asexual reproduction results in offspring with identical genetic information and sexual reproduction results in offspring with genetic variation. Assessment does not include specific changes at the molecular level, mechanisms for protein synthesis, or specific types of mutations.

SC.6.12 Weather and Climate

SC.6.12.4 Gather, analyze, and communicate evidence of factors and interactions that affect weather and climate.

SC.6.12.4.A **Collect data** to provide evidence for how the motions and complex interactions of air masses result in changes in weather conditions. Assessment does not include recalling the names of cloud types or weather symbols used on weather maps or the reported diagrams from weather stations.

NE weather conditions

SC.6.12.4.B **Develop and use a model** to describe how unequal heating and rotation of the Earth cause patterns of atmospheric and oceanic circulation that determine regional climates. Assessment does not include the dynamics of the Coriolis effect.

SC.6.12.4.C **Ask questions** to clarify evidence of the factors that have caused the change in global temperatures over thousands of years.

SC.6.12.4.D **Analyze and interpret data** on weather and climate to forecast future catastrophic events and inform the development of technologies to mitigate their effect.

SC.6.13 Earth's Systems

SC.6.13.5 Gather, analyze, and communicate evidence of the flow of energy and cycling of matter associated with Earth's materials and processes.

SC.6.13.5.A **Develop a model** to describe the cycling of water through Earth's systems driven by energy from the sun and the force of gravity.

A quantitative understanding of the latent heats of vaporization and fusion is not assessed.

NE systems

7TH GRADE

The seventh grade standards and indicators help students gather, analyze, and communicate evidence as they formulate answers to questions tailored to student interest and current topics that may include but are not limited to:

How does thermal energy affect particles?
Students will be able to provide molecular level descriptions that explain states of matter and changes between states.

Why do different pure substances have different physical and chemical properties and how do those properties determine how substances are used?
Students are expected to understand what occurs at the atomic molecular scales.

What happens when new materials are formed?
Students are expected to provide molecular level descriptions to explain that chemical reactions involve regrouping of atoms to form new substances and that atoms rearrange during chemical reactions.

How do organisms obtain and use energy?
Students are expected to use conceptual and physical models to explain the transfer of energy and cycling of matter as they construct explanations for the role of photosynthesis in cycling matter in ecosystems.

How does matter and energy move through an ecosystem?
Students are expected to construct explanations for the cycling of matter in organisms and the interaction of organisms to obtain matter and energy from an ecosystem to survive and grow.

How do organisms interact with other organisms in the physical environment to obtain matter and energy?
Students are expected to understand that organisms and populations of organisms are dependent on their environmental interactions both with other organisms and with non-living factors.

How do people figure out that Earth and life on Earth have changed over time?
Students are expected to examine geoscience data in order to understand the processes and events in Earth's history.

How do the materials in and on Earth's crust change over time?
Students are expected to understand how Earth's geosystems operate by modeling the flow of energy and the cycling of matter within and among different systems.

How do human activities affect Earth's systems?
Students are expected to understand the ways that human activities impact Earth's other systems.

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SC.7.3 Structure and Properties of Matter

SC.7.3.1 Gather, analyze, and communicate evidence of the structure, properties, and interactions of matter.

SC.7.3.1.A **Develop <u>models</u>** <u>to describe the atomic</u> composition of simple molecules. Assessment does not include valence electrons and bonding energy, discussing the ionic nature of subunits of complex structures, or a complete description of all individual atoms in a complex molecule or extended structure is not required.

SC.7.3.1.B **Gather and make sense of information** to describe that <u>synthetic materials come from natural resources</u> and impact society. Assessment is limited to qualitative information.

SC.7.3.1.C **Develop a model** that predicts and describes changes in particle motion, temperature, and state of a pure substance when thermal energy is added or removed.

SC.7.5 Chemical Reactions

SC.7.5.2 Gather, analyze, and communicate evidence of chemical reactions.

SC.7.5.2.A **Analyze and interpret data** on the properties of substances before and after the substances interact to determine if a chemical reaction has occurred. Assessment is limited to analysis of the following properties: density, melting point, boiling point, solubility, flammability, and odor.

SC.7.5.2.B **Develop and use a model** to describe how the total number of atoms does not change in a chemical reaction and thus mass is conserved. Assessment does not include the use of atomic masses, balancing symbolic equations, or intermolecular forces.

SC.7.5.2.C **Undertake a design project** to construct, test, and modify a device that either releases or absorbs thermal energy by chemical processes. Assessment is limited to the criteria of amount, time, and temperature of substance in testing the device.

SC.7.5.2.D **Analyze data from tests** to determine similarities and differences among several design solutions to identify the best characteristics of each that can be combined into a new solution to better meet the criteria for success.

SC.7.7 Interdependent Relationships in Ecosystems

SC.7.7.3 Gather, analyze, and communicate evidence of interdependent relationships in ecosystems.

SC.7.7.3.A **Construct an explanation** that predicts patterns of interactions among organisms across multiple ecosystems.

NE ecosystems

SC.7.7.3.B **Evaluate competing design solutions** for maintaining biodiversity and ecosystem services.

NE endangered species and reintroduction of species

SC.7.7.3.C **Evaluate competing design solutions** using a systematic process to determine how well they meet the criteria and constraints of the problem.

SC.7.7.3.D Apply scientific principles to **design** a method for monitoring and increasing positive human impact on the environment.

SC.7.8 Matter and Energy in Organisms and Ecosystems

SC.7.8.4 Gather, analyze, and communicate evidence of the flow of energy and cycling of matter in organisms and ecosystems.

SC.7.8.4.A **Construct a scientific explanation** based on evidence for the role of photosynthesis in the cycling of matter and flow of energy into and out of organisms. Assessment does not include the biochemical mechanisms of photosynthesis.

NE food webs

SC.7.8.4.B **Develop a model** to describe how food is rearranged through chemical reactions forming new molecules that support growth and/or release energy as matter moves through an organism. Assessment does not include details of the chemical reactions for photosynthesis or respiration.

SC.7.8.4.C **Analyze and interpret data** to provide evidence for the effects of resource availability on organisms and populations of organisms in an ecosystem.

NE plants and animals

SC.7.8.4.D **Develop a model** to describe the cycling of matter and flow of energy among living and nonliving parts of an ecosystem. Assessment does not include the use of chemical reactions to describe the processes.

NE ecosystems

SC.7.8.4.E **Construct an argument** supported by evidence that changes to physical or biological components of an ecosystem affect populations.

NE ecosystems

SC.7.13 Earth's Systems

SC.7.13.5 Gather, analyze, and communicate evidence of the flow of energy and cycling of matter associated with Earth's materials and processes.

SC.7.13.5.A **Develop a model** to describe the cycling of Earth's materials and the flow of energy that drives this process. Assessment does not include the identification and naming of minerals.

SC.7.13.5.B **Construct a scientific explanation** based on evidence for how the uneven distributions of Earth's mineral, energy, and groundwater resources are the result of past and current geoscience processes.

NE resources

SC.7.13.5.C **Construct an argument** supported by evidence for how increases in human population and per-capita consumption of natural resources impact Earth's systems.

Food security and NE agriculture

SC.7.14 History of Earth

SC.7.14.6 Gather, analyze, and communicate evidence to explain Earth's history.

SC.7.14.6.A **Construct an explanation** based on evidence for how geoscience processes have changed Earth's surface at varying time and spatial scales.

NE geographic features

SC.7.14.6.B **Analyze and interpret data** on the distribution of fossils and rocks, continental shapes, and seafloor structures to provide evidence of past plate motions. Paleomagnetic anomalies in oceanic and continental crust are not assessed.

SC.7.14.6.C **Analyze and interpret data** on natural hazards to forecast future catastrophic events and inform the development of technologies to mitigate their effects.

8TH GRADE

The eighth grade standards and indicators help students gather, analyze, and communicate evidence as they formulate answers to questions tailored to student interest and current topics that may include but are not limited to:

How can one describe physical interactions between objects and within systems of objects?
Students will be expected to apply Newton's Third Law of Motion to relate forces to explain the motion of objects. Students also apply ideas about gravitational, electrical, and magnetic forces to explain a variety of phenomena including beginning ideas about why some materials attract each other while other repel.

How does the energy of an object change related to its mass, speed, and position in a system?
Students understand that objects that are moving have kinetic energy and that objects may also contain stored (potential) energy, depending on their relative positions.

What are the characteristic properties of waves and how can they be used?
Students are expected to describe and predict characteristic properties and behaviors of waves when the waves interact with matter. Students can apply an understanding of waves as a means to send digital information.

What factors cause genes to change and how does that affect the structure and function of organisms?
Students are expected to understand the ways humans can select for specific traits, the role of technology, genetic modification, and the nature of ethical responsibilities related to selective breeding.

How does genetic variation among organisms in a species affect survival and reproduction? How does the environment influence genetic traits in populations over multiple generations?
Students are expected to analyze data from the fossil record to describe evidence of the history of life on Earth and can construct explanations for similarities in organisms. They have a beginning understanding of the role of variation in natural selection and how this leads to speciation.

What is Earth's place in the Universe? What makes up our solar system and how can the motion of Earth explain seasons and eclipses?
Students are expected to examine the Earth's place in relation to the solar system, Milky Way galaxy, and universe. There is a strong emphasis on a systems approach, using models of the solar system to explain astronomical and other observations of the cyclic patterns of eclipses, tides, and seasons.

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SC.8.1 Forces and Interactions

SC.8.1.1 Gather, analyze, and communicate evidence of forces and interactions.

SC.8.1.1.A Apply Newton's Third Law to **design a solution** to a problem involving the motion of two colliding objects. Assessment is limited to vertical or horizontal interactions in one dimension.

SC.8.1.1.B **Develop a model** to generate data for iterative testing and modification of a proposed object, tool, or process such that an optimal design can be achieved.

SC.8.1.1.C **Plan an investigation** to provide evidence that the change in an object's motion depends on the sum of the forces on the object and the mass of the object. Assessment is limited to forces and changes in motion in one-dimension in an inertial reference frame and to change in one variable at a time; does not include use of trigonometry.

SC.8.1.1.D **Ask questions** about data to determine the factors that affect the strength of electrical and magnetic forces. Assessment about questions that require quantitative answers is limited to proportional reasoning and algebraic thinking.

SC.8.1.1.E **Construct and present arguments** using evidence to support the claim that gravitational interactions are attractive and depend on the masses of interacting objects. Assessment does not include Newton's Law of Gravitation or Kepler's Laws.

SC.8.1.1.F **Conduct an investigation** and evaluate the experimental design to provide evidence that fields exist between objects exerting forces on each other even though the objects are not in contact. Assessment is limited to electric and magnetic fields, and limited to qualitative evidence for the existence of fields.

SC.8.2 Waves and Electromagnetic Radiation

SC.8.2.2 Gather, analyze, and communicate evidence of waves and electromagnetic radiation.

SC.8.2.2.A **Use mathematical representations** to describe a simple model for waves that includes how the amplitude of a wave is related to the energy in a wave. Assessment does not include electromagnetic waves and is limited to standard repeating waves.

SC.8.2.2.B **Develop and use a model** to describe that waves are reflected, absorbed, or transmitted through various materials. Assessment is limited to qualitative applications pertaining to light and mechanical waves.

SC.8.2.2.C **Integrate qualitative scientific and technical information** to support the claim that digitized signals are a more reliable way to encode and transmit information than analog signals. Assessment does not include binary counting. Assessment does not include the specific mechanism of any given device.

SC.8.4 Energy

SC.8.4.3 Gather, analyze, and communicate evidence of energy.

SC.8.4.3.A **Construct and interpret graphical displays of data** to describe the relationships of kinetic energy to the mass of an object and to the speed of an object.

SC.8.4.3.B **Develop a model** to describe that when the arrangement of objects interacting at a distance changes, then different amounts of potential energy are stored in the system. Assessment is limited to two objects and electric, magnetic, and gravitational interactions.

SC.8.9 Heredity: Inheritance and Variation of Traits

SC.8.9.4 Gather, analyze, and communicate evidence of the inheritance and variation of traits.

SC.8.9.4.A **Develop and use a model** to describe why structural changes to genes (mutations) may result in harmful, beneficial, or neutral effects to structure and function of organisms. Assessment does not include specific changes at the molecular level, mechanisms for protein synthesis, or specific types of mutations.

SC.8.9.4.B **Gather and synthesize information** about technologies that have changed the way humans influence inheritance of desired traits in organisms.

NE agriculture practices

SC.8.10 Natural Selection and Adaptations

SC.8.10.5 Gather, analyze, and communicate evidence of natural selection and adaptations.

SC.8.10.5.A **Analyze and interpret data** for patterns in the fossil record that document the existence, diversity, extinction, and change of life forms throughout the history of life on Earth under the assumption that natural laws operate today as in the past. Assessment does not include the names of individual species or geological eras in the fossil record.

NE Geological History

SC.8.10.5.B **Apply scientific ideas to construct an explanation** for the anatomical similarities and differences among and between modern and fossil organisms to infer evolutionary relationships.

NE Geological History

SC.8.10.5.C **Construct an explanation** based on evidence that describes how genetic variations of traits in a population increase some individuals' probability of surviving and reproducing in a specific environment.

SC.8.10.5.D **Use mathematical representations** to support explanations of how natural selection may lead to increases and decreases of specific traits in populations over time. Assessment does not include Hardy Weinberg calculations.

NE plants and animals

SC.8.11 Space Systems

SC.8.11.6 Gather, analyze, and communicate evidence of the interactions among bodies in space.

SC.8.11.6.A **Develop and use a model** of the Earth-sun-moon system to describe the cyclic patterns of lunar phases, eclipses of the sun and moon, and seasons.

SC.8.11.6.B **Develop and use a model** to describe the role of gravity in the motions within the galaxy and the solar system. Assessment does not include Kepler's Laws of orbital motion or the apparent retrograde motion of planets as viewed from Earth.

SC.8.11.6.C **Analyze and interpret data** to determine scale properties of objects in the solar system. Assessment does not include recalling facts about properties of the planets and other solar system bodies.

SC.8.14 History of Earth

SC.8.14.7 Gather, analyze, and communicate evidence to explain Earth's history.

SC.8.14.7.A **Construct a scientific explanation** based on evidence from rock strata for how the geologic time scale is used to organize Earth's 4.6-billion-year-old history. Assessment does not include recalling the names of specific periods or epochs and events within them.

NE Geological history

HS Physical Sciences

The physical science standards and indicators help students gather, analyze, and communicate evidence as they formulate answers to questions tailored to student interest and current topics that may include but are not limited to:

How can one explain the structure and properties of matter?
Students are expected to develop understanding of the substructure of atoms and provide more mechanistic explanations of the properties of substances. Students are able to use the periodic table as a tool to explain and predict the properties of elements.

How do substances combine or change (react) to make new substances? How does one characterize and explain these reactions and make predictions about them?"
Students will be able to explain important biological and geophysical phenomena. Students are also able to apply an understanding of the process of optimization in engineering design to chemical reaction systems.

How can one explain and predict interactions between objects and within systems of objects?
Students are expected to build an understanding of forces and interactions, total momentum of a system of objects is conserved when there is no net force on the system, and predict the gravitational and electrostatic forces between objects. Students are able to apply scientific and engineering ideas to design, evaluate, and refine a device that minimizes the force on a macroscopic object during a collision.

How is energy transferred and conserved?
Students are expected to develop an understanding that energy at both the macroscopic and the atomic scale can be accounted for as either motions of particles or energy associated with the configuration (relative positions) of particles. In some cases, the energy associated with the configuration of particles can be thought of as stored in fields.

How are waves used to transfer energy and send and store information?
Students are expected to apply understanding of how wave properties and the interactions of electromagnetic radiation with matter can transfer information across long distances, store information, and investigate nature on many scales.

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SC.HS.1 Forces and Interactions

SC.HS.1.1 Gather, analyze, and communicate evidence of forces and interactions.

SC.HS.1.1.A **Analyze data** to support the claim that Newton's Second Law of Motion describes the mathematical relationship among the net force on a macroscopic object, its mass, and its acceleration. Assessment is limited to one-dimensional motion and to macroscopic objects moving at non-relativistic speeds.

SC.HS.1.1.B **Use mathematical representations** to support the claim that the total momentum of a system of objects is conserved when there is no net force on the system. Assessment is limited to systems of two macroscopic bodies moving in one dimension.

NE roadside and highway safety

SC.HS.1.1.C **Apply science and engineering ideas to design, evaluate, and refine** a device that minimizes the force on a macroscopic object during a collision. Assessment is limited to qualitative evaluations and/or algebraic manipulations.

SC.HS.1.1.D **Use mathematical representations** of Newton's Law of Gravitation and Coulomb's Law to describe and predict the gravitational and electrostatic forces between objects. Assessment is limited to systems with two objects.

SC.HS.1.1.E **Plan and conduct an investigation** to provide evidence that an electrical current can produce a magnetic field and that a changing magnetic field can produce an electrical current. Assessment is limited to designing and conducting investigations with provided materials and tools.

NE energy producers

SC.HS.2 Waves and Electromagnetic Radiation

SC.HS.2.2 Gather, analyze, and communicate evidence of the interactions of waves.

SC.HS.2.2.A **Use mathematical representations** to support a claim regarding relationships among the frequency, wavelength, and speed of waves traveling in various media. Assessment is limited to algebraic relationships and describing those relationships qualitatively.

SC.HS.2.2.B **Evaluate questions** about the advantages of using digital transmission and storage of information.

SC.HS.2.2.C **Evaluate the claims, evidence, and reasoning** behind the idea that electromagnetic radiation can be described either by a wave model or a particle model, and that for some situations one model is more useful than the other. Assessment does not include using quantum theory.

SC.HS.2.2.D **Evaluate the validity and reliability of claims** in published materials of the effects that different frequencies of electromagnetic radiation have when absorbed by matter. Assessment is limited to qualitative descriptions.

SC.HS.2.2.E **Communicate technical information** about how some technological devices use the principles of wave behavior and wave interactions with matter to transmit and capture information and energy. Assessments are limited to qualitative information. Assessments do not include band theory.

SC.HS.3 Structure and Properties of Matter

SC.HS.3.3 Gather, analyze, and communicate evidence of the structure, properties, and interactions of matter.

SC.HS.3.3.A **Use the periodic table as a model** to predict the relative properties of elements based on the patterns of electrons in the outermost energy level of atoms. Assessment is limited to main group elements. Assessment does not include quantitative understanding of ionization energy beyond relative trends.

NE Geology

SC.HS.3.3.B **Plan and conduct an investigation** to gather evidence to compare the structure of substances at the macro scale to infer the strength of electrical forces between particles. Assessment does not include Raoult's law calculations of vapor pressure.

SC.HS.3.3.C **Develop models** to illustrate the changes in the composition of the nucleus of the atom and the energy released during the processes of fission, fusion, and radioactive decay. Assessment does not include quantitative calculation of energy released. Assessment is limited to alpha, beta, and gamma radioactive decays.

NE Geologic history and nuclear power production

SC.HS.3.3.D **Communicate scientific and technical information** about why the molecular-level structure is important in the functioning of designed materials. Assessment is limited to provided molecular structures of specific designed materials.

NE manufacturers

SC.HS.4 Energy

SC.HS.4.4 Gather, analyze, and communicate evidence of the interactions of energy.

SC.HS.4.4.A **Create a computational model** to calculate the change in the energy of one component in a system when the change in energy of the other component(s) and energy flows in and out of the system are known. Assessment is limited to basic algebraic expressions or computations; to systems of two or three components; and to thermal energy, kinetic energy, and/or the energies in gravitational, magnetic, or electric fields.

SC.HS.4.4.B **Develop and use models** to illustrate that energy at the macroscopic scale can be accounted for as a combination of energy associated with the motion of particles (objects) and energy associated with the relative positions of particles (objects).

SC.HS.4.4.C **Design, build, and refine a device** that works within given constraints to convert one form of energy into another form of energy. Assessment for quantitative evaluations is limited to total output for a given input. Assessment is limited to devices constructed with materials provided to students.

NE energy producers

SC.HS.4.4.D **Analyze a major global challenge** to specify qualitative and quantitative criteria and constraints for solutions that account for societal needs and wants.

SC.HS.4.4.E **Plan and conduct an investigation** to provide evidence that the transfer of thermal energy when two components of different temperature are combined within a closed system results in a more uniform energy distribution among the components in the system (second law of thermodynamics). Assessment is limited to investigations based on materials and tools provided to students.

SC.HS.4.4.F **Develop and use a model** of two objects interacting through electrical or magnetic fields to illustrate the forces between objects and the changes in energy of the objects due to the interaction. Assessment is limited to systems containing two objects.

SC.HS.5 Chemical Reactions

SC.HS.5.5 Gather, analyze, and communicate evidence of chemical reactions.

SC.HS.5.5.A **Construct and revise an explanation** for the outcome of a simple chemical reaction based on the outermost electron states of atoms, trends in the periodic table, and knowledge of the patterns of chemical properties. Assessment is limited to chemical reactions involving main group elements and combustion reactions.

NE energy and ethanol production

SC.HS.5.5.B **Develop a model** to illustrate that the release or absorption of energy from a chemical reaction system depends on the changes in total bond energy. Assessment does not include calculating the total bond energy changes during a chemical reaction from the bond energies of reactants and products.

NE energy and ethanol production

SC.HS.5.5.C **Apply scientific principles** and evidence to provide an explanation about the effects of changing the temperature or concentration of the reacting particles on the rate at which a reaction occurs. Assessment is limited to simple reactions in which there are only two reactants; evidence from temperature, concentration, and rate data; and qualitative relationships between rate and temperature.

NE energy and ethanol production

SC.HS.5.5.D **Refine the design** of a chemical system by specifying a change in conditions that would produce increased amounts of products at equilibrium. Assessment is limited to specifying the change in only one variable at a time. Assessment does not include calculating equilibrium constants and concentrations.

NE energy and ethanol production

SC.HS.5.5.E **Design a solution** to a complex real-world problem by breaking it down into smaller, more manageable problems that can be solved through engineering.

SC.HS.5.5.F **Use mathematical representations** to support the claim that atoms, and therefore mass, are conserved during a chemical reaction. Assessment does not include complex chemical reactions.

NE energy and ethanol production

HS Life Sciences

The life science standards and indicators help students gather, analyze, and communicate evidence as they formulate answers to questions tailored to student interest and current topics that may include but are not limited to:

How do the structures of organisms enable life's functions?
Students are expected to investigate explanations for the structure and function of cells as the basic units of life, the hierarchical systems of organisms, and the role of specialized cells for maintenance and growth. Students will demonstrate understanding of how systems of cells function together to support the life processes.

How are the characteristics from one generation related to the previous generation?
High school students demonstrate understanding of the relationship of DNA and chromosomes in the processes of cellular division that pass traits from one generation to the next. Students can determine why individuals of the same species vary in how they look, function, and behave. Ethical issues related to genetic modification of organisms and the nature of science can be described.

How do organisms obtain and use energy they need to live and grow? How do matter and energy move through ecosystems?
Students will be expected to develop understanding of organisms' interactions with each other and their physical environment, how organisms obtain resources, change the environment, and how these changes affect both organisms and ecosystems. Students will use mathematical concepts to construct explanations for the role of energy in the cycling of matter in organisms and ecosystems.

How do organisms interact with the living and non-living environment to obtain matter and energy?

Students will be expected to investigate the role of biodiversity in ecosystems and the role of animal behavior on survival of individuals and species. Students will develop increased understanding of interactions among organisms and how those interactions influence the dynamics of ecosystems.

How can there be so many similarities among organisms yet so many different plants, animals, and microorganisms? How does biodiversity affect humans?
Students will be expected to demonstrate understanding of the factors causing natural selection and the process of evolution of species over time. They demonstrate understanding of how multiple lines of evidence contribute to the strength of scientific theories of natural selection and evolution

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SC.HS.6 Structure and Function

SC.HS.6.1 Gather, analyze, and communicate evidence of the relationship between structure and function in living things.

SC.HS.6.1.A **Construct an explanation** based on evidence for how the structure of DNA determines the structure of proteins which carry out the essential functions of life through systems of specialized cells. Assessment does not include identification of specific cell or tissue types, whole body systems, specific protein structures and functions, or the biochemistry of protein synthesis.

NE agricultural practices

SC.HS.6.1.B **Develop and use a model** to illustrate the hierarchical organization of interacting systems that provide specific functions within multicellular organisms. Assessment does not include interactions and functions at the molecular or chemical reaction level.

SC.HS.6.1.C **Plan and conduct an investigation** to provide evidence that feedback mechanisms maintain homeostasis. Assessment does not include the cellular processes involved in the feedback mechanism.

NE agricultural practices

SC.HS.6.1.D **Use a model** to illustrate the role of cellular division (mitosis) and differentiation in producing and maintaining complex organisms. Assessment does not include specific gene control mechanisms or rote memorization of the steps of mitosis.

SC.HS.7 Interdependent Relationships in Ecosystems

SC.HS.7.2 Gather, analyze, and communicate evidence of interdependent relationships in ecosystems.

SC.HS.7.2.A **Use mathematical and/or computational representations to support explanations** of factors that affect carrying capacity of ecosystems at different scales**.** Assessment does not include deriving mathematical equations to make comparisons.

SC.HS.7.2.B **Use mathematical representations** to support and revise explanations based on evidence about factors affecting biodiversity and populations in ecosystems of different scales. Assessment is limited to provided data.

SC.HS.7.2.C **Evaluate the claims, evidence, and reasoning** that the interactions in ecosystems maintain relatively consistent numbers and types of organisms in stable conditions, but changing conditions may result in a new ecosystem.

NE river systems and ecosystems

SC.HS.7.2.D **Evaluate the evidence** for the role of group behavior on individual and species' chances to survive and reproduce.

SC.HS.7.2.E **Design, evaluate, and refine a solution** for increasing the positive impacts of human activities on the environment and biodiversity.

NE native species, conservation organizations, agriculture practices

SC.HS.7.2.F **Use a computer simulation** to model the impact of proposed solutions to a complex real-world problem with numerous criteria and constraints on interactions within and between systems relevant to the problem. Assessment is limited to testing solutions for a proposed problem related to threatened or endangered species, or to genetic variation of organisms for multiple species.

SC.HS.8 Matter and Energy in Organisms and Ecosystems

SC.HS.8.3 Gather, analyze, and communicate evidence of the flow of energy and cycling of matter in organisms and ecosystems.

SC.HS.8.3.A **Use a model** to illustrate how photosynthesis transforms light energy into stored chemical energy. Assessment does not include specific biochemical steps.

SC.HS.8.3.B **Construct and revise an explanation** based on evidence for how carbon, hydrogen, and oxygen from sugar molecules may combine with other molecules to form the four basic macromolecules. Assessment does not include the details of the specific chemical reactions or identification of macromolecules.

SC.HS.8.3.C **Use a model** to illustrate that cellular respiration is a chemical process whereby the bonds of food molecules are broken and bonds in new compounds are formed resulting in a net transfer of energy. Assessment should not include identification of the steps or specific processes involved in cellular respiration.

SC.HS.8.3.D **Construct and revise an explanation** based on evidence for the cycling of matter and flow of energy in aerobic and anaerobic conditions. Assessment does not include the specific chemical processes of either aerobic or anaerobic respiration.

NE ethanol production

SC.HS.8.3.E **Use mathematical representations** to support claims for the cycling of matter and flow of energy among organisms in an ecosystem. Assessment is limited to proportional reasoning to describe the cycling of matter and flow of energy.

NE agricultural practices

SC.HS.8.3.F **Develop a model** to illustrate the role of photosynthesis and cellular respiration in the cycling of carbon among the biosphere, atmosphere, hydrosphere, and geosphere. Assessment does not include the specific chemical steps of photosynthesis and respiration.

SC.HS.9 Heredity: Inheritance and Variation of Traits

SC.HS.9.4 Gather, analyze, and communicate evidence of the inheritance and variation of traits.

SC.HS.9.4.A. **Develop and use a model** to explain the relationships between the role of DNA and chromosomes in coding the instructions for characteristic traits passed from parents to offspring. Assessment does not include the phases of meiosis or the molecular mechanism of specific steps in the process.

NE agricultural practices

SC.HS.9.4.B **Make and defend a claim** based on evidence that inheritable genetic variations may result from: (1) new genetic combinations through meiosis, (2) viable errors occurring during replication, and/or (3) mutations caused by environmental factors. Assessment does not include the phases of meiosis or the molecular mechanism of specific steps in the process.

NE plants and animals

SC.HS.9.4.C **Apply concepts of statistics and probability** to explain the variation and distribution of expressed traits in a population. Assessment does not include Hardy-Weinberg calculations.

NE plants and animals

SC.HS.10 Biological Evolution

SC.HS.10.5 Gather, analyze, and communicate evidence of biological evolution.

SC.HS.10.5.A **Communicate scientific** information that common ancestry and biological evolution are supported by multiple lines of empirical evidence.

NE fossil record

SC.HS.10.5.B **Construct an explanation** based on evidence that natural selection primarily results from four factors: (1) the potential for a species to increase in number, (2) the heritable genetic variation of individuals in a species due to mutation and reproduction, (3) competition for limited resources, and (4) the proliferation of those organisms that are better able to survive and reproduce in the environment. Assessment does not include other mechanisms of evolution, such as genetic drift, gene flow through migration, and co-evolution.

NE plants and animals

SC.HS.10.5.C **Apply concepts of statistics and probability** to support explanations that organisms with an advantageous heritable trait tend to increase in proportion to organisms lacking this trait. Assessment is limited to basic statistical and graphical analysis. Assessment does not include allele frequency calculations.

NE plants and animals

SC.HS.10.5.D **Construct an explanation** based on evidence for how natural selection leads to adaptation of populations.

SC.HS.10.5.E **Evaluate the evidence** supporting claims that changes in environmental conditions may result in: (1) increases in the number of individuals of some species, (2) the emergence of new species over time, and (3) the extinction of other species.

NE plants and animals

HS Earth and Space Sciences

The earth and space science standards and indicators help students gather, analyze, and communicate evidence as they formulate answers to questions tailored to student interests and current topics that may include but are not limited to:

What is the universe and what goes on in stars? What are the predictable patterns caused by Earth's movement in the solar system?
Students examine the processes governing the formation, evolution, and workings of the solar system and universe in order to understand how matter in the universe formed and how short-term changes in the behavior of the sun directly affect humans. Engineering and technology play a large role here in obtaining and analyzing data that support theories of the formation of the solar system and universe.

How do people reconstruct and date events in Earth's planetary history? Why do the continents move?
Students can construct explanations for the scales of time over which Earth processes operate. An important aspect of the earth and space sciences involves making inferences about events in Earth's history based on a data record that is increasingly incomplete the farther one goes back in time.

How do the properties and movements of water shape Earth's surface and affect its systems?
Students develop models and explanations for the ways that feedbacks between different Earth systems control the appearance of Earth's surface. Central to this in the tension between internal systems, which are largely responsible for creating and at Earth's surface and the sun-driven surface systems that tear down land through weathering and erosion. Students understand the role water plays in affecting weather and understand chemical cycles in Earth's systems.

What regulates weather and climate?
Students understand the system interactions that control weather and climate. Students can understand the analysis and interpretation of different kinds of geoscience data allow student to construct explanations for the many factors that drive climate change over a wide range of timescales.

How do humans depend on Earth's resources? How do people model and predict the effects of human activities?
Students understand the complex and significant interdependencies between humans and the rest of Earth's systems through the impacts of natural hazards, our dependencies on natural resources, and the environmental impacts of human activities**.**

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SC.HS.11 Space Systems

SC.HS.11.1. Gather, analyze, and communicate evidence to defend that the universe changes over time.

SC.HS.11.1.A **Develop a model** based on evidence to illustrate the stages of stars, like the sun**,** and the role of nuclear fusion in the sun's core to release energy that eventually reaches Earth in the form of radiation. Assessment does not include details of the atomic and sub-atomic processes involved with the sun's nuclear fusion.

SC.HS.11.1.B **Construct an explanation** of the Big Bang theory based on astronomical evidence of light spectra, motion of distant galaxies, and composition of matter in the universe.

SC.HS.11.1.C **Communicate scientific ideas** about the way stars, throughout their stellar stages, produce elements. Details of the many different nucleosynthesis pathways for stars of differing masses are not assessed.

SC.HS.11.1.D **Use mathematical or computational representations** to predict the motion of orbiting objects in the solar system. Mathematical representations for the gravitational attraction of bodies and Kepler's Laws of orbital motions should not deal with more than two bodies, nor involve calculus.

SC.HS.12 Weather and Climate

SC.HS.12.2 Gather, analyze, and communicate evidence to support that Earth's climate and weather are influenced by energy flow through Earth systems.

SC.HS.12.2.A **Construct an explanation based on evidence** for how the sun's energy moves among Earth's systems.

SC.HS.12.2.B **Use a model** to describe how variations in the flow of energy into and out of Earth's systems result in changes in climate. Assessment of the results of changes in climate is limited to changes in surface temperatures, precipitation patterns, glacial ice volumes, sea levels, and biosphere distribution.

SC.HS.12.2.C **Analyze geoscience data** and the results from global climate models to make an evidence-based forecast of the current rate and scale of global or regional climate changes.

NE data

SC.HS.12.2.D **Evaluate the validity and reliability** of past and present models of Earth conditions to make projections of future climate trends and their impacts.

SC.HS.13 Earth's Systems

SC.HS.13.3 Gather, analyze, and communicate evidence to defend the position that Earth's systems are interconnected and impact one another.

SC.HS.13.3.A **Analyze geoscience data** to make the claim that one change to Earth's surface can create feedbacks that cause changes to other Earth systems.

NE geologic time scale and fossil record

SC.HS.13.3.B **Develop a model** based on evidence of Earth's interior to describe the cycling of matter.

SC.HS.13.3.C **Construct an argument based on evidence** to explain the multiple processes that cause Earth's plates to move.

SC.HS.13.3.D **Plan and conduct an investigation** of the properties of water and their effects on Earth materials, surface processes, and groundwater systems.

NE water systems

SC.HS.13.3.E **Develop a quantitative model** to describe the cycling of carbon and other nutrients among the hydrosphere, atmosphere, geosphere, and biosphere, today and in the geological past.

SC.HS.14 History of Earth

SC.HS.14.4 Gather, analyze, and communicate evidence to interpret Earth's history.

SC.HS.14.4.A **Evaluate evidence** of the past and current movements of continental and oceanic crust and the theory of plate tectonics to explain the differences in age, structure, and composition of crustal and sedimentary rocks.

SC.HS.14.4.B **Apply scientific reasoning** and evidence from ancient Earth materials, meteorites, and other planetary surfaces to reconstruct Earth's formation and early history.

SC.HS.14.4.C **Develop a model** to illustrate how Earth's internal and surface processes operate over time to form, modify, and recycle continental and ocean floor features. Assessment does not include memorization of the details of the formation of specific geographic features of Earth's surface.

NE water systems and surface processes

SC.HS.14.4.D **Construct an argument** based on evidence to validate coevolution of Earth's systems and life on Earth. Assessment does not include a comprehensive understanding of the mechanisms of how the biosphere interacts with all of Earth's other systems.

SC.HS.15 Sustainability

SC.HS.15.5 **Gather, analyze, and communicate evidence** to describe the interactions between society, environment, and economy.

SC.HS.15.5.A **Construct an explanation based on evidence** for how the availability of natural resources, occurrence of natural hazards, and changes in climate have influenced human activity.

NE historical events

SC.HS.15.5.B **Evaluate competing design solutions** for developing, managing, and utilizing energy and mineral resources based on cost-benefit ratios.

SC.HS.15.5.C **Create a computational simulation** to illustrate the relationships among management of natural resources, the sustainability of human populations, and biodiversity. Assessment for computational simulations is limited to using provided multi-parameter programs or constructing simplified spreadsheet calculations.

NE resource management

SC.HS.15.5.D **Evaluate or refine a technological solution** that increases positive impacts of human activities on natural systems.

SC.HS.15.5.E **Evaluate a solution to a complex real-world problem** based on prioritized criteria and tradeoffs that account for a range of constraints, including cost, safety, reliability, and aesthetics, as well as possible social, cultural, and environmental impacts.

SC.HS.15.5.F **Use a computational representation** to illustrate the relationships among Earth systems and the degree to which those relationships are being modified due to human activity. Assessment does not include running computational representations but is limited to using the published results of scientific computational models.

Plus Standards (Optional)

The High School Plus (HSP) standards represent advanced science topics designed to enhance the rigor of general science curricula or supplement additional advanced science courses. The standards were developed using postsecondary syllabi from entry level science courses for science majors (e.g. UNL LIFE 120, CHEM 109). Introducing the content to high school students will scaffold their learning providing a bridge between high school science coursework and postsecondary level coursework.

Physics

SC.HSP.1 Forces, Interactions, and Motion

SC.HSP.1.1 Gather, analyze, and communicate evidence of forces, interactions, and motion.

SC.HSP.1.1.A **Generate and interpret mathematical and graphical representations** to describe the relationships between position, velocity, acceleration and time. Examples of data could include tables or graphs of position or velocity as a function of time for objects subject to no acceleration and objects undergoing a constant acceleration, including projectile motion, free fall, and circular motion. Examples should also include both average and instantaneous velocities. Assessment is limited to one and two-dimensional motion and to objects moving at non-relativistic speeds.

SC.HSP.1.1.B **Use mathematical and pictorial models** as applied to Newton's second law of motion describing the relationship among the net force on a macroscopic object, its mass, and its acceleration. Examples include drawing and using free body diagrams to analyze the net force on the object and the resulting motion; vectors including decomposition and recomposition, addition and subtraction. Assessment is limited to two-dimensional motion.

SC.HSP.1.1.C **Use mathematical representations** of momentum to predict the outcome of a collision. Emphasis is on the quantitative conservation of momentum in interactions and the qualitative meaning of this principle. **Assessment is limited to quantitative analysis of systems of two macroscopic bodies moving in one-dimension and qualitative analysis of multiple macroscopic bodies moving in two or three-dimensions.**

SC.HSP.1.1.D **Apply scientific and engineering ideas** to design, evaluate, and refine a device that minimizes the force on a macroscopic object during a collision. Examples of evaluation and refinement could include determining the success of the device at protecting an object from damage and modifying the design to improve it by applying the impulse-momentum theorem. Examples of a device could include a football helmet or an airbag. **Assessment is limited to qualitative evaluations and/or algebraic manipulations.**

SC.HSP.1.1.E **Use mathematical representations** of Newton's Law of Gravitation and Coulomb's Law to describe and predict the gravitational and electrostatic forces between objects. Emphasis is on both quantitative and conceptual descriptions of forces from gravitational and electric sources. **Assessment can be expanded to systems with multiple objects.**

SC.HSP.2 Waves, Electromagnetic Radiation, and Optics

SC.HSP.2.2 Gather, analyze, and communicate evidence of the interactions of waves and optics.

SC.HSP.2.2.A **Use mathematical representations** to describe the relationships among the frequency, wavelength, and speed of waves traveling in various media. Examples of data could include electromagnetic radiation traveling in a vacuum and glass, sound waves traveling through air and water, and seismic waves traveling through the Earth. Examples also include descriptive changes in observed frequency based on relative motion of observer or source (Doppler effect). **Assessment is limited to algebraic relationships and describing those relationships qualitatively.**

SC.P.2.2.B **Develop and use models** to predict interactions of longitudinal and transverse waves in various media. Examples could include P, S and Surface seismic waves, water waves, and waves on a spring. Emphasis is on structure and function of waves.

SC.HSP.2.2.C **Develop and use models** to describe the behavior of light at the boundary of various media. Emphasis is on both geometric (ray diagrams) and algebraic models (mirror and thin lens equation, Snell's Law).

SC.HSP.2.2.D **Evaluate the claims, evidence, and reasoning** behind the idea that electromagnetic radiation can be described either by a wave model or a particle model, and that for some situations one model is more useful than the other. Emphasis is on how the experimental evidence supports the claim and how a theory is generally modified in light of new evidence. Examples of a phenomenon could include resonance, interference, diffraction, photoelectric effect and the idea that photons associated with different frequencies of light have different energies. **Assessment includes qualitative and quantitative models of light.**

SC.HSP.2.2.E **Use evidence to support explanations** for causes of emission and absorption spectra of electromagnetic radiation. Emphasis is on the idea that photons associated with different frequencies of light have different energies. This could include the displacement and broadening of spectral lines (redshift and blueshift). Examples could include different elements absorb or emit specific frequencies of light. Assessment is limited to qualitative descriptions.

SC.HSP.2.2.F **Communicate technical information** about how some technological devices use the principles of wave behavior and wave interactions with matter to transmit and capture information and energy. Examples could include solar cells capturing light and converting it to electricity; medical imaging; communications technology; lasers. **Assessments are limited to qualitative information. Assessments do not include band theory.**

SC.HSP.4 Energy: Physics

SC.HSP.4.3 Gather, analyze, and communicate evidence of the interactions of energy.

SC.HSP.4.3.A **Create a computational model** to calculate the change in the energy of one component in a system when the change in energy of the other component(s) and energy flows in and out of the system are known. Emphasis is on explaining the meaning of mathematical expressions used in the model including the Work-Energy theorem. **Assessment is limited to basic algebraic expressions or computations; to systems of two or three components; and to thermal energy, kinetic energy, and/or the energies in gravitational, magnetic, or electric fields.**

SC.HSP.4.3.B **Plan and conduct an investigation** to rate the power and efficiency used in performing work on a system. Emphasis is on the quantitative determination of power in interactions. Examples could include use of pulleys and electric motors.

SC.HSP.4.3.C **Design, build, and refine a device** that works within given constraints to convert one form of energy into another form of energy. Emphasis is on both qualitative and quantitative evaluations of devices. Examples of devices could include Rube Goldberg devices, wind turbines, solar cells, solar ovens, generators, heat engines and heat pumps. Examples of constraints could include use of renewable energy forms and efficiency. **Assessment for quantitative evaluations is limited to total output for a given input. Assessment is limited to devices constructed with materials provided to students.**

SC.HSP.4.3.D **Analyze a major global challenge** to specify qualitative and quantitative criteria and constraints for solutions that account for societal needs and wants. Examples could include analysis of renewable energy systems for electricity generation and the effect of autonomous electric cars on the economy, society and the environment.

SC.HSP.4.3.E **Plan and conduct an investigation** to provide evidence for the transfer of thermal energy within a system based on the Laws of Thermodynamics. Emphasis is on analyzing data from student investigations and using mathematical thinking to describe the energy changes both quantitatively and conceptually, such as changes in entropy of a system. Examples of investigations could include mixing liquids at different initial temperatures or adding objects at different temperatures to water, changes from kinetic to thermal energy, and heat engines and heat pumps. **Assessment is limited to investigations based on materials and tools provided to students.**

SC.HSP.4.3.F **Develop and use a model** of two objects interacting through gravitational, electric, or magnetic fields to illustrate the forces between objects and the changes in energy of the objects due to the interaction. Examples of models could include drawings, diagrams, and texts, such as drawings of what happens when two charges of opposite polarity are near each other. **Assessment is limited to systems containing two objects.**

SC.HSP.16 Electricity and Magnetism

SC.HSP.16.4 Gather, analyze, and communicate evidence of electricity and magnetism.

SC.HSP.16.4.A **Use mathematical representations** of Newton's Law of Gravitation and Coulomb's Law to describe and predict the gravitational and electrostatic forces between objects. Emphasis is on both quantitative and conceptual descriptions of forces from gravitational and electric sources. **Assessment can be expanded to systems with multiple objects.**

SC.HSP.16.4.B **Use models** to visualize and describe gravitational, magnetic and electrical fields and predict resulting forces on nearby objects. Examples of fields include point charges, charged parallel plates/rings/spheres, and bar magnets. Also could include electromagnetic forces, such as the magnetic force acting on a moving charge. **Assessment is limited to descriptive analysis of the fields and the forces they produce.**

SC.HSP.16.4.C **Use mathematical representations** to provide evidence that describes and predicts relationships between power, current, voltage, and resistance. Emphasis is on insulators and conductors accounting for Ohm's Law, total resistance for combinations of resistors and P=IV.

SC.HSP.16.4.D **Evaluate competing design solutions** for construction and use of electrical consumer products accounting for a range of constraints, including cost, safety, reliability, and aesthetics as well as possible social, cultural, and environmental impacts. Examples could include efficiency of light bulbs (visible intensity vs. power) and thermal energy limits of wire.

SC.HSP.16.4.E **Obtain and communicate technical information** about how some technological devices use alternating current and others use direct current. Examples could include why public utilities use AC while many devices use DC and energy loss in transmission of electricity.

SC.HSP.16.4.F **Design a solution** to a problem using the fact that an electric current can produce a magnetic field and/or that a changing magnetic field can produce an electric current. Emphasis is on both quantitative and conceptual descriptions of electric and magnetic fields. Examples include designing a generator, motor or transformer. **Assessment is limited to systems with two objects.**

SC.HSP.16.4.G **Analyze a major global challenge** to specify qualitative and quantitative criteria and constraints for solutions that account for societal needs and wants. Examples could include analysis of renewable energy systems for electricity generation and the effect of autonomous electric cars on the economy, society and the environment.

Chemistry

SC.HSP.3 Structure and Properties of Matter

SC.HSP.3.1 Gather, analyze, and communicate evidence of the structure, properties, and interactions of matter.

SC.HSP.3.1.A **Use the periodic table as a model** to predict the relative properties of elements based on the patterns of electrons in the outermost energy level of atoms. Assessment does not include quantitative understanding of ionization energy beyond relative trends.

SC.HSP.3.1.B **Plan and conduct an investigation** to gather evidence to compare the structure of substances at the macro scale to infer the strength of electrical forces between particles. Examples of intramolecular forces include bond type, polarity of bonds and, resonance structures. Examples of intermolecular forces include hydrogen bonds, dipole-dipole. **Assessment does not include Raoult's law calculations of vapor pressure.**

SC.HSP.3.1.C **Develop and use models** to predict and explain forces that are in and between molecules. Examples of intramolecular forces include bond type, polarity of bonds and, resonance structures. Examples of intermolecular forces include hydrogen bonds, dipole-dipole.

SC.HSP.3.3.D **Evaluate a solution** to a complex, real-world problem based on prioritized criteria and tradeoffs that account for a range of constraints, including cost, safety, reliability, and aesthetics, as well as possible social, cultural, and environmental impacts. Examples could include the effects of concentration of solutions on the freezing/boiling point (melting of ice on roadways), aspartame and caffeine in beverages, fluoride in drinking water.

SC.HSP.3.3.E **Develop models** to illustrate the changes in the composition of the nucleus of the atom and the energy released during the processes of fission, fusion, and radioactive decay. **Assessment is limited to alpha, beta, and gamma radioactive decays.**

SC.HSP.3.3.F.**Develop and use models** to describe and predict mechanisms of the quantum mechanical model of the atom. Examples of representation include Aufbau Diagram, Hund's Rule, Pauli Exclusion, and orbital shapes, Hybridization of orbitals, and electron configuration.

SC.HSP.3.3.G **Evaluate the evidence** supporting claims about how atoms absorb and emit energy in the form of electromagnetic radiation. Examples include using mathematical relationships to demonstrate the relationship between observed light spectrum, wavelength of light and emission spectrum.

SC.HSP.3.3.H **Use mathematical representations** to quantify matter through the analysis of patterns in chemical compounds at different scales. Emphasis is on the mole concept, empirical formula, molecular formula, percent composition, and law of constant composition.

SC.HSP.4 Energy: Chemistry

SC.HSP.4.2 Gather, analyze, and communicate evidence of the interactions of energy.

SC.HSP.4.2.A **Use statistical and mathematical techniques** to describe qualitative and quantitative thermodynamic relationships. Thermodynamic relationships may include: Enthalpy, Hess's Law, Heats of Formation. Examples of data displays or graphs could include energy diagrams to communicate bond energies of products or reactants. Lab investigations may include calorimetry.

SC.HSP.4.2.B **Plan and conduct an investigation** to gather evidence of how the Kinetic Molecular Theory and gas laws are related. Examples include Dalton's Law of particle pressures, Graham's Law of Diffusion and Effusion, and empirical gas laws.

SC.HSP.4.2.C **Analyze and interpret data** to explain changes in energy within a system and/or energy flows in and out of a system. Emphasis is on the use of mathematical expressions to describe the change in energy within the system. Investigations could include electrochemistry (electrolysis).

SC.HSP.4.2.D **Analyze a major global challenge** to specify qualitative and quantitative criteria and constraints for solutions that account for societal needs and wants. Examples could include alternative energies, carbon footprint, and crude oil refining process.

SC.HSP.5 Chemical Reactions

SC.HSP.5.3 Gather, analyze, and communicate evidence of chemical reactions.

SC.HSP.5.3.A **Plan and conduct an investigation** to generate evidence that answers scientific questions related to changes in solution chemistry. Examples include titrations, solubility, and Le Chatelier's Principle

SC.HSP.5.3.B **Use a model** to identify electron transfer and balance a redox reaction. Emphasis would be on using half reaction method for balancing equations and understanding electron transfer. Examples include electrochemical cells and electroplating.

SC.HSP.5.3.C **Use mathematical and/or computational representations** to predict and explain relationships within chemical systems. Examples include stoichiometric calculations, gas stoichiometry, limiting reactant, empirical formula/molecular formula calculations, % comp % yield.

SC.HSP.5.3.D **Use mathematical representations** to analyze the proportion and quantity of particles in solution. Emphasis is on molarity and developing net ionic equations.

SC.HSP.5.3.E **Plan and conduct an investigation** to predict the outcome of a chemical reaction based on patterns of chemical properties. Examples of reaction types could include single replacement, double replacement, etc. Examples of patterns could include the use of solubility rules, activity series.

SC.HS.5.3.F **Construct and revise an explanation** for the outcome of a simple chemical reaction based on the outermost electron states of atoms, trends in the periodic table, and knowledge of the patterns of chemical properties.

Biology

SC.HSP.6 Structure and Function

SC.HSP.6.1 Gather, analyze, and communicate evidence of the relationship between structure and function in living things.

SC.HSP.6.1.A **Construct an explanation** based on evidence for how the sequence of DNA determines the structure of proteins which carry out the essential functions of life through systems of specialized cells.

SC.HSP.6.1.B **Develop and use a model** to illustrate the hierarchical organization of interacting systems that provide specific functions within multicellular organisms. Emphasis is on functions at the organism system level such as nutrient uptake, water delivery, and organism movement in response to neural stimuli. An example of an interacting system could be an artery depending on the proper function of elastic tissue and smooth muscle to regulate and deliver the proper amount of blood within the circulatory system. **Assessment does not include interactions and functions at the molecular level.**

SC.HSP.6.1.C **Plan and conduct an investigation** to provide evidence that feedback mechanisms maintain homeostasis. Examples of investigations could include heart rate response to exercise, stomate response to moisture and temperature, and root development in response to water levels.

SC.HSP.6.1.D **Use a model** to illustrate the role of cell signaling and cell communication in producing and maintaining cellular functions within organisms. Emphasis is on conceptual understanding of the types of cell signals, signal reception, signal transduction, and types of cellular responses.

SC.HSP.6.1.E **Construct an explanation** based on evidence that plants have structures that function to support survival, growth, behavior, and reproduction. Emphasis is on plant structure, growth, and development, nutrient uptake and transport, plant reproduction, and plant responses to internal and external stimuli.

SC.HSP.6.1.F **Construct an explanation** based on evidence that animals have structures that function to support survival, growth, behavior, and reproduction. Emphasis is on the basic principles of animal form and functions. Examples of basic principles could include animal nutrition, circulation, gas exchange, immunity, osmoregulation and excretion, hormonal and endocrine control, reproduction, development, neural control systems, and animal behavior.

SC.HSP.7 Interdependent Relationships in Ecosystems

SC.HSP.7.2 Gather, analyze, and communicate evidence of interdependent relationships in ecosystems.

SC.HSP.7.2.A **Use mathematical and/or computational representations** to support explanations of factors that affect carrying capacity of ecosystems at different scales. Emphasis is on quantitative analysis and comparison of the relationships among interdependent factors including boundaries, resources, climate and competition. Examples of mathematical comparisons could include graphs, charts, histograms, and population changes gathered from simulations or historical data sets. **Assessment does not include deriving mathematical equations to make comparisons.**

SC.HSP.7.2.B **Use mathematical representations** to support and revise explanations based on evidence about factors affecting biodiversity and populations in ecosystems of different scales. Examples of mathematical representations include finding the average, determining trends, and using graphical comparisons of multiple sets of data.

SC.HSP.7.2.C **Evaluate the claims, evidence, and reasoning** related to the principle that complex interactions in ecosystems maintain relatively consistent numbers and types of organisms in stable conditions, but changing conditions may result in a new ecosystem. Examples of changes in ecosystem conditions could include modest biological or physical changes, such as moderate hunting or a seasonal flood; and extreme changes, such as volcanic eruption or sea level rise.

SC.HSP.7.2.D **Design, evaluate, and refine a solution** for increasing the positive impacts of human activities on the environment and biodiversity. Examples of human activities can include habitat development and restoration, supporting native pollinators, reducing consumption, rotating crops, using integrated pest management.

SC.HSP.7.2.E **Create or revise a simulation** to test a solution to mitigate the impacts of human activity on biodiversity. Emphasis is on testing solutions for a proposed problem related to threatened or endangered species, or to genetic variation of organisms for multiple species.

SC.HSP.7.2.F **Evaluate evidence** for the role of behavior on individual and species' chances to survive and reproduce. Emphasis is on: (1) distinguishing between group and individual behavior, (2) identifying evidence supporting the outcomes of group behavior, and (3) developing logical and reasonable arguments based on evidence. Examples of behaviors could include fixed action patterns, imprinting, kinesis, taxis, hibernation, estivation, habituation, spatial learning, associative learning, cognition, foraging behavior, agonistic behavior, altruism, social learning, flocking, schooling, herding, and cooperative behaviors such as hunting, migrating, and swarming.

SC.HSP.8 Matter and Energy in Organisms and Ecosystems

SC.HSP.8.3 Gather, analyze, and communicate evidence of the flow of energy and cycling of matter in organisms and ecosystems.

SC.HSP.8.3.A **Use a model** to illustrate how photosynthesis transforms light energy into stored chemical energy. Emphasis is on illustrating inputs and outputs of matter and the transfer and transformation of energy in photosynthesis by plants and other photosynthesizing organisms. Examples of models could include diagrams, chemical equations, and conceptual models

SC.HSP.8.3.B **Construct and revise an explanation** based on evidence for how carbon, hydrogen, and oxygen from sugar molecules may combine with other molecules to form amino acids and/or other large carbon-based molecules. Emphasis is on using evidence from models and simulations to support explanations.

SC.HSP.8.3.C **Use a model** to illustrate that cellular respiration is a chemical process whereby the bonds of food molecules and oxygen molecules are broken and the bonds in new compounds are formed resulting in a net transfer of energy. Emphasis is on the conceptual understanding of the steps or specific processes involved in cellular respiration.

SC.HSP.8.3.D **Construct and revise an explanation** based on evidence for the cycling of matter and flow of energy in aerobic and anaerobic conditions. Emphasis is on conceptual understanding of the role of metabolism in different environments.

SC.HSP.8.3.E **Use mathematical representations** to support claims for the cycling of matter and flow of energy among organisms in an ecosystem. Emphasis is on using a mathematical model of stored energy in biomass to describe the transfer of energy from one trophic level to another and that matter and energy are conserved as matter cycles and energy flows through ecosystems. Emphasis is on atoms and molecules such as carbon, oxygen, hydrogen and nitrogen being conserved as they move through an ecosystem. **Assessment is limited to proportional reasoning to describe the cycling of matter and flow of energy.**

SC.HSP.8.3.F **Develop a model** to illustrate the role of photosynthesis and cellular respiration in the cycling of carbon among the biosphere, atmosphere, hydrosphere, and geosphere. Examples of models could include simulations and mathematical models.

SC.HSP.8.3.G **Use models** to illustrate how atomic structure and bonding impact the properties of water and their influence on biological systems. Emphasis is on atomic structure, types of chemical bonds, and properties of water and how those properties influence organisms and ecosystems.

SC.HSP.8.3.H **Construct an explanation** based on evidence for how ATP powers cellular work and for how enzymes affect the rate of and the amount of energy needed for metabolic reactions. Emphasis is on the structure of ATP and how ATP is used to power cellular work by coupling exergonic and endergonic reactions. Emphasis is on how enzymes speed up and/or lower the activation energy needed for metabolic reactions and how the regulation of enzyme activity helps control metabolism.

SC.HSP.9 Inheritance and Variation of Traits

SC.HSP.9.4 Gather, analyze, and communicate evidence of the inheritance and variation of traits.

SC.HSP.9.4.A **Use a model** to illustrate the role of cellular division (mitosis) and differentiation in producing and maintaining complex organisms.

SC.HSP.9.4.B **Ask questions** to clarify relationships about the role of DNA and chromosomes in coding the instructions for characteristic traits passed from parents to offspring.

SC.HSP.9.4.C **Make and defend a claim** based on evidence that inheritable genetic variations may result from: (1) new genetic combinations through meiosis, (2) viable errors occurring during replication, and/or (3) mutations caused by environmental factors. Emphasis is on using data to support arguments for the way variation occurs.

SC.HSP.9.4.D **Apply concepts of statistics and probability** to explain the variation and distribution of expressed traits in a population. Emphasis is on the use of mathematics to describe the probability of traits as it relates to genetic and environmental factors in the expression of traits (examples could include Hardy-Weinberg calculations and chi-square calculations

SC.HSP.9.4.E **Evaluate evidence** supporting claims that gene regulation can explain the variation and distribution of expressed traits in a population. Emphasis is on the differences in gene expression of multi-cellular organisms, leading to different cell types within organisms and the distribution of traits in a population.

SC.HSP.9.4.F **Construct an explanation** based on evidence for the role of biotechnology in the research and understanding of biological systems. Emphasis is on the evolution of genomes, how biotechnology allows researchers to study the sequence, expression, and function of genes, and the practical applications of biotechnology

SC.HSP.10 Biological Evolution

SC.HSP.10.5 Gather, analyze, and communicate evidence of biological evolution.

SC.HSP.10.5.A **Communicate scientific information** that common ancestry and biological evolution are supported by multiple lines of empirical evidence. Emphasis is on a conceptual understanding of the role each line of evidence has relating to common ancestry and biological evolution. Examples of evidence could include similarities in DNA sequences, anatomical structures, and order of appearance of structures in embryological development.

SC.HSP.10.5.B **Construct an explanation** based on evidence that the process of evolution primarily results from four factors: (1) the potential for a species to increase in number, (2) the heritable genetic variation of individuals in a species due to mutation and sexual reproduction, (3) competition for limited resources, and (4) the proliferation of those organisms that are better able to survive and reproduce in the environment. Emphasis is on using evidence to explain the influence each of the four factors has on number of organisms, behaviors, morphology, or physiology in terms of ability to compete for limited resources and subsequent survival of individuals and adaptation of species. Examples of evidence could include mathematical models such as simple distribution graphs and proportional reasoning.

SC.HSP.10.5.C **Apply concepts of statistics and probability** to support explanations that organisms with an advantageous heritable trait tend to increase in proportion to organisms lacking this trait. Emphasis is on analyzing shifts in numerical distribution of traits and using these shifts as evidence to support explanations. Examples of basic statistical and graphical analysis could include allele frequency calculations

SC.HSP.10.5.D **Construct an explanation** based on evidence for how natural selection leads to adaptation of populations. Emphasis is on using data to provide evidence for how specific biotic and abiotic differences in ecosystems (such as ranges of seasonal temperature, long-term climate change, acidity, light, geographic barriers, or evolution of other organisms) contribute to a change in gene frequency over time, leading to adaptation of populations.

SC.HSP.10.5.E **Evaluate evidence** supporting claims that changes in environmental conditions may result in: (1) increases in the number of individuals of some species, (2) the emergence of new species over time, and (3) the extinction of other species. Emphasis is on determining cause and effect relationships for how changes to the environment such as deforestation, fishing, application of fertilizers, drought, flood, and the rate of change of the environment affect distribution or disappearance of traits in species.

SC.HSP.10.5.F **Develop and use models** to illustrate patterns in the evolutionary history of biological diversity. Emphasis is on how the structure and function of bacteria, archaea, protists, fungi, plants, and animals are used in are related in the tree of life.

Anatomy and Physiology

SC.HSP.6 Structure and Function: Anatomy & Physiology

SC.HSP.6.2 Gather, analyze, and communicate evidence of the relationship between the structures and physiological processes of the *integumentary system.*

SC.HSP.6.2.A **Communicate scientific information** that explains the patterns of organization in the integumentary system. Information could be gathered from dissections, models, simulations, and scientific texts.

SC.HSP.6.2.B **Ask questions** to clarify the role of various proteins and integumentary system function.

SC.HSP.6.2.C **Develop and use a model** to identify and describe the relationship between the structures and physiological processes of the integumentary system.

SC.HSP.6.2.D **Plan and conduct an investigation** to gather evidence that feedback mechanisms in the integumentary system help maintain homeostasis.

SC.HSP.6.2.E **Construct a scientific explanation** based on evidence for the role of cell division in integumentary system dysfunction.

SC.HSP.6.2.F **Develop and use a model** to explain the relationship between the integumentary system and other body systems. Emphasis is on the endocrine system.

SC.HSP.6.2.G **Construct and revise an explanation** based on evidence for the role of the integumentary system in the cycling of matter and flow of energy among body systems.

SC.HSP.6.3 Gather, analyze, and communicate evidence of the relationship between the structures and physiological processes of the *skeletal system*.

SC.HSP.6.3.A **Communicate scientific information** that explains the patterns of organization in the skeletal system. Information could be gathered from dissections, models, simulations, and scientific texts.

SC.HSP.6.3.B **Develop and use a model** to identify and describe the relationship between the structures and physiological processes of the skeletal system.

SC.HSP.6.3.C **Plan and conduct an investigation** to gather evidence that feedback mechanisms in the skeletal system help maintain homeostasis.

SC.HSP.6.3.D **Develop and use a model** to explain the order of events necessary for bone formation.

SC.HSP.6.3.E **Construct and present arguments** using evidence to support claims about the causes of dysfunction in the skeletal system. Evidence could include data obtained from case studies.

SC.HSP.6.3.F **Develop and use a model** to explain the relationship between the skeletal system and other body systems. Include the endocrine system.

SC.HSP.6.4 Gather, analyze, and communicate evidence of the relationship between the structures and physiological processes of the *muscular system*.

SC.HSP.6.4.A **Communicate scientific information** that explains the patterns of organization in the muscular system. Information could be gathered from dissections, models, simulations, and scientific texts.

SC.HSP.6.4.B **Develop and use a model** to identify and describe the relationship between the structures and physiological processes of the muscular system.

SC.HSP.6.4.C **Construct an argument** based on evidence that muscle contraction is the result of biochemical reactions.

SC.HSP.6.4.D **Plan and conduct an investigation** to gather evidence that feedback mechanisms in the muscular system help maintain homeostasis. Investigations could include micro stimulation of muscle tissues.

SC.HSP.6.4.E **Construct and present arguments** using evidence to support claims about the causes of dysfunction in the muscular system. Evidence could include data obtained from case studies.

SC.HSP.6.4.F **Develop and use a model** to explain the relationship between the muscular system and other body systems. Include the endocrine system.

SC.HSP.6.4.G **Construct and revise an explanation** based on evidence for the role of the muscular system in the cycling of matter and flow of energy among body systems.

SC.HSP.6.5 Gather, analyze, and communicate evidence of the relationship between the structures and physiological processes of the *nervous system*.

SC.HSP.6.5.A **Communicate scientific information** that explains the patterns of organization in the nervous system. Information could be gathered from dissections, models, simulations, and scientific texts.

SC.HSP.6.5.B **Develop and use a model** to identify and describe the relationship between the structures and physiological processes of the nervous system.

SC.HSP.6.5.C **Construct an argument** based on evidence that production of a nerve impulse is the result of biochemical reactions.

SC.HSP.6.5.D **Plan and conduct an investigation** to gather evidence that feedback mechanisms in the nervous system help maintain homeostasis.

SC.HSP.6.5.E **Construct and present arguments** using evidence to support claims about the causes of dysfunction in the nervous system. Evidence could include data obtained from case studies.

SC.HSP.6.5.F **Develop and use a model** to explain the relationship between the nervous system and other body systems. Include the endocrine system.

SC.HSP.6.5.G **Construct and revise an explanation** based on evidence for the role of the nervous system in the cycling of matter and flow of energy among body systems.

SC.HSP.6.6 Gather, analyze, and communicate evidence of the relationship between the structures and physiological processes of the *cardiovascular/respiratory systems*.

SC.HSP.6.6.A **Communicate scientific information** that explains the patterns of organization in the cardiovascular/respiratory systems. Information could be gathered from dissections, models, simulations, and scientific texts.

SC.HSP.6.6.B **Develop and use a model** to identify and describe the relationship between the structures and physiological processes of the cardiovascular/respiratory systems.

SC.HSP.6.6.C **Plan and conduct an investigation** to gather evidence that feedback mechanisms in the cardiovascular/respiratory systems help maintain homeostasis.

SC.HSP.6.6.D **Construct and present arguments** using evidence to support claims about the causes of dysfunction in the cardiovascular/respiratory systems. Evidence could include data obtained from case studies.

SC.HSP.6.6.E **Develop and use a model** to explain the relationship between the cardiovascular/respiratory systems and other body systems. Include the endocrine and lymphatic systems.

SC.HSP.6.6.F **Construct and revise an explanation** based on evidence for the role of the cardiovascular/respiratory systems in the cycling of matter and flow of energy among body systems.

SC.HSP.6.7 Gather, analyze, and communicate evidence of the relationship between the structures and physiological processes of the *digestive system*.

SC.HSP.6.7.A **Communicate scientific information** that explains the patterns of organization in the digestive system. Information could be gathered from dissections, models, simulations, and scientific texts.

SC.HSP.6.7.B **Develop and use a model** to identify and describe the relationship between the structures and physiological processes of the digestive system.

SC.HSP.6.7.C **Plan and conduct an investigation** to gather evidence that feedback mechanisms in the digestive system help maintain homeostasis.

SC.HSP.6.7.D **Construct and present arguments** using evidence to support claims about the causes of dysfunction in the digestive system. Evidence could include data obtained from case studies.

SC.HSP.6.7.E **Develop and use a model** to explain the relationship between the digestive system and other body systems. Include the endocrine and lymphatic systems.

SC.HSP.6.7.F **Construct and revise an explanation** based on evidence for the role of the digestive system in the cycling of matter and flow of energy among body systems.

SC.HSP.6.8 Gather, analyze, and communicate evidence of the relationship between the structures and physiological processes of the *urinary system*.

SC.HSP.6.8.A **Communicate scientific information** that explains the patterns of organization in the urinary system. Information could be gathered from dissections, models, simulations, and scientific texts.

SC.HSP.6.8.B **Develop and use a model** to identify and describe the relationship between the structures and physiological processes of the urinary system.

SC.HSP.6.8.C **Plan and conduct an investigation** to gather evidence that feedback mechanisms in the urinary system help maintain homeostasis.

SC.HSP.6.8.D **Construct and present arguments** using evidence to support claims about the causes of dysfunction in the urinary system. Evidence could include data obtained from case studies.

SC.HSP.6.8.E **Develop and use a model** to explain the relationship between the urinary system and other body systems. Include the endocrine and reproductive systems.

SC.HSP.6.8.F **Construct and revise an explanation** based on evidence for the role of the urinary system in the cycling of matter and flow of energy among body systems.

SC.HSP.6.9 Gather, analyze, and communicate evidence of the relationship between the structures and physiological processes of the *reproductive system*.

SC.HSP.6.9.A **Communicate scientific information** that explains the patterns of organization in the reproductive system. Information could be gathered from dissections, models, simulations, and scientific texts.

SC.HSP.6.9.B **Develop and use a model** to identify and describe the relationship between the structures and physiological processes of the reproductive system. Include spermatogenesis, oogenesis, and menstruation

SC.HSP.6.9.C **Plan and conduct an investigation** to gather evidence that feedback mechanisms in the reproductive system help maintain homeostasis.

SC.HSP.6.9.D **Construct and present arguments** using evidence to support claims about the causes of dysfunction in the reproductive system. Evidence could include data obtained from case studies.

SC.HSP.6.9.E **Develop and use a model** to explain the relationship between the reproductive system and other body systems. Include the endocrine and nervous systems.

SC.HSP.6.9.F **Construct and revise an explanation** based on evidence for the role of the reproductive system in the cycling of matter and flow of energy among body systems.

SC.HSP.17 Engineering in Health Sciences

SC.HSP.17.1 Gather, analyze, and communicate evidence of the connection between health science careers and engineering.

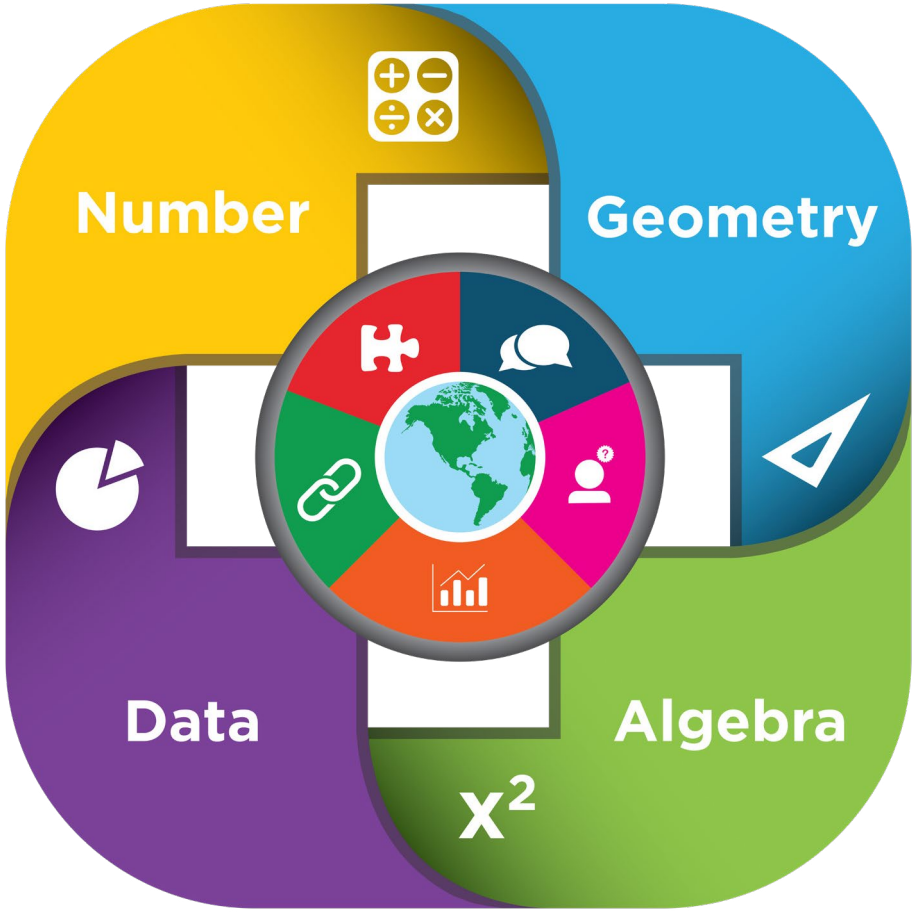
SC.HSP.17.1.A **Obtain, evaluate, and communicate information** related to health science careers. Examples include researcher, bio-medical engineer, medical professional, technician, manufacturer and distributor, administrator, and data storage and security professional.

SC.HSP.17.1.B **Design a solution** to a complex real-world problem affecting body systems that can be solved through engineering. Solutions could include prosthetics, mobility enhancement, engineered body parts, treatment processes, and disease control.

SC.HSP.17.1.C **Evaluate a solution** to a complex real-world human health problem based on prioritized criteria and trade-offs that account for a range of constraints, including cost, safety, reliability, and aesthetics as well as possible social, cultural, and environmental impacts**.** Solutions could include the effects on the human body or solutions for environmental public health issues.

Appendix A: Topic Progression

Topic \ Grade	K	1	2	3	4	5	6	7	8	HS
1 Forces & Interactions	SC.K.1			SC.3.1					SC.8.1	SC.HS.1
2 Waves & Electro-magnetic Radiation		SC.1.2			SC.4.2				SC.8.2	SC.HS.2
3 Structure & Properties of Matter			SC.2.3			SC.5.3		SC.7.3		SC.HS.3
4 Energy					SC.4.4		SC.6.4		SC.8.4	SC.HS.4
5 Chemical Reactions								SC.7.5		SC.HS.5
6 Structure & Function		SC.1.6			SC.4.6		SC.6.6			SC.HS.6
7 Inter-dependent Relationships in Ecosystems	SC.K.7		SC.2.7	SC.3.7				SC.7.7		SC.HS.7
8 Matter & Energy in Organisms & Ecosystems						SC.5.8		SC.7.8		SC.HS.8
9 Heredity: Inheritance & Variation of Traits				SC.3.9			SC.6.9		SC.8.9	SC.HS.9
10 Biological Evolution									SC.8.10	SC.HS.10
11 Space Systems		SC.1.11				SC.5.11			SC.8.11	SC.HS.11
12 Weather & Climate	SC.K.12			SC.3.12			SC.6.12			SC.HS.12
13 Earth's Systems			SC.2.13		SC.4.13	SC.5.13	SC.6.13	SC.7.13		SC.HS.13
14 History of Earth								SC.7.14	SC.8.14	SC.HS.14
15 Sustainability										SC.HS.15



Nebraska's College and Career Ready Standards for Mathematics

Approved by the Nebraska State Board of Education on September 2, 2022

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Introduction

College and career readiness for Nebraska's K-12 students requires content area standards that are clearly defined and increasingly rigorous across grade levels. The standards are designed to ensure all students have access to grade-level mathematics content centered on deep learning of concepts while actively building new knowledge from their experiences. The revised mathematics standards encompass a wide range of essential skills across the strands of Number, Algebra, Geometry, and Data. The standards, both individually and as an integrated whole, describe not only expectations for college and career readiness, but the 21st century mathematical literacies for critical and innovative thinking and problem solving. The progression of skills within each strand are research and evidence-based and designed to prepare Nebraska's students for postsecondary and workforce demands.

Content Area Standards Overview

Nebraska Revised Statute 79-760.01 requires the State Board of Education to adopt measurable academic content standards for the areas of reading, writing, mathematics, science, and social studies. Standards describe grade-level expectations for given content areas and provide a framework upon which Nebraska districts develop, establish, and implement curriculum. For effective teaching and learning to occur, the content area standards should drive local decisions related to instructional materials, resources, and interim, formative, and summative assessments.

The Nebraska Department of Education has identified quality criteria in the development of content area standards. These criteria ensure that standards are grounded in a strong research base of human cognition, motivation, and teaching and learning and describe essential knowledge and skills for college, career, and civic readiness. The revised mathematics standards, written by teams of Nebraska educators and reviewed by local and national experts, were developed with the following indicators of quality:

Measurable. Standards provide benchmarks against which student progress toward learning goals can be measured.

Appropriately challenging. Standards must build in complexity so that by the end of grade 12, students are prepared for postsecondary education and the workforce.

Connected. Student learning is most effective when it connects knowledge and skills to related topics and authentic applications.

Clearly worded. Content area standards must effectively communicate what students should know and be able to do.

Scaffolded. Indicators in the Nebraska content area standards scaffold student learning by sequencing connected knowledge and skills across grades so that students build and deepen understanding and ability over time.

Specific. Specificity assures that the language used in standards and indicators is sufficiently detailed to be accurately interpreted by educators.

Mathematics Standards Design

Nebraska's College and Career Ready Standards for Mathematics reflect the tiered structure common across all Nebraska content area standards. Grade-level standards include broad, overarching content-based statements that describe the basic cognitive or affective expectations of student learning. They also reflect, across all grade levels, the long-term goals for learning associated with college and career readiness. Indicators further describe what students must know and be able to do to meet the standard as well as provide guidance related to classroom instruction and assessment. In addition to standards and indicators, some of the standards include examples. The "e.g." statements, where appropriate, provide guidance relative to topics that may be included in a locally determined curriculum.

The structure of Nebraska's College and Career Ready Standards for Mathematics includes:

K-12 Content Strands. The strands are broad, general statements that are not grade-level specific. They reflect major topics in mathematics (number, algebra, geometry, and data) and the five mathematical processes.

Grade-Level Standards. The grade-level standards identify what students should know and be able to do by the end of each grade level or grade band. The standards are organized within K-12 Content Strands. The grade-level standards include a statement that describes the expectations for proficiency relative to the major work of the grade.

Indicators. The indicators provide additional specificity to distinguish expectations between grade levels. They are considered an integral part of the standard to be taught and assessed.

For grades K-8, the standards and indicators are written at grade level and are organized by four content strands: Number, Algebra, Geometry, and Data. The High School Standards and Advanced Topics Standards are organized by four content strands: Number, Algebra, Geometry, and Data.

Coding: The standards are organized using a coding system that includes the content area, the grade level, an abbreviation for the content strand, and the number within the strand. Lowercase letters represent indicators for some of the standards. (NOTE: not all standards include indicators.)

––—----**Example: MA.K.N.1.a**—--------

MA = Content Area (Math)

K = Kindergarten

N = Content Strand (Number)

1 = Standard

a = indicator

Approved by the Nebraska State Board of Education on September 2, 2022

The structure of Nebraska's College and Career Ready Standards for Mathematics includes:

Content Strand	Description
Number (N)	Students will solve problems and reason with number concepts using multiple representations, make connections within math and across disciplines, and communicate their ideas.
Ratios and Proportions (R) [1]	Students will understand ratio concepts and use ratio reasoning to solve problems.
Algebra (A)	Students will solve problems and reason with algebra using multiple representations, make connections within math and across disciplines, and communicate their ideas.
Geometry (G)	Students will solve problems and reason with geometry using multiple representations, make connections within math and across disciplines, and communicate their ideas.
Data (D)	Students will solve problems and reason with data/probability using multiple representations, make connections within math and across disciplines, and communicate their ideas.

[1] Ratios and Proportions is a new content strand found only in Grades 6 and 7.

Grade Level Content Focus

In addition to the standards and indicators, this document includes information about content focus at the beginning of each grade level. Based on research and the progression of the disciplines, the information provides a snapshot of the "major work of the grade." This guidance leverages the structure and emphases of college- and career-ready mathematics standards. At every grade level, instruction should emphasize the development of the mathematical processes as the vehicle for content mastery.

Nebraska Mathematical Processes

Introduction. The Nebraska Mathematical Processes reflect overarching processes that students should master as they work towards college and career readiness. As described by the National Research Council (2001), mathematical processes are integral to all mathematics teaching and learning. The Nebraska Mathematical Processes reflect the interaction of skills necessary for success in math coursework as well as the ability to apply math knowledge and processes within authentic contexts. The processes highlight the applied nature of math within the workforce and clarify the expectations held for the use of mathematics in and outside of the classroom. Additionally, the Fordham Institute (2018) states that high quality standards for mathematics "integrate and promote the 'math processes' or mathematical habits of mind that every student should possess." Mathematical processes activate the learning process while increasing the likelihood that students will become mathematically proficient (Van de Walle et al., 2018).

To develop essential mathematical habits of mind, mathematically proficient students:

Make sense of problems and persevere in solving them. Students make sense of problems and look for entry points to plan solution pathways. A variety of tools including, but not limited to, mental math, estimation, concrete and visual models, and appropriate technology may be selected to support problem solving. Students form conjectures or inferences based on patterns or sets of examples and nonexamples and monitor their progress. Perseverance includes working without knowing if a plan will succeed, trying other plans if an initial plan does not work, and checking if a solution is reasonable. **(PROBLEM SOLVING)**

Reason quantitatively and abstractly and consider the reasoning of others. Students make sense of quantities and their relationships using quantitative and abstract reasoning. Quantitative reasoning uses the properties of numbers, operations, and geometric objects. Abstract reasoning includes making sense of and manipulating representations in terms of the original context. Students can represent a problem using numbers and mathematical symbols, solve the problem and then make sense of the solution in context of the original situation. Students can analyze their own reasoning and the reasoning of others by comparing different approaches, recognizing correctness and efficiency, and finding counterexamples. **(REASONING)**

Create and use representations to organize, record, and communicate mathematical ideas. Students will understand that representations of mathematical ideas – physical, visual, symbolic, contextual, and verbal – are an essential part of learning, doing, and communicating mathematics. Students create, use, and evaluate the effectiveness of representations to clearly communicate mathematical ideas. **(REPRESENTATIONS)**

Analyze mathematical relationships to connect mathematical ideas. Students routinely interpret their mathematical results in the context of the situation and reflect on whether the results make sense. By modeling mathematics in authentic contexts, students make connections among and between different areas of mathematics and other disciplines. Students seek out and make connections among different approaches and representations, including those of other students. **(CONNECTIONS)**

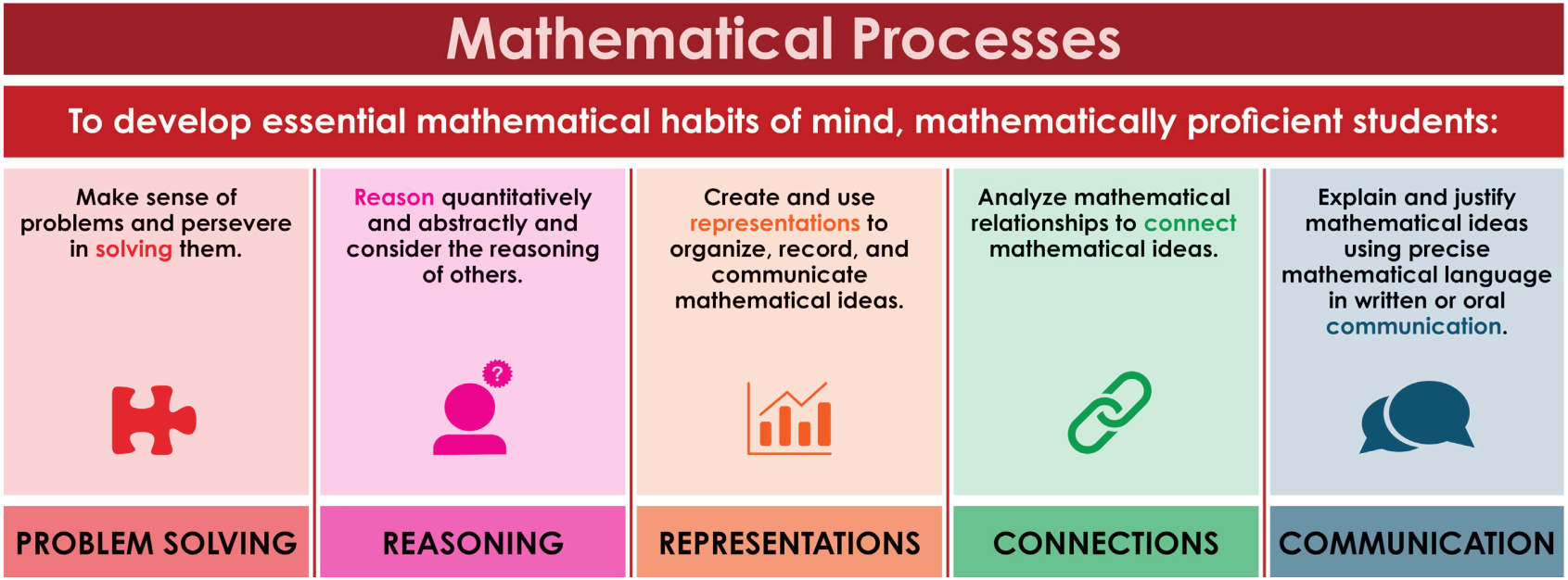
Explain and justify mathematical ideas using precise mathematical language in written or oral communication. Students will communicate their solutions with displays, explanations, and justifications. Students make sense of the mathematics by asking helpful questions that clarify or deepen understanding. Students will use precise mathematical language when explaining and justifying their work in written or oral form. **(COMMUNICATION)**

Kindergarten Standards

Kindergarten Content Focus

During Kindergarten, instruction should emphasize the development of the mathematical processes as the vehicle for mastering the grade-level content. Instruction should focus on these critical areas:

- Using numbers to represent quantities and to solve quantitative problems, such as quickly recognizing the number in a small set, counting objects in a set, producing sets of given sizes, and comparing and ordering sets or numerals.
- Working with numbers 11-19 to gain foundations for place value.
- Understanding addition as putting together and adding to and understanding subtraction as taking apart and taking from.
- Identifying, naming, and describing two- and three-dimensional shapes that are presented in a variety of ways.



NUMBER: Students will solve problems and reason with number concepts using multiple representations, make connections within math and across disciplines, and communicate their ideas.

K.N.1 Subitizing: Students will quantify briefly shown collections and verbally label the arrangements without counting.

K.N.1.a Without counting, recognize and verbally label arrangements for briefly shown collections up to 10 (e.g., "I saw 5." "How did you know?" "I saw 3 and 2, that is 5."

K.N.2 Counting and Cardinality: Students will understand the relationship between numbers and quantities.

K.N.2.a Use one-to-one correspondence when counting objects to show the relationship between numbers and quantities and understand the last number counted is a direct representation of the total objects in a given set.

K.N.2.b Understand that each successive number name refers to a quantity that is one larger.

K.N.2.c Count out the number of objects given a number from 1 to 20.

K.N.2.d Count up to 20 objects arranged in a line, a rectangular array, or a circle, and count up to 10 objects in a scattered configuration.

K.N.2.e Count verbally forward and backward from any given number within 20.

K.N.2.f Count verbally in sequential order by ones and by tens to 100, making accurate decade transitions (e.g., 89 to 90).

K.N.2.g Write and name numbers 0 to 20. Represent a number of objects with a written numeral 0 to 20.

K.N.2.h Compare the number of objects in two groups, up to 20, using the words fewer than, more than, the same as.

K.N.3 Base Ten: Students will work with numbers 11 to 19 to gain a foundation for place value.

K.N.3.a Compose and decompose numbers from 11 to 19 into a group of ten ones and some more ones using a model, drawing, or equation.

K.N.4 Number and Algebraic Relationships: Students will understand and demonstrate the meaning of addition and subtraction.

K.N.4.a Represent and explain addition and subtraction as part-whole relationships, with addition as *putting together* and/or *adding to* and subtraction as *taking apart* and/or *taking from*, using objects, drawings, numbers, and equations.

K.N.4.b Compose and decompose numbers less than or equal to 10 into pairs in more than one way using verbal explanations, objects, or drawings.

K.N.4.c For any number from 1 to 9, find the number that makes 10 when added to the given number, sharing the answer with a model, drawing, or equation.

K.N.4.d Efficiently, flexibly, and accurately add and subtract within 5.

K.N.4.e Solve authentic problems that involve addition and subtraction within 10 (e.g., by using objects, drawings, and equations to represent the problem).

ALGEBRA: Students will solve problems and reason with algebra using multiple representations, make connections within math and across disciplines, and communicate their ideas.

SEE NUMBER AND ALGEBRAIC RELATIONSHIPS IN NUMBER (K.N.4)

GEOMETRY: Students will solve problems and reason with geometry using multiple representations, make connections within math and across disciplines, and communicate their ideas.

K.G.1 Shapes and Their Attributes: Students will identify and represent the attributes of two-dimensional shapes and three-dimensional solids.

K.G.1.a Identify and name two-dimensional shapes including circles, triangles, squares, and rectangles regardless of orientation or size.

K.G.1.b Identify and name three-dimensional shapes including spheres, cubes, cylinders, and cones regardless of orientation or size.

K.G.1.c Describe the relative positions of shapes in relation to other objects or shapes using terms such as above, below, in front of, behind, and next to.

K.G.1.d Create shapes using given materials and describe one or more of the attributes such as number of sides/corners.

K.G.1.e Combine simple shapes to compose larger shapes.

K.G.2 Measurement: Students will describe and compare measurable attributes.

K.G.2.a Describe measurable attributes of authentic objects including length, capacity, and weight.

K.G.2.b Directly compare two objects with a measurable attribute in common to describe which object is longer/shorter, heavier/lighter, and has more/less-capacity.

K.G.3 Time and Money: Students will know coin names and values and tell time to the hour.

K.G.3.a Identify the name and value of pennies, nickels, and dimes.

K.G.3.b Identify the parts of digital and analog clocks. Tell and write time to the hour using digital clocks and analog clocks using only the hour hand.

DATA: Students will solve problems and reason with data/probability using multiple representations, make connections within math and across disciplines, and communicate their ideas.

K.D.1 Classification: Students will sort and classify objects using one or more attributes.

K.D.1.a Identify, sort, and classify objects by size, shape, color, and other attributes.

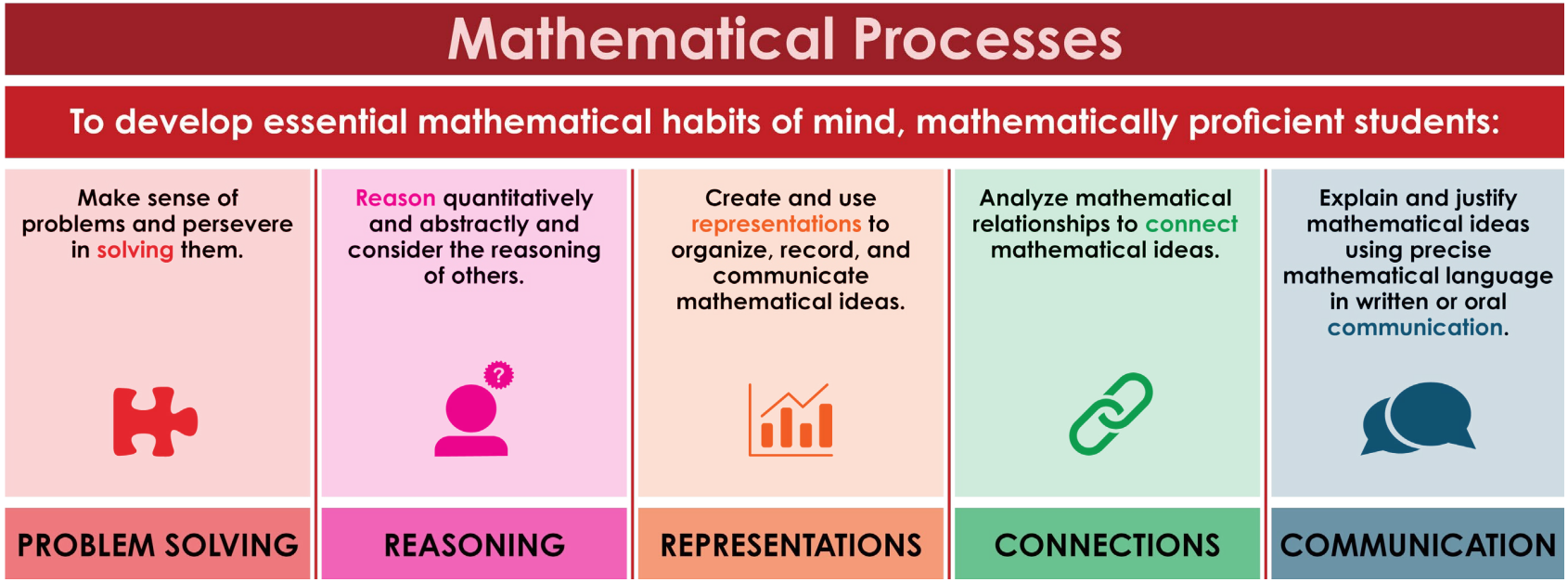
K.D.1.b Identify objects that do not belong to a particular group and explain the reasoning used.

Grade 1 Standards

Grade 1 Content Focus

During Grade 1, instruction should emphasize the development of the mathematical processes as the vehicle for mastering the grade-level content. Instruction should focus on these critical areas:

- Extending the counting sequence and strategies for solving quantitative questions.
- Representing and solving problems involving addition and subtraction to include work with equations and the properties of the operations.
- Developing understandings of addition and subtraction strategies for basic addition facts and related subtraction facts.
- Developing an understanding of whole number relationships, including grouping in tens and ones.
- Measuring lengths indirectly and by iterating length units.



Approved by the Nebraska State Board of Education on September 2, 2022

NUMBER: Students will solve problems and reason with number concepts using multiple representations, make connections within math and across disciplines, and communicate their ideas.

1.N.1 Subitizing: Students will quantify briefly shown collections and verbally label the arrangements without counting.

1.N.1.a Without counting, recognize and verbally label arrangements for briefly shown collections up to 20 (e.g.," I saw 16." "How did you know?" "I saw 10 and 6, that is 16").

1.N.2 Counting and Cardinality: Students will understand the relationship between numbers and quantities to extend the counting sequence.

1.N.2.a Count verbally by ones and tens within 120 starting at any given number.

1.N.2.b Count verbally by ones and tens within 120 starting at any given number. Understand that the given number is a direct representation of the total objects in a given set and counting on each successive number represents adding an additional object, and counting back each proceeding number represents removing an object.

1.N.2.c Write numerals to match a representation of a given set of objects for numbers up to 120.

1.N.2.d Understand patterns of skip counting by 2s, 5s, and 10s.

1.N.3 Base Ten: Students will represent and compare two-digit numbers to gain foundations for place value.

1.N.3.a Understand 10 as a bundle, collection, or (more abstractly) composition of ten ones and that the two digits of a two-digit number represent a composition of some tens and some ones.

1.N.3.b Compare two, two-digit numbers using words greater than, less than, equal to, and symbols <, >, =. Justify comparisons based on the number of tens and ones.

1.N.4 Number and Operations: Students will compute using addition and subtraction.

1.N.4.a Add and subtract within 20, using flexible strategies such as counting on or counting back, making ten, using ten, and using doubles and near doubles.

1.N.4.b Efficiently, flexibly, and accurately add and subtract within 10.

1.N.4.c Find the difference between two numbers that are multiples of 10, ranging from 10 to 90 using concrete models, drawings, or strategies, and write the corresponding equation.

1.N.4.d Mentally find 10 more or 10 less than a two-digit number without having to count and explain the reasoning used.

1.N.4.e Add within 100, including adding a two-digit number and a one-digit number, adding a two-digit number and a multiple of ten, using concrete models, drawings, and strategies that reflect an understanding of place value, the relationship between addition and subtraction, and the properties of operations. Relate the strategy to a written method and explain the reasoning used to solve.

1.N.4.f Understand that in adding two-digit numbers, one adds tens and tens, ones and ones; sometimes it is necessary to compose a ten.

1.N.4.g Subtract multiples of ten from two-digit numbers (positive or zero differences) using concrete models, drawings, and strategies that reflect an understanding of place value, the relationship between addition and subtraction, and the properties of operations. Relate the strategy to a written method and explain the reasoning used to solve.

1.N.5 Number and Algebraic Relationships: Students will understand and apply properties of operations and the relationship between addition and subtraction to solve problems.

1.N.5.a Use the meaning of the equal sign to determine if equations are true and give examples of equations that are true (e.g., 4 = 4, 6 = 7 – 1, 6 + 3 = 3 + 6, 7 + 2 = 5 + 4).

1.N.5.b Use the relationship of addition and subtraction to solve subtraction problems (e.g., find 12 – 9 = _____, using the addition fact 9 + 3 = 12).

1.N.5.c Determine the unknown whole number in an addition or subtraction equation (e.g., 7 + ? = 13).

1.N.5.d Use the commutative property of addition to develop addition strategies and compose/decompose numbers to develop addition and subtraction strategies. (See other flexible strategies in 1.N.4.a).

1.N.5.e Solve problems that call for addition of three whole numbers whose sum is less than or equal to 20 using flexible strategies with objects, drawings, and/or equations.

1.N.5.f Solve authentic problems involving addition and subtraction within 20 in situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all parts of the addition or subtraction problem by using objects, drawings, and/or equations with a symbol for the unknown number to represent the problem.

1.N.5.g Create an authentic problem to represent a given equation involving addition and subtraction within 20.

ALGEBRA: Students will solve problems and reason with algebra using multiple representations, make connections within math and across disciplines, and communicate their ideas.

SEE NUMBER AND ALGEBRAIC RELATIONSHIPS IN NUMBER (1.N.5)

GEOMETRY: Students will solve problems and reason with geometry using multiple representations, make connections within math and across disciplines, and communicate their ideas.

1.G.1 Shapes and Their Attributes: Students will represent and describe the attributes of two-dimensional shapes.

1.G.1.a Determine geometric attributes of two-dimensional shapes regardless of orientation or size for rhombi, trapezoids, and hexagons (e.g., a hexagon is closed with six sides).

1.G.1.b Determine geometric attributes of three-dimensional shapes including cones, cylinders, cubes, and rectangular prisms regardless of orientation or size.

1.G.1.c Describe lines and sides of shapes as parallel or non-parallel.

1.G.1.d Partition circles and rectangles into two and four equal parts using the language halves and fourths.

1.G.2 Measurement: Students will measure and compare lengths.

1.G.2.a Measure the length of an object as a whole number of same-size, non-standard units by placing them end to end.

1.G.2.b Order three objects by directly comparing their lengths or indirectly by using a third object.

1.G.3 Time and Money: Students will solve problems with coins and tell time to the half hour.

1.G.3.a Understand the value of dimes and pennies (e.g., a dime is equal to ten pennies) relating to tens and ones and solve problems involving dimes and pennies using the ¢ symbol appropriately.

1.G.3.b Count collections of like coins (penny, nickel, and dime) relating to patterns of counting by 1s, 5s, and 10s.

1.G.3.c Tell and write time to the half hour and hour using analog and digital clocks.

DATA: Students will solve problems and reason with data/probability using multiple representations, make connections within math and across disciplines, and communicate their ideas.

1.D.1 Data Collection: Students will formulate questions to collect, organize, and represent data.

1.D.1.a Collect, organize, and represent a data set with up to three categories using a picture graph.

1.D.2 Analyze Data and Interpret Results: Students will analyze the data and interpret the results.

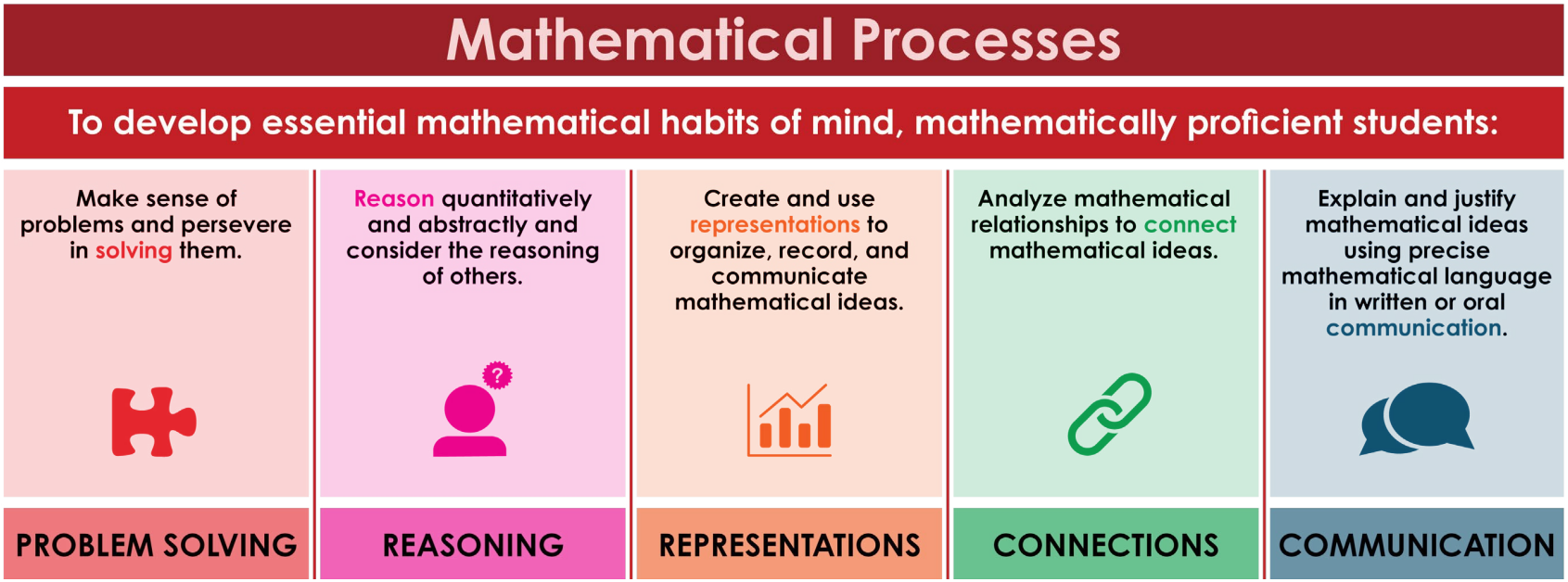
1.D.2.a Ask and answer questions about the total number of data points, how many in each category, and compare categories by identifying how many more or less are in a particular category using a picture graph.

Grade 2 Standards

Grade 2 Content Focus

During Grade 2, instruction should emphasize the development of the mathematical processes as the vehicle for mastering the grade-level content. Instruction should focus on these critical areas:

- Building on base-ten numeration system and place-value concepts to demonstrate understanding of multi-digit numbers.
- Applying properties of operations and the relationship between adding and subtracting.
- Developing quick recall of addition facts and related subtraction facts.
- Solving problems that involve time and/or money.
- Extending understanding of linear measurement by measuring and estimating lengths and relating length to addition and subtraction.



Approved by the Nebraska State Board of Education on September 2, 2022

NUMBER: Students will solve problems and reason with number concepts using multiple representations, make connections within math and across disciplines, and communicate their ideas.

2.N.1 Subitizing: Students will quantify briefly shown collections and verbally label the arrangements without counting.

2.N.1.a Without counting, recognize and verbally label structured arrangements for briefly shown collections using groups, multiplicative thinking, and place value (e.g.," I saw 48." "How did you know?" "I saw 4 groups of 10 and 2 groups of 4 is 8...4 tens and 8 ones...48").

2.N.2 Counting: Students will understand the relationship between numbers and quantities to extend the counting sequence.

2.N.2.a Count within 1,000, including skip counting by 5s, 10s, and 100s starting at a variety of multiples of 5, 10, or 100.

2.N.3 Base Ten: Students will represent and compare three-digit numbers to apply concepts of place value.

2.N.3.a Read and write numbers within the range of 0 to 1,000 using standard, word, and expanded forms.

2.N.3.b Understand 100 as a bundle, collection, or (more abstractly) composition of ten tens and that the three digits of a three-digit number represent a composition of some hundreds, some tens, and some ones.

2.N.3.c Compare two three-digit numbers by using symbols <, >, = and justify the comparison based on the value of the hundreds, tens, and ones.

2.N.4 Number and Operations: Students will compute using addition and subtraction.

2.N.4.a Fluently add and subtract within 20.

2.N.4.b Add and subtract using 100 strategies based on place value including properties of operations, relationships between addition and subtraction, and algorithms.

2.N.4.c Mentally add or subtract 10 or 100 to or from a given number 100 to 900.

2.N.4.d Add up to three two-digit numbers using strategies based on place value and understanding of properties.

2.N.4.e Add and subtract within 1,000 using concrete models, drawings, and strategies that reflect an understanding of place value and the properties of operations.

2.N.5 Number and Algebraic Relationships: Students will create and solve problems involving addition and subtraction and work with equal groups of objects to gain foundations for multiplication.

2.N.5.a Solve authentic problems involving addition and subtraction within 100 in situations of addition and subtraction, including adding to, subtracting from, joining and separating, and comparing situations with unknowns in all positions using objects, models, drawings, verbal explanations, expressions, and equations.

2.N.5.b Create authentic problems to represent one-step addition and subtraction within 100 with unknowns in all positions.

2.N.5.c Use repeated addition to find the total number of objects arranged in an array no larger than five rows and five columns and write an equation to express the total.

2.N.5.d Identify a group of objects from 0 to 20 as even or odd by counting by 2s or by showing even numbers as a sum of two equal parts.

ALGEBRA: Students will solve problems and reason with algebra using multiple representations, make connections within math and across disciplines, and communicate their ideas.

SEE NUMBER AND ALGEBRAIC RELATIONSHIPS IN NUMBER (2.N.5)

GEOMETRY: Students will solve problems and reason with geometry using multiple representations, make connections within math and across disciplines, and communicate their ideas.

2.G.1 Shapes and Their Attributes: Students will recognize and represent the attributes of two-dimensional shapes and three-dimensional solids.

2.G.1.a Recognize and describe all faces of three-dimensional shapes as two-dimensional shapes. Identify and count attributes of solid shapes including the edges, faces, and vertices.

2.G.1.b Recognize and draw two-dimensional shapes having a specific number of sides, angles, and vertices including triangles, quadrilaterals, pentagons, and hexagons.

2.G.1.c Partition a rectangle into rows and columns of equal-sized squares and count to find the total.

2.G.1.d Divide circles and rectangles into two, three, or four equal parts and describe the parts using the language of halves, thirds, fourths, half of, a third of, and a fourth of.

2.G.1.e Recognize that equal shares of identical wholes need not have the same shape.

2.G.2 Describe Measurable Attributes: Students will measure, estimate, and compare lengths to build meaning of the measurement process.

2.G.2.a Measure the length of an object using two different length units and describe how the measurements relate to the size of the specific unit.

2.G.2.b Compare the difference in length of objects using inches and feet or centimeters and meters.

2.G.3 Measurement: Students will use tools to measure and estimate length using standard units.

2.G.3.a Identify and use appropriate tools for measuring length.

2.G.3.b Measure and estimate lengths using whole numbers with inches, feet, centimeters, and meters.

2.G.4 Relate Addition and Subtraction to Measurement: Students will add or subtract to solve length problems.

2.G.4.a Represent whole numbers as equally spaced lengths on a number line diagram. Use number lines to find sums and differences within 100.

2.G.4.b Use addition and subtraction within 100 to solve problems using the same standard-length units.

2.G.5 Time and Money: Students will solve problems with dollar bills and coins and tell time to the nearest five-minute interval.

2.G.5.a Solve problems involving dollar bills, quarters, dimes, nickels, and pennies using $ and ¢ symbols appropriately.

2.G.5.b Identify and write time to five-minute intervals using analog and digital clocks and both a.m. and p.m.

DATA: Students will solve problems and reason with data/probability using multiple representations, make connections within math and across disciplines, and communicate their ideas.

2.D.1 Data Collection: Students will formulate questions to collect, organize, and represent data.

2.D.1.a Ask authentic questions to generate data and represent the data using scaled picture graphs with up to four categories.

2.D.1.b Ask authentic questions to generate data and represent the data using bar graphs with up to four categories.

2.D.1.c Create and represent a data set by making a line plot using whole numbers.

2.D.2 Analyze Data and Interpret Results: Students will analyze the data and interpret the results.

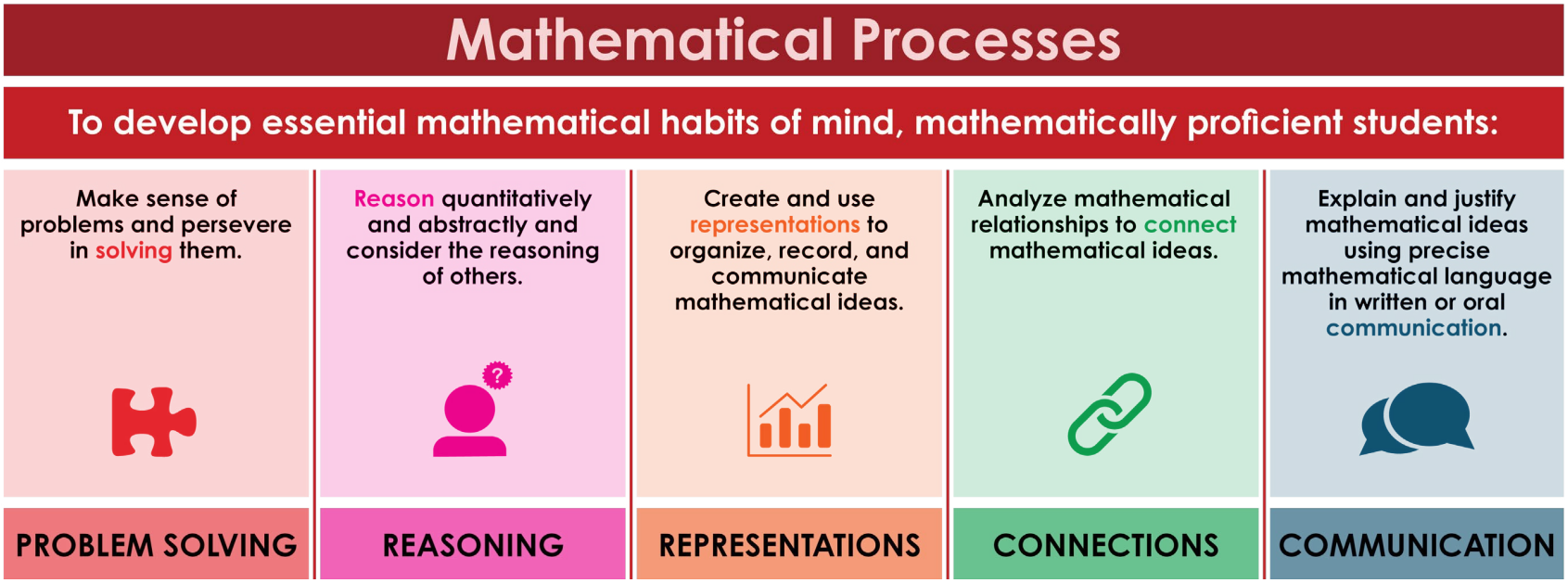
2.D.2.a Analyze data using scaled picture graphs or bar graphs with up to four categories. Solve problems including one-step comparison problems, using information from the graphs.

Grade 3 Standards

Grade 3 Content Focus

During Grade 3, instruction should emphasize the development of the mathematical processes as the vehicle for mastering the grade-level content. Instruction should focus on these critical areas:

- Building on additive reasoning to develop understanding of multiplication and division
- Exploring multiplication properties and strategies to multiply within 100 flexibly and efficiently
- Developing understanding of fractions as numbers by connecting prior work in partitioning shapes into equal areas to the relationship between numerator and denominator
- Solving problems using visual fraction models to compare and find equivalencies.
- Reasoning with shapes and their attributes.
- Recognizing area as an attribute of two-dimensional shapes and connecting understanding to multiplication.



NUMBER: Students will solve problems and reason with number concepts using multiple representations, make connections within math and across disciplines, and communicate their ideas.

3.N.1 Numeric Relationships: Students will demonstrate and represent multi-digit numbers using place value understanding.

3.N.1.a Read, write, and demonstrate multiple equivalent representations for numbers up to 10,000 using objects or visual representations including standard form and expanded form.

3.N.1.b Represent and justify comparisons of whole numbers up to 10,000 using number lines and reasoning strategies.

3.N.2 Fractions: Students will develop understanding of fractions as numbers.

3.N.2.a Partition two-dimensional figures into equal areas and express the area of each part as a unit fraction of the whole.

3.N.2.b Find parts of a whole using visual fraction models.

3.N.2.c Represent and understand a fraction as a number on a number line.

3.N.2.d Show and identify equivalent fractions using visual representations including pictures, manipulatives, and number lines.

3.N.2.e Justify whole numbers as fractions and identify fractions that are equivalent to whole numbers.

3.N.2.f Compare and order fractions having the same numerators or denominators by reasoning about their size.

ALGEBRA: Students will solve problems and reason with algebra using multiple representations, make connections within math and across disciplines, and communicate their ideas.

3.A.1 Operations and Algebraic Thinking: Students will extend understanding of multiplication and apply operational properties to solve problems.

3.A.1.a Add and subtract up to four-digit whole numbers with or without regrouping using strategies based on place value and algorithms.

3.A.1.b Determine the reasonableness of whole number sums and differences using estimations and number sense.

3.A.1.c Solve and write one-step whole number equations to represent authentic problems using the four operations including equations with an unknown start, unknown change, or unknown result.

3.A.1.d Interpret and solve two-step authentic problems involving whole numbers and the four operations.

3.A.1.e Apply commutative, associative, distributive, identity, and zero properties as strategies to multiply and divide.

3.A.1.f Use drawings, words, arrays, symbols, repeated addition, equal groups, and number lines to interpret and explain the meaning of multiplication and division and their relationship.

3.A.1.g Fluently multiply and divide within 100 using strategies based on understanding and properties of operations.

3.A.1.h Multiply one-digit whole numbers by multiples of 10 in the range of 10 to 90 using strategies based on place value and properties of operations.

GEOMETRY: Students will solve problems and reason with geometry using multiple representations, make connections within math and across disciplines, and communicate their ideas.

3.G.1 Shapes and Their Attributes: Students will recognize and represent the attributes of two-dimensional shapes.

3.G.1.1 Sort quadrilaterals into categories according to their attributes.

3.G.2 Area and Perimeter: Students will recognize perimeter and area as attributes of plane figures and understand concepts of area measurement.

3.G.2.a Solve authentic problems involving perimeters of polygons when given the side lengths or when given the perimeter and unknown side length(s).

3.G.2.b Use concrete and pictorial models to measure areas in square units by counting square units.

3.G.2.c Find the area of a rectangle with whole-number side lengths by modeling with unit squares; show that area can be additive and is the same as would be found by multiplying the side lengths.

3.G.3 Measurement: Students will use tools to solve measurement problems.

3.G.3.a Identify and use the appropriate tools and units of measurement, both customary and metric, to solve authentic problems involving length, weight, mass, liquid volume, and capacity (within the same system and unit).

3.G.3.b Estimate and measure length to the nearest half inch, fourth inch, and centimeter.

3.G.4 Time: Students will tell time to the nearest minute and find elapsed time.

3.G.4.a Tell and write time to the minute using both analog and digital clocks.

3.G.4.b Solve authentic problems involving addition and subtraction of time intervals and find elapsed time.

DATA: Students will solve problems and reason with data/probability using multiple representations, make connections within math and across disciplines, and communicate their ideas.

3.D.1 Data Collection: Students will formulate questions to collect, organize, and represent data.

3.D.1.a Create scaled picture graphs and scaled bar graphs to represent a data set with more than four categories, including data collected through observations, surveys, and experiments.

3.D.1.b Generate and represent data using line plots where the horizontal scale is marked off in halves and whole number units.

3.D.2 Analyze Data and Interpret Results: Students will analyze the data and interpret the results.

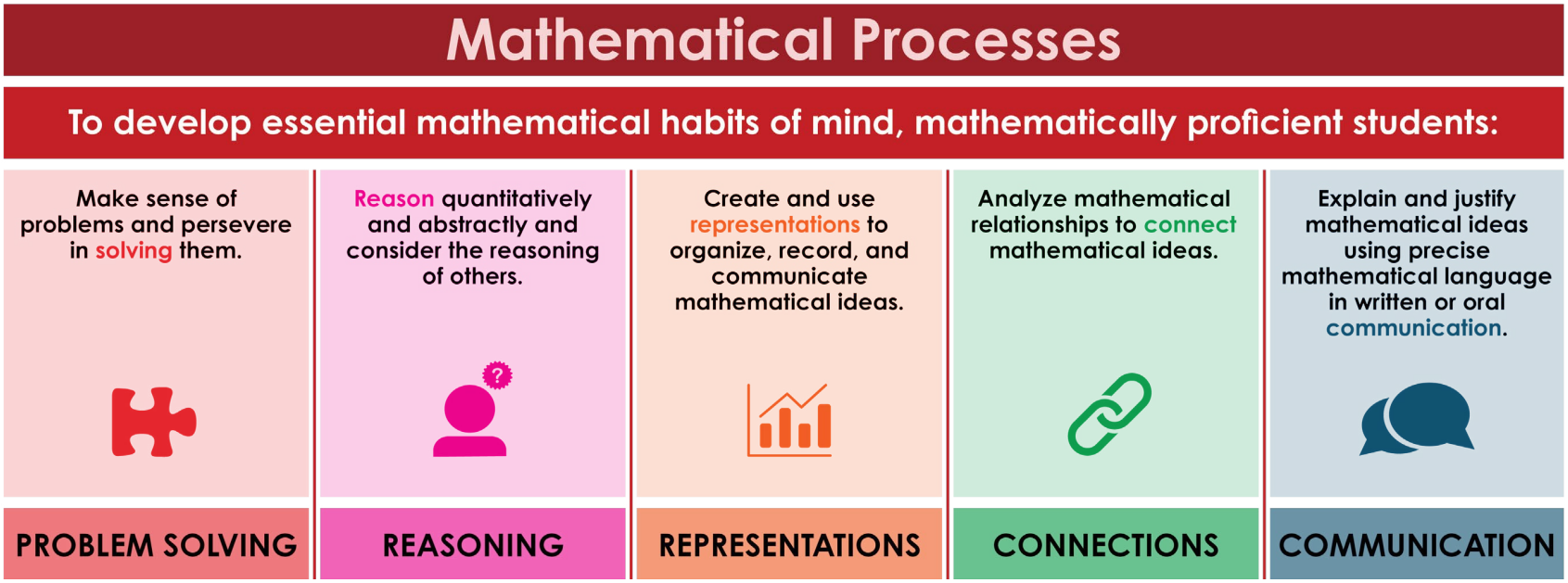
3.D.2.a Analyze data and make simple statements using information represented in picture graphs, line plots, and bar graphs.

Grade 4 Standards

Grade 4 Content Focus

During Grade 4, instruction should emphasize the development of the mathematical processes as the vehicle for mastering the grade-level content. Instruction should focus on these critical areas:

- Developing understanding and fluency with multi-digit multiplication through visual models and operational properties.
- Developing understanding of division involving multi-digit dividends using place value models.
- Extending understanding of fraction equivalence and operations with fractions by composing and decomposing, reasoning about relative size, and applying properties of operations.
- Classifying two-dimensional shapes according to their attributes such as the presence or absence of lines or angles.
- Developing understanding of an angle as a turn in a circle and justify the classification of angles as acute, obtuse, and right.



NUMBER: Students will solve problems and reason with number concepts using multiple representations, make connections within math and across disciplines, and communicate their ideas.

4.N.1 Numeric Relationships: Students will demonstrate and represent multi-digit numbers using relationships with the base-ten number system.

4.N.1.a Read, write, and demonstrate multiple equivalent representations for whole numbers up to 1,000,000 and decimals to the hundredths using visual representations, standard form, and expanded form.

4.N.1.b Represent and justify comparisons of whole numbers up to 1,000,000 and decimals through the hundredths place using number lines and reasoning strategies.

4.N.1.c Recognize a digit in one place represents ten times what it represents in the place to its right.

4.N.1.d Use decimal notation for fractions with denominators of 10 or 100 (e.g., 43/100 = 0.43).

4.N.2 Fractions and Decimals: Students will extend understanding of fractions by equivalence and ordering and will develop an understanding of decimals.

4.N.2.a Explain and demonstrate how a mixed number is equivalent to a fraction greater than one and how a fraction greater than one is equivalent to a mixed number using visual fraction models and reasoning strategies.

4.N.2.b Explain and demonstrate how equivalent fractions are generated by multiplying by a fraction equivalent to 1 using visual fraction models and the Identity Property of Multiplication.

4.N.2.c Compare and order fractions having unlike numerators or denominators using number lines, benchmarks, reasoning strategies, and/or equivalence.

4.N.3 Operations with Fractions: Students will understand and demonstrate fractional computation.

4.N.3.a Decompose a fraction into a sum of fractions with the same denominator in more than one way and record each decomposition with an equation and a visual representation.

4.N.3.b Explain the meaning of addition and subtraction of fractions with like denominators using visual fraction models, properties of operations, and reasoning strategies.

4.N.3.c Add and subtract fractions and mixed numbers with like denominators.

4.N.3.d Solve authentic problems involving addition and subtraction of fractions and mixed numbers with like denominators.

4.N.3.e Multiply a fraction by a whole number using visual fraction models and properties of operations.

4.N.4 Factors and Multiples: Students will find factors and multiples and classify numbers as prime or composite.

4.N.4.a Determine whether a given whole number up to 100 is a multiple of a given one-digit number.

4.N.4.b Determine factors of any whole number up to 100 and classify a number up to 100 as prime or composite.

ALGEBRA: Students will solve problems and reason with algebra using multiple representations, make connections within math and across disciplines, and communicate their ideas.

4.A.1 Operations and Algebraic Thinking: Students will extend understanding of multiplication and division and apply operational properties to solve problems involving variables.

4.A.1.a Add and subtract multi-digit numbers using an algorithm.

4.A.1.b Multiply up to a four-digit whole number by a one-digit whole number and multiply a two-digit whole number by a two-digit whole number, using strategies based on place value, properties of operations, and algorithms.

4.A.1.c Divide up to a four-digit whole number by a one-digit divisor with and without a remainder using strategies based on place value.

4.A.1.d Determine the reasonableness of whole number products and quotients using estimations and number sense.

4.A.1.e Create a simple algebraic expression or equation using a variable for an unknown number to represent an authentic mathematical situation (e.g., 3 + n = 15, 81 ÷ n = 9).

4.A.1.f Solve one- and two-step authentic problems using the four operations including interpreting remainders and the use of a letter to represent the unknown quantity.

GEOMETRY: Students will solve problems and reason with geometry using multiple representations, make connections within math and across disciplines, and communicate their ideas.

4.G.1 Shapes and Their Attributes: Students will draw and identify lines and angles and classify shapes by properties of their lines and angles.

4.G.1.a Identify, create, and describe points, lines, line segments, rays, angles, parallel lines, perpendicular lines, and intersecting lines.

4.G.1.b Justify the classification of angles as acute, obtuse, or right.

4.G.1.c Justify the classification of two-dimensional shapes based on the presence or absence of parallel and perpendicular lines or the presence or absence of specific angles.

4.G.1.d Recognize, draw, and justify lines of symmetry in two-dimensional shapes.

4.G.2 Measurement: Students will generate simple conversions from a larger unit to a smaller unit to solve authentic problems and measure angles.

4.G.2.a Identify and use the appropriate tools, operations, and units of measurement, both customary and metric, to solve authentic problems involving time, length, weight, mass, and capacity.

4.G.2.b Determine the reasonableness of measurements involving time, length, weight, mass, capacity, and angles.

4.G.2.c Generate simple conversions from a larger unit to a smaller unit within the customary and metric systems of measurement.

4.G.2.d Measure angles in whole number degrees using a protractor and relate benchmark angle measurements to their rotation through a circle (e.g., 180º = 1/2 of a circle).

4.G.2.e Recognize angle measures as additive and solve problems involving addition and subtraction to find unknown angles on a diagram.

4.G.3 Area and Perimeter: Students will apply perimeter and area formulas for rectangles.

4.G.3.a Apply perimeter and area formulas for rectangles to solve authentic problems.

DATA: Students will solve problems and reason with data/probability using multiple representations, make connections within math and across disciplines, and communicate their ideas.

4.D.1 Data Collection: Students will formulate questions to collect, organize, and represent data.

4.D.1.a Generate and represent data using line plots where the horizontal scale is marked off in appropriate units—whole numbers, halves, fourths, or eighths.

4.D.2 Analyze Data and Interpret Results: Students will analyze the data and interpret the results.

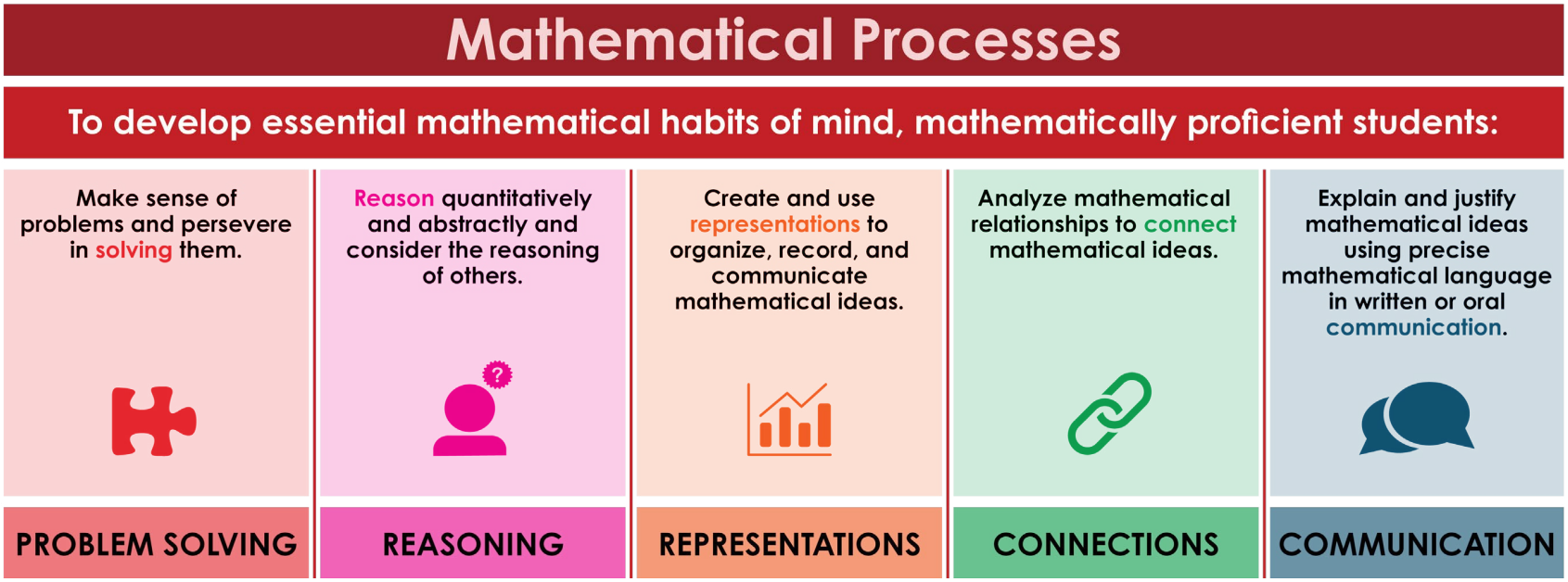
4.D.2.a Solve authentic problems and analyze data involving addition or subtraction of fractions presented in line plots.

Grade 5 Standards

Grade 5 Content Focus

During Grade 5, instruction should emphasize the development of the mathematical processes as the vehicle for mastering the grade-level content. Instruction should focus on these critical areas:

- Extending previous understandings of multiplication and division to multiply and divide fractions and decimals.
- Performing operations with multi-digit whole numbers and decimals to the hundredths in order to solve authentic problems following the order of operations.
- Categorizing shapes using knowledge of their attributes.
- Developing concepts of volume and relating volume to multiplication and addition.



NUMBER: Students will solve problems and reason with number concepts using multiple representations, make connections within math and across disciplines, and communicate their ideas.

5.N.1 Numeric Relationships: Students will understand the place value system.

5.N.1.a Read, write, and demonstrate multiple equivalent representations for multi-digit whole numbers and decimals through the thousandths place using standard form and expanded form.

5.N.1.b Recognize a digit in one place represents 1/10 of what it represents in the place to its left.

5.N.1.c Use whole number exponents to denote powers of 10.

5.N.2 Fractions and Decimals: Students will extend understanding of fraction and decimal equivalence and ordering.

5.N.2.a Generate equivalent forms of commonly used fractions and decimals (e.g., halves, fourths, fifths, tenths).

5.N.2.b Represent and justify comparisons of whole numbers, fractions, mixed numbers, and decimals through the thousandths place using number lines, reasoning strategies, and/or equivalence.

5.N.3 Operations with Fractions and Decimals: Students will apply and extend previous understandings of whole number operations to add, subtract, multiply and divide fractions and decimals.

5.N.3.a Interpret a fraction as division of the numerator by the denominator.

5.N.3.b Multiply a whole number by a fraction or a fraction by a fraction, including mixed numbers, using visual fraction models and properties of operations.

5.N.3.c Divide a unit fraction by a whole number and a whole number by a unit fraction using visual fraction models and properties of operations.

5.N.3.d Solve authentic problems involving addition, subtraction, and multiplication of fractions and mixed numbers with like and unlike denominators.

5.N.3.e Add and subtract fractions and mixed numbers with unlike denominators without simplifying.

5.N.3.f Solve authentic problems involving division of unit fractions by whole numbers and division of whole numbers by unit fractions.

5.N.3.g Add, subtract, multiply, and divide decimals to hundredths using strategies based on place value, properties of operations, and/or algorithms.

ALGEBRA: Students will solve problems and reason with algebra using multiple representations, make connections within math and across disciplines, and communicate their ideas.

5.A.1 Operations and Algebraic Thinking: Students will extend understanding of division and apply operational properties to solve problems involving order of operations.

5.A.1.a Multiply multi-digit whole numbers using an algorithm.

5.A.1.b Divide four-digit whole numbers by a two-digit divisor, with and without remainders, using strategies based on place value.

5.A.1.c Justify the reasonableness of computations involving whole numbers, fractions, and decimals.

5.A.1.d Simplify authentic numerical or algebraic expressions using order of operations (excluding exponents).

GEOMETRY: Students will solve problems and reason with geometry using multiple representations, make connections within math and across disciplines, and communicate their ideas.

5.G.1 Shapes and Their Attributes: Students will classify two-dimensional figures into categories based on their properties.

5.G.1.a Identify and describe faces, edges, and vertices of rectangular prisms.

5.G.1.b Recognize volume as an attribute of solid figures that is measured in cubic units.

5.G.1.c Justify the classification of two and three-dimensional figures in a hierarchy based on their properties.

5.G.2 Coordinate Geometry: Graph points on the coordinate plane to solve authentic problems.

5.G.2.a Identify the origin, x axis, and y axis of the coordinate plane.

5.G.2.b Graph and name points in the first quadrant of the coordinate plane using ordered pairs of whole numbers.

5.G.2.c Form ordered pairs from authentic problems involving rules or patterns, graph the ordered pairs in the first quadrant on a coordinate plane, and interpret coordinate values in the context of the situation.

5.G.3 Measurement: Generate conversions within the customary and metric systems of measurement to solve authentic problems.

5.G.3.a Generate conversions in authentic mathematical situations from larger units to smaller units and smaller units to larger units, within the customary and metric systems of measurement.

5.G.4 Area and Volume: Students will extend area problems for rectangles to include fractions and build meaning for measuring volume.

5.G.4.a Find the area of a rectangle with fractional side lengths by tiling it with unit squares of the fraction side lengths and show that the area is the same as would be found by multiplying the side lengths.

5.G.4.b Multiply fractional side lengths to find areas of rectangles and represent fraction products as rectangular areas.

5.G.4.c Use concrete models to measure the volume of rectangular prisms by counting cubic units.

5.G.4.d Find the volume of a rectangular prism with whole-number side lengths by modeling with unit cubes and show that the volume can be additive and is the same as would be found by multiplying the area of the base times height.

5.G.4.e Solve authentic problems by applying the formulas $V = l \times w \times h$ and $V = B \times h$ for rectangular prisms to find volumes of rectangular prisms with whole number edge lengths.

DATA: Students will solve problems and reason with data/probability using multiple representations, make connections within math and across disciplines, and communicate their ideas.

5.D.1 Data Collection: Students will formulate questions to collect, organize, and represent data.

No additional indicators at this level.

5.D.2 Analyze Data and Interpret Results: Students will analyze the data and interpret the results.

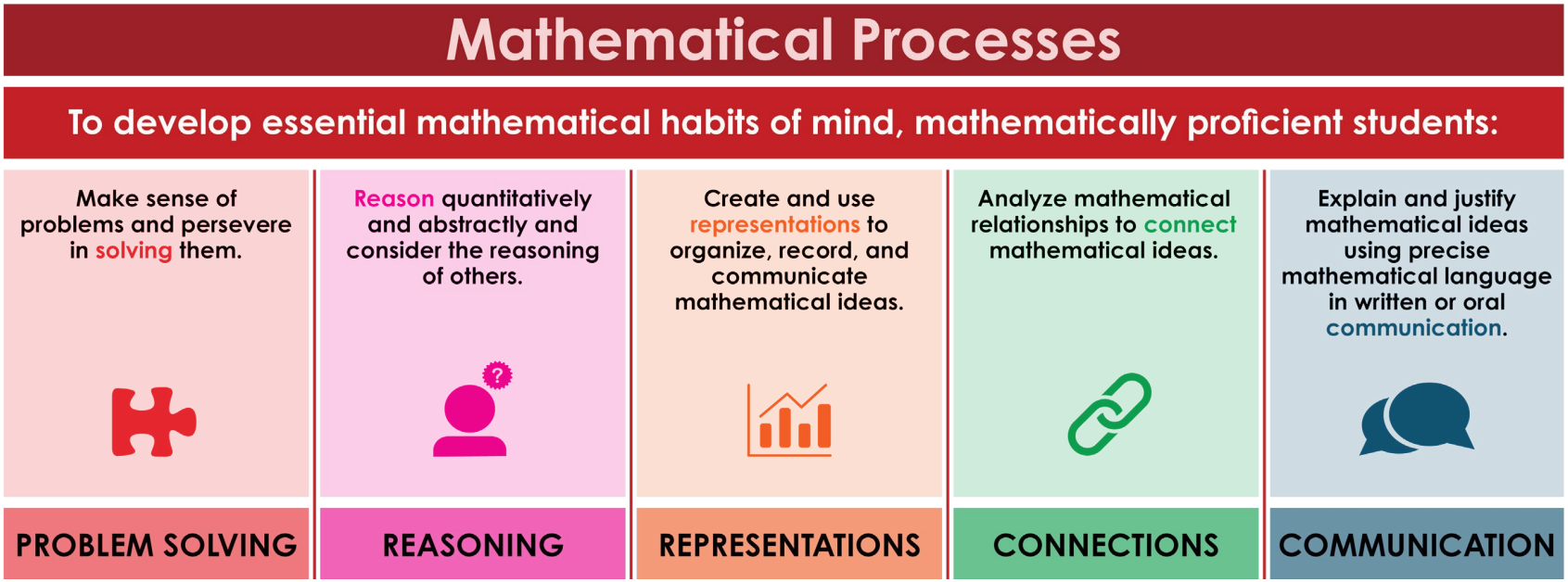
5.D.2.a Represent, analyze, and solve authentic problems using information presented in one or more tables or line plots including whole numbers and fractions.

Grade 6 Standards

Grade 6 Content Focus

During Grade 6, instruction should emphasize the development of the mathematical processes as the vehicle for mastering the grade-level content. Instruction should focus on these critical areas:

- Connecting ratio and rate to whole number multiplication and division and using concepts of ratio and rate to solve problems.
- Completing computational understanding with the division of fractions and moving towards efficiency by using the algorithm for each operation.
- Extending understanding of the number line to include the entire system of rational numbers, which now includes negative numbers.
- Writing and using expressions and equations
- Representing data in multiple ways in order to analyze and interpret the results.



NUMBER: Students will solve problems and reason with number concepts using multiple representations, make connections within math and across disciplines, and communicate their ideas.

6.N.1 Numeric Relationships: Students will demonstrate, represent, and show relationships among fractions, decimals, percents, and integers within the base-ten number system.

6.N.1.a Determine common factors and common multiples.

6.N.1.b Determine prime factorization of numbers with and without exponents.

6.N.1.c Model integers using drawings, words, number lines, models, and symbols.

6.N.1.d Determine absolute value of rational numbers.

6.N.1.e Compare and order numbers including non-negative fractions and decimals, integers, and absolute values and locate them on the number line.

6.N.2 Operations: Students will compute with fractions and decimals accurately.

6.N.2.a Divide multi-digit whole numbers and decimals using an algorithm.

6.N.2.b Divide non-negative fractions and mixed numbers.

6.N.2.c Evaluate numerical expressions including absolute value and/or positive exponents with respect to order of operations.

RATIOS AND PROPORTIONS: Students will understand ratio concepts and use ratio reasoning to solve problems.[2]

6.R.1 Ratios and Rates: Students will understand the concept of ratios and unit rates, use language to describe the relationship between two quantities, and use ratios and unit rates to solve authentic situations.

6.R.1.a Determine ratios from concrete models, drawings, and/or words.

6.R.1.b Explain and determine unit rates.

6.R.1.c Find a percent of a quantity as a rate per 100 and solve problems involving finding the whole, given a part and the percent.

6.R.1.d Convert among fractions, decimals, and percents using multiple representations.

6.R.1.e Solve authentic problems using ratios, unit rates, and percents.

6.R.1.f Use ratio reasoning to convert measurement units; manipulate and transform units appropriately when multiplying or dividing quantities.

[2] Ratios and Proportions is a new content strand found only in Grades 6 and 7.

6.R.2 Represent: Students will represent ratios and rates on the coordinate plane.

6.R.2.a Identify the ordered pair of a given point in the coordinate plane.

6.R.2.b Plot the location of an ordered pair in the coordinate plane.

6.R.2.c Identify the location of a given point in the coordinate plane (e.g., axis, origin, quadrant).

6.R.2.d Make tables of equivalent ratios relating quantities with whole number measurements.

6.R.2.e Use the constant of proportionality to find the missing value in ratio tables.

6.R.2.f Plot the pair of values from a ratio table on the coordinate plane.

6.R.2.g Explain what a point (x, y) on the graph of a proportional relationship means in terms of the situation.

ALGEBRA: Students will solve problems and reason with algebra using multiple representations, make connections within math and across disciplines, and communicate their ideas.

6.A.1 Algebraic Processes: Students will apply the operational properties when evaluating expressions and solving equations and inequalities.

6.A.1.a Recognize and generate equivalent algebraic expressions involving the distributive property and combining like terms.

6.A.1.b Given the value of the variable, evaluate algebraic expressions with non-negative rational numbers with respect to order of operations, which may include absolute value.

6.A.1.c Use substitution to determine if a given value for a variable makes an equation or inequality true.

6.A.1.d Solve one-step equations with non-negative rational numbers using addition, subtraction, multiplication, and division.

6.A.1.e Solve one-step inequalities with whole numbers using addition, subtraction, multiplication, and division and represent solutions on a number line (e.g., graph $3x > 3$).

6.A.2 Applications: Students will solve authentic problems with algebraic expressions, equations, and inequalities.

6.A.2.a Create algebraic expressions (e.g., one operation, one variable as well as multiple operations, one variable) from word phrases.

6.A.2.b Write equations (e.g., one operation, one variable) to represent authentic situations involving non- negative rational numbers.

6.A.2.c Write inequalities (e.g., one operation, one variable) to represent authentic situations involving whole numbers.

GEOMETRY: Students will solve problems and reason with geometry using multiple representations, make connections within math and across disciplines, and communicate their ideas.

6.G.1 Attributes: Students will identify and describe geometric attributes of two- dimensional shapes.

6.G.1.a Identify and create nets to represent two-dimensional drawings of prisms and pyramids.

6.G.2 Coordinate Geometry: Students will determine location, orientation, and relationships on the coordinate plane.

SEE WORK WITH COORDINATE PLANES IN RATIOS AND PROPORTIONS (6.R.2)

6.G.3 Measurement: Students identify geometric attributes that create two- and three-dimensional shapes in order to perform measurements and apply formulas to find area and volume.

6.G.3.a Determine the area of quadrilaterals and triangles by composition and decomposition of these shapes, as well as applications of properties and formulas. Quadrilaterals include parallelograms and trapezoids.

6.G.3.b Determine the surface area of rectangular prisms and triangular prisms using nets as well as application of formulas.

6.G.3.c Apply volume formulas for triangular prisms.

DATA: Students will solve problems and reason with data/probability using multiple representations, make connections within math and across disciplines, and communicate their ideas.

6.D.1 Data Collection and Statistical Methods: Students will formulate statistical investigative questions, collect data, and organize data.

No additional indicators at this level.

6.D.2 Analyze Data and Interpret Results: Students will represent and analyze the data and interpret the results.

6.D.2.a Represent data using dot plots, box-and-whisker plots, and histograms.

6.D.2.b Solve problems using information presented in dot plots, box-and-whisker plots, histograms, and circle graphs.

6.D.2.c Find and interpret the mean, median, mode, and range for a set of data.

6.D.2.d Compare the mean, median, mode, and range from two sets of data.

6.D.2.e Compare and interpret data sets based upon their measures of central tendency and graphical representations (e.g., center, spread, shape).

6.D.3 Probability: Students will interpret and apply concepts of probability.

6.D.3.a Identify a list of possible outcomes for a simple event.

6.D.3.b Describe the theoretical and experimental probability of an event using a fraction, percentage, and decimal.

6.D.3.c Express the degree of likelihood (possible, impossible, certain, more likely, equally likely, or less likely) of simple events.

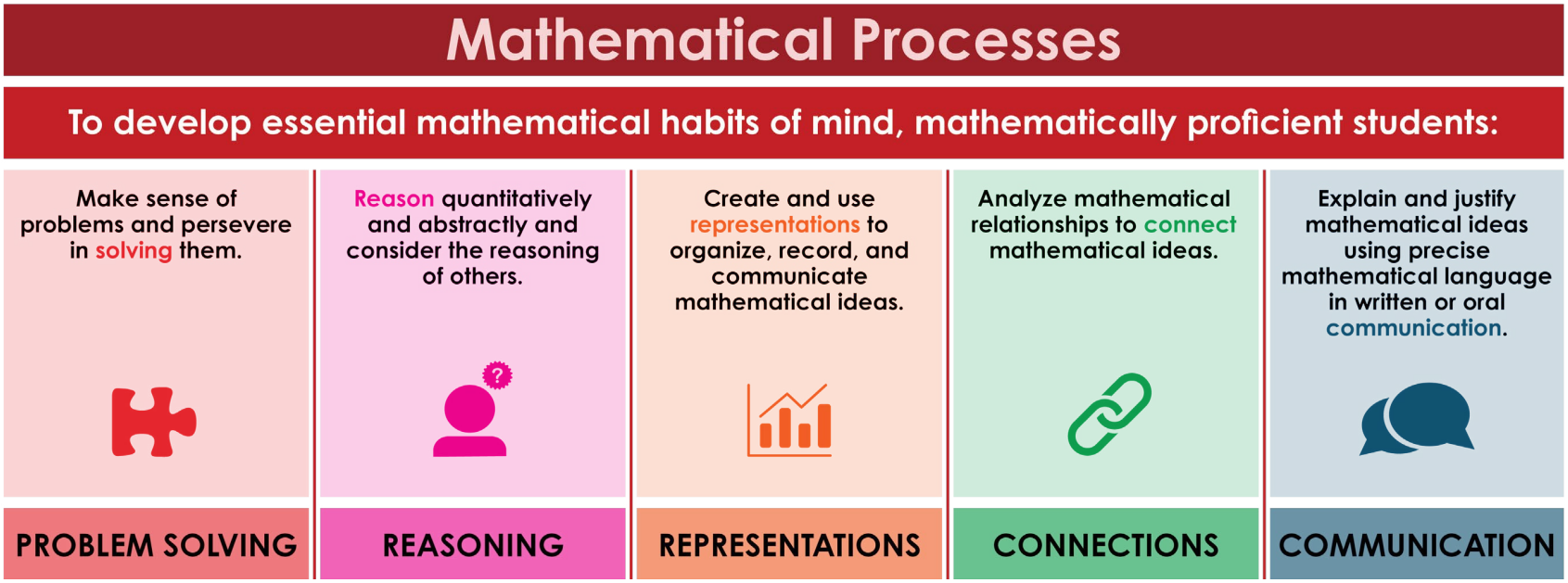
6.D.3.d Compare and contrast theoretical and experimental probabilities.

Grade 7 Standards

Grade 7 Content Focus

During Grade 7, instruction should emphasize the development of the mathematical processes as the vehicle for mastering the grade-level content. Instruction should focus on these critical areas:

- Developing an understanding of proportional relationships.
- Understanding operations with rational numbers.
- Using expressions and linear equations to represent and solve problems.
- Solving problems involving perimeter and area of two-dimensional figures as well as surface area and volume of three-dimensional figures.
- Investigating probability concepts.



Approved by the Nebraska State Board of Education on September 2, 2022

NUMBER: Students will solve problems and reason with number concepts using multiple representations, make connections within math and across disciplines, and communicate their ideas.

7.N.1 Numeric Relationships: Students will demonstrate, represent, and show relationships among rational numbers within the base-ten number system.

No additional indicator(s) at this level.

7.N.2 Operations: Students will compute with rational numbers accurately.

7.N.2.a Add, subtract, multiply, and divide rational numbers (e.g., positive and negative fractions, decimals, and integers).

7.N.2.b Apply properties of operations (commutative, associative, distributive, identity, inverse, zero) as strategies for problem solving with rational numbers.

[3]RATIOS AND PROPORTIONS: Students will understand ratio concepts and use ratio reasoning to solve problems.

7.R.1 Proportional Relationships: Students will understand the concept of proportions, use language to describe the relationship between two quantities, and use proportions to solve authentic situations.

7.R.1.a Decide whether two quantities are in a proportional relationship (e.g., by testing for equivalent ratios in a table).

7.R.1.b Represent and solve authentic problems with proportions.

7.R.1.c Use proportional relationships to solve authentic percent problems (e.g., percent change, sales tax, mark-up, discount, tip).

7.R.1.d Solve authentic problems involving scale drawings.

ALGEBRA: Students will solve problems and reason with algebra using multiple representations, make connections within math and across disciplines, and communicate their ideas.

7.A.1 Algebraic Processes: Students will apply the operational properties when evaluating expressions, and solving equations and inequalities.

7.A.1.a Use factoring and properties of operations to create equivalent algebraic expressions (e.g., 2x + 6 = 2(x + 3)).

[3] Ratios and Proportions is a new content strand found only in Grades 6 and 7.

7.A.1.b Given the value of the variable(s), evaluate algebraic expressions, which may include absolute value.

7.A.1.c Solve one- and two-step equations involving rational numbers.

7.A.1.d Solve equations using the distributive property and combining like terms.

7.A.1.e Solve one- and two-step inequalities involving integers and represent solutions on a number line.

7.A.2 Applications: Students will solve authentic problems with algebraic expressions, equations, and inequalities.

7.A.2.a Write one- and two-step equations involving rational numbers from words, tables, and authentic situations.

7.A.2.b Write one- and two-step inequalities to represent authentic situations involving integers.

GEOMETRY: Students will solve problems and reason with geometry using multiple representations, make connections within math and across disciplines, and communicate their ideas.

7.G.1 Attributes: Students will identify angle relationships and apply properties to determine angle measures.

7.G.1.a Apply properties of adjacent, complementary, supplementary, linear pair, and vertical angles to find missing angle measures.

7.G.2 Coordinate Geometry: Students will determine location, orientation, and relationships on the coordinate plane.

7.G.2.a Draw polygons in the coordinate plane given coordinates for the vertices.

7.G.2.b Calculate vertical and horizontal distances in the coordinate plane to find perimeter and area of rectangles.

7.G.3 Measurement: Students will identify geometric attributes that create two- and three-dimensional shapes in order to perform measurements and apply formulas to find area and volume.

7.G.3.a Solve authentic problems involving perimeter and area of composite shapes made from triangles and quadrilaterals.

7.G.3.b Determine surface area and volume of composite rectangular and triangular prisms.

7.G.3.c Determine the area and circumference of circles both on and off the coordinate plane using 3.14 for the value of Pi.

DATA: Students will solve problems and reason with data/probability using multiple representations, make connections within math and across disciplines, and communicate their ideas.

7.D.1 Data Collection and Statistical Methods: Students will formulate statistical investigative questions, collect data, and organize data.

7.D.1.a Create an investigative question and collect data.

7.D.1.b Generate conclusions about a population based on a random sample.

7.D.1.c Identify and critique biases in various data representations.

7.D.2 Analyze Data and Interpret Results: Students will represent and analyze the data and interpret the results.

No additional indicator(s) at this level.

7.D.3 Probability: Students will interpret and apply concepts of probability.

7.D.3.a Find theoretical and experimental probabilities for compound independent and dependent events.

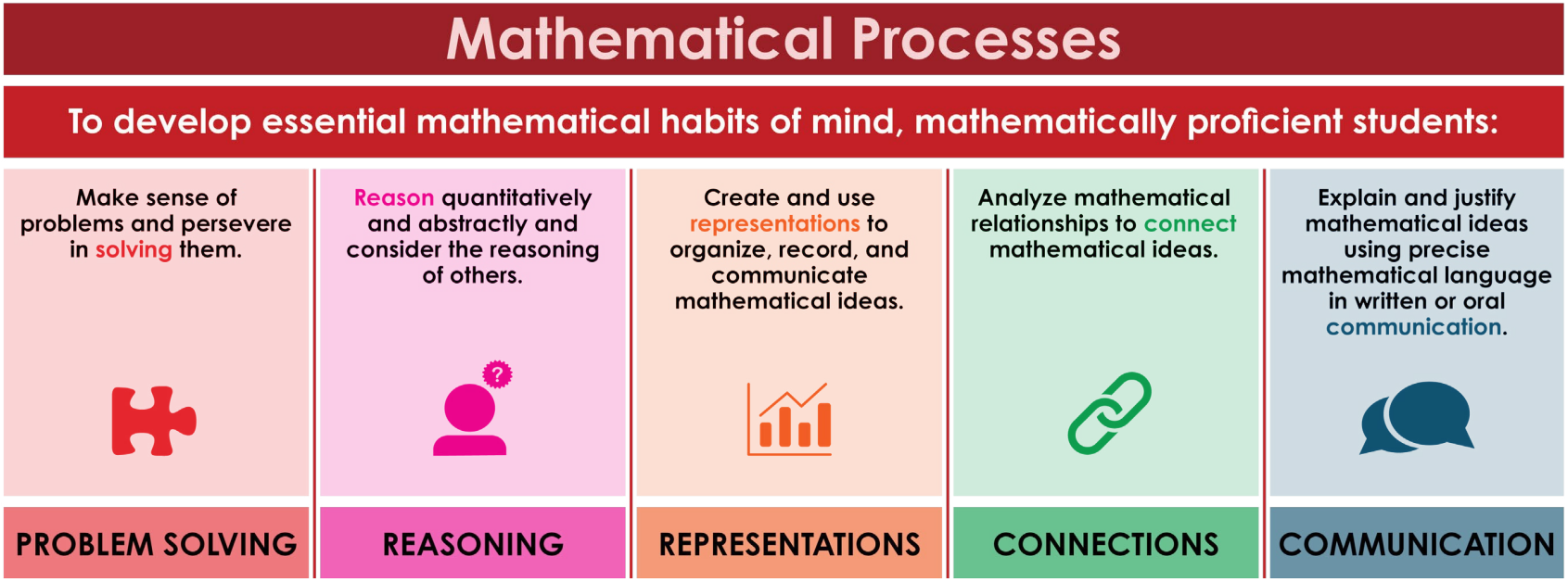
7.D.3.b Identify complementary events and calculate their probabilities.

Grade 8 Standards

Grade 8 Content Focus

During Grade 8, instruction should emphasize the development of the mathematical processes as the vehicle for mastering the grade-level content. Instruction should focus on these critical areas:

- Using linear equations to represent, analyze, and solve a variety of problems.
- Developing an understanding of irrational numbers and integer exponents.
- Analyzing two-dimensional figures and solving problems using understanding of distance, angle, similarity, and congruence.
- Understanding and applying the Pythagorean Theorem.
- Determining and describing rate of change and y-intercept for given situations.



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NUMBER: Students will solve problems and reason with number concepts using multiple representations, make connections within math and across disciplines, and communicate their ideas.

8.N.1 Numeric Relationships: Students will demonstrate, represent, and show relationships among real numbers within the base-ten number system.

8.N.1.a Determine subsets of numbers as natural, whole, integer, rational, irrational, or real based on the definitions of these sets of numbers.

8.N.1.b Represent numbers with positive and negative exponents and in scientific notation.

8.N.1.c Describe the difference between a rational and irrational number.

8.N.1.d Approximate, compare, and order real numbers, both rational and irrational, and locate them on the number line.

8.N.2 Operations: Students will compute with exponents and roots.

8.N.2.a Evaluate the square roots of perfect squares less than or equal to 400 and cube roots of perfect cubes less than or equal to 125.

8.N.2.b Simplify numerical expressions involving integer exponents, square roots, and cube roots (e.g., 4^{-2} is the same as 1/16).

8.N.2.c Evaluate numerical expressions involving absolute value.

8.N.2.d Multiply and divide numbers using scientific notation.

ALGEBRA: Students will solve problems and reason with algebra using multiple representations, make connections within math and across disciplines, and communicate their ideas.

8.A.1 Algebraic Processes: Students will apply the operational properties when evaluating expressions and solving equations.

8.A.1.a Describe single variable equations as having one solution, no solution, or infinitely many solutions.

8.A.1.b Solve multi-step equations involving rational numbers with the same variable appearing on both sides of the equation.

8.A.1.c Solve equations of the form $x^2 = k (k <= 400)$ and $x^3 = k (k <= 125)$, where k is a positive rational number, using square root and cube root symbols.

8.A.2 Applications: Students will solve authentic problems involving multi-step equations.

8.A.2.a Write multi-step single variable equations from words, tables, and authentic situations.

8.A.2.b Determine and describe the rate of change for given situations through the use of tables and graphs.

8.A.2.c Graph proportional relationships and interpret the rate of change.

GEOMETRY: Students will solve problems and reason with geometry using multiple representations, make connections within math and across disciplines, and communicate their ideas.

8.G.1 Attributes: Students will apply properties of angle relationships in triangles and with lines to determine angle measures.

8.G.1.a Determine and use the relationships of the interior angles of a triangle to solve for missing measures.

8.G.1.b Identify and apply geometric properties of parallel lines cut by a transversal and the resulting corresponding same side interior, alternate interior, and alternate exterior angles to find missing measures.

8.G.2 Coordinate Geometry: Students will determine location, orientation, and relationships on the coordinate plane.

8.G.2.a Perform and describe positions and orientations of shapes under single transformations including rotations in multiples of 90 degrees about the origin, translations, reflections, and dilations on and off the coordinate plane.

8.G.2.b Determine if two-dimensional figures are congruent or similar.

8.G.2.c Perform and describe positions and orientations of shapes under a sequence of transformations on and off the coordinate plane.

8.G.3 Measurement: Students will reason with formulas and context to determine and compare length, area, and volume.

8.G.3.a Explain a model of the Pythagorean Theorem.

8.G.3.b Apply the Pythagorean Theorem to find side lengths of triangles and to solve authentic problems.

8.G.3.c Find the distance between any two points on the coordinate plane using the Pythagorean Theorem.

8.G.3.d Determine the volume of cones, cylinders, and spheres and solve authentic problems using volumes.

DATA: Students will solve problems and reason with data/probability using multiple representations, make connections within math and across disciplines, and communicate their ideas.

8.D.1 Data Collection and Statistical Methods: Students will formulate statistical investigative questions, collect data, and organize data.

No additional indicator(s) at this level.

8.D.2 Analyze Data and Interpret Results: Students will represent and analyze the data and interpret the results.

8.D.2.a Represent and interpret bivariate data (e.g., ordered pairs) using scatter plots.

8.D.2.b Describe patterns such as positive or negative association, linear or nonlinear association, clustering, and outliers when bivariate data is represented on a coordinate plane.

8.D.2.c Draw an informal line of best fit based on the closeness of the data points to the line.

8.D.2.d Use a linear model to make predictions and interpret the rate of change and y-intercept in context.

8.D.3 Probability: Students will interpret and apply concepts of probability.

No additional indicator(s) at this level.

High School Standards

High School Content Focus

During high school, instruction should emphasize the development of the mathematical processes as the vehicle for mastering the content standards. The content standards are designed to be accessible to each and every high school student prior to graduation whereas the Advanced Topics reflect the mathematical content leading to certain career interests. Schools have the flexibility to organize the standards into integrated or strand-focused courses.

NUMBER: Instruction in Number should focus on these critical areas:

- Working in authentic contexts, solutions involve quantities, numbers with units.
- Using units, approximations, and estimations to check the reasonableness of their work.
- Understanding how forms of approximation can accumulate errors when problem solving.
- Understanding the four operations on real numbers applies to complex numbers.

ALGEBRA: Instruction in Algebra should focus on these critical areas:

- Solving many authentic problems to best understand patterns, expressions, relations, and functions.
- Using algebraic symbols and mathematical models to represent and demonstrate an understanding of quantitative relationships.
- Analyzing change as it arises in various contexts such as physical and social as supported by algebraic reasoning and the concept of function.
- Interpreting the functions in multiple representations, using their points of interest, and connecting across multiple representations to understand their mathematical equivalence instead of rote steps or procedures.

GEOMETRY: Instruction in Geometry should focus on these critical areas:

- Using mathematics to define the spatial attributes of the world around us.
- Exploring transformations (translations, reflections, rotations, and dilations) to build a foundation to understand congruence, similarity, and symmetry.
- Formalizing geometric concepts using planar geometry, parallelism, congruence, similarity, and symmetry.
- Connecting algebra and geometry via coordinate geometry, planar transformations, and trigonometry.
- Developing skills of argumentation and proof by proving congruence, similarity, symmetry, and other concepts of plane geometry.

DATA: Instruction in Data should focus on these critical areas:

- Using numbers in context (data) with the mathematical processes can result in better predictions and informed decisions.
- Using tools to apply statistical methods to describe patterns and trends.
- Understanding randomness, variability, and causality through data collection, data analysis, and interpretation of results.
- Describing data using probability and sampling distributions to judge whether a result is unsurprising or rare.

Mathematical Processes

To develop essential mathematical habits of mind, mathematically proficient students:

PROBLEM SOLVING	REASONING	REPRESENTATIONS	CONNECTIONS	COMMUNICATION
Make sense of problems and persevere in solving them.	Reason quantitatively and abstractly and consider the reasoning of others.	Create and use representations to organize, record, and communicate mathematical ideas.	Analyze mathematical relationships to connect mathematical ideas.	Explain and justify mathematical ideas using precise mathematical language in written or oral communication.

NUMBER: Students will solve problems and reason with number concepts using multiple representations, make connections within math and across disciplines, and communicate their ideas.

HS.N.1 Estimation and Technology: Students will use estimation strategies and technology to reason, to solve problems, and to make connections within mathematics and across disciplines.

HS.N.1.a Select, apply, and explain the method of computation when problem solving using real numbers (e.g., models, mental computation, paper-pencil, technology).

HS.N.1.b Determine if the context of a problem calls for an approximation or an exact value.

HS.N.1.c Determine the rounding convention to be used based on the context of a problem.

HS.N.1.d Estimate a value using the concept of betweenness by bounding above and below (e.g., since log(10) = 1 and log(1,000) = 3 we know log(500) is between 1 and 3).

HS. N.1.e Determine the tolerance interval and percent of error in measurement.

HS.N.1.f Convert equivalent rates (e.g., miles per hour to feet per second).

HS.N.1.g Determine whether extremely large or extremely small quantities can be reasonably represented by a calculator or graphing utility.

HS.N.1.h Use scientific notation to appropriately represent large and small quantities.

HS.N.2 Sets and Operations: Students will use number sets and operations to reason and to solve problems.

HS.N.2.a Extend the properties of exponents to rational numbers.

HS.N.2.b Use properties of rational and irrational numbers.

HS.N.2.c Demonstrate, represent, and show relationships among the subsets of real numbers and the complex number system.

HS.N.2.d Compute with subsets of the complex number system including imaginary, rational, irrational, integers, whole, and natural numbers.

HS.N.3 Interpretation and Sense Making: Students will reason abstractly and quantitatively using units to solve problems and interpret results in context.

HS.N.3.a Understand roundoff error and why roundoff error accumulates when rounding occurs prior to the last step in a computation.

HS.N.3.b Use estimation methods to check the reasonableness of real number computations and decide if the problem calls for an approximation (including appropriate rounding) or an exact number.

HS.N.3.c Use units to assess the validity of an answer in the context of a problem.

HS.N.3.d Communicate the meaning of an answer in the context of a problem.

ALGEBRA: Students will solve problems and reason with algebra using multiple representations, make connections within math and across disciplines, and communicate their ideas.

HS.A.1 Algebraic Relationships: Students will demonstrate and represent relationships with functions.

HS.A.1.a Demonstrate that functions are a well mapped subdomain of relations.

HS.A.1.b Analyze a relation to determine if it is a function given mapping diagrams, function notation (e.g., $f(x)=x^2$), a table, or a graph.

HS.A.1.c Classify a function given its mapping diagram, function notation, table, or graph as a linear, quadratic, absolute value, exponential, or other function.

HS.A.1.d Analyze a function's domain and range to determine if it is one-to-one and has an inverse function both algebraically and graphically.

HS.A.1.e Define, interpret, and analyze linear, quadratic, absolute value, and exponential functions using the points of interest of the functions and graphing technology.

HS.A.1.f Identify, analyze, and apply transformations of existing functions (including translation and dilation).

HS.A.1.g Interpret logarithmic equations as exponential equations.

HS.A.1.h Describe arithmetic sequences using tables of values and functions in explicit and recursive forms.

HS.A.1.i Describe geometric sequences using tables of values and functions in explicit and recursive forms.

HS.A.2 Algebraic Processes: Students will apply the operational properties when evaluating rational expressions and solving linear and quadratic equations, and inequalities.

HS.A.2.a Analyze and explain the properties used in solving equations, inequalities, systems of linear equations, systems of linear inequalities, and literal equations.

HS.A.2.b Generate expressions in equivalent forms by using algebraic properties to make different characteristics or features visible.

HS.A.2.c Analyze equations and inequalities to determine and apply efficient methods to solve and use appropriate technology as needed.

HS.A.2.d Calculate the slope (rate of change) of a line given coordinate points, a graph, or a table of values.

HS.A.2.e Write and graph equations of functions (linear, absolute value, quadratic, and exponential) using the points of interest of the function.

HS.A.2.f Given a line, write the equation of a line that is parallel or perpendicular to it.

HS.A.2.g Perform and explain operations such as addition, subtraction, multiplication, division, and factoring on polynomials.

HS.A.2.h Explain the connection between the factors of a polynomial and the zeros of a polynomial.

HS.A.2.i Combine functions by composition and perform operations on functions.

HS.A.3 Applications: Students will solve authentic problems using nonlinear functions.

HS.A.3.a Analyze and model authentic situations using various representations and appropriate technology.

HS.A.3.b Identify, interpret, relate, and graph the factors, x-intercepts, roots, and zeros of polynomial functions using algebraic and graphing methods.

HS.A.3.c Identify and predict appropriate solutions to equations given context and domain/range (e.g., extraneous solutions, imaginary solutions, no solution, infinitely many solutions).

GEOMETRY: Students will solve problems and reason with geometry using multiple representations, make connections within math and across disciplines, and communicate their ideas.

TOOLS: Students will sketch, draw, and construct appropriate representations using a variety of tools and methods which may include ruler/straight edge, protractor, compass, reflective devices, paper folding, or dynamic geometric software.

HS.G.1 Attributes: Students will identify and describe geometric attributes, apply properties and theorems, and create two- dimensional shapes.

HS.G.1.a Demonstrate that two figures are similar or congruent by using a sequence of rigid motions and dilations that map a figure onto the other in problems both with and without coordinates.

HS.G.1.b Describe symmetries of a figure in terms of rigid motions that map a figure onto itself and make inferences about symmetric figures (e.g., unknown side lengths or angle measures) in problems both with and without coordinates.

HS.G.1.c Explain how the criteria for triangle congruence and similarity (ASA, SAS, AAS, and SSS congruence; AA similarity criterion) follow from the definition of congruence and similarity in terms of corresponding parts.

HS.G.1.d Identify and apply right triangle relationships including converse of the Pythagorean Theorem.

HS.G.1.e Apply side and angle relationships of special right triangles (30 degree-60 degree-90 degree and 45 degree-45 degree-90 degree) to solve geometric problems.

HS.G.1.f Identify and apply right triangle relationships including sine, cosine, and tangent.

HS.G.1.g Apply interior and exterior angle formulas for n-gons and apply to authentic situations.

HS.G.1.h Compare/contrast the properties of quadrilaterals: parallelograms, rectangles, rhombi, squares, kites, trapezoids, and isosceles trapezoids.

HS.G1.i Use slope and the distance formula to determine the type of quadrilateral.

HS.G.1.j Identify, describe, apply, and reason through properties of central angles, inscribed angles, angles formed by intersecting chords, secants, and/or tangents to find the measures of angles related to the circle, arc lengths, and areas of sectors.

HS.G.2 Attributes: Students will identify and describe geometric attributes, apply properties and theorems and create three-dimensional shapes.

HS.G.2.a Convert between various units of volume (e.g., cubic feet to cubic yards).

HS.G.2.b Apply the effect of a scale factor to determine the volume of similar three-dimensional shapes and solids.

HS.G.2.c Determine surface area and volume of pyramids, as well as solids that are composites of pyramids, prisms, spheres, cylinders, and cones, using formulas and appropriate units.

HS.G.3 Coordinate Geometry and Transformations: Students will demonstrate and represent location, orientation, and relationships on the coordinate plane.

HS.G.3.a Derive the midpoint formula using the concept of average and apply the midpoint formula to find coordinates.

HS.G.3.b Find the images and preimages of transformations of a point, shape, or a relation on the coordinate plane. Transformations include the following and their compositions: reflections across horizontal and vertical lines and the lines y=x and y=-x, rotations about the origin of 90 degrees, dilations about the origin by any positive scale factor, and any translation.

HS.G.3.c Find the equation of a circle given the radius and the center.

HS.G.4 Logic and Proof: Students will use geometric definitions and theorems to reason abstractly and quantitatively.

HS.G.4.a Know and use definitions to make deductions in mathematical argumentation (e.g., syllogism, detachment).

HS.G.4.b Evaluate the validity of conditional statements, including biconditional statements (e.g., conditional, converse, contrapositive, inverse).

HS.G.4.c Evaluate the validity of an argument communicated in different ways (e.g., a flow format, two- column, paragraph format).

HS.G.4.d Use coordinate geometry to prove triangles are right, acute, obtuse, isosceles, equilateral, or scalene.

HS.G.4.e Prove and apply geometric properties and theorems regarding triangles, congruence, and similarity using deductive reasoning.

HS.G.4.f Prove and apply geometric theorems about quadrilaterals using deductive reasoning.

DATA: Students will solve problems and reason with data/probability using multiple representations, make connections within math and across disciplines, and communicate their ideas.

HS.D.1 Data Collection and Statistical Methods: Students will formulate statistical investigative questions, collect data, and organize data.

HS.D.1.a Formulate multi-variable statistical investigative questions and determine how data can be collected and analyzed to provide an answer.

HS.D.1.b Apply an appropriate data collection plan when collecting primary data for the statistical investigative question of interest.

HS.D.1.c Use appropriate technology, including spreadsheet-based logic, to organize data for analysis.

HS.D.1.d Distinguish between surveys, observational studies, and experiments.

HS.D.1.e Understand what constitutes good practice in designing a sample survey, an experiment, and an observational study.

HS.D.1.f Understand issues of bias and confounding variables in a study and their implications for interpretation.

HS.D.2 Analyze Data and Interpret Results: Students will represent and analyze the data and interpret the results.

HS.D.2.a Identify appropriate ways to summarize and then represent the distribution of univariate data and bivariate data through the construction of histograms, dot plots, stem plots, box plots, cumulative relative frequency graphs, time plots, circle graphs, stacked bar graphs, and mosaic bar graphs by hand or with technology.

HS.D.2.b Describe the shape, identify any outliers, and determine the spread of a data set.

HS.D.2.c Select and determine the appropriate measure of center based on the shape of a distribution and/or the presence of outliers.

HS.D.2.d Recognize when a data set can be reasonably said to be normally distributed and draw conclusions about the data from the associated normal distribution.

HS.D.2.e Summarize categorical data for two categories in two-way frequency tables. Interpret relative frequencies in the context of the data and recognize possible associations and trends in the data.

HS.D.2.f Represent data on two quantitative variables on a scatter plot and describe how the variables are related.

HS.D.2.g Use technology to develop regression models for linear and non-linear data to predict unobserved outcomes. Interpret slope and y-intercept in the context of the problem.

HS.D.2.h Measure the strength of association using correlation coefficients for regression curves and interpret their meanings for the model.

HS.D.2.i Use residuals and residual plots to judge the quality of a regression model.

HS.D.2.j Recognize and explain when arguments based on data confuse correlation with causation.

HS.D.2.k Understand what constitutes statistical significance. Interpret statistical significance in the context of a situation and answer investigative questions appropriately.

HS.D.2.l Use probability as a tool for assessing risk and for informed decision making by interpreting P-values.

HS.D.3 Probability: Students will interpret and apply concepts of probability.

HS.D.3.a Describe events as subsets of a sample space using characteristics of the outcomes or as unions, intersections, or complements of other events.

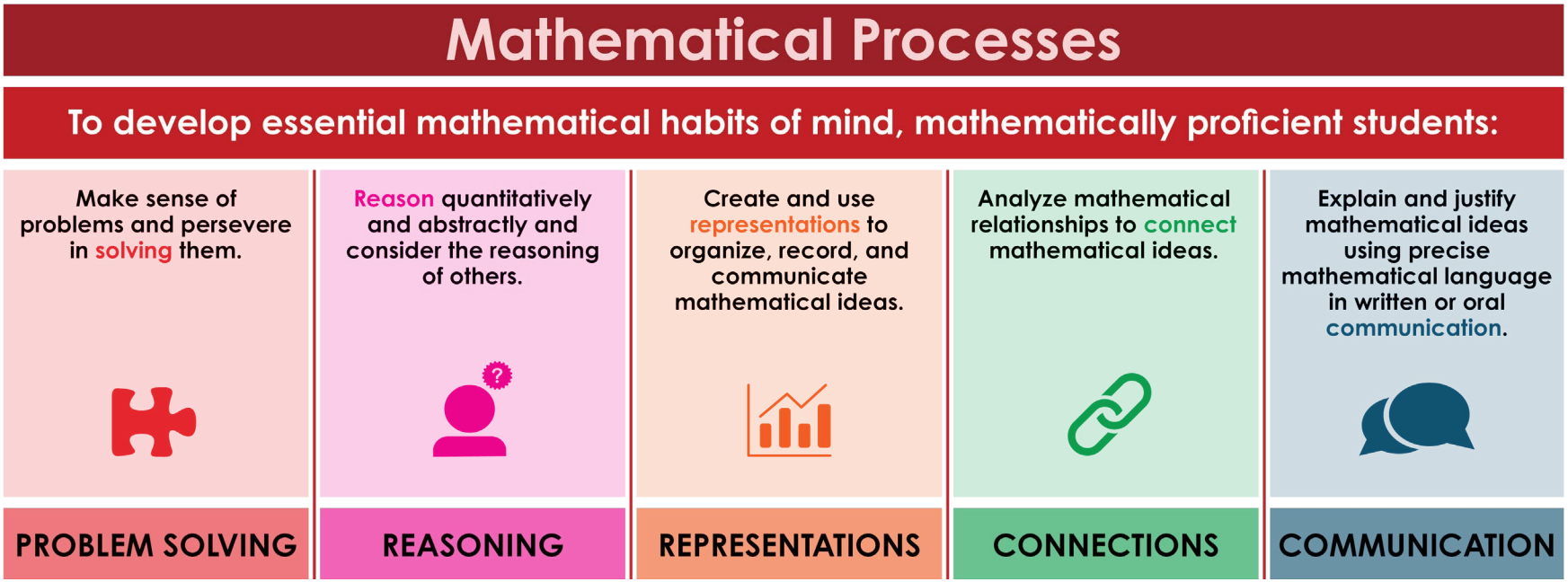
HS.D.3.b Explain independent versus dependent probability of an event.

HS.D.3.c Determine when order in counting matters and use permutations and combinations to compute probabilities of events accordingly.

HS.D.3.d Determine whether or not events are mutually exclusive (disjoint) and calculate their probabilities in either case.

HS.D.3.e Recognize and explain the concepts of conditional probability in everyday language and everyday situations.

High School Advanced Topics Standards



NUMBER: Students will solve problems and reason with number concepts using multiple representations, make connections within math and across disciplines, and communicate their ideas.

AT.N.1 Estimation and Technology: Students will use estimation strategies and technology to reason, to solve problems, and to make connections within mathematics and across disciplines.

AT.N.1.a Use domain and range restrictions to apply an appropriate viewing window while using graphing technology.

AT.N.1.b Compare and contrast radians and degrees as measures of angles and the reason graphing utilities tend to use radians as the default setting.

AT.N.2 Sets and Operations: Students will compare and contrast subsets and perform operations with subsets of the complex number system to reason and to solve problems.

AT.N.2.a Perform arithmetic operations with complex numbers.

AT.N.2.b Represent complex numbers and their operations in the complex plane.

AT.N.2.c Use complex numbers in polynomial identities and equations.

AT.N.2.d Represent quantities using bases other than decimal such as binary (base 2) or hexadecimal (base 16) and convert numbers to and from base 10.

AT.N.2.e Explain modular arithmetic and its role in computer programming.

AT.N.2.f Represent and model vector quantities.

AT.N.2.g Perform operations on vectors.

AT.N.2.h Perform operations on matrices and use matrices in applications.

AT.N.3 Interpretation and Sense Making: Students will reason abstractly and quantitatively using units to solve problems and interpret results in context.

AT.N.3.a Use vectors to communicate the geometric relationships between complex numbers in the complex plane.

ALGEBRA: Students will solve problems and reason with algebra using multiple representations, make connections within math and across disciplines, and communicate their ideas.

AT.A.1 Algebraic Relationships: Students will demonstrate and represent relationships with functions.

AT.A.1.a Analyze and graph nonlinear functions (trigonometric, rational, higher-order polynomials, logarithmic, and piecewise) and relations (conic sections) using their points of interest and graphing technology.

AT.A.1.b Use the unit circle to define the trigonometric functions on multiples of known angles (positive and negative multiples of 30 and 45 degrees or pi/6 and pi/4).

AT.A.1.c Given a function, list the sequence of algebraic transformations that changes a parent function to the given function.

AT.A.1.d Define the radian unit of measure and its relationship with degrees.

AT.A.2 Algebraic Processes: Students will apply the operational properties when evaluating nonlinear expressions and solving nonlinear equations and inequalities.

AT.A.2.a Explain symmetry of functions and determine whether a function is odd, even, or neither.

AT.A.2.b Represent, interpret, and analyze inverses of functions algebraically and graphically using domain restrictions when necessary.

AT.A.2.c Write equations of nonlinear functions (trigonometric, rational, higher-order polynomials, logarithmic and piecewise) using points of interest of the function.

AT.A.2.d Convert between radian and degree measures of an angle.

AT.A.2.e Use limits to describe the behavior of a function near its asymptotes and removable discontinuities.

AT.A.3 Applications: Students will solve authentic problems using nonlinear functions and relations.

AT.A.3.a Analyze and model authentic situations using various non-linear representations and relations with appropriate technology.

AT.A.3.b Analyze and model authentic application situations using various non-linear representations and relations with appropriate technology.

GEOMETRY: Students will solve problems and reason with geometry using multiple representations, make connections within math and across disciplines, and communicate their ideas.

TOOLS: Students will sketch, draw, and construct appropriate representations using a variety of tools and methods which may include ruler/straight edge, protractor, compass, reflective devices, paper folding, or dynamic geometric software.

AT.G.1 Attributes: Students will identify and describe geometric attributes, apply properties and theorems, and create two- dimensional shapes.

AT.G.1.a Apply the Law of Sines and the Law of Cosines to find unknown measures in triangles.

AT.G.2 Attributes: Students will identify and describe geometric attributes, apply properties and theorems, and create three-dimensional shapes.

AT.G.2.a Determine the three-dimensional object created by rotating or revolving a two-dimensional object about an axis.

AT.G.2.b Determine the shape of a two-dimensional cross-section of a three-dimensional object.

AT.G.2.c Use Cavalieri's Principle to determine volume of three-dimensional figures.

AT.G.3 Coordinate Geometry and Transformations: Students will demonstrate and represent location, orientation, and relationships on the coordinate plane.

AT.G.3.a Identify symmetry properties of a function (e.g., axis of symmetry of a parabola) and know the connection between its symmetry properties and specific transformations.

AT.G.3.b Recognize that translations can be described in terms of vectors.

AT.G.3.c Find the images and preimages of transformations of a point, shape, or relation on the coordinate plane, where transformations include the following compositions: reflections about lines of any rational slope passing through the origins, delations about the origin by any positive scale factor, and translations.

AT.G.3.d Explain the focus-directrix construction of a parabola and derive the equation of a parabola from focus and directrix for a parabola whose axis of symmetry is a coordinate axis.

AT.G.4 Logic and Proof: Students will use geometric definitions and theorems to reason abstractly and quantitatively.

AT.G.4.a Use known definitions and results in informal argumentation to construct logical arguments.

AT.G.4.b Distinguish between empirical reasoning, examples, and deductive reasoning, as well as informal and formal reasoning.

AT.G.4.c Evaluate the deductive consequences of alternative definitions of known objects (e.g., whether a trapezoid is defined as a quadrilateral with exactly one pair of parallel sides or defined as at least one pair of parallel sides).

DATA: Students will solve problems and reason with data/probability using multiple representations, make connections within math and across disciplines, and communicate their ideas.

AT.D.1 Data Collection and Statistical Methods: Students will formulate statistical investigative questions, collect data, and organize data.

AT.D.1.a Explain what constitutes good practice in designing a sample survey, an experiment, and an observational study.

AT.D.1.b Explain the use of randomization to reduce the influence of confounding or lurking variables.

AT.D.1.c Explain issues of bias and confounding variables in a study and their implications for interpretation.

AT.D.1.d Demonstrate knowledge of the role sampling distributions play in the estimation of an unknown population parameter through the use of appropriate sampling techniques.

AT.D.2 Analyze Data and Interpret Results: Students will represent and analyze the data and interpret the results.

AT.D.2.a Determine when a data set can be reasonably said to be normally distributed and draw conclusions about the data from the associated normal distribution.

AT.D.2.b Use technology to develop regression models for linear and non-linear data to predict unobserved

outcomes. Apply algebraic transformations to non-linear data to generate a linearized data set and employ linear regression techniques to analyze the non-linear data set.

AT.D.3 Probability: Students will interpret and apply concepts of probability.

AT.D.3.a Weigh the possible outcomes of a decision by assigning probabilities to payoff values and finding expected values. Interpret the expected value as the mean of a probability distribution.

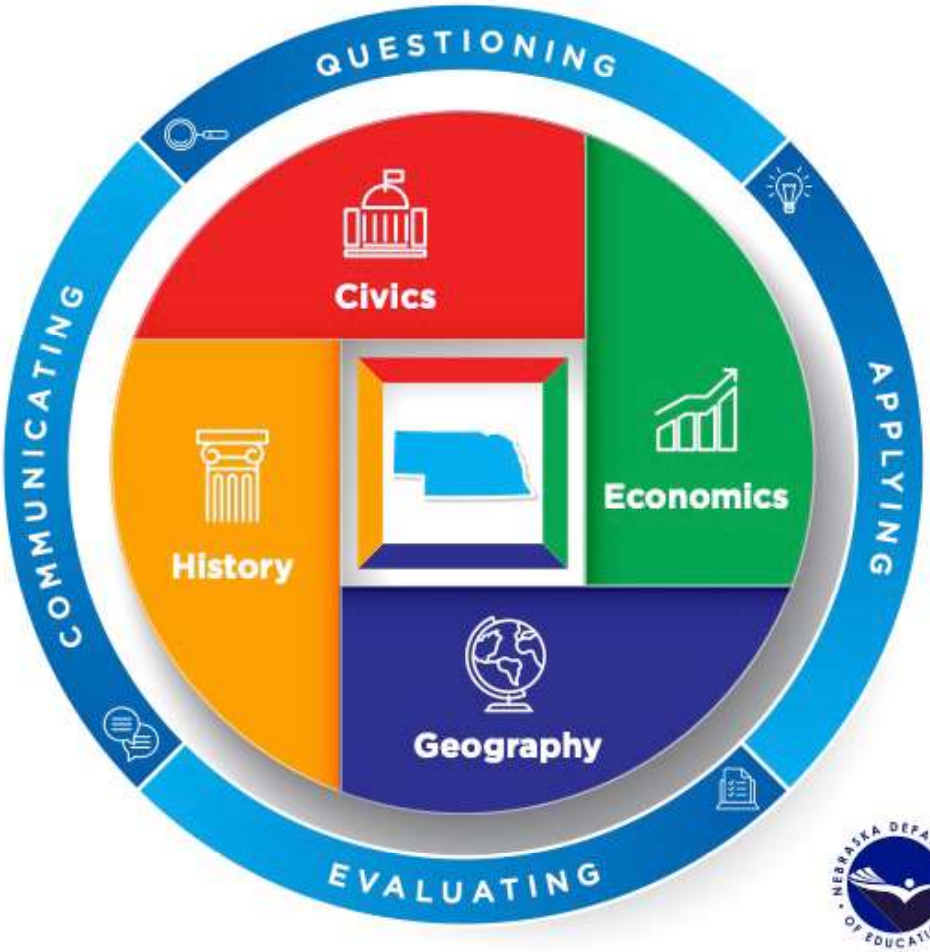
AT.D.3.b Communicate what constitutes statistical significance. Interpret statistical significance in the context of a situation and answer investigative questions appropriately.

AT.D.3.c Use data to compare two groups, describe sample variability, and decide if differences between parameters are significant based on the statistics.

AT.D.3.d Use probability as a tool for assessing risk and for informed decision making by computing and interpreting P-values.

AT.D.3.e Use confidence intervals to estimate an unknown population parameter.

NEBRASKA SOCIAL STUDIES STANDARDS



Approved by the Nebraska State Board of Education on November 8, 2019

Nebraska Social Studies Standards

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Content Area Standards

The Nebraska Social Studies Standards describe the knowledge and skills that students should learn, but they do not prescribe particular curriculum, lessons, teaching techniques, or activities. These standards create a framework for teaching and learning, and they articulate a trajectory for knowledge acquisition across all grade levels. This ensures that student learning builds on prior knowledge and becomes more in-depth over time. Standards describe what students are expected to know and be able to do, while the local curriculum and instructional materials are used to help students master the standards. Decisions about curriculum and instructional materials are made locally by individual school districts and classroom teachers. The Nebraska Department of Education does not mandate the curriculum or instructional materials used within a local school.

Organization and Structure of Nebraska's Social Studies Standards

The overall structure of Nebraska's Social Studies Standards reflects the two-tier structure common across all Nebraska content area standards. The two levels include standards and indicators. At the broadest level, standards include broad, overarching content-based statements that describe the basic cognitive, affective, or psychomotor expectations of student learning. The standards, across all grade levels, reflect long-term goals for learning. Indicators further describe what students must know and be able to do to meet the standard and provide guidance related to classroom instruction. Additionally, the indicators provide guidance related to the assessment of student learning. In addition to standards and indicators, the Nebraska Social Studies standards provide examples. The "For example…" statements provide guidance relative to topics that may be included in the locally determined curriculum. These suggestions may be used to meet the learning expectations of the standards and indicators.

For grades K-8, the standards and indicators are written at grade level. The K-8 standards and indicators are organized within four ***disciplines***: Civics, Economics, Geography, and History. Within those disciplines, standards and indicators are grouped by ***big ideas***. Big ideas are concepts, themes, or issues that give meaning and connection to facts and skills (Wiggins and McTighe, 2005, p. 5). The high school standards and indicators are written within one grade band (HS = 9-12), and they are also organized by discipline and big ideas. Prior to each grade level and the high school grade band, a summary statement and theme are included. This provides a high-level overview of what students are expected to learn at that grade level.

In addition to a common structure for content area standards, a consistent numbering system is used for content area standards. The Nebraska Social Studies Standards numbering system is as follows:

Kindergarten

Grade Level Summary and Theme

Myself and Others: In kindergarten, students begin their investigation of the world using perspectives, concepts, and skills from social studies. The context for social studies learning at this grade level is the student's interaction with classroom and school. The classroom serves as a microcosm of society in which decisions are made with respect to rights, rules, and responsibilities. Students begin to learn the basic concepts of fairness and respect for the rights and opinions of others.

Civics

Forms and Functions of Government

SS K.1.1 Communicate the purpose of rules and the roles within learning and living environments.

SS K.1.1.a Describe a rule and analyze its purpose.

For example: safety, to make learning possible, to protect freedoms, to ensure consistency for all

SS K.1.1.b Identify roles in a family structure and explain their importance.

For example: head of household, primary caregiver, parent/guardian, elders, siblings

Civic Participation

SS K.1.2 Demonstrate positive and productive citizenship skills.

SS K.1.2.a Model citizenship skills.

For example: respect, courtesy, honesty, voting, cultural virtues

SS K.1.2.b Communicate patriotic symbols, songs, actions, and cultural celebrations.

For example: U.S. Flag, Pledge of Allegiance, "Star-Spangled Banner," and "America the Beautiful," cultural songs

SS K.1.2.c Communicate historical background and significance of national holidays.

For example: George Washington's Birthday, Abraham Lincoln's Birthday, Dr. Martin Luther King, Jr.'s Birthday, Native American Heritage Day, Constitution Day, Memorial Day, Veterans Day, Thanksgiving Day

Economics

Economic Decision Making

SS K.2.1 Differentiate between wants and needs in decision-making.

SS K.2.1.a Classify wants and needs and explain subsequent choices.

Financial Literacy

SS K.2.2 Recognize money is used to purchase goods and services to satisfy economic wants and needs.

SS K.2.2.a Explain the purposes of money.

Exchange and Markets

SS K.2.3 Not addressed at this level

National Economy

SS K.2.4 Not addressed at this level

Global Economy

SS K.2.5 Not addressed at this level

Geography

Location and Place

SS K.3.1 Explore where (spatial) and why people, places and environments are organized in the world.

SS K.3.1.a Communicate personal directions to describe relative locations of people and objects.

For example: next to, over there, close to

SS K.3.1.b Identify locations in the school and around the classroom.

For example: left/right, up/down, front/back, over/under, near/far- supplies, trash can, pencil sharpener, other students, library, gym, office, restroom, cafeteria

SS K.3.1.c Identify geographic tools as representations of local and distant places.

For example: maps, globes, photographs, GPS (Global Positioning System)

SS K.3.1.d Identify the difference between land and water on a globe.

Regions

SS K.3.2 Explore places and regions.

SS K.3.2.a Identify physical characteristics of place.

For example: landforms, bodies of water, weather

SS K.3.2.b Identify human characteristics of place.

For example: cities, buildings, farms, roads, highways

Human-Environment Interaction

SS K.3.3 Explore the relationship between humans and their physical environment.

SS K.3.3.a Identify types of weather and the impact of weather on everyday life.

For example: rainy, snowy, sunny, cloudy, foggy - choice of clothing, rainouts

SS K.3.3.b Identify the four seasons.

SS K.3.3.c Inquire about how people prepare for and respond to severe weather.

For example: weather forecasting, tornado drills, winter clothing

Movement

SS K.3.4 Recognize that people belong to different groups and live in different settings.

SS K.3.4.a Identify students as members of various groups.

For example: scouts, sports, classrooms, families

SS K.3.4.b Identify places in the community where people may live.

For example: farms, houses, apartments

Geospatial Skills and Geo-literacy

SS K.3.5 Use geographic skills to make connections to students' lives.

SS K.3.5.a Apply geographic knowledge and techniques to navigate the classroom.

For example: Locate people or places in relation to each other, or make a fire evacuation plan for your home.

History

Change, Continuity, and Context

SS K.4.1 Recognize patterns of continuity and change over time in themselves and others.

SS K.4.1.a Identify concepts of time and chronology.

For example: yesterday, today, tomorrow

SS K.4.1.b Identify the sequence of personal events and their impact.

For example: daily schedule, timelines

Multiple Perspectives

SS K.4.2 Recognize different perspectives of events.

SS K.4.2.a Compare perspectives of self and others.
For example: events that occurred on the playground

Historical Analysis and Interpretation

SS K.4.3 Identify historical people, events, and symbols.

SS K.4.3.a Recognize historical people from a variety of cultures.
For example: George Washington, Harriet Tubman, Crazy Horse, Martin Luther King, Jr.

SS K.4.3.b Identify symbols of the United States.
For example: American flag, bald eagle, Washington Monument, Statue of Liberty

SS K.4.3.c Differentiate between stories from the present and the past.
For example: literary and informational, history vs. historical fiction, past and present including different cultural perspectives

Historical Inquiry and Research

SS K.4.4 Develop historical inquiry and research skills.

SS K.4.4.a Construct questions about personal history.
For example: "How did my family come to live in this place?" "Where were other members of my family born?"

SS K.4.4.b Identify and cite appropriate sources when conducting historical research.
For example: "My family member gave me this picture."

SS K.4.4.c Gather and communicate historical information.
For example: pictures, posters, and oral narratives

Grade 1

Grade Level Summary and Theme

Families - Living, Learning, and Working Together: In first grade, students develop their understanding of basic concepts and ideas from civics, economics, geography, and history. The context for social studies learning in first grade is the family and the ways they choose to live and work together. To develop students' understanding of the basic social studies concepts, students are asked to think about families nearby and those far away.

Civics

Forms and Functions of Government

SS 1.1.1 Analyze the relationship between roles and rules within learning and living environments

SS 1.1.1.a Explain how rules reduce and help resolve conflicts between people with different perspectives.

For example: classroom rules, playground rules, school rules, family rules

SS 1.1.1.b Identify leaders within a school community and explain the importance of their roles.

For example: teachers, administrators, nurse, playground supervisor, support staff

Civic Participation

SS 1.1.2 Demonstrate positive and productive citizenship skills.

SS 1.1.2.a Model and communicate citizenship skills.

For example: responsibility, voting or decision-making within a family structure, obeying civic laws, obeying family rules, cultural virtues

SS 1.1.2.b Identify patriotic symbols, songs, actions, holidays, and cultural celebrations.

For example: U.S. Flag, bald eagle, Pledge of Allegiance, national holidays, cultural songs

SS 1.1.2.c Communicate historical background and significance of national holidays.

For example: George Washington's Birthday, Abraham Lincoln's Birthday, Dr. Martin Luther King, Jr.'s Birthday, Native American Heritage Day, Constitution Day, Memorial Day, Veterans Day, and Thanksgiving Day, and the roles that different cultures played in our community/nation

SS 1.1.2.d Compare and contrast historical and current government figures that exemplify civic engagement.

For example: governors, civic leaders of marginalized groups such as Susan B. Anthony, Martin Luther King, Jr., Rosa Parks, Chief Standing Bear

Economics

Economic Decision Making

SS 1.2.1 Explain how scarcity necessitates making choices.

SS 1.2.1.a Identify gains and losses when choices are made.
For example: tradeoff, opportunity cost

Financial Literacy

SS 1.2.2 Compare spending and saving opportunities.

SS 1.2.2.a Give examples of situations where students and families could choose to save for future purchases.

Exchange and Markets

SS 1.2.3 Explain that resources are used to produce goods and services.

SS 1.2.3.a Categorize human and natural resources used to create goods and services.
For example: iron ore (a natural resource) is made into steel, which the factory worker (a human resource) uses to build a bike (a good)

National Economy

SS 1.2.4 Not addressed at this level

Global Economy

SS 1.2.5 Not addressed at this level

Geography

Location and Place

SS 1.3.1 Explore where (spatial) and why people, places, and environments are organized in the world.

SS 1.3.1.a Identify the four cardinal directions.

SS 1.3.1.b Identify and describe locations in schools and homes and explain reasons for the locations.
For example: Why is the cafeteria next to the kitchen? Why is the office by the front door? Why is the nurse's office often located near the main office? Why is the water fountain near the restroom?

SS 1.3.1.c Create and use maps.
For example: maps of the home and school

SS 1.3.1.d Distinguish between continents and oceans.

Regions

SS 1.3.2 Explore places and regions.

SS 1.3.2.a Identify and differentiate between physical features on maps, globes, graphics, and in the physical world.

For example: mountains, plains, islands, hills, oceans, rivers, lakes

SS 1.3.2.b Identify and differentiate between human features.

For example: cities, farms, buildings, bridges, streets

SS 1.3.2.c Explain how places change over time.

For example: new building, a bigger road

Human-Environment Interaction

SS 1.3.3 Explore the relationship between humans and their physical environment.

SS 1.3.3.a Interpret the impact of environmental hazards and severe weather on everyday life.

For example: tornado drills, snow days, floods

SS 1.3.3.b Identify Earth's natural resources.

For example: minerals, air, land, water, soil

SS 1.3.3.c Describe how people adapt to their physical environment.

For example: housing, reservations, land use, recreational activities, soil conservation, build dams

Movement

SS 1.3.4 Describe the characteristics of culture.

SS 1.3.4.a Identify cultural traits.

For example: languages, religions, foods, music, sports, clothing

SS 1.3.4.b Describe the characteristics of individual culture.

For example: foods, languages, celebrations

Geospatial Skills and Geo-literacy

SS 1.3.5 Use geographic skills to make connections to students' lives.

SS 1.3.5.a Apply geographic knowledge and techniques to navigate the school.

For example: Make a map of the school or playground.

History

Change, Continuity, and Context

SS 1.4.1 Recognize patterns of continuity and change over time in families.

SS 1.4.1.a List and describe life events over time.
For example: weekly, monthly, yearly, seasonal celebrations from different cultural perspectives

SS 1.4.1.b Compare and contrast family life from earlier times and today.
For example: "How was life different for earlier generations?"

Multiple Perspectives

SS 1.4.2 Identify multiple perspectives of diverse family traditions.

SS 1.4.2.a Compare and contrast family traditions across cultures.
For example: holidays, celebrations, milestones

Historical Analysis and Interpretation

SS 1.4.3 Describe historical people, events, and symbols.

SS 1.4.3.a Identify the contributions of historical people.
For example: Abraham Lincoln, Frederick Douglass, Martin Luther King, Jr., Standing Bear, Willa Cather, Susan LaFlesche

SS 1.4.3.b Identify symbols of the United States.
For example: national anthem, other patriotic songs

SS 1.4.3.c Describe how oral traditions, books, letters, and other artifacts help us to understand the past.
For example: show and tell of an artifact from the past, visiting a museum

Historical Inquiry and Research

SS 1.4.4 Develop historical inquiry and research skills.

SS 1.4.4.a Construct and answer questions about family history.
For example: "Where was I born?" "What do my family members remember from when I was a small child?"

SS 1.4.4.b Identify and cite appropriate texts, letters, and other artifacts for research.
For example: the title and author of the text from which information was taken

SS 1.4.4.c Gather and communicate historical information about families.
For example: picture, posters, and oral narratives

Grade 2

Grade Level Summary and Theme

Neighborhood: In second grade, students apply their emerging understanding of civics, economics, geography, and history to their communities and others around the world. Students learn about how their community works as well as the variety of ways that communities organize themselves. To develop conceptual understanding, students examine the geographic and economic aspects of life in their own neighborhoods and compare them to those of people long ago.

Civics

Forms and Functions of Government

SS 2.1.1 Investigate and defend the responsibilities and rights of citizens in their communities.

SS 2.1.1.a Contribute to developing rules by considering multiple points of view.

For example: classroom meetings, voting, consensus building activities

SS 2.1.1.b Demonstrate conflict management strategies as individuals, groups, and communities.

For example: respectful conversations, active participation, restating others' views, checking for understanding

Civic Participation

SS 2.1.2 Contribute to making decisions using democratic traditions based on established rules.

SS 2.1.2.a Identify and apply civic responsibilities that are important to individuals and their communities.

For example: voting, obeying laws, justice, equality, decision-making process in different cultures

SS 2.1.2.b Explain how patriotic symbols, songs, actions, celebrations, and holidays reflect democratic traditions.

For example: what the colors of the U.S. Flag represent, symbolism of the bald eagle, reasons for reciting the Pledge of Allegiance, why national holidays were established and celebrated, the origination of tribal songs, how cultural songs and symbols unify communities

SS 2.1.2.c Communicate historical background and significance of national holidays.

For example: George Washington's Birthday, Abraham Lincoln's Birthday, Presidents Day, Dr. Martin Luther King, Jr. Day, Native American Heritage Day, Constitution Day, Memorial Day, Veterans Day, and Thanksgiving Day

SS 2.1.2.d Investigate ways to be actively engaged to improve family, school, and community.

For example: volunteerism, participation in school clubs and organizations, classroom jobs, following rules, bully prevention

SS 2.1.2.e Model and communicate characteristics of good citizenship.

For example: establishing beliefs and justice, truth, equality, personal responsibilities for the common good, respect for diversity of opinions, cultural virtues

Economics

Economic Decision Making

SS 2.2.1 Evaluate choices about how to use scarce resources that involve prioritizing wants and needs.

SS 2.2.1.a. Justify a decision made by providing evidence of possible gains and losses.

For example: tradeoff, opportunity cost, delayed gratification, savings

Financial Literacy

SS 2.2.2 Demonstrate knowledge of currency, its denominations, and use.

SS 2.2.2.a Make transactions using currency emphasizing its use as a medium of exchange.

For example: via school store, buying pencils, purchases via debit card or Apple pay as a way to make transactions (medium of exchange)

Exchange and Markets

SS 2.2.3 Describe how producers deliver products/services, earn an income, and satisfy economic needs and wants.

SS 2.2.3.a. Explain the role of goods and services and supply and demand in a community.

For example: meet wants and needs

SS 2.2.3.b. Describe how people in their communities earn income/wages through work.

For example: babysitter, teacher, firefighter, grocery store clerk, librarian, banker, lawyer, rancher, farmer, laborer

National Economy

SS 2.2.4 Identify the goods and services governments provide.

SS 2.2.4.a Identify goods and services that local governments provide.

For example: water, fire department, police, educational programs

SS 2.2.4.b Explain how the local government uses taxes to pay for goods and services it provides.

For example: roads, fire and law enforcement, libraries, schools

Global Economy

SS 2.2.5 Not addressed at this level

Geography

Location and Place

SS 2.3.1 Explore where (spatial) and why people, places, and environments are organized in the world.

SS 2.3.1.a Compare and contrast maps and globes.
For example: The shape of a globe makes it look more realistic. You can't see all of the continents and oceans on the globe like you can on a map unless you turn it. Maps can be transported more easily. Globes might have texture for landforms that maps do not have.

SS 2.3.1.b Identify and describe locations in neighborhoods.
For example: home, the park, friend's house, fire station, grocery store

SS 2.3.1.c Identify and apply map elements.
For example: title, symbols, legend, and cardinal directions

SS 2.3.1.d Locate communities, Nebraska, and the United States on maps and globes.

SS 2.3.1.e Explain why things are located where they are in neighborhoods.
For example: Why are stores on a main street?

Regions

SS 2.3.2 Compare places and regions.

SS 2.3.2.a Identify and differentiate between physical and human features of neighborhoods and communities.
For example: vegetation, ravines, housing, streets, sewers, road signs

SS 2.3.2.b Describe local places and regions.
For example: prairie, forest, farm land, ranch land, local community

SS 2.3.2.c Explain how places and regions change over time.

Human-Environment Interaction

SS 2.3.3 Describe relationships between humans and the physical environment.

SS 2.3.3.a Identify examples of Earth's physical processes.
For example: wind and water erosion/deposition

SS 2.3.3.b Describe how seasonal weather patterns, natural hazards, and natural resources affect human activities.
For example: seasonal jobs (landscaping, street/grounds maintenance, construction), seasonal foods, drought causing water shortages

SS 2.3.3.c Match resources to their sources.
For example: food from farms, wood from trees, minerals from the ground, fish from bodies of water

SS 2.3.3.d Describe how people adapt to their physical environment.

For example: soil conservation, build levees, grow plants and raise animals

Movement

SS 2.3.4 Describe different groups of people and the different settings where they live.

SS 2.3.4.a Describe cultures of the local community and other communities.

For example: foods, languages, celebrations, religions, music, sports

SS 2.3.4.b Identify examples of cultural markers in the community.

For example: religious or institutional structures, names of streets, types of businesses, buildings

Geospatial Skills and Geo-literacy

SS 2.3.5 Use geographic skills to make connections to students' lives.

SS 2.3.5.a Apply geographic knowledge and techniques to navigate students' homes and neighborhoods.

For example: Use navigation tools to map out shortest route to school; Map the route of a school field trip to multiple destinations.

History

Change, Continuity, and Context

SS 2.4.1 Recognize patterns of continuity and change over time in neighborhoods.

SS 2.4.1.a Describe how a neighborhood has changed over the course of time using maps and other artifacts.

For example: pictures from school library/media center

SS 2.4.1.b Compare and contrast how different neighborhoods have changed over time.

For example: photographs of school building, materials from local historical society

Multiple Perspectives

SS 2.4.2 Compare multiple perspectives of events within neighborhoods.

SS 2.4.2.a Compare and contrast perspectives from multiple sources regarding the same event.

For example: Compare and contrast different holiday displays in your neighborhood.

Historical Analysis and Interpretation

SS 2.4.3 Determine past and current events, issues, and people relevant to a neighborhood.

SS 2.4.3.a Describe historical people, events, ideas, and symbols (including various cultures and ethnic groups) that impacted a neighborhood.

For example: library, police station, schools, local monuments, city hall, and tribal headquarters

Historical Inquiry and Research

SS 2.4.4 Develop historical inquiry and research skills.

SS 2.4.4.a Construct and answer questions about neighborhood history.

For example: What parks or community buildings are there? When were they built?

SS 2.4.4.b Identify, obtain, and cite appropriate primary and secondary sources for research.

For example: identifying titles and authors of texts where students located information

SS 2.4.4.c Gather and present historical information about a neighborhood.

For example: Ask questions of a guest speaker in the classroom.

Grade 3

Grade Level Summary and Theme

Communities Near and Far: In third grade, students begin to explore more complex concepts and ideas from civics, economics, geography, and history as they study the varied backgrounds of people living in Nebraska and how they relate to other regions of the United States. Emphasis is on cultures in the United States, including the study of Native Americans and other indigenous people (such as Pacific Islanders, Native Hawaiians, Native Alaskans). Students examine these cultures from the past and in the present and the impact they have had in shaping our contemporary society. They begin to look at issues and events from more than one perspective.

Civics

Forms and Functions of Government

SS 3.1.1 Analyze the structure and function of local governments.

SS 3.1.1.a Compare and contrast the structure and function of roles commonly found in local governments.

For example: mayor, city manager, city council, village board, tribal council

SS 3.1.1.b Communicate how and why a community creates laws.

For example: civil discourse, active participation, apply knowledge to address meaningful issues within our society

SS 3.1.1.c Investigate and summarize the roles that leaders and other citizens serve in local communities.

For example: city council, mayor, city manager, village clerk, county commissioner, sheriff's office, school board, neighborhood associations, PTA, tribal council

SS 3.1.1.d Justify the importance of roles that leaders and citizens serve in local government.

For example: creation of local laws, safety, transportation (roads department), economic development, management of public funds, enforcement of laws

Civic Participation

SS 3.1.2 Describe the impact of individual and group decisions at the community level.

SS 3.1.2.a Identify and model rights and responsibilities of citizens at the community level.

For example: voting, public service, service learning projects

SS 3.1.2.b Explain how patriotic symbols, songs, actions, celebrations, and holidays are recognized in local communities.

For example: flag etiquette, bald eagle, Pledge of Allegiance, national holidays

SS 3.1.2.c Communicate the background of national holidays or historical events, their significance, and how they are recognized in the local community.

For example: George Washington's Birthday, Abraham Lincoln's Birthday, Presidents Day, Dr. Martin Luther King, Jr. Day, Native American Heritage Day, Constitution Day, Memorial Day, Veterans Day, Thanksgiving Day, Patriots' Day (Recognition of 9/11)

SS 3.1.2.d Identify and engage in opportunities to serve the local community.

For example: volunteerism, service learning, participation in community clubs and organizations

SS 3.1.2.e Engage in discourse that demonstrates respect and consideration of multiple points of view.

For example: class meetings, observe a city council meeting, school board meeting, class debate

SS 3.1.2.f Describe the decisions of local leaders and how they affect public policy.

For example: recycling/trash hauling plan, city snow removal, disaster relief

Economics

Economic Decision Making

SS 3.2.1 Explain that people choose and decide what services they ask their local and state government to provide and pay for.

SS 3.2.1.a Identify goods and services funded through state or local taxes.

For example: snow removal, waste management, law enforcement

Financial Literacy

SS 3.2.2 Evaluate choices and consequences for spending and saving.

SS 3.2.2.a Given a budget, make choices as to what to purchase, what to give up, and what to save.

Exchange and Markets

SS 3.2.3 Explain that markets are places where buyers and sellers exchange goods and services.

SS 3.2.3.a Indicate various markets where buyers and sellers meet.

For example: grocery store, buy things online, mall, fast food places

National Economy

SS 3.2.4 Describe how the local community trades with other communities.

SS 3.2.4.a Identify local goods and services that could be traded with people everywhere.

For example: corn, soybeans, beef, irrigation systems, dry edible beans, art, buffalo hides, fish

Global Economy

SS 3.2.5 Not addressed at this level

Geography

Location and Place

SS 3.3.1 Explore where (spatial) and why people, places, and environments are organized in the world.

SS 3.3.1.a Identify and apply map elements.

For example: title, scale, symbols, legend, and cardinal and intermediate directions

SS 3.3.1.b Use a map to identify location and distribution of physical and human features.

For example: rivers/roads, cities/towns, bodies of water, landforms

SS 3.3.1.c Determine why things are located where they are in the community.

For example: Why are stores located on main streets? Why are schools near homes? What might be a better location for a school?

SS 3.3.1.d Locate specific places on maps and globes.

For example: Missouri River, Platte River, Rocky Mountains, Nebraska, the student's community

SS 3.3.1.e Identify the continents, oceans, and hemispheres.

Regions

SS 3.3.2 Compare the characteristics of places and regions.

SS 3.3.2.a Identify and differentiate between physical and human features of neighborhoods and communities.

For example: vegetation, hills, waterways, housing, streets, business/residential areas

SS 3.3.2.b Compare and contrast local places and regions with other places and regions.

For example: prairie and forest, local community with another community, life on and off a reservation, products from Nebraska and another state, crops grown in Nebraska and another state

SS 3.3.2.c Explain how and why places and regions change over time.

For example: population growth (more housing, schools), demolition/renovation of old/unsafe structures, flood control measures

Human-Environment Interaction

SS 3.3.3 Explain relationships between humans and the physical environment.

SS 3.3.3.a Describe how the environment influences human activities and how humans alter the environment to suit their needs.

For example: climate, water cycle, soil fertility impact agricultural production, usage of land and energy - land formation impacts transportation and communication, agriculture, transportation, industry, use of natural resources, regulations/practices to protect the environment

SS 3.3.3.b Identify ecosystems.

For example: forests, deserts, grasslands

SS 3.3.3.c Explain the importance of Earth's natural resources.

For example: minerals, air, water, land

SS 3.3.3.d Describe how humans develop communities in local settings.

For example: roads, landfills, utilities, land use patterns

Movement

SS 3.3.4 Compare and contrast the characteristics of local cultures.

SS 3.3.4.a Compare and contrast cultural traits within a community.

For example: languages, religions, foods, music, sports

SS 3.3.4.b Describe examples of how and why cultures change in a community.

For example: technology, education, employment, migration

Geospatial Skills and Geo-literacy

SS 3.3.5 Use geographic skills to make connections to issues and events.

SS 3.3.5.a Identify and evaluate how changes in human and physical geography have shaped the community.

For example: placement of schools/hospitals, building of roads, access to water sources, suitable soil for farming

History

Change, Continuity, and Context

SS. 3.4.1 Detect and apply patterns of continuity and change over time in communities (town or city).

SS 3.4.1.a Describe community events over time using maps and other artifacts.

For example: weekly, monthly, yearly, seasonal happenings

SS 3.4.1.b Compare and contrast how different communities have changed over time.

For example: parks and playground equipment, different economic communities, different kinds of schools, compare rural and urban communities

Multiple Perspectives

SS 3.4.2 Describe and explain multiple perspectives of events within a community.

SS 3.4.2.a Describe the role of diverse groups of people, events, and ideas in the development of a community.

For example: local cultural figures, landmarks, celebrations, cultural events

SS 3.4.2.b Compare and contrast conflicting perspectives about a past event in a community.

For example: widening a street, where to construct a park or building

Historical Analysis and Interpretation

SS 3.4.3 Select past and current events and people relevant to the community.

SS 3.4.3.a Determine factual information about community historical events through use of a variety of sources such as artifacts, pictures, and documents.

For example: local cultural figures, landmarks, celebrations, cultural events

SS 3.4.3.b Identify how decisions affected events in a community.

For example: decisions on location, growth, etc.

Historical Inquiry and Research

SS 3.4.4 Develop historical inquiry and research skills.

SS 3.4.4.a Construct and answer questions about multiple community histories from viewpoints of that community.

For example: How does the founding of a town differ for different groups? Why?

SS 3.4.4.b Identify, obtain, and cite appropriate primary and secondary sources for research about the local community.

For example: Local newspapers, town charters, and local treaties

SS 3.4.4.c Gather and communicate historical information about the community.

For example: Interview a community member, find community resources

Grade 4

Grade Level Summary and Theme

Nebraska Studies: In fourth grade, students use their understanding of social studies concepts and skills to explore Nebraska in the past and present. Students learn about the state's unique geography and key eras in early Nebraska history, particularly the treaty-making period. They use this historical perspective to help them make sense of the state's geography, economy, and government today. The cognitive demand of many grade level expectations begins to include analysis and asks students to look at issues and events from multiple perspectives.

Civics

Forms and Functions of Government

SS 4.1.1 Synthesize and justify the structure and function of Nebraska's government.

SS 4.1.1.a Investigate and summarize the historical foundation and events that led to the formation and structure of Nebraska's Constitution and government.

For example: modeled from U.S. government, three branches of government

SS 4.1.1.b Analyze the origin, structure, and function of Nebraska's state government.

For example: Unicameral vs. Bicameral structure, journey from territory status to statehood, state services/responsibilities vs. national or local services/responsibilities, three branches of Nebraska government

SS 4.1.1.c Communicate how a bill becomes a law in the Nebraska unicameral.

For example: introduction of a bill, committee hearings, legislative debate, governor approval/veto, ratification

SS 4.1.1.d Investigate and summarize the roles that leaders and other citizens serve in Nebraska to equitably represent all residents in the state.

For example: legislative districts, cultural advocacy groups

SS 4.1.1.e Justify the importance of roles that leaders and citizens serve in Nebraska government.

For example: governor, state senators, judiciary, tribal leaders, advocacy group participants

Civic Participation

SS 4.1.2 Investigate how different perspectives impact government decisions at the state level.

SS 4.1.2.a Identify and model rights and responsibilities of citizens at the state level.

For example: voting, public service, service learning projects

SS 4.1.2.b Investigate the meaning of state symbols, songs, and holidays.

For example: Nebraska state flag, "Beautiful Nebraska," state and national holidays

SS 4.1.2.c Communicate background of Nebraska state holidays or historical events, their significance, and how they are recognized.

For example: Arbor Day, George Norris Day and Nebraska Statehood Day, Native American Heritage Day

SS 4.1.2.d Identify and engage in opportunities to serve the state.

For example: volunteerism, service learning, participation in state clubs and organizations

SS 4.1.2.e Explain how individuals and groups influence the way a state issue is viewed and resolved.

For example: lobbying, petitions, media, social media

SS 4.1.2.f Analyze the decisions of state leaders and how they impact public policy.

For example: seatbelt law, state testing, speed limits, state parks

Economics

Economic Decision Making

SS 4.2.1 Describe how scarcity requires the consumer and producer to make choices and identify costs associated with them.

SS 4.2.1.a Predict how consumers would react if the price of a good or service changed.

For example: Price of gasoline increases; price of haircuts increases; price of milk/bread/sugar increases - would buy less or start to change behavior toward buying less, i.e., plan a carpool and get hair cut less often. Price of something decreases and buy more of it.

SS 4.2.1.b Predict how producers would react if the profit from selling a good or service changed.

For example: You produce widgets and they have become very popular and the price is rising, what would you do – produce more. In a natural disaster, because of scarcity prices tend to rise for things like water and lumber, if you produced water and/or lumber, the increased price would incentivize you to get more of things where they were needed.

Financial Literacy

SS 4.2.2 Investigate various financial institutions in Nebraska and the reasons for people's spending and saving choices.

SS 4.2.2.a Identify financial institutions in the community and their purposes.

For example: a field trip to a bank/credit union or a representative to discuss how banks ensure your money is safe and how they loan money to help businesses grow and help people buy housing among other things

Exchange and Markets

SS 4.2.3 Investigate how resources are used to make other goods and produce services.

SS 4.2.3.a Give examples of human, natural, capital, and entrepreneurial resources used in making goods and services in Nebraska and the United States.

For example: human resources (labor), tools used in agriculture, laboratories, equipment, and machinery, game/video designers

National Economy

SS 4.2.4 Identify and explain specialization and trade and why different regions produce different goods and services.

SS 4.2.4.a Compare Nebraska with different regions and the goods and services each region produces.

For example: beef, wheat, telemarketing, cotton, coal, beekeeping, tribal traditional art (beading)

SS 4.2.4.b Discuss how technology has affected the specialization of Nebraska's economy and surrounding states.

For example: irrigation, agriculture and farm equipment, online trading, geospatial technology (GIS [Geographic Information Systems] and GPS [Global Positioning System])

Global Economy

SS 4.2.5 Not addressed at this level

Geography

Location and Place

SS 4.3.1 Explore where (spatial) and why people, places, and environments are organized in the state and around the world.

SS 4.3.1.a Use local and state maps and atlases to locate physical and human features in Nebraska.

For example: major cities, bodies of water, landforms, interstate/highways, railroads, state parks, tribal reservations

SS 4.3.1.b Apply map skills to analyze physical/political maps of the state.

For example: Utilize grid systems to find locations, identify the location and purpose of time zones, and identify and locate cities using relative and absolute locations.

SS 4.3.1.c Determine why things are located where they are in Nebraska.

For example: Why are large cattle ranches found in the Sandhills? Why are major airports located near large cities? What determined the route of I-80?

SS 4.3.1.d Differentiate between classifications of bodies of water, cities, and land masses.

For example: lakes, rivers, capital city, county seats, major urban centers, plains, river valleys, Sandhills

Regions

SS 4.3.2 Compare the characteristics of places and regions and their impact on human decisions.

SS 4.3.2.a Identify criteria used to define regions in the state of Nebraska and the United States.

For example: soil, climate, precipitation, population, natural vegetation, land and agricultural usage

SS 4.3.2.b Classify regions and places within the state of Nebraska using physical and human features.

For example: Sandhills, Pine Ridge, Loess Hills, Platte River Valley, rural/urban/suburban, counties and cities

Human-Environment Interaction

SS 4.3.3 Explain how human and natural forces have modified different environments in Nebraska and how humans have adapted.

SS 4.3.3.a Identify physical processes that shape Nebraska's features and patterns.

For example: weathering, erosion, deposition, drought

SS 4.3.3.b Identify examples of ecosystems in Nebraska and describe related environmental issues.

For example: forests, wetlands, grasslands, and rivers, runoff, flooding, erosion, wildfires

SS 4.3.3.c Describe the impact of extreme natural events on the human and physical environment in Nebraska.

For example: tornadoes, floods, dust storms, insect infestations result in changes to agricultural/construction/public safety practices

SS 4.3.3.d Describe how humans have adapted to Nebraska's physical environment and use available natural resources.

For example: progression of home construction materials, agriculture, irrigation, introduction of trees, soil conservation, soil, timber, surface water and ground water

Movement

SS 4.3.4 Compare and contrast the characteristics of culture statewide.

SS 4.3.4.a Compare and contrast patterns of culture within the state of Nebraska.

For example: languages, religions, foods, music, sports, celebrations

SS 4.3.4.b Compare and contrast population characteristics of the state of Nebraska.

For example: density, distribution, growth rates due to available jobs, resources

Geospatial Skills and Geo-literacy

SS 4.3.5 Use geographic skills to make connections to issues and events.

SS 4.3.5.a Identify and evaluate how changes in human and physical geography have shaped Nebraska.

For example: map major tornado paths, blizzards, floods, or droughts; how the construction of the Transcontinental Railroad and Interstate Highway system have impacted the way Nebraskans live, locations and reasons for tribal reservations

SS 4.3.5.b Explain the interrelationships of human or physical geographic characteristics of places in Nebraska.

For example: A community is located on a river floodplain with fertile soil and water for transportation, irrigation, and human consumption.

History

Change, Continuity, and Context

SS 4.4.1 Investigate patterns of continuity and change over time in Nebraska.

SS 4.4.1.a Analyze the chronology of key state and/or regional events and communicate their impact on the past, present, and future.

For example: timelines, before and after statehood

Multiple Perspectives

SS 4.4.2 Analyze and explain multiple perspectives of events in Nebraska, including historically marginalized and underrepresented groups.

SS 4.4.2.a Compare and contrast primary and secondary sources to better understand multiple perspectives of the same event.

For example: The Homestead Act, Oregon Trail diaries, military journal of Ponca Removal, Standing Bear testimony

SS 4.4.2.b Identify and describe how various sources relate their perspectives of Nebraska history.

For example: texts and primary documents, primary documents from differing groups of people

Historical Analysis and Interpretation

SS 4.4.3 Analyze past and current events throughout Nebraska history.

SS 4.4.3.a Analyze key sources in Nebraska history to determine credibility and context.

For example: accounts from settlers and Nebraska tribes, foundational documents in Nebraska

SS 4.4.3.b Identify key events in American history that shaped or were shaped by Nebraskans.

For example: Kansas-Nebraska Act, Homestead Act, Ponca Trail of Tears, Santee Exile and Winnebago Removal, North Platte Canteen, Orphan Train, Native American Boarding Schools, World War I, Will Brown, World War II, Tuskegee Airmen, Great Depression, Cold War, Civil Rights Movement, September 11, 2001

Historical Inquiry and Research

SS 4.4.4 Develop historical inquiry and research skills.

SS 4.4.4.a Construct and answer questions about Nebraska history.

For example: Why did people migrate and/or relocate to Nebraska?

SS 4.4.4.b Identify and cite primary and secondary sources to research the history of Nebraska.

For example: document archives, newspapers, interviews

SS 4.4.4.c Gather, analyze, and communicate historical information about Nebraska.

For example: collect oral histories from community members, research newspaper archives

Grade 5

Grade Level Summary and Theme

U.S. Studies: In fifth grade, students use their understanding of social studies concepts and cause and effect relationships to study Pre-Columbian cultures, the development of the American colonies, and the creation of the United States through the writing of the U.S. Constitution. By applying what they know from civics, economics, and geography, students learn the ideals, principles, and systems that shaped this country's founding. They conclude the fifth grade by applying their understanding of the country's founding and the ideals in the nation's fundamental documents to issues of importance to them today. This learning forms the foundation and understanding of social studies concepts that will provide students with the ability to examine their role in the community, state, nation, and world.

Civics

Forms and Functions of Government

SS 5.1.1 Synthesize and justify the structure and function of the United States government.

SS 5.1.1.a Investigate and summarize contributions that resulted in the historical foundation and formation of the United States constitutional government.

For example: early state constitutions, Declaration of Independence, and the Articles of Confederation, Magna Carta, English Bill of Rights, tribal constitutions

SS 5.1.1.b Identify and explain the structure and functions of the three branches of government.

For example: legislative, executive, judicial

SS 5.1.1.c Analyze how colonial and new states' governments' laws affected majority groups and marginalized groups within their population.

For example: citizens, enslaved persons, Native American tribes, immigrants, women, class systems

SS 5.1.1.d Evaluate how the decisions of the national government affect local and state government and citizens of diverse backgrounds.

For example: three-fifths clause, treaties, voting requirements, slavery

SS 5.1.1.e Justify the principles of the American Republic.

For example: liberty, representative democracy, United States Constitution, Bill of Rights

SS 5.1.1.f Analyze and contrast forms of government.

For example: Tribal, British monarchy, early American colonial governments

Civic Participation

SS 5.1.2 Analyze democratic principles that are the foundation of the United States government systems in daily life.

SS 5.1.2.a Explore and communicate the constitutional rights and civic responsibilities of U.S. citizens.

For example: freedom of speech, voting, staying informed of issues, respecting the rights, opinions, and beliefs of others, joining a civic group

SS 5.1.2.b Communicate origins of national and state holidays including historical background and significance.

For example: George Washington's Birthday, Abraham Lincoln's Birthday, Presidents Day, Dr. Martin Luther King, Jr. Day, Native American Heritage Day, Constitution Day, Memorial Day, Veterans Day, Thanksgiving Day, Citizenship Day, tribal flag songs, Native American Day

SS 5.1.2.c Interpret and communicate the significance of patriotic symbols, songs, and activities.

For example: significance of the flag, Fourth of July, Constitution Day, George Washington's birthday, military songs from the Revolutionary War, tribal songs, the Liberty Bell

SS 5.1.2.d Explore models of group and individual actions that illustrate civic ideas in the founding of the United States.

For example: George Washington, Boston Tea Party, Continental Congress, Federalist Papers, Sons of Liberty, *Common Sense* by Thomas Paine, Mayflower Compact

SS 5.1.2.e Examine how cooperation and conflict among people have contributed to political, economic, and social events and situations in the United States.

For example: communication through civil discourse historically and presently, constitutional compromises, Continental Congress

SS 5.1.2.f Determine how the roles of individuals and groups influenced government.

For example: George Washington, John Adams, Abigail Adams, Thomas Jefferson, Benjamin Franklin, sovereign Native Americans, Patriots, Loyalists, European governments,

Economics

Economic Decision Making

SS 5.2.1 Not addressed at this level

Financial Literacy

SS 5.2.2 Not addressed at this level

Exchange and Markets

SS 5.2.3 Explain how human capital can be improved by education and training and thereby increase standards of living.

SS 5.2.3.a List examples of how additional education/training improves productivity and increases standards of living.

For example: On the job training, education can all lead to higher wages.

SS 5.2.4 Explain how specialization, division of labor, and technology increase productivity and interdependence.

SS 5.2.4.a Describe the historical role of innovation and entrepreneurship in a market economy.

For example: apprentice, journeyman, early inventors and entrepreneurs

National Economy

SS 5.2.5 Summarize characteristics of economic institutions in the United States.

SS 5.2.5.a Describe the importance of financial institutions to households and businesses.

For example: loans to agriculture, business, and individuals in order to provide capital; importance of rule of law to enforce contracts and provide for private property

SS 5.2.5.b Explain the rules and laws that protect and support consumers.

For example: contracts, agreements, and product safety

SS 5.2.5.c Identify goods and services funded through federal taxes.

For example: military and armed forces, parks

Global Economy

SS 5.2.6 Summarize how specialization and trade impact the global market and relationships with other countries.

SS 5.2.6.a Describe how international trade promotes specialization and division of labor and increases the productivity of labor, output, and consumption.

For Example: New England specialized in ship building and fishing, South Carolina grew rice, the Middle Colonies had grain, and the Upper South grew tobacco and got finished goods like books from Great Britain.

SS 5.2.6.b Explain how trade impacts relationships between countries.

For example: fur, tobacco, cotton, lumber, triangle trade, tribal trading with settlers

Geography

Location and Place

SS 5.3.1 Explore where (spatial) and why people, places, and environments are organized in the United States.

SS 5.3.1.a Use maps and atlases to locate major human and physical features in the United States.

For example: states, capitals and major cities, Rocky Mountains, Appalachian Mountains, Great Lakes

SS 5.3.1.b Apply map skills to analyze physical/political maps of the United States.

For example: Identify latitude/longitude and the global grid, and the ocean currents, trade winds.

SS 5.3.1.c Determine why things are located where they are in the United States.

For example: Why were the 13 colonies located on the eastern side of the United States? Why was corn raised in Pennsylvania and Ohio and cotton in Virginia and Georgia?

Regions

SS 5.3.2 Compare the characteristics of places and regions and draw conclusions on their impact on human decisions.

SS 5.3.2.a Identify criteria used to define regions within the United States.

For example: location, climate, industry, landforms, bodies of water

SS 5.3.2.b Identify and classify regions and places within the United States using physical and human features.

For example: Tidewater, New England, Hudson Valley, congressional districts

Human-Environment Interaction

SS 5.3.3 Explain how human and natural forces have modified different environments in the United States and how humans have adapted.

SS 5.3.3.a Identify examples of ecosystems and analyze issues related to the natural setting in the United States.

For example: forests, deserts, grasslands, deforestation, wildfires, urban sprawl, flooding, erosion, strip mining

SS 5.3.3.b Describe the impact of extreme natural events in the United States on the human and physical environment.

For example: lightning, blizzards, floods, drought, hurricanes, tornadoes result in changes to agricultural/construction/public safety practices

SS 5.3.3.c Examine patterns of resource distribution and utilization in the United States.

For example: fisheries, forests, agricultural development, manufacturing regions

Movement

SS 5.3.4 Compare, contrast, and draw conclusions about the characteristics of culture and migration in the United States.

SS 5.3.4.a Compare and contrast patterns of culture within the United States over time and space.

For example: languages, religions, foods, music, sports, celebrations

SS 5.3.4.b Compare and contrast population characteristics of the United States.

For example: density, distribution, growth rates

SS 5.3.4.c Explain reasons for historical and present day migrations to and within the United States.

For example: economic opportunity, war, famine, natural disasters, persecution

Geospatial Skills and Geo-literacy

SS 5.3.5 Use geographic skills to interpret issues and events.

SS 5.3.5.a Explain the influences of physical and human geographic features on events in the United States.

For example: Developing major settlements around natural East Coast harbors such as New York City (New Amsterdam), building the Boston Post Road to improve connections and communications within the colonies, migrating through the Cumberland Gap into the Kentucky bluegrass region

SS 5.3.5.b Analyze aspects of human and physical geography that have shaped the settlement and development of Early America.

For example: latitude and longitude in the role of early navigation, groundwater and irrigation, westward expansion of European immigrants, seeds, fertile soils, agriculture, transportation systems, water power

History

Change, Continuity, and Context

SS 5.4.1 Investigate patterns of continuity and change over time from the Pre-Columbian era through the Constitution.

SS 5.4.1.a Examine the chronology of key events in the United States and communicate their impact on various groups in the past, present, and future.

For example: Development of civilizations in America before Columbus, founding of colonies, Native American responses to colonization, coming of American Revolution, founding of United States, creation of the United States Constitution, Bill of Rights, the gradual abolition of slavery in the northern states

Multiple Perspectives

SS 5.4.2 Describe and explain multiple perspectives of historical events in the Pre-Columbian era through the Constitution including marginalized and underrepresented groups.

SS 5.4.2.a Compare and contrast primary and secondary sources to better understand multiple perspectives of the same event.

For example: The Boston Massacre, Declaration of Independence, United States Constitution, historical biographies

SS 5.4.2.b Identify and describe how multiple perspectives facilitate the understanding of US history.

For example: Battle for the Old Northwest, Atlantic Slave Trade

Historical Analysis and Interpretation

SS 5.4.3 Analyze past and current events and challenges from the Pre-Columbian era through the Constitution.

SS 5.4.3.a Compare the impact of people, events, ideas, and symbols on various cultures and ethnic groups in the Pre-Columbian era through the Constitution.

For example: Native American cultures, exploration, conflict, colonization, the emergence of democratic institutions, the Revolution, founders and founding documents, the unique nature of the creation of the United States leading to a nation based upon personal freedom, inalienable rights, and democratic ideals, and other patriotic national symbols

Historical Inquiry and Research

SS 5.4.4 Apply the inquiry process to construct and answer historical questions.

SS 5.4.4.a Construct and answer questions about the Pre-Columbian era through the Constitution based on multiple sources.

For example: Why did people migrate to the Americas?

SS 5.4.4.b Evaluate and cite appropriate primary and secondary sources to research the Pre-Columbian era through the Constitution.

For example: use of appropriate citation format; determine the credibility, contextualization, and corroboration of sources

SS 5.4.4.c Gather, analyze, and communicate historical information from the Pre-Columbian era through the Constitution from multiple sources.

For example: document archives, artifacts, newspapers, interviews, pictures, posters, oral/written narratives, and electronic presentation

Nebraska Social Studies Standards

Middle School Standards Introduction: The purpose of Nebraska's 6-8 Social Studies Standards is to integrate important subject matter and skills, and to provide students a robust understanding of grade-specific concepts. The standards should not be viewed in isolation, but as a unifying approach to social studies curriculum and instruction.

6th Grade	7th Grade	8th Grade
Civics		
SS 6.1.1 Investigate the foundations, structures, and functions of governmental institutions.	SS 7.1.1 Analyze the foundations, structures and functions of governmental institutions.	SS 8.1.1 Investigate and analyze the foundation, structure, and functions of the United States government.
SS 6.1.2 Investigate the roles, responsibilities, and rights of citizens.	SS 7.1.2 Analyze the roles, responsibilities, and rights of citizens and groups in international societies.	SS 8.1.2 Evaluate the roles, responsibilities, and rights as local, state, national, and international citizens.
Economics		
SS 6.2.1 Investigate how economic decisions affect the well-being of individuals and society.	SS 7.2.1 Not addressed at this level	SS 8.2.1 Not addressed at this level
SS 6.2.2 Not addressed at this level	SS 7.2.2 Not addressed at this level	SS 8.2.2 Understand personal and business financial management.
SS 6.2.3 Explain the interdependence of producers and consumers.	SS 7.2.3 Not addressed at this level	SS 8.2.3 Not addressed at this level
SS 6.2.4 Not addressed at this level	SS 7.2.4 Investigate how varying economic systems impact individuals in a civilization/society.	SS 8.2.4 Justify and debate economic decisions made by North American societies.
SS 6.2.5 Not addressed at this level	SS 7.2.5 Analyze information using appropriate data to draw conclusions about the total production, income, and economic growth in various economies.	SS 8.2.5 Illustrate how international trade impacts individuals, organizations, and nations.
SS 6.2.6 Not addressed at this level	SS 7.2.6 Illustrate how international trade impacts individuals, organizations, and nations/societies.	

Nebraska Social Studies Standards

6th Grade	7th Grade	8th Grade
Geography		
SS 6.3.1 Identify where (spatial) and why people, places, and environments are organized on the Earth's Surface.	SS 7.3.1 Not addressed at this level	SS 8.3.1 Not addressed at this level
SS 6.3.2 Not addressed at this level	SS 7.3.2 Evaluate how regions form and change over time.	SS 8.3.2 Examine how regions form and change over time.
SS 6.3.3 Identify how the natural environment is changed by natural and human forces, and how humans adapt to their surroundings.	SS 7.3.3 Determine how the natural environment is changed by natural and human forces and how humans adapt to their surroundings.	SS 8.3.3 Determine how the natural environment is changed by natural and human forces and how humans adapt to their surroundings.
SS 6.3.4 Interpret and summarize patterns of culture around the world.	SS 7.3.4 Examine and interpret patterns of culture around the world.	SS 8.3.4 Not addressed at this level
SS 6.3.5 Not addressed at this level	SS 7.3.5 Compare issues and/or events using geographic knowledge and skills to make informed decisions.	SS 8.3.5 Not addressed at this level
History		
6.4.1 Analyze patterns of continuity and change over time in world history.	SS 7.4.1 Compare patterns of continuity and change over time in world history.	SS 8.4.1 Analyze patterns of continuity and change over time in United States history.
SS 6.4.2 Use multiple perspectives to identify the historical, social, and cultural context of past and current events.	SS 7.4.2 Use multiple perspectives to examine the historical, social, and cultural context of past and current events.	SS 8.4.2 Use multiple perspectives to evaluate the historical, social, and cultural context of past and current events.
SS 6.4.3 Examine historical events from the perspectives of marginalized and underrepresented groups.	SS 7.4.3 Examine historical events from the perspectives of marginalized and underrepresented groups.	SS 8.4.3 Examine historical events from the perspectives of marginalized and underrepresented groups.
SS 6.4.4 Interpret and evaluate sources for historical context.	SS 7.4.4 Analyze and interpret sources for perspective and historical context.	SS 8.4.4 Evaluate and interpret sources for perspective and historical context.
SS 6.4.5 Apply the inquiry process to construct and answer historical questions.	SS 7.4.5 Apply the inquiry process to construct and answer historical questions.	SS 8.4.5 Apply the inquiry process to construct and answer historical questions.

Grade 6

Grade Level Summary and Theme

World Studies I: In sixth grade, students are ready to deepen their understanding of the Earth and its peoples through the study of history, geography, politics, culture, and economic systems. Students examine the world by exploring the location, place, and spatial organization of the world's ancient civilizations. In this way, students develop higher levels of critical thinking by considering why civilizations developed, where and when they did, and why they declined. Students will have multiple opportunities to employ maps and timelines, to compare the foundations of economic and political systems, and to engage in content-driven research and inquiry. Students will explore the connections between ancient and classical societies and contemporary civic ideas and issues. Students analyze the interactions among the various cultures, emphasizing their enduring contributions and the link between the contemporary and ancient worlds.

Civics

Forms and Functions of Government

SS 6.1.1 Investigate the foundations, structures, and functions of governmental institutions.

SS 6.1.1.a Analyze the different forms of government through the study of early civilizations.

For example: tribal, monarchy, democracy, republic, theocracy, tyranny and oligarchy

SS 6.1.1.b Identify the development of written laws and artifacts.

For example: Code of Hammurabi, Greek Democracy, Axumite, Confucius, Ten Commandments, Indian deities

SS 6.1.1.c Communicate the various ways governmental decisions have impacted people, places, and history.

For example: invasions, conquests, laws, public works, religious tolerance, censorship, hierarchy

SS 6.1.1.d Investigate important government principles.

For example: democracy, rule of law, justice, equality, toleration

Civic Participation

SS 6.1.2 Investigate the roles, responsibilities, and rights of citizens.

SS 6.1.2.a Describe ways individuals participate in the political process.

For example: tribal/family institutions, city-state, voting, contacting officials, civic engagement, decision making, leadership

SS 6.1.2.b Compare and contrast the roles and rights of individuals in Ancient Civilizations to those in the United States today.

For example: military service, voting, civic engagement, decision making, leadership

Economics

Economic Decision Making

SS 6.2.1 Investigate how economic decisions affect the well-being of individuals and society.

SS 6.2.1.a Compare the benefits and costs of economic decisions made by Ancient Civilizations.

For example: marginal benefits of the migration of the Swahili people throughout southern Africa, Constantine the Great's decision to convert the Roman Empire to Christianity, Ancient Mesopotamians that settled along the Tigris and Euphrates to sustain life in a desert

SS 6.2.1.b Examine how social and governmental decisions impact economic well-being.

For example: Under constant invasion, Chinese dynasties built the Great Wall. Europeans and Asians were able to establish trade through the Silk Road to attain resources not native to their own continents. The caste system of Ancient India established order in the government but at the sake of the liberty of those in lower castes. Use democratic process established in Greece to make a classroom decision.

Financial Literacy

SS 6.2.2 Not addressed at this level

Exchange and Markets

SS 6.2.3 Explain the interdependence of producers and consumers.

SS 6.2.3.a Identify producers and consumers for Ancient civilizations.

For example: Examine the independence and interdependence of social classes in ancient societies. List items sold and traded among various medieval societies.

SS 6.2.3.b Explain how the interaction between producers and consumers satisfied economic wants and needs.

For example: Research the various resources that were utilized as mediums of exchange like animals, cowry shells, gold, and porcelain. Examine how societies without currency differed from those with currency.

National Economy

SS 6.2.4 Not addressed at this level

Global Economy

SS 6.2.5 Not addressed at this level

Geography

Location and Place

SS 6.3.1 Identify where (spatial) and why people, places, and environments are organized on the Earth's surface.

SS 6.3.1.a Identify and illustrate the locations of the first cities, civilizations, and empires and the reasoning for their locations.

For example: river civilizations (Tigris/Euphrates, Yellow, Indus, Nile, Mesopotamia), early cities (Memphis, Ur, Babylon)

SS 6.3.1.b Investigate the human and physical characteristics of early patterns of civilizations and empires.

For example: agricultural societies (agricultural hearths for crops and livestock), deposits of copper and iron

Regions

SS 6.3.2 Not addressed at this level

Human Environment Interaction

SS 6.3.3 Identify how the natural environment is changed by natural and human forces, and how humans adapt to their surroundings.

SS 6.3.3.a Describe the impact of natural processes on the human and physical environments.

For example: precipitation, drought, earthquakes, tornadoes, floods, hurricanes, volcanic eruptions, mudslides

SS 6.3.3.b Summarize how early humans utilized and adapted to their physical environment.

For example: irrigation, levees, terraces, fertile soils, mechanized agriculture, changes in land use, clothing, sewage systems, scarcity of resources

Movement

SS 6.3.4 Interpret and summarize patterns of culture around the world.

SS 6.3.4.a Compare and contrast characteristics of groups of people/settlements.

For example: characteristics of river civilizations

SS 6.3.4.b Explain how cultural diffusion occurs.

For example: trade routes, migration, conquest/empire building

Geospatial Skills and Geo-literacy

SS 6.3.5 Not addressed at this level

History

Change, Continuity, and Context

SS 6.4.1 Analyze patterns of continuity and change over time in world history.

SS 6.4.1.a Examine the impact of people, events, and ideas, including various cultures and ethnic groups, on the world.

For example: Chavin, Zapotec, Olmec, Mesopotamia, Egypt, Indus, Greco-Roman, early Chinese and Japanese dynasties, Hinduism, Taoism, Buddhism, Judaism, Christianity, Islam

SS 6.4.1.b Analyze the impact of historical events in the world using symbols, maps, documents, and artifacts.

For example: Hammurabi's Code, symbols of world religions

Multiple Perspectives

SS 6.4.2 Use multiple perspectives to identify the historical, social, and cultural context of past and current events.

SS 6.4.2.a Identify evidence from multiple perspectives and sources to better understand the complexities of world history.

For example: Macedonian Empire, Persian Empire

SS 6.4.2.b Explain the use of primary and secondary sources to better understand multiple perspectives of the same event.

For example: foundational texts of world religions

SS 6.4.3 Examine historical events from the perspectives of marginalized and underrepresented groups.

SS 6.4.3.a Identify how differing experiences can lead to the development of perspectives.

For example: religious, ethnic and racial groups

SS 6.4.3.b Interpret perspectives of marginalized and underrepresented regions around the world.

For example: inclusion of non-Eurasian civilizations

Historical Analysis and Interpretation

SS 6.4.4 Interpret and evaluate sources for historical context.

SS 6.4.4.a Compare and contrast primary and secondary sources of history.

For example: Compare Lascaux cave paintings with a historian's interpretation of the Paleolithic Era.

SS 6.4.4.b Analyze the relationships among historical events in the world and relevant contemporary issues.

For example: agriculture, technology, written laws

Historical Inquiry and Research

SS 6.4.5 Apply the inquiry process to construct and answer historical questions.

SS 6.4.5.a Construct and answer inquiry questions using multiple historical sources.

For example: What defines an empire?

SS 6.4.5.b Identify and cite appropriate sources for research about world history, including primary and secondary sources.

For example: Hammurabi's Code, Twelve Tables

SS 6.4.5.c Gather, analyze, and communicate historical information about the world from multiple sources.

For example: document archives, artifacts, newspapers, interviews, pictures, posters, oral/written narratives, and electronic presentation

Grade 7

Grade Level Summary and Theme

World Studies II: In seventh grade, students become more proficient with the core concepts in social studies. This grade level focuses on a regional examination of geography, civics, economics, and history of post-classical societies. The purpose of studying these different regions and eras is to develop an understanding of major factors influencing our world today.

The course guides students in exploring the connection between historical developments and contemporary global issues. Students will have multiple opportunities to use geographic concepts and processes, develop economic reasoning, examine specific historical ideas, beliefs, and themes, and analyze how individuals and societies have changed over time. Students will further develop fundamental concepts and processes of authority, power, and influence with particular emphasis on the democratic skills and attitudes necessary to become responsible citizens.

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Civics

Forms and Functions of Government

SS 7.1.1 Analyze the foundations, structures, and functions of governmental institutions.

SS 7.1.1.a Describe different forms and structures of government around the world and how they address the needs of the citizens.

For example: republic, monarchy, authoritarian/dictatorship, how nation-states interact, unlimited forms of government, limited forms of government, imperialism

SS 7.1.1.b Identify and report significant historic events and documents that have influenced governmental institutions and their function.

For example: any governments of major societies from post-classical societies up to present that could include French Revolution, Justinian's Code, Iroquois Confederacy, Communist Manifesto, United States Constitution, Magna Carta, Native American treaties with federal government, trade agreements, arms control

SS 7.1.1.c Analyze how governmental systems have changed over time and how those developments influence civic life and ideals around the world.

For example: increased role and influence of technology on society, impact of global conflicts on local communities

Civic Participation

SS 7.1.2 Analyze the roles, responsibilities, and rights of citizens and groups in international societies.

SS 7.1.2.a Examine ways in which individuals and groups participate in the political process in different regions of the globe.

For example: interconnected nature of world events/relationships, recognize multiple perspectives on issues, demonstrate ethical use of information, service learning, volunteerism, social movements, voting

SS 7.1.2.b Evaluate how cooperation and conflict among people around the world have contributed to political, economic, and social events and situations.

For example: treaties, aftermath of global conflicts and the rise of international organizations (United Nations, NATO, League of Nations, World Health Organization)

SS 7.1.2.c Explain the roles and influence of individuals, groups, and the media on governments in an interdependent society.

For example: printing press, right to petition, media literacy, media conglomerates, social media platforms, cyber security concerns

Economics

Economic Decision Making

SS 7.2.1 Not addressed at this level

Financial Literacy

SS 7.2.2 Not addressed at this level

Exchange and Markets

SS 7.2.3 Not addressed at this level

National Economy

SS 7.2.4 Investigate how varying economic systems impact individuals in a civilization/society.

SS 7.2.4.a Compare and contrast characteristics of different socio-economic groups in economic systems.

For example: traditional, market, command/communism, socialism, feudal, or caste systems - Examine the daily life of the indigenous people of Guatemala as opposed to those in urban areas.

SS 7.2.4.b Identify the relationships between diverse socio-economic groups and their economic systems in the modern world.

For example: Compare tax structures in various countries and how the people are impacted.

SS 7.2.5 Analyze information using appropriate data to draw conclusions about the total production, income, and economic growth in various economies.

SS 7.2.5.a Define the government's role in various economic systems.

For example: democratic governments' impact on capitalism and dictators' impact on command economies, tobacco industry and how rules come about in the US vs. tobacco industry in Cuba

SS. 7.2.5.b Identify various economic indicators that governments use to measure modern world societies, nations, and cultures.

For example: Explore consumption, government spending, business investment, balance of trade, exports, imports, life expectancy, literacy rates, income, etc.

SS 7.2.5.c Categorize goods and services provided in modern societies, nations, and cultures into the four factors of production.

For example: Identify the four factors of production (land, labor, capital, and entrepreneurship) and how they manifest in a diverse way from culture to culture and over time.

Global Economy

SS 7.2.6 Illustrate how international trade impacts individuals, organizations, and nations/societies.

SS 7.2.6.a Explain how individuals gain through specialization and voluntary trade and how international trade affects the domestic economy.

For example: Business owners are able to explore the world to find labor sources that help maximize profit. Many of the economies of the Americas owe their establishment and success to the development and processing of sugar cane. Corporations chartered for colonial settlement: Dutch East India Company, Virginia Company, etc.

Geography

Location and Place

SS 7.3.1 Not addressed at this level

Regions

SS 7.3.2 Evaluate how regions form and change over time.

SS 7.3.2.a Classify physical and human characteristics of places and regions.

For example: climate, landforms, languages, religions

SS 7.3.2.b Interpret the impact of land and water features on human decisions.

For example: location of settlements and transportation with respect to physical features

SS 7.3.2.c Identify how humans construct major world regions and the impact on human societies.

For example: geographic factors that influence international relationships and economic development-trade, communication, transportation, infrastructure

Human Environment Interaction

SS 7.3.3 Determine how the natural environment is changed by natural and human forces and how humans adapt to their surroundings.

SS 7.3.3.a Explain the impact of natural processes on human and physical environments.

For example: temperature, precipitation, drought, earthquakes, tornadoes, floods, hurricanes, volcanic eruptions, mudslides

SS 7.3.3.b Research and describe how humans have utilized and adapted to their physical environment.

For example: rivers, floods, precipitation, drought, use of natural resources

Movement

SS 7.3.4 Examine and interpret patterns of culture around the world.

SS 7.3.4.a Compare and contrast characteristics of groups of people/settlements.

For example: elements of culture including languages, religions, foods, arts, clothing, education, etc.

SS 7.3.4.b Develop a logical process to describe how cultural diffusion occurs and how the diffusion of ideas impacts cultures.

For example: migration, conquering, trade

Geospatial Skills and Geo-literacy

SS 7.3.5 Compare issues and/or events using geographic knowledge and skills to make informed decisions.

SS 7.3.5.a Classify the physical or human factors that explain the geographic patterns of world events.

For example: Use maps/charts/diagrams/timelines/mapping technology to track and analyze historical changes over space and time (spread of religious groups, spatial connections through trade or political arrangement).

SS 7.3.5.b Develop geographic representations and analyze the role of geographic physical and human factors in determining the arrangement of economic activity and patterns of human settlement.

For example: geographic concentration of manufacturing, banking, or industries, urbanization, availability of arable land, water and suitable climate for farming, access to resources for development

History

Continuity, Change, and Context

SS 7.4.1 Compare patterns of continuity and change over time in world history.

SS 7.4.1.a Analyze the impact of people, events, and ideas, including various cultures and ethnic groups, on the world.

For example: Songhai, Mali, Gupta Empire, Han Dynasty, Hinduism, Taoism, Buddhism, Judaism, Christianity, Islam, Sikhism, Silk Road, Trans-Saharan Trade, Incas, Mayans, Aztecs

SS 7.4.1.b Analyze the impact of historical events in the world using symbols, maps, documents, and artifacts.

For example: trade routes

Multiple Perspectives

SS 7.4.2 Use multiple perspectives to examine the historical, social, and cultural context of past and current events.

SS 7.4.2.a Analyze evidence from multiple perspectives and sources to better understand the complexities of world history.

For example: caste system, partition of India, Ibn Battuta, Zheng He, Marco Polo, Mansa Musa, Mongol Empire, Berlin Conference, Arab-Israeli Conflict, Latin American revolutions, Columbian Exchange

SS 7.4.2.b Compare and contrast primary and secondary sources to better understand multiple perspectives of the same event.

For example: foundational texts of world religions

SS 7.4.3 Examine historical events from the perspectives of marginalized and underrepresented groups.

SS 7.4.3.a Identify how differing experiences can lead to the development of perspectives.

For example: religious, ethnic and racial groups

SS 7.4.3.b Interpret perspectives of marginalized and underrepresented regions around the world.

For example: civilizations from all regions of the world

Historical Analysis and Interpretation

SS 7.4.4 Analyze and interpret sources for perspective and historical context.

SS 7.4.4.a Compare and contrast primary and secondary sources of history.

For example: Compare eyewitness accounts of the Black Death with contemporary medical understandings.

SS 7.4.4.b Identify the cause and effect relationships among historical events in the world and relevant contemporary issues.

For example: migrations, declarations of war, treaties, alliances, epidemics

Historical Inquiry and Research Skills

SS 7.4.5 Apply the inquiry process to construct and answer historical questions.

SS 7.4.5.a Construct and answer inquiry questions using multiple historical sources.

For example: Students engage in inquiry and gather evidence to provide a response.

SS 7.4.5.b Evaluate and cite appropriate sources for research about world history, including primary and secondary sources.

For example: Interpret primary and secondary sources to address the inquiry. Demonstrate ethical use of information and copyright guidelines by appropriately quoting or paraphrasing from a text and citing the source using available resources.

SS 7.4.5.c Gather, analyze, and communicate historical information about the world from multiple sources.

For example: document archives, artifacts, newspapers, interviews, pictures, posters, oral/written narratives, and electronic presentation

Grade 8

Grade Level Summary and Theme

United States History: In eighth grade, students develop a new, more abstract level of understanding of social studies concepts. The context for developing this understanding is U.S. history and government. After reviewing the Colonial foundations of what became the United States, students explore the ideas, issues, and events from the adoption of the United States Constitution through the Gilded Age. Study of the founding of the United States allows students to explore the development of the United States' unique institutions of government, civic ideals, geography and economy.

Civics

Forms and Functions of Government

SS 8.1.1 Investigate and analyze the foundation, structure, and functions of the United States government.

SS 8.1.1.a Identify and describe the different systems of government.
For example: Monarchy, Federal, Confederate, Unitary, Tribal, corporate

SS 8.1.1.b Analyze the structure and roles of the United States government in meeting the needs of the citizens governed, managing conflict, and establishing order and security.
For example: Chinese Exclusion Act, Fugitive Slave Laws, 13th, 14th, 15th Amendments, antitrust laws, Homestead Act, Indian Removal Act

SS 8.1.1.c Examine the development of foundational laws and other documents in the United States government.
For example: Declaration of Independence, United States Constitution, Preamble, Bill of Rights

SS 8.1.1.d Evaluate how various United States government decisions impact people, place, and history.
For example: taxation, distribution of resources, acquisition of territories, Trail of Tears, Indian Removal Act, Dred Scott decision, treaties, Louisiana Purchase, census, Civil War, War of 1812, Mexican-American War

SS 8.1.1.e Describe how important government principles are shown in American government.
For example: freedom, individual rights, representative democracy, equality, rule of law, popular sovereignty, justice, tribal sovereignty

SS 8.1.1.f Analyze the development and significance of political parties in the United States.
For example: Federalists and Antifederalists

Civic Participation

SS 8.1.2 Evaluate the roles, responsibilities, and rights as local, state, national, and international citizens.

SS 8.1.2.a Demonstrate ways individuals participate in the political process.

For example: registering and voting, elections, contacting government officials, campaign involvement, demonstrating ethical use of information

SS 8.1.2.b Analyze the significance of patriotic symbols, songs and activities in terms of historical, social, and cultural contexts.

For example: Pledge of Allegiance, "The Star-Spangled Banner," "America the Beautiful," recognition of Memorial Day, Independence Day, Veterans Day, Martin Luther King, Jr. Day, Constitution Day, Patriot's Day - 9/11, Native American Heritage Day, tribal flag songs

SS 8.1.2.c Demonstrate civic engagement.

For example: engaging in service learning projects, volunteerism, student government participation, participation in simulations of democratic processes (mock trials, elections, etc.), USCIS Citizenship test, communicating through civil discourse

SS 8.1.2.d Describe how cooperation and conflict among people have contributed to political, economic, and social events and situations in the United States.

For example: Louisiana Purchase, Civil War, Civil Disobedience, NAACP movement, women's movement, slave rebellions, Jim Crow laws

SS 8.1.2.e Compare and contrast the roles and influences of individuals, groups, and the media on American government.

For example: Seneca Falls Convention, Underground Railroad, Horace Greeley, Harriet Beecher Stowe, Jane Addams, Muckrakers, Booker T. Washington, Chief Standing Bear, Susan La Flesche

Economics

Economic Decision Making

SS 8.2.1 Not addressed at this level

Financial Literacy

SS 8.2.2 Understand personal and business financial management.

SS 8.2.2.a Identify skills for future financial success.

For example: Identify key terms associated with budgeting, credit, savings, credit score, investing, fraud, and risk management.

SS 8.2.2.b Understand tools, strategies, and systems used to maintain, monitor, control, and plan the use of financial resources.

For example: Analyze the impact of credit on an individual's ability to acquire goods and services, charitable contributions.

Exchange and Markets

SS 8.2.3 Not addressed at this level

National Economy

SS 8.2.4 Justify and debate economic decisions made by North American societies.

SS 8.2.4.a Research the origins and development of the economic system, banks, and financial institutions in the United States.

For example: Examine the work of Alexander Hamilton and his influence on the banking system in the U.S. economy.

SS 8.2.4.b Explain how tax revenues are collected and distributed.

For example: Review the Constitution to understand the roles of each branch in establishing a national budget and how the separation of powers is structured.

SS 8.2.4.c Describe the progression of money and its role in early United States history.

For example: Identify what forms of currency/bartering were used as a medium for exchange among various Native American tribes. Examine what services and regulations were established during the Progressive Era as urban areas' populations boomed. Examine the National Banking Act of 1863.

Global Economy

SS 8.2.5 Illustrate how international trade impacts individuals, organizations, and nations.

SS 8.2.5.a Explain that currency must be converted to make purchases in other countries.

For example: Trace the conversion of products and currency between the French and the indigenous tribes of the Midwest.

SS 8.2.5.b Recognize how trade barriers impact the prices and quantity of goods.

For example: Examine the impact of the Sugar and Molasses Act of 1733 and the Stamp Act of 1765.

Geography

Location and Place

SS 8.3.1 Not addressed at this level

Regions

SS 8.3.2 Examine how regions form and change over time.

SS 8.3.2.a Evaluate physical and human characteristics of places and regions.

For example: climate, landforms, religious groups, ethnic groups

SS 8.3.2.b Determine the impact of land and water features on human decisions.

For example: location of settlements and transportation with respect to physical features

SS 8.3.2.c Identify and justify how humans develop major world regions and the impact on human societies.

For example: geographic factors that influence international relationships and economic development-trade, communication, transportation, infrastructure

Human Environment Interaction

SS 8.3.3 Determine how the natural environment is changed by natural and human forces and how humans adapt to their surroundings.

SS 8.3.3.a Interpret the impact of natural processes on human and physical environments.

For example: precipitation, drought, earthquakes, tornadoes, floods, hurricanes, volcanic eruptions, mudslides

SS 8.3.3.b Analyze how humans have utilized and adapted to their physical environment.

For example: rivers, wetlands, forests, treeless plains, precipitation, drought

Movement

SS 8.3.4 Not addressed at this level

Geospatial Skills and Geo-literacy

SS 8.3.5 Not addressed at this level

History

Continuity, Change, and Context

SS 8.4.1 Analyze patterns of continuity and change over time in United States history.

SS 8.4.1.a Evaluate the impact of people, events, and ideas, including various cultures and ethnic groups, on the United States.

For example: Columbian Exchange, European colonization and Native American response, Colonial America, Great Awakening, Benjamin Franklin, George Washington, Thomas Jefferson, establishing a nation, Manifest Destiny, Indian Removal Act, slavery, expansion and reform, Dred Scott decision, secession, Abraham Lincoln, Civil War and Reconstruction, Standing Bear, rise of corporations, growth of organized labor, assembly line, immigration, industrialization John Deere, Thomas Edison, Alexander Graham Bell, George Washington Carver, democratic ideals, patriotism, citizen's rights

SS 8.4.1.b Evaluate the impact of historical events in the United States using symbols, maps, documents, and artifacts.

For example: founders and founding documents, national symbols

Multiple Perspectives

SS 8.4.2 Use multiple perspectives to evaluate the historical, social, and cultural context of past and current events.

SS 8.4.2.a Compare and interpret evidence from multiple perspectives and sources to better understand the complexities of US history.

For example: Dawes Act, Santee Mankato Executions (Dakota Uprising), Chinese Exclusion Act, Treaty of Guadalupe Hidalgo, Reconstruction Acts and Amendments, The Emancipation Proclamation, organized labor, Women's Suffrage Movement

SS 8.4.2.b Evaluate the relevancy, accuracy, and completeness of primary and secondary sources to better understand multiple perspectives of the same event.

For example: The Bill of Rights, slavery, Gettysburg Address, "The New Colossus" poem

SS 8.4.3 Examine historical events from the perspectives of marginalized and underrepresented groups.

SS 8.4.3.a Identify how differing experiences can lead to the development of perspectives.

For example: Compare primary accounts by American Indian peoples and American settlers regarding the expansion of the United States.

SS 8.4.3.b Interpret how and why marginalized and underrepresented groups and/or individuals might understand historical events similarly or differently.

For example: Compare how differing Native American groups and Spanish-speaking peoples responded to the Indian Removal Act and the Mexican-American War.

Historical Analysis and Interpretation

SS 8.4.4 Evaluate and interpret sources for perspective and historical context.

SS 8.4.4.a Compare and contrast primary and secondary sources of history.

For example: Compare what texts say about Wounded Knee Massacre to Black Elk's account of the same event.

SS 8.4.4.b Evaluate the relationships among historical events in the United States and relevant contemporary issues.

For example: political party platforms, continuing debates about role of government

Historical Inquiry and Research Skills

SS 8.4.5 Apply the inquiry process to construct and answer historical questions.

SS 8.4.5.a Identify areas of inquiry by using student-generated questions about multiple historical sources.

For example: Why is the Gettysburg Address considered an important statement of American national ideals?

SS 8.4.5.b Locate, analyze, and cite appropriate sources for research about United States history, including primary and secondary sources.

For example: classroom texts, Gettysburg Address, tribal treaties, major online historical archives like Library of Congress, National Archives, and local and state archives

SS 8.4.5.c Gather, analyze, and communicate historical information about United States history from multiple sources.

For example: primary sources, secondary sources, popular media, scholarly perspectives

High School Civics

Summary

In a constitutional republic, productive civic engagement requires knowledge about the functions of state and local government, courts and legal systems, the U.S. Constitution, other nations' systems and practices, and international institutions. Civics is not limited to the study of politics and society; it also encompasses participation in classrooms and schools, neighborhood, groups, and organizations using civic virtues and principles to guide that participation (which includes the discussion of issues and making choices and judgments with information and evidence, civility and respect, and concern for fair procedures). Civics enables students not only to study how others participate but also to practice participating and taking informed action themselves.

Forms and Functions of Government

SS HS.1.1 Analyze the foundation, structures, and functions of the United States government as well as local, state, and international governments.

SS HS.1.1.a Examine the historical foundation that influenced the creation of the United States Constitution.

For example: philosophers, social contract theory, natural rights, Constitutional Convention, Federalist, and Anti-Federalist Papers, Iroquois Confederation, and the imbalance of representation

SS HS.1.1.b Evaluate the structure of American constitutional government.

For example: federalism, democracy, representative government, branches of the government, separation of powers, checks and balances, amendment process, concurrent/enumerated/implied powers, electoral college, Bill of Rights, Reconstruction amendments, Prohibition, women's vote

SS HS.1.1.c Analyze the functions of United States government and its outcomes.

For example: national security, legislative law-making, executive implementation, judicial interpretation, constitutionalism, taxation, naturalization of citizens, environmental implications

SS HS.1.1.d Analyze the foundation, structures, and functions of local government and its outcomes.

For example: city council, school board, county government, regional boards, grassroots, local organizations, community organizations

SS HS.1.1.e Analyze the foundation, structures, and functions of state government and its outcomes.

For example: bicameral/unicameral, reapportionment/redistricting, branches of government, judiciary process, penal system

SS HS.1.1.f Analyze the foundation, structures, and functions of supranational organizations.

For example: United Nations, NATO, European Union, treaties, trade organizations, Native American Treaties

SS HS.1.1.g Analyze the roles that political parties have played in the United States.

For example: Republican Party - Civil War, Populist Party - Progressive movement, Democratic Party - New Deal, Southern Strategy- Dixiecrats, emergence of the Tea Party Movement, hyperpartisanship

SS HS.1.1.h Analyze United States foreign policy issues.

For example: methods, approaches, events, and their outcomes on various groups of people

Civic Participation

SS HS.1.2 Demonstrate meaningful civic participation by analyzing local, state, national, or international issues and policies.

SS HS.1.2.a Investigate how individuals and groups can effectively use the structure and functions of various levels of government to shape policy.

For example: lobbying, voting, contacting government officials, petitioning, civil disobedience, tribal voting, tribal government officials, analyze past voting patterns and discuss methods to increase participation in voting

SS HS.1.2.b Analyze and communicate the significance and impacts of patriotic symbols, songs, holidays, and activities in terms of historical, social, and cultural contexts.

For example: Pledge of Allegiance, "The Star-Spangled Banner," "America the Beautiful," Dr. Martin Luther King, Jr. Day and "I Have a Dream" speech, George Washington's Birthday, Abraham Lincoln's Birthday, Presidents Day, Native American Heritage Day, Constitution Day, Memorial Day, Veterans Day, and Thanksgiving Day, 4th of July, Hispanic Heritage month, tribal flag songs

SS HS.1.2.c Engage and reflect on participation in civic activities.

For example: discussing current issues, advocating for personal rights and the rights of others, influencing governmental actions, participating in civil discourse, registering for selective service, registering to vote, and voting when reaching the age of majority, participating in community improvement activities, service learning

SS HS.1.2.d Investigate an issue and communicate which level of government is most appropriate to utilize in addressing the issue.

For example: students communicate through an editorial, public service announcement, pamphlet, public presentation, tribal council, community entities

SS HS.1.2.e Demonstrate how individuals, groups, and the media check governmental practices.

For example: Watergate, Civil Rights movement, Suffrage movement

SS HS.1.2.f Analyze various media sources for accuracy and perspective.

For example: news media literacy, online civic reasoning

Summary
Effective economic decision making requires that students have a keen understanding of the ways in which individuals, businesses, governments, and societies make decisions to allocate human capital, physical capital, and natural resources among alternative uses. This economic reasoning process involves the consideration of costs and benefits with the ultimate goal of making decisions that will enable individuals and societies to be as well-off as possible. The study of economics provides students with the concepts and tools necessary for an economic way of thinking and helps students understand the interaction of buyers and sellers in markets, workings of the national economy, and interactions within the global marketplace. Economics is grounded in knowledge about how people choose to use resources. Economic understanding helps individuals, businesses, governments, and societies choose what resources to allocate to work, to school, and to leisure; how many dollars to spend, and how many to save; and how to make informed decisions in a wide variety of contexts. Economic reasoning and skillful use of economic tools draw upon a strong base of knowledge about human capital, land, investments, money, income and production, taxes, and government expenditures. To be effective participants in our representative democracy, students need an understanding of economics.

Economic Decision Making

SS HS.2.1 Apply economic concepts that support rational decision making.

SS HS.2.1.a Make decisions by systematically considering alternatives and consequences through the use of cost benefit analysis.

For example: PACED decision making model (Problem, Alternatives, Criteria, Evaluate, Decision); Some potential topics could include options for energy sources, center pivot irrigation, oil pipeline through Nebraska, use of pesticides and fertilizers. Decisions made by businesses and social issues including corporate social responsibility programs, green energy, living wage, paid parental leave, equal pay, social entrepreneurship (businesses that aim to solve social problems).

SS HS.2.1.b Assess the incentives for investing in personal education, skills, and talents.

For example: Research returns to education, look at cost of education, and compare to earnings; costs of returning to small towns vs. cities

Financial Literacy

SS HS.2.2 Develop a plan to support short- and long-term goals.

SS HS.2.2.a Develop a budget using a financial record keeping tool.

For example: Mint.com, spreadsheet, Quicken, journal on paper

SS HS.2.2.b Compare and contrast different types of banking accounts and features.

For example: checking, savings, money market, CDs

SS HS.2.2.c Assess the effects of taxes on personal income.

For example: state income tax, federal income tax, social security, property tax, sales tax, etc.

SS HS.2.2.d Compare and contrast possible career choices.

SS HS.2.3 Critique strategies used to establish, build, maintain, monitor, and control credit.

SS HS.2.3.a Compare and contrast the costs and benefits of different types and sources of credit and debt.

For example: credit card interest rates, personal loans rates, mortgage rates, student loan rates, etc.

SS HS.2.3.b Investigate strategies to effectively manage debt and factors that influence credit ratings.

For example: Credit cards, auto loans, mortgages, extended warranties

SS HS.2.4 Evaluate savings, investment, and risk management strategies to achieve financial goals.

SS HS.2.4.a Explain the importance of saving and investing early to ensure financial security.

For example: compound interest, use rule of 72, time value of money

SS HS.2.4.b Develop an investment strategy to achieve short- and long-term goals utilizing a variety of investment vehicles.

For example: stocks, bonds, mutual funds, retirement plans, investment in education including analysis of student loans, average income of job, and repayment of loan, investment in homeownership vs. rental

SS HS.2.4.c Examine appropriate and cost effective risk management strategies.

For example: health, disability, life, auto insurance, personal identity protection, extended warranties, fraud protection

Exchange and Markets

HS.2.5 Explain the role of markets in determining prices and allocating scarce goods and services.

SS HS.2.5.a Summarize the role of competition, markets, and prices.

For example: Use product and factor market/circular flow; compare market structures (perfect competition to monopoly)

SS HS.2.5.b Illustrate how markets determine changing equilibrium prices through supply and demand analysis.

For example: changes in demand and supply, changes in quantity demanded and quantity supplied

SS HS.2.5.c Hypothesize how competition between sellers could result in lower prices, higher quality products, and better customer service.

For example: Look at businesses in the monopolistic market structure - competing for consumer dollars, trying to earn your business.

SS HS.2.5.d Investigate possible causes and consequences of shortages and surpluses.

For example: use current events and public policy - rent control and minimum wage, etc.

National Economy

SS HS.2.6 Explain how economic institutions impact different individuals and various groups.

SS HS.2.6.a Explain how various economic institutions have played a role in United States economic policy and practice.

For example: corporations, labor unions, financial institutions, stock markets, cooperatives, small business and entrepreneurs, and business partnerships

SS HS.2.6.b Calculate and describe the impact of economic indicators.

For example: trends and business cycles using GDP, unemployment rates including frictional, structural, cyclical, inflation/deflation rates

SS HS.2.6.c Describe the functions and role of the Federal Reserve System and its influence through monetary policy.

For example: balancing inflation and unemployment, and how banks and a sound monetary system are critical to a functioning economy

SS HS.2.7 Assess the roles of institutions such as clearly defined property rights and the rule of law in a market economy.

SS HS.2.7.a Assess how property rights are defined, enforced, and limited by government.

For example: contracts and the rule of law, zoning laws, eminent domain, Homestead Act, copyright laws, patents, and intellectual property

SS HS.2.8 Compare and contrast the roles and responsibilities of government and differing outcomes from various economic systems: command/communism, mixed, socialism, market, and traditional economic systems.

SS HS.2.8.a Examine how governments utilize taxation to provide goods and services to society.

For example: disaster relief, flood control, military and armed forces, ownership of resources

SS HS.2.8.b Evaluate the effectiveness of government policies altering market outcomes.

For example: Use economic theory to analyze current events and public policy. Compare and contrast farm subsidies and corporate incentives.

SS HS.2.8.c Critique government policies and regulations in areas of market failure.

For example: monopolies, externalities, non-enforcement of property rights

SS HS.2.9 Examine the government's influence on economic systems through fiscal policy.

SS HS.2.9.a Explore various forms of taxation including income, sales, and capital gains and examine how governments can use taxing and spending policies to influence behavior.

For example: alcohol tax, home mortgage interest deduction, sales tax, etc.

SS HS.2.9.b Examine the impact of fiscal policy on budget deficits/surpluses and national debt.

For example: Spending resources to service the debt impacts opportunities for using the funds for other needs.

Global Economy

SS HS.2.10 Investigate how international trade affects individuals, organizations, the domestic economy, and other nations.

SS HS.2.10.a Explore comparative advantage among different countries.

For example: research on what different countries produce when they specialize in those products

SS HS.2.10.b Analyze the impact on prices and quantities of various trade policies, both domestically and internationally.

For example: tariffs, quotas, protectionist policies, and the resulting changes in price and quantity; research NAFTA and/or Brexit.

Summary

To succeed in an increasingly interconnected world, Nebraska's next generation of citizens will need to be fluent in spatial knowledge. Geography at the high school level prepares students to understand the world and their place in it. Beyond merely knowing "Where?" the geographically minded person will be better equipped to answer the question of "Why there?" An integrative study of our planet's human and physical features will involve 21st century technologies and inquiry-based research methods. This approach will expand students' geographic knowledge and enable them to think critically about problems. Through analysis of spatial patterns and relationships over time and place, students will be better able to make sense of both the past and present, and be well equipped to address society's future needs.

Location and Place

SS HS.3.1 Evaluate where (spatial) and why people, places, and environments are organized on the Earth's surface.

SS HS.3.1.a Determine spatial organization of human settlements in relation to natural features.

For example: population density and distribution, world climate regions, city categorization, natural resource deposits, agricultural hearths, croplands, structure of communities, highway and rail networks

SS HS.3.1.b Analyze and explain changes in spatial patterns as a result of the interactions among human and physical processes.

For example: major world physical features (mountains, seas, rivers), patterns of human settlement on local, regional, national, and global scale, governmental systems, economic systems, site and situation, Weber's Least Cost Theory, Von Thunen Model of Land Use

Regions

SS HS.3.2 Evaluate how regions form and change over time.

SS HS.3.2.a Analyze physical and human processes that shape places and regions.

For example: historical influences, current events, natural disasters, climate change, conflicts, natural processes (erosion, plate tectonics), relationships and connections

SS HS.3.2.b Examine the importance of places and regions to individual and social identity and how identities change over space and time.

For example: popular cultural traits, folk cultural traits, national monuments and folklore, nationalism, ethnicity, migration, urbanization, demographic transition model, industrial development, toponymy (place names), regional identity (Corn Belt, Heartland, Homeland)

SS HS.3.2.c Evaluate the interdependence of places and regions.

For example: models of industrial and economic development, new international division of labor, supranational organizations (The United Nations, Association of Southeast Asian Nations [ASEAN], or The European Union), globalization, popular culture, international trade agreements, patterns of human migration, alliances, Paris Climate Agreement, central place theory

Human-Environment Interactions

SS HS.3.3 Analyze how the natural environment and cultural landscape are transformed by natural and human forces and interpret how humans adapt to their surroundings.

SS HS.3.3.a Explain components of Earth's physical systems and evaluate the impact of natural processes on human environments.

For example: atmosphere, lithosphere, biosphere, and hydrosphere, plate tectonics/continental drift, global ocean systems, atmospheric systems, natural disasters, Earth's orbit, seasonal changes in ice coverage, greenhouse effect

SS HS.3.3.b Evaluate how humans have utilized and adapted to their physical environment.

For example: renewable and non-renewable resources, the cultural landscape, natural disasters (hurricanes, wildfires), environmental technological adaptations (air conditioning, skyways, insulation), synthetic materials, human modifications to physical environment, conservation and environmentalism, Genetically Modified Organisms (GMO), agricultural revolutions, transportation networks, industrial revolutions, Von Thunen Model of Land Use, deforestation, desertification

Movement

SS HS.3.4 Compare and contrast patterns of human populations and culture over space and time on a local, national, and global scale.

SS HS.3.4.a Compare trends in human migration, urbanization, and demographic composition at a local, national, and global scale over time and short-term and long-term causes and effects.

For example: urban models, Demographic Transition Model, rural organization (long lot, metes and bounds, township and range), rural to urban migration, Human Development Index, Borchert's Epochs, trends locally, nationally, and globally over time, migration push and pull factors, effects of migration on both the source regions and destinations, More Developed Countries (MDCs) and Less Developed Countries (LDCs), demography

SS HS.3.4.b Examine the spread of cultural traits and the potential benefits and challenges of cultural diffusion, economic development, and globalization.

For example: cultural convergence and divergence, universalizing and ethnic religions, competition between multinational corporations and local businesses, folk cultures and popular cultures, spread of ideas (such as economic ideals, ideas on government, gender norms), diffusion of medical knowledge and impact on demographics, agricultural and industrial revolutions, models of economic development, the cultural landscape, Third Agricultural Revolution (Green Revolution), internet connectivity and cell phone networks, lingua franca, hypernationalism

SS HS.3.4.c Analyze the relationships of sovereign nations and the role of multinational organizations on conflict and cooperation both between and within countries.

For example: impacts of membership in multinational organizations and agreements, treaties, resource and technology exchanges, Heartland and Rimland Theory, demarcation of borders, territorial morphology

Geospatial Skills and Geo-literacy

SS HS.3.5 Evaluate issues and/or events using geographic knowledge and geospatial skills to make informed decisions.

SS HS.3.5.a Apply geographic knowledge and skills to interpret the past and present in order to plan for the future.

For example: developing a geographic question, acquiring and organizing data/information, performing analysis, presenting findings, and developing action plan

SS HS.3.5.b Analyze how geospatial skills and geo-literacy are applied to improve standards of living and solve problems.

For example: Examine how geospatial technologies (such as GIS [Geographic Information Systems] and remote sensing) and geographic knowledge (such as geopolitics) can be applied to better understand the world, address issues, and make spatial decisions (such as determining market potential, optimum usage of irrigation and fertilizers, or mapping public health outbreaks to determine source).

SS HS.3.5.c Evaluate geographical information sources for applications, credibility, and appropriateness in displaying spatial data.

For example: use maps (paper, digital, and mental), atlases, Global Positioning System (GPS), Geographic Information Systems (GIS), remote sensing, and forms of quantitative/qualitative data, analyze a map to determine appropriate use of scale, evaluate strengths and weaknesses of different map projections

Summary

History involves acquiring knowledge about significant events, developments, individuals, groups, documents, places, and ideas to support investigations about the past. Acquiring relevant knowledge requires assembling information from a wide variety of sources in an integrative process. Developing historical knowledge in connection with historical investigations not only helps students better remember the content because it has meaning, but also allows students to become better critical thinkers. High school history courses emphasize historical thinking. Historical thinking requires understanding and evaluating change and continuity over time, and making appropriate use of historical evidence in answering questions and developing arguments about the past. It involves going beyond simply asking, "What happened when?" to evaluating why and how events occurred and developments unfolded. It involves locating and assessing historical sources of many different types to understand the contexts of given historical eras and the perspectives of different individuals and groups within geographic units that range from the local to the global. Historical thinking is a process of chronological reasoning, which means wrestling with issues of causality, connections, significance, and context with the goal of developing credible explanations of historical events and developments based on reasoned interpretation of evidence.

United States History (Progressive Era – Present)

Change, Continuity and Context

HS.4.1 (US) Analyze and evaluate patterns of continuity and change over time in American history.

SS HS.4.1.a (US) Evaluate the cause and effect of historical events on various groups in the United States.

For example: To which conditions were Progressives responding? Why did the United States enter World War I? What caused the Great Depression? What caused the interpretation of "separate but equal" to change over time?

SS HS.4.1.b (US) Select, record, and interpret key national events in chronological order.

For example: Progressive Era, Women's Suffrage, World War I, Great Migration, Great Depression and New Deal, Naziism, World War II, Holocaust, Cold War, Civil Rights Era, contemporary United States

SS HS.4.1.c (US) Evaluate the impact of people, events, and ideas, including various cultures and ethnic groups, on the United States.

For example: 19th Amendment, *Brown v. Board of Education of Topeka*, Dolores Huerta, desegregation of the military following WWII, March on Washington, Movement for the Restoration of Tribal Status, continuing struggle for equality

Multiple Perspectives

SS HS.4.2 (US) Analyze the complexity of the interaction of multiple perspectives to investigate causes and effects of significant events in the development of history.

SS HS.4.2.a (US) Identify and evaluate how considering multiple perspectives facilitates an understanding of history.

For example: Nineteenth Amendment, 1924 National Origins Act, Indian Reorganization Act of 1934, Bracero program, Civil Rights Movement

SS HS.4.2.b (US) Evaluate the relevancy, accuracy, and completeness of primary and secondary sources to better understand multiple perspectives of the same event.

For example: Theodore Roosevelt's New Nationalism and Woodrow Wilson's New Freedom, Indian Reorganization Act and responses from tribal leaders, differing strategies in the struggle to gain black equality

SS HS.4.3 (US) Examine historical events from the perspectives of marginalized and underrepresented groups.

SS HS.4.3.a (US) Identify how differing experiences can lead to the development of perspectives.

For example: religious, racial or ethnic groups, immigrants, women, LGBTQ persons, and Native American nations

SS HS.4.3.b (US) Interpret how and why marginalized and underrepresented groups and/or individuals might understand historical events similarly or differently.

For example: Immigration and Naturalization Act of 1965, Stonewall Riots, American Indian Movement, Equal Rights Amendment, Civil Rights Act of 1964, *West Virginia v. Barnette*, United Farm Workers

Historical Analysis and Interpretation

SS HS.4.4 (US) Evaluate sources for perspective, limitations, accuracy, and historical context.

SS HS.4.4.a (US) Compare, contrast, and critique the central arguments in primary and secondary sources of history from multiple media.

For example: written documents, radio broadcasts, news broadcasts, film, newspapers, photographs, oral histories, virtual museum exhibits

SS HS.4.4.b (US) Evaluate strengths and limitations of a variety of primary and secondary historical sources.

For example: Jane Addams on settlement houses, Franklin Roosevelt's "Four Freedoms" Speech, Martin Luther King, Jr.'s "Letter from Birmingham Jail," Equal Rights Amendment

SS HS.4.4.c (US) Determine the relationship between multiple causes and effects of events and developments in the past.

For example: patterns of immigration and migration, presidential leadership strategies, tactics among different civil rights organizations

SS HS.4.4.d (US) Synthesize the relationships among historical events in the United States and relevant contemporary issues.

For example: voting behavior, political party platforms, economic trends, place relevant current events in historical context, the relationship between Native Americans living on and off the reservation

Historical Inquiry and Research

SS HS.4.5 (US) Apply the inquiry process to construct and answer historical questions.

SS HS.4.5.a (US) Construct meaningful questions about topics in U.S. history.

For example: "Why did the United States enter World War I?"

SS HS.4.5.b (US) Locate, evaluate, and cite appropriate sources for research about selected topics in U.S. History, including primary and secondary sources.

For example: Examine speeches from President Woodrow Wilson leading up to World War I, examine internal communications within Wilson administration, examine press coverage of events leading up to American entry.

SS HS.4.5.c (US) Select, organize, and corroborate relevant historical information about selected topics in U.S. History.

For example: Compare the sources and determine an initial answer to the inquiry.

SS HS.4.5.d (US) Synthesize historical information to create new understandings.

For example: Compare the answer students have created to secondary sources and potentially revise students' answers.

SS HS.4.5.e (US) Communicate inquiry results within a historical context.

For example: Provide an evidence-based answer to the inquiry, "Why did the United States enter World War I?"

Change, Continuity, and Context

HS.4.1 (WLD) Analyze and evaluate patterns of continuity and change over time in world history.

SS HS.4.1.a (WLD) Evaluate the cause and effect of historical events in the world.

For example: How did the rise of totalitarianism lead to war?

SS HS.4.1.b (WLD) Select, record, and interpret key global events in chronological order.

For example: emergence of new states and cultures, increased inter-regional trade, colonization and expansion, global interactions, Industrialization, Age of Revolutions, Imperialism, global conflict, Holocaust, globalization, decolonization, Cold War, contemporary events

SS HS.4.1.c (WLD) Evaluate the impact of people, events, and ideas, including various cultures and ethnic groups, on the world.

For example: trade networks, empires, revolutions, treaties, warfare, diplomacy, migration and immigration

Multiple Perspectives

SS HS.4.2 (WLD) Analyze the complexity of the interaction of multiple perspectives to investigate causes and effects of significant events in the development of history.

SS HS.4.2.a (WLD) Identify and evaluate how considering multiple perspectives facilitates an understanding of history.

For example: Scramble for Africa and indigenous response, Arab-Israeli Conflict, French Revolution, Haitian Revolution

SS HS.4.2.b (WLD) Evaluate the relevancy, accuracy, and completeness of primary and secondary sources to better understand multiple perspectives of the same event.

For example: compare accounts from colonizers and colonized, impact of trade on different population groups

SS HS.4.3 (WLD) Examine historical events from the perspectives of diverse groups.

SS HS.4.3.a (WLD) Identify how differing experiences can lead to the development of perspectives.

For example: diverse groups of historical figures and examples from political, religious, and ethnic groups

SS HS.4.3.b (WLD) Interpret how and why diverse groups and/or individuals might understand historical events similarly or differently.

For example: diverse groups of historical actors and examples from national, religious, and ethnic groups

Historical Analysis and Interpretation

SS HS.4.4 (WLD) Evaluate sources for perspective, limitations, accuracy, and historical context.

SS HS.4.4.a (WLD) Compare, contrast, and critique the central arguments in primary and secondary sources of history from multiple media.

For example: written documents, radio broadcasts, news broadcasts, film, newspapers, photographs, oral histories, virtual museum exhibits, works of art

SS HS.4.4.b (WLD) Evaluate strengths and limitations of a variety of primary and secondary historical sources.

For example: written and visual documents

SS HS.4.4.c (WLD) Determine the relationship between multiple causes and effects of events and developments in the past.

For example: patterns of migration and immigration, wars, diplomacy, government structures, religious movements

SS HS.4.4.d (WLD) Synthesize the relationships among historical events in the world and relevant contemporary issues.

For example: current events from various international news sources

Historical Inquiry and Research

SS HS.4.5 (WLD) Apply the inquiry process to construct and answer historical questions.

SS HS.4.5.a (WLD) Construct meaningful questions that initiate an inquiry.

For example: "Can peace lead to war?"

SS HS.4.5.b (WLD) Locate, evaluate, and cite appropriate sources for research about selected topics in world history, including primary and secondary sources.

For example: Examine the Treaty of Versailles and the League of Nations founding documents, examine maps from before and after treaty, examine contemporary responses to the treaty from a variety of countries.

SS HS.4.5.c (WLD) Select, organize, and corroborate relevant historical information about selected topics in world history.

For example: Compare the sources and determine an initial answer to the inquiry.

SS HS.4.5.d (WLD) Synthesize historical information to create new understandings.

For example: Compare the answer students have created to secondary sources and potentially revise students' answers.

SS HS.4.5.e (WLD) Communicate inquiry results within a historical context.

For example: Provide an evidence-based answer to the inquiry, "How do countries make decisions about war and peace?"

NEBRASKA CAREER AND TECHNICAL EDUCATION

CTE®
Learning that works for Nebraska

NEBRASKA DEPARTMENT OF EDUCATION

COMMUNICATION AND INFORMATION SYSTEMS

PROGRAM OF STUDY STANDARDS

COMMUNICATION ARTS

INFORMATION TECHNOLOGY

NEBRASKA CAREER AND TECHNICAL EDUCATION STATE MODEL PROGRAMS OF STUDY

CAREER FIELD OVERVIEW

The Communication and Information Systems Career Field Area provides opportunities for students to deepen their understanding of topics in areas such as computer science, information technology, e-commerce, advertising, public relations, commercial photography, journalism, graphic design, broadcasting, scriptwriting, radio/TV production, business technology applications, web design, interactive media, and networking.

PROGRAMS OF STUDY

Programs of Study are the primary delivery model for Career and Technical Education (CTE) in Nebraska. They include a sequence of courses which progresses in specificity and rigor and are updated regularly to align with Nebraska's workforce needs and economic development priorities. This document includes the programs of study and course-based standards for the Communication and Information Systems career field. These state model programs of study were developed to:

- Assist secondary schools in creating meaningful sequences of courses that adequately prepare individuals for seamless transitions to postsecondary education and careers eliminating duplication of coursework;
- Assist students in identifying appropriate courses for high school and postsecondary education that lead to their chosen career;
- Encourage collaboration between secondary and postsecondary education through curricular alignment;
- Offer opportunities for high-quality workplace experiences aligned to students' career interests;
- Promote the advancement of early postsecondary opportunities (including dual-credit courses) for all students; and
- Support postsecondary education options for students to further prepare them for successful transitions to their future careers.

Nebraska's programs of study are organized around Nebraska's CTE Model, which provides a way for students to explore the diversity of career options available to them.

NEBRASKA CAREER AND TECHNICAL EDUCATION MODEL

1 CORE ACADEMICS AND CAREER READINESS

At the center of the NCE Model is the expectation for all students to develop a solid academic core. The next ring identifies specific career readiness standards and practices that prepare students for success in postsecondary education as well as entrepreneurship/employment.

2 CAREER FIELDS

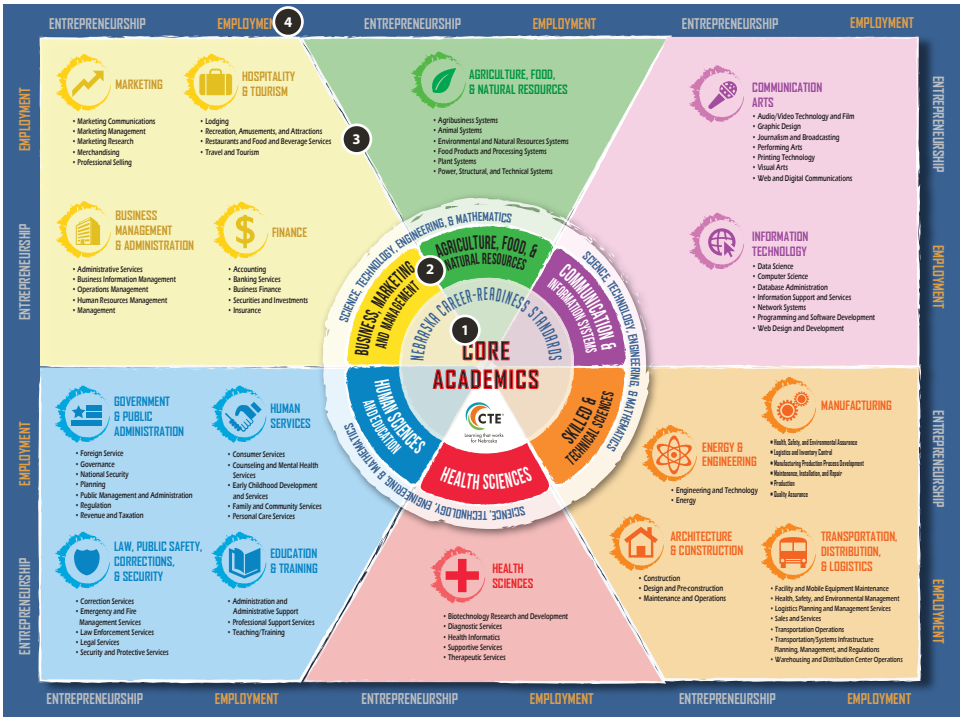
The six career fields represent broad sectors of the job market on which students may choose to focus.

3 CAREER CLUSTERS

Each career field is composed of career clusters radiating out from it. The clusters are more specific segments of the labor market. Each cluster is a grouping of careers that focus on similar subjects or similar skills. A basic understanding and exploration of each of the clusters will provide students with a solid foundation for career decision-making to conceptualize the entire world of work.

4 EMPLOYABILITY AND ENTREPRENEURSHIP

Career education provides the opportunity to gain the knowledge and skills for both employment and entrepreneurship. The reality for Nebraska and the United States is that entrepreneurship will help ensure economic growth and vitality. By infusing entrepreneurship competencies, career education is helping create the next generation of America's innovators and entrepreneurs.



The model is a visual map of "career fields" and "career clusters/pathways" and organizes the 16 National Career Clusters into six broad sectors of entrepreneurship and employment:

- Agriculture, Food and Natural Resources
- Business, Marketing and Management
- Communication and Information Systems
- Health Sciences
- Human Sciences and Education
- Skilled and Technical Sciences

These fields break down into more specific Career Clusters, Pathways and Occupational Specialties. The model provides a way for:

- Students to explore the diversity of career options available to them.
- Students to begin to prepare for their career with plans for secondary and post-secondary education.
- Schools to organize curriculum into Programs of Study that prepare students for opportunities in Nebraska's economy.

COURSE SEQUENCING

The courses within the State Model Program of Study are intended to be offered sequentially, to allow learners to build upon foundational knowledge and skills learned in introductory and intermediate courses and applied in more advanced capstone coursework. Non-duplicative sequences of courses ensure students transition to postsecondary education without duplication of classes and content. CTE enrollment data is collected at the course level. Students who participate and concentrate in CTE generally have more positive outcomes such as higher graduation rates along with postsecondary success.

Introductory Courses

Introductory courses set the foundation for a program of study by introducing students to broad foundational knowledge relative to an occupational area and career field.

Intermediate Courses

Intermediate courses build on the foundational knowledge of Introductory courses to further develop the academic, technical, and career readiness skills within a particular career field and occupational area.

Capstone Courses

Capstone courses are occupationally specific and further develop the necessary and required academic, technical, and career readiness skills needed for seamless transitions to postsecondary education and employment. Capstone courses often provide opportunities for students to earn postsecondary credit.

Levels of Participation

CTE Participant

A student who has earned one or more credits in any career and technical education program area.

CTE Concentrator

A secondary student who, in grades 9 through 12, has earned credit in at least two courses in a single career cluster program at the intermediate or capstone level.

State Model Programs of Study are coordinated, nonduplicative sequences of academic and technical content at the secondary and postsecondary levels that incorporate challenging State academic standards, address both academic and technical knowledge and skills, including Nebraska's Career Readiness Skills, are aligned with the needs of industries in Nebraska's economy, progress in specificity, have multiple entry and exit points that incorporate credentialing, and culminate in the attainment of a recognized postsecondary credential.

COURSE-BASED STANDARDS

Individual CTE courses, which make up the sequence of courses for Programs of Study, include content area standards and indicators to provide a framework for quality teaching and learning. While not required by state law, districts are encouraged to adopt these State Model Programs of Study and their related course-based standards. CTE State Model Programs of Study and course-based standards are revised on a five-year cycle to remain responsive to the rapid advances and needs of business and industry, help students explore a variety of postsecondary options and corresponding entrance requirements to help identify their next steps, and to align to changes in postsecondary programs.

Standards

At the highest level of generality, content area standards include a set of broad, overarching content-based statements that describe the basic cognitive, affective, or psychomotor expectations of students. They reflect long-term goals for learning.

Indicators

Under each standard are indicators, which further describe what a student must know and be able to do to meet the standard. Indicators are performance-based statements that provide educators with a clear understanding of the expected level of student learning and guidance. Indicators provide guidance for an assessment of student learning.

EXPANDED LEARNING OPPORTUNITIES

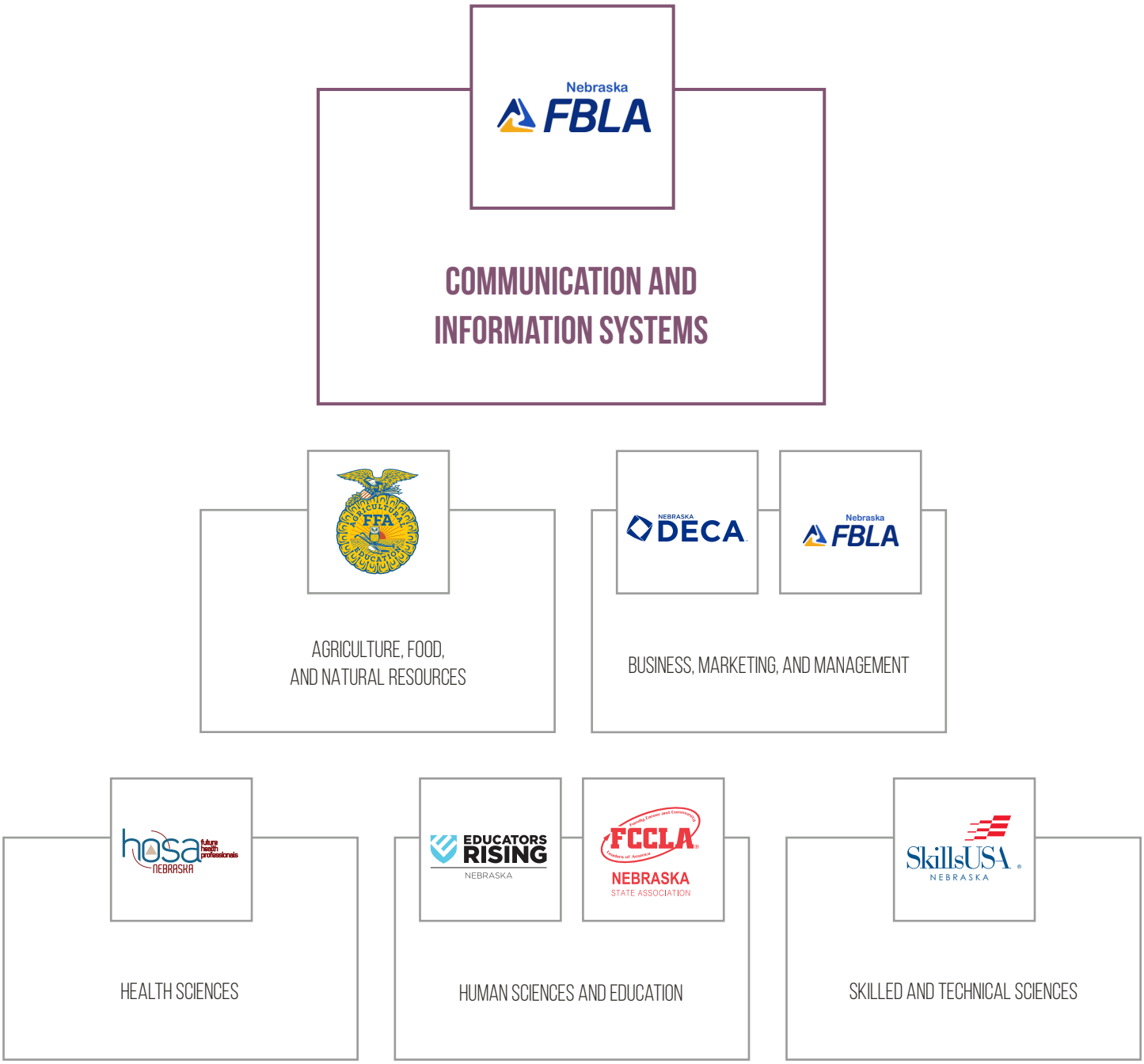
Expanded learning opportunities build on, support, and enhance learning within and outside of regular school programming. They are a critical component of Nebraska's educational landscape and should be intentionally supported to further develop students' college and career readiness. To signal aligned expanded learning opportunities, each Program of Study identifies additional areas where students may desire to personalize their program and take additional coursework or work-based learning that aligns with their interests. These expanded learning opportunities are not considered part of a Program of Study nor are they required, but rather a meaningful opportunity for students to continue to learn after completing the Program of Study sequence of courses within the context of their career interests. Along with aligned coursework, two prominent expanded learning opportunities include participating in Work-Based Learning or a Career and Technical Student Organization.

Work-Based Learning

Work-Based Learning (WBL) connects learners with employers to prepare them for success in an ever-changing workplace. WBL is a planned program of meaningful experiences related to the career interests of learners that enables them to acquire knowledge and skills in a real or simulated work setting. It requires strong partnerships between schools, colleges, and local employers. WBL is learning through work, not simply learning about work. Expanding high-quality WBL opportunities for students is one of Nebraska's CTE strategic priorities and is a program quality accountability indicator. Nebraska CTE affirms WBL as a critical component of career development. Throughout the State Model Programs of Study, courses where WBL is embedded into the class is noted in the course title (e.g., "Information Technology Work-Based Learning Experience"). It is also signaled as an expanded learning opportunity across all programs of study.

Career And Technical Student Organizations

Career and Technical Student Organizations (CTSOs) are an extension of classroom instruction—applying classroom learning to real-world experiences. CTSOs provide opportunities for all students to develop career readiness skills through activities, competitions, and community service. Nebraska recognizes seven CTSOs aligned with the state's Programs of Study and career field areas. These include:



CAREER READINESS STANDARDS

Embedded into the State Model Programs of Study and courses are the Nebraska Career Readiness standards. These standards rest on important "practices and proficiencies" with long-standing importance in career education. These standards and related practices are not limited to formal CTE programs nor to the middle school or high school level. Rather, these standards and practices should be used over and over again with increasing complexity and relevance by students as they progress through their educational pathway. The standards themselves do not dictate curriculum, pedagogy or delivery of content. Schools and colleges may handle the teaching and assessing of these standards in many different ways.

THE CAREER READY INDIVIDUAL...

1. Applies appropriate academic and technical skills

2. Communicates effectively and appropriately

3. Contributes to employer and community success

4. Makes sense of problems and perseveres in solving them

5. Uses critical thinking

6. Demonstrates innovation and creativity

7. Models ethical leadership and effective management

8. Works productively in teams and demonstrates cultural competency

9. Utilizes technology

10. Manages personal career development

11. Attends to personal and financial well-being

COMMUNICATION AND INFORMATION SYSTEMS

PROGRAMS OF STUDY

COMMUNICATION ARTS CLUSTER

Program of Study Name	Introductory Course	Intermediate Course	Capstone Course	Expanded Learning Opportunity
BROADCAST JOURNALISM (Page10–24)	270602 - Digital Media	270609 - Video Production	270610 - Media Production, OR 270604 - Foundations of Web Design	320704 - Communication Arts Work-Based Learning Experience
DIGITAL DESIGN (Page 25–38)	270602 - Digital Media	270611 - Digital Design	270613 - Advanced Digital Design, OR 270604 - Foundations of Web Design	320704 - Communication Arts Work-Based Learning Experience

INFORMATION TECHNOLOGY CLUSTER

Program of Study Name	Introductory Course	Intermediate Course	Capstone Course	Expanded Learning Opportunity
BUSINESS TECHNOLOGY (Page 39–53)	270501 - IT Applications 1, AND 270502 - IT Applications 2	270611 - Digital Design	270604 - Foundations of Web Design, OR 030600 - Business Communication (BMM)	320713 - Information Technology Work-Based Learning Experience, OR 320704 - Communication Arts Work-Based Learning Experience
CISCO NETWORKING	270505 - CISCO I: Introduction to Networks	270506 - CISCO II: Routing & Switching Essentials	270507 - CISCO III: Scaling Networks	320713 - Information Technology Work-Based Learning Experience
COMPUTER SCIENCE (Page 54–69)	270704 - Foundations of Computing, OR 270504 - IT Fundamentals	270703 - Computer Science Principles (1 year), OR 270702 - AP Computer Science Principles, OR 270708 - PLTW Computer Science Principles	270701 - Computer Science A (1 year), OR 270712 - IB Comp Science, OR 270700 - AP Computer Science A, OR 270705 - Software Development, OR 270709 - PLTW Computer Science A	320713 - Information Technology Work-Based Learning Experience

INFORMATION TECHNOLOGY CLUSTER **(CONTINUED)**

Program of Study Name	Introductory Course	Intermediate Course	Capstone Course	Expanded Learning Opportunity
DATA ANALYTICS AND MANAGEMENT (Page 70–78)	270502 - IT Applications 2	270414 - Data Literacy & Visualization	270413 - Introduction to Data Science	320713 - Information Technology Work-Based Learning Experience
IT OPERATIONS MANAGEMENT (Page 79–92)	270504 - IT Fundamentals, OR 270502 - IT Applications 2	270707 - Cybersecurity, OR 270711 - PLTW Cybersecurity	270601 - Networking	320713 - Information Technology Work-Based Learning Experience
WEB DEVELOPMENT (Page 93–105)	270504 - IT Fundamentals, OR 270502 - IT Applications 2	270706 - Web Design & Development	270604 - Foundations of Web Design	320713 - Information Technology Work-Based Learning Experience, OR 320704 - Communication Arts Work-Based Learning Experience

DIGITAL MEDIA

COURSE DESCRIPTION

Students will learn and apply copyright laws while using industry standard digital tools to create, design, and produce digital media including sound, video, motion graphics, and print design following rules of composition and basic design principles.

STANDARDS AND INDICATORS:

CIS.HS.7.1 Evaluate and comply with copyright laws.

CIS.HS.7.1.a	Define terms such as infringement and fair use, royalty free and copyright free, and public domain.
CIS.HS.7.1.b	Locate sources of royalty-free music, images, graphics, and video.
CIS.HS.7.1c	Define copyright as it applies to their own creative work.
CIS.HS.7.1.d	Select audio, video, still images, and art that are royalty free and/or abide by the licensing agreement under Creative Commons usage.
CIS.HS.7.1.e	Analyze the different types of copyright licenses and their uses. (e.g., Creative Commons, Public Domain…)

CIS.HS.7.2 Demonstrate composition techniques.

CIS.HS.7.2.a	Demonstrate rules of composition (e.g., rule of thirds, point-of-view, framing).
CIS.HS.7.2.b	Demonstrate a variety of photographic/video shots using a digital camera or video camera (e.g., establishing, close up, mid-shot, wide, over the shoulder).
CIS.HS.7.2.c	Demonstrate elements of typographic design in print media (e.g., font selection, size, leading, tracking and kerning, measure, whitespace, hierarchy, and scale).
CIS.HS.7.2.d	Demonstrate basic design principles such as consistency, dominance, palette, eye line, readability, alignment, and color theory.

DIGITAL MEDIA (cont.)

CIS.HS.7.3 Create and edit digital photographic images.

CIS.HS.7.3.a	Select appropriate hardware and software.
CIS.HS.7.3.b	Capture still photographic images.
CIS.HS.7.3.c	Edit still photos (e.g., cropping, color correction, layers, and levels).
CIS.HS.7.3.d	Export photos in a usable format.
CIS.HS.7.3.e	Name and store native and exported files in a manageable file structure (i.e., Drive, Cloud, and external hard drives).
CIS.HS.7.3.f	Navigate, organize, and customize the application workspace.

CIS.HS.7.4 Create and edit digital audio.

CIS.HS.7.4.a	Select appropriate hardware and software.
CIS.HS.7.4.b	Capture an audio recording.
CIS.HS.7.4.c	Edit digital audio (e.g., trim, delete, and add effects).
CIS.HS.7.4.d	Export audio in a usable format.
CIS.HS.7.4.e	Name and store native and exported files in a manageable file structure (i.e., Drive, Cloud, and external hard drives).
CIS.HS.7.4.f	Navigate, organize, and customize the application workspace.

DIGITAL MEDIA (cont.)

CIS.HS.7.5 Create and edit digital video.

CIS.HS.7.5.a	Select appropriate hardware and software.
CIS.HS.7.5.b	Capture video footage.
CIS.HS.7.5.c	Edit digital video (e.g., trim, delete, and add effects).
CIS.HS.7.5.d	Export video in a usable format.
CIS.HS.7.5.e	Name and store native and exported files in a manageable file structure (i.e., Drive, Cloud, and external hard drives).
CIS.HS.7.5.f	Navigate, organize, and customize the application workspace.

CIS.HS.7.6 Create and edit motion graphics objects for animation.

CIS.HS.7.6.a	Select appropriate hardware and software
CIS.HS.7.6.b	Add motion to objects.
CIS.HS.7.6.c	Edit motion graphics (e.g., trim, delete, add effects, etc.).
CIS.HS.7.6.d	Export motion graphics in a usable format.
CIS.HS.7.6.e	Name and store native and exported files in a manageable file structure (i.e., Drive, Cloud, and external hard drives).
CIS.HS.7.6.f	Navigate, organize, and customize the application workspace.

DIGITAL MEDIA (cont.)

CIS.HS.7.7 Create and edit digital print design.

CIS.HS.7.7.a	Select appropriate hardware and software.
CIS.HS.7.7.b	Apply elements of typographic design in print media (e.g., font selection, size, leading, tracking and kerning, measure, whitespace, hierarchy, and scale).
CIS.HS.7.7.c	Apply basic design principles such as consistency, dominance, palette, eye line, readability, and alignment.
CIS.HS.7.7.d	Name and store native and exported files in a manageable file structure (i.e., Drive, Cloud, and external hard drives).
CIS.HS.7.7.e	Navigate, organize, and customize the application workspace.

VIDEO PRODUCTION

COURSE DESCRIPTION

Students will expand upon the basics of video production to create projects that will involve a sequence requiring pre-production, production, and post production. The emphasis of video production is to tell stories through interviewing, scripting, and a more professional application of lighting, filming, recording, and editing.

STANDARDS AND INDICATORS:

CIS.HS.17.1 Use video equipment to create media production projects.

CIS.HS.17.1.a	Identify and use various types of cameras (e.g., DSLR's, camcorders, drones, etc) to best capture the scene.
CIS.HS.17.1.b	Identify and use various types of camera features (e.g., white balance, iso, fps).
CIS.HS.17.1.c	Demonstrate the functions and uses of camera mounting devices (e.g., monopods, tripods, steadicam, gimbals, etc.).
CIS.HS.17.1.d	Demonstrate different shot compositions (e.g., establishing shot, medium shot, close up, long shot, etc.).
CIS.HS.17.1.e	Demonstrate compositional techniques with a camera (e.g., rule of thirds, framing, balance, background/foreground, headroom, lead room, etc.).
CIS.HS.17.1.f	Demonstrate proper use, maintenance, and care of all equipment and tools.

CIS.HS.17.2 Use audio equipment to create media production projects.

CIS.HS.17.2.a	Identify and use various types of microphones (e.g., lavaliere, directional, omnidirectional, shotgun, podcast, etc) to best capture voice, natural sound, ambient sound, background music, and secondary sounds for mood and effect.
CIS.HS.17.2.b	Explain the function of industry standard audio equipment and accessories (e.g., microphones, XLR, 2 Ring (TRS) vs. 3 Ring (TRRS) for headphones, mixing board, cabling, etc.).
CIS.HS.17.2.c	Identify and then troubleshoot sources of interference and poor sound quality.
CIS.HS.17.2.d	Demonstrate proper use, maintenance, and care of all equipment and tools.

VIDEO PRODUCTION (cont.)

CIS.HS.17.3 Use lighting to create media production projects.

CIS.HS.17.3.a Utilize various light sources for effect (e.g., natural light, back light, reflectors, portable lights, box lights, lamps etc.).

CIS.HS.17.3.b Explain and demonstrate the use of lighting techniques in creating composition, visual continuity, and mood.

CIS.HS.17.3.c Demonstrate proper use, maintenance, and care of all equipment and tools.

CIS.HS.17.4 Complete pre-production tasks.

CIS.HS.17.4.a Propose a project to include purpose, target audience, delivery method, selection of cast and crew, best equipment for the job, logistics, and schedule.

CIS.HS.17.4.b Scout and secure locations for the best lighting, sound, availability, and proper setting for the purpose of the project.

CIS.HS.17.4.c Create a properly formatted storyboard and shot list for each scene (sketch subjects, draw background, motion/movement, shot numbers, etc.).

CIS.HS.17.5 Develop all parts of the storytelling process.

CIS.HS.17.5.a Write questions for interviews.

CIS.HS.17.5.b Write a voice over script.

CIS.HS.17.5.c Research information as part of the story.

VIDEO PRODUCTION (cont.)

CIS.HS.17.6 Perform production tasks.

CIS.HS.17.6.a	Perform the duties of director to create vision as laid forth in pre-production (e.g., disseminate commands and information to cast and crew and execute creative vision).
CIS.HS.17.6.b	Perform the duties of various production roles (i.e., camera operator, sound operator, grip, gaffer, on-air talent, etc.).
CIS.HS.17.6.c	Employ basic lighting techniques for the project (i.e., three-point, natural, artificial, reflectors, etc.).
CIS.HS.17.6.d	Employ appropriate audio recording method for the project.
CIS.HS.17.6.e	Reflect, revise, and refine pre-production decisions as needed.
CIS.HS.17.6.f	Apply different shot compositions when filming (e.g., establishing shot, medium shot, close up, long shot, etc.).

CIS.HS.17.7 Perform post-production tasks.

CIS.HS.17.7.a	Import and organize media to create an efficient workflow (i.e., assemble, review, share, etc.).
CIS.HS.17.7.b	Demonstrate how to perform editing techniques using chosen software (e.g., cuts, trims, color correction, cropping, audio leveling, key framing, chroma key, transitions, compositing, continuity, and fades).
CIS.HS.17.7.c	Determine effect use and placement of titles, text, fonts, colors, graphics, and lower thirds.
CIS.HS.17.7.d	Implement legal and appropriate audio into a project.
CIS.HS.17.7.e	Evaluate video for proper timing and pacing techniques appropriate to the project.
CIS.HS.17.7.f	Differentiate between still image, audio, and digital video extensions and how they function in the project.
CIS.HS.17.7.g	Create, compress, and convert digital video files, still images, and audio files in various formats (e.g., MPEG, WMV, MOV, MP3, MP4, VLC, JPEG, AIFF, AVCHD, etc.).

VIDEO PRODUCTION (cont.)

CIS.HS.17. 8 Describe working in the media production industry.

CIS.HS.17.8.a Describe best practices employed in the design industry.

CIS.HS.17.8.b Examine careers in the media production field.

CIS.HS.17.8.c Identify job market trends in the media production field.

CIS.HS.17.8.d Identify the benefits of industry certification and higher education in the field.

CIS.HS.17.9 Evaluate and comply with copyright laws.

CIS.HS.17.9.a Determine the type of copyright, permissions, and licensing required to use specific content.

CIS.HS.17.9.b Analyze the different types of copyright licenses and their uses. (e.g., Creative Commons, Public Domain).

CIS.HS.17.9.c Identify legal and ethical considerations for using third-party content, such as copyright, permissions, and licensing.

CIS.HS.17.9.d Understand copyright as it applies to one's own creative work.

MEDIA PRODUCTION

COURSE DESCRIPTION

Students will expand their skills in the creation of media productions such as a news broadcast, video story package, live streaming, radio show, podcast, PSAs, digital signage, short films, documentaries, and other media projects. These skills will prepare students for entry-level positions in the media production field.

STANDARDS AND INDICATORS:

CIS.HS.14.1 Analyze working in the media production field.

CIS.HS.14.1.a Analyze careers in the media production field.

CIS.HS.14.1.b Analyze job market trends in the media production field.

CIS.HS.14.1.c Analyze the benefits of industry certification and higher education in the field.

CIS.HS.14.1.d Investigate careers in media production.

CIS.HS.14.2 Identify and describe the roles and responsibilities for the cast and crew.

CIS.HS.14.2.a Describe the hierarchy of the production leadership crew (e.g., Executive Producer, Producer, or Director).

CIS.HS.14.2.b Identify the roles and duties of the production crew (i.e., actor, on-camera reporter, writer, announcer, play-by-play announcer, color commentary announcer, camera operator, sound board, etc.)

MEDIA PRODUCTION (cont.)

CIS.HS.14.3 Simulate working in the media production field through the creation of client-based media projects.

CIS.HS.14.3.a Compare and contrast the various roles involved in media production.

CIS.HS.14.3.b Interpret the client's purpose, audience, and audience needs for preparing media to ensure the content is relevant.

CIS.HS.14.3.c Prepare a production schedule (e.g., creating and using a work plan, establishing milestones and deliverables).

CIS.HS.14.3.d Describe the importance of branding as it applies to client-based media production projects.

CIS.HS.14.3.e Communicate in person and through written communication with peers and clients about production plans and processes.

CIS.HS.14.3.f Distribute a final product to the target audience using appropriate outlets.

CIS.HS.14.3.g Evaluate effectiveness, analytics, and feedback from the media production.

CIS.HS.14.4 Research, report, and synthesize information from interviews as part of the storytelling process.

CIS.HS.14.4.a Identify the components of a compelling video story.

CIS.HS.14.4.b Write open-ended questions for interviews.

CIS.HS.14.4.c Conduct interviews with subjects.

CIS.HS.14.4.d Incorporate information from research and interviews to write a voice over script appropriate to the project.

MEDIA PRODUCTION (cont.)

CIS.HS.14.5 Demonstrate technical skills for broadcast, video, Internet, audio, and/or mobile production.

CIS.HS.14.5.a Demonstrate proficiency using equipment and software during recording and post-production applications.

CIS.HS.14.5.b Research and evaluate trends in new equipment, software, and techniques.

CIS.HS.14.6 Evaluate and comply with copyright laws.

CIS.HS.14.6.a Determine the type of copyright, permissions, and licensing required to use specific content.

CIS.HS.14.6.b Analyze the different types of copyright licenses and their uses. (e.g., Creative Commons, Public Domain).

CIS.HS.14.6.c Identify legal and ethical considerations for using third-party content, such as copyright, permissions, and licensing.

CIS.HS.14.6.d Apply copyright as it pertains to one's own creative work.

CIS.HS.14.7 Create a digital portfolio which demonstrates competency in the Media Production field.

CIS.HS.14.7.a Examine professional digital portfolios as models.

CIS.HS.14.7.b Evaluate all elements of the portfolio for compliance with copyright.

CIS.HS.14.7.c Curate works for the portfolio that demonstrates media production skills.

CIS.HS.14.7.d Design portfolio so that it demonstrates principles of good design.

CIS.HS.14.7.e Choose language to ensure copyright protections of the student work.

CIS.HS.14.7.f Explain the importance of branding as it applies to their portfolio of creative work.

FOUNDATIONS OF WEB DESIGN

COURSE DESCRIPTION

Students will demonstrate knowledge of web and mobile app design to create an effective website or app that captures and keeps visitors' interests. Students will demonstrate project management skills, while also enhancing creativity, problem solving, and critical thinking. Students will explore career opportunities in an information technology career field.

STANDARDS AND INDICATORS:

CIS.HS.9.1 Explain and apply appropriate web design language and terminology.

- CIS.HS.9.1.a Describe the principles and goals of website design.
- CIS.HS.9.1.b Describe the principles and goals of responsive design.
- CIS.HS.9.1.c Describe binary code.
- CIS.HS.9.1.d Define common industry terminology.

CIS.HS.9.2 Plan a website and/or app for a specific purpose.

- CIS.HS.9.2.a Develop a storyboard, mock-up, and wireframes for a website and/or app.
- CIS.HS.9.2.b Explain the design process in regards to audience, layout, time, and budget.
- CIS.HS.9.2.c Identify the target market audience's needs.
- CIS.HS.9.2.d Evaluate clients' needs based on current trends.
- CIS.HS.9.2.e Plan for responsive design.

FOUNDATIONS OF WEB DESIGN (cont.)

CIS.HS.9.3 Analyze elements and principles of design to communicate ideas consistent with project goals.

CIS.HS.9.3.a	Apply appropriate font and font family concepts.
CIS.HS.9.3.b	Demonstrate knowledge of design decisions in regards to shapes, lines, colors.
CIS.HS.9.3.c	Demonstrate knowledge of design decisions in regards to white space, margins, and layout of graphic and text.
CIS.HS.9.3.d	Incorporate text layout techniques such as kerning, leading, and alignment.
CIS.HS.9.3.e	Incorporate audio, visual, and graphic elements.
CIS.HS.9.3.f	Develop a focused concept, clear methods of conveyance, and unified theme that solves the given problem.
CIS.HS.9.3.g	Identify accessibility and standard compliance measures in order to communicate with a broad audience.
CIS.HS.9.3.h	Explain design decisions in regards to themes.
CIS.HS.9.3.i	Evaluate the impact of design decisions on the theme of a design.
CIS.HS.9.3.j	Explain design and project goals using a storyboard, mock-up, and wireframes.

CIS.HS.9.4 Analyze legal and ethical responsibilities.

CIS.HS.9.4.a	Apply copyright laws as appropriate in website and app creation.
CIS.HS.9.4.b	Discuss security issues that are related to the utilization of the computer and/or Internet.
CIS.HS.9.4.c	Describe situations where web pages and/or apps may be used unethically.
CIS.HS.9.4.d	Describe licensing agreements.
CIS.HS.9 4.e	Discuss the importance of creative commons.

FOUNDATIONS OF WEB DESIGN (cont.)

CIS.HS.9.5 Create and test websites and/or apps designed for cross browser and mobile compatibility.

CIS.HS.9.5.a Utilize standards-compliant elements in code that delivers essential content and functionality if older browsers are not capable of displaying content.

CIS.HS.9.5.b Create websites and/or apps that utilize responsive design to allow for a variety of screen sizes and geometries to view the content in a meaningful and logical fashion.

CIS.HS.9.5.c Test an application on devices of varying geometries and operating system versions to ensure maximum compatibility.

CIS.HS.9.6 Implement quality assurance processes to deliver effective digital communication.

CIS.HS.9.6.a Evaluate the website and/or app functionality.

CIS.HS.9.6.b Test a website and/or app in a variety of environments.

CIS.HS.9.6.c Evaluate site effectiveness through user search and accessibility to meet all audience needs.

CIS.HS.9.6.d Investigate web hosts.

CIS.HS.9.6.e Troubleshoot and maintain a website and/or app.

CIS.HS.9.6.f Evaluate cross-browser compatibility.

CIS.HS.9.6.g Identify the process of securing a domain name.

FOUNDATIONS OF WEB DESIGN (cont.)

CIS.HS.9.7 Critique a website and/or app in accordance with web design principles.

CIS.HS.9.7.a Assess download time.

CIS.HS.9.7.b Assess readability of the website and/or app.

CIS.HS.9.7.c Assess ease of navigation for both website and/or app.

CIS.HS.9.7.d Assess the design theme of a website and/or app.

CIS.HS.9.7.e Assess consistency of the theme across the entire website and/or app.

CIS.HS.9.7.f Assess the functionality of links.

CIS.HS.9.8 Identify opportunities in an information technology career field including but not limited to entrepreneurial opportunities, responsibilities, education, and certification.

CIS.HS.9.8.a Identify information technologies used in various industries.

CIS.HS.9.8.b Discuss the impact of technology on all career fields.

CIS.HS.9.8.c Identify common tasks in career fields.

CIS.HS.9.8.d Discuss career opportunities in information technology career fields.

CIS.HS.9.8.e Describe the impact of technological change and the importance of lifelong learning in this career field.

DIGITAL MEDIA

COURSE DESCRIPTION

Students will learn and apply copyright laws while using industry standard digital tools to create, design, and produce digital media including sound, video, motion graphics, and print design following rules of composition and basic design principles.

STANDARDS AND INDICATORS:

CIS.HS.7.1 Evaluate and comply with copyright laws.

CIS.HS.7.1.a	Define terms such as infringement and fair use, royalty free and copyright free, and public domain.
CIS.HS.7.1.b	Locate sources of royalty-free music, images, graphics, and video.
CIS.HS.7.1.c	Define copyright as it applies to their own creative work.
CIS.HS.7.1.d	Select audio, video, still images, and art that are royalty free and/or abide by the licensing agreement under Creative Commons usage.
CIS.HS.7.1.e	Analyze the different types of copyright licenses and their uses. (e.g., Creative Commons, Public Domain…)

CIS.HS.7.2 Demonstrate composition techniques.

CIS.HS.7.2.a	Demonstrate rules of composition (e.g., rule of thirds, point-of-view, framing).
CIS.HS.7.2.b	Demonstrate a variety of photographic/video shots using a digital camera or video camera (e.g., establishing, close up, mid-shot, wide, over the shoulder).
CIS.HS.7.2.c	Demonstrate elements of typographic design in print media (e.g., font selection, size, leading, tracking and kerning, measure, whitespace, hierarchy, and scale).
CIS.HS.7.2.d	Demonstrate basic design principles such as consistency, dominance, palette, eye line, readability, alignment, and color theory.

DIGITAL MEDIA (cont.)

CIS.HS.7.3 Create and edit digital photographic images.

CIS.HS.7.3.a	Select appropriate hardware and software.
CIS.HS.7.3.b	Capture still photographic images.
CIS.HS.7.3.c	Edit still photos (e.g., cropping, color correction, layers, and levels).
CIS.HS.7.3.d	Export photos in a usable format.
CIS.HS.7.3.e	Name and store native and exported files in a manageable file structure (i.e., Drive, Cloud, and external hard drives).
CIS.HS.7.3.f	Navigate, organize, and customize the application workspace.

CIS.HS.7.4 Create and edit digital audio.

CIS.HS.7.4.a	Select appropriate hardware and software.
CIS.HS.7.4.b	Capture an audio recording.
CIS.HS.7.4.c	Edit digital audio (e.g., trim, delete, and add effects).
CIS.HS.7.4.d	Export audio in a usable format.
CIS.HS.7.4.e	Name and store native and exported files in a manageable file structure (i.e., Drive, Cloud, and external hard drives).
CIS.HS.7.4.f	Navigate, organize, and customize the application workspace.

DIGITAL MEDIA (cont.)

CIS.HS.7.5 Create and edit digital video.

CIS.HS.7.5.a	Select appropriate hardware and software.
CIS.HS.7.5.b	Capture video footage.
CIS.HS.7.5.c	Edit digital video (e.g., trim, delete, and add effects).
CIS.HS.7.5.d	Export video in a usable format.
CIS.HS.7.5.e	Name and store native and exported files in a manageable file structure (i.e., Drive, Cloud, and external hard drives).
CIS.HS.7.5.f	Navigate, organize, and customize the application workspace.

CIS.HS.7.6 Create and edit motion graphics objects for animation.

CIS.HS.7.6.a	Select appropriate hardware and software
CIS.HS.7.6.b	Add motion to objects.
CIS.HS.7.6.c	Edit motion graphics (e.g., trim, delete, add effects, etc.).
CIS.HS.7.6.d	Export motion graphics in a usable format.
CIS.HS.7.6.e	Name and store native and exported files in a manageable file structure (i.e., Drive, Cloud, and external hard drives).
CIS.HS.7.6.f	Navigate, organize, and customize the application workspace.

DIGITAL MEDIA (cont.)

CIS.HS.7.7 Create and edit digital print design.

CIS.HS.7.7.a	Select appropriate hardware and software.
CIS.HS.7.7.b	Apply elements of typographic design in print media (e.g., font selection, size, leading, tracking and kerning, measure, whitespace, hierarchy, and scale).
CIS.HS.7.7.c	Apply basic design principles such as consistency, dominance, palette, eye line, readability, and alignment.
CIS.HS.7.7.d	Name and store native and exported files in a manageable file structure (i.e., Drive, Cloud, and external hard drives).
CIS.HS.7.7.e	Navigate, organize, and customize the application workspace.

DIGITAL DESIGN

COURSE DESCRIPTION

Students will focus on developing skills to plan, design, and create digital design projects using elements of composition, digital photography, and digital print design.

STANDARDS AND INDICATORS:

CIS.HS.6.1 Utilize composition techniques.

CIS.HS.6.1.a	Demonstrate rules of composition (e.g., rule of thirds, point-of-view, framing).
CIS.HS.6.1.b	Demonstrate a variety of photographic shots using a digital camera.
CIS.HS.6.1.c	Demonstrate elements of typographic design in print media (e.g., font selection, size, leading, tracking and kerning, measure, whitespace, hierarchy and scale).
CIS.HS.6.1.d	Demonstrate basic design principles such as consistency, dominance, palette, eye line, readability, alignment, and color theory.
CIS.HS.6.1.e	Differentiate between bitmap, raster, and vector images.

CIS.HS.6.2 Create and edit digital photographic images.

CIS.HS.6.2.a	Select appropriate hardware and software.
CIS.HS.6.2.b	Capture still photographic images.
CIS.HS.6.2.c	Edit still photos (e.g., cropping, color correction, layers, and levels).
CIS.HS.6.2.d	Apply multiple camera modes.
CIS.HS.6.2.e	Apply light and color principles to projects.
CIS.HS.6.2.f	Apply image stabilization.
CIS.HS.6.2.g	Apply exposure, shutter speed, and aperture.
CIS.HS.6.2.h	Export photos in a usable format.
CIS.HS.6.2.i	Name and store native and exported files in a manageable file structure (i.e.: Drive, Cloud, or external hard drive).

DIGITAL DESIGN (cont.)

CIS.HS.6.3 Create and edit digital print design.

CIS.HS.6.3.a	Select appropriate hardware and software.
CIS.HS.6.3.b	Apply elements of typographic design in print media (e.g., font selection, size, leading, tracking and kerning, measure, whitespace, hierarchy and scale).
CIS.HS.6.3.c	Apply basic design principles such as consistency, dominance, palette, eye line, readability, and alignment.
CIS.HS.6.3.d	Demonstrate knowledge of page layout (e.g.,negative space, alignment, symmetrical, and asymmetrical).
CIS.HS.6.3.e	Use layers to manage design elements and modify layer visibility using opacity and masks.
CIS.HS.6.3.f	Make, manage, and manipulate selections.
CIS.HS.6.3.g	Name and store native and exported files in a manageable file structure (ie: Drive, Cloud, or external hard drive).
CIS.HS.6.3.h	Explain the difference between modes of a print document: CMYK, RGB, grayscale, bitmap.

CIS.HS.6.4 Create and edit motion graphics objects for animation.

CIS.HS.6.4.a	Select appropriate hardware and software.
CIS.HS.6.4.b	Add motion to objects as a project or to enhance a project.
CIS.HS.6.4.c	Edit motion graphics (e.g., trim, delete, add effects, etc.).
CIS.HS.6.4.d	Export a motion graphic in a usable format.
CIS.HS.6.4.e	Name and store native and exported files in a manageable file structure i.e., Drive, Cloud, or external hard drive).

DIGITAL DESIGN (cont.)

CIS.HS.6.5 Describe working in the digital design field.

CIS.HS.6.5.a	Identify the purpose, audience, and audience needs for preparing images.
CIS.HS.6.5.b	Determine whether content is relevant to the purpose, audience, and audience needs.
CIS.HS.6.5.c	Demonstrate knowledge of basic design principles and understand best practices employed in the digital design field.
CIS.HS.6.5.d	Examine careers in the digital design field.
CIS.HS.6.5.e	Identify job market trends in the digital design field.
CIS.HS.6.5.f	Identify the benefits of industry certification and higher education in the field.

CIS.HS.6.6 Evaluate and comply with copyright laws.

CIS.HS.6.6.a	Determine the type of copyright, permissions, and licensing required to use specific content.
CIS.HS.6.6.b	Analyze the different types of copyright licenses and their uses. (e.g., Creative Commons, or Public Domain).
CIS.HS.6.6.c	Identify legal and ethical considerations for using third-party content, such as copyright, permissions, and licensing.
CIS.HS.6.6.d	Understand copyright as it applies to their own creative work.

ADVANCED DIGITAL DESIGN

COURSE DESCRIPTION

Students will focus on utilizing advanced skills to plan, design, and create a design portfolio to showcase elements of composition, digital photography, or digital print design. These skills will prepare students for entry-level positions in the digital design field.

STANDARDS AND INDICATORS:

CIS.HS.1.1 Design client-based or personal projects utilizing composition techniques.

CIS.HS.1.1.a	Compose photographic, digital print design, or animation projects utilizing design and composition rules.
CIS.HS.1.1.b	Select appropriate hardware and software based on the final product needed by client.
CIS.HS.1.1.c	Demonstrate rules of composition.
CIS.HS.1.1.d	Construct a project and justify chosen design principles.
CIS.HS.1.1.e	Name and store native and exported files in a manageable file structure (i.e., Drive, Cloud, external hard drive).

CIS.HS.1.2 Design graphics and text that clearly express the personal perspective of intended audiences.

CIS.HS.1.2.a	Identify purpose, audience, and audience needs for preparing images. Determine whether content is relevant to the purpose, audience, and audience needs.
CIS.HS.1.2.b	Prepare a production schedule (e.g., creating and using a work plan, establishing milestones and deliverables).
CIS.HS.1.2.c	Assess and utilize design principles and best practices employed in the design field.

ADVANCED DIGITAL DESIGN (cont.)

CIS.HS.1.3 Simulate working in the digital design field through creation of client-based design projects.

CIS.HS.1.3.a Describe the client's purpose and audience when preparing projects to ensure the content is relevant to the client's needs.

CIS.HS.1.3.b Prepare a production schedule (e.g., creating and using a work plan, establishing milestones and deliverables).

CIS.HS.1.3.c Assess and utilize design principles and best practices employed in the design field.

CIS.HS.1.3.d Describe the importance of branding as it applies to client-based design projects.

CIS.HS.1.3.e Communicate effectively in person and through written communication with peers and clients about design plans and processes.

CIS.HS.1.4 Analyze working in the digital design field.

CIS.HS.1.4.a Analyze careers in the digital design field.

CIS.HS.1.4.b Analyze job market trends in the digital design field.

CIS.HS.1.4.c Analyze the benefits of industry certification and higher education in the field.

CIS.HS.1.4.d Investigate careers in digital design through pursuit of a job shadowing or internship experience.

ADVANCED DIGITAL DESIGN (cont.)

CIS.HS.1.5 Evaluate and comply with copyright laws.

CIS.HS.1.5.a	Determine the type of copyright, permissions, and licensing required to use specific content.
CIS.HS.1.5.b	Analyze the different types of copyright licenses and their uses. (e.g., Creative Commons, Public Domain).
CIS.HS.1.5.c	Identify legal and ethical considerations for using third-party content, such as copyright, permissions, and licensing.
CIS.HS.1.5.d	Apply copyright as it pertains to their own creative work.

CIS.HS.1.6 Create a digital portfolio which demonstrates competency in the digital design field.

CIS.HS.1.6.a	Examine professional digital portfolios as models.
CIS.HS.1.6.b	Evaluate all elements of the portfolio for compliance with copyright.
CIS.HS.1.6.c	Curate works for the portfolio that demonstrate mastery of design.
CIS.HS.1.6.d	Design portfolio itself so that it demonstrates mastery of design.
CIS.HS.1.6.e	Choose language to ensure copyright protections of the student work.
CIS.HS.1.6.f	Describe the importance of branding as it applies to their portfolio of creative work.

FOUNDATIONS OF WEB DESIGN

COURSE DESCRIPTION

Students will demonstrate knowledge of web and mobile app design to create an effective website or app that captures and keeps visitors' interests. Students will demonstrate project management skills, while also enhancing creativity, problem solving, and critical thinking. Students will explore career opportunities in an information technology career field.

STANDARDS AND INDICATORS:

CIS.HS.9.1 Explain and apply appropriate web design language and terminology.

- CIS.HS.9.1.a Describe the principles and goals of website design.
- CIS.HS.9.1.b Describe the principles and goals of responsive design.
- CIS.HS.9.1.c Describe binary code.
- CIS.HS.9.1.d Define common industry terminology.

CIS.HS.9.2 Plan a website and/or app for a specific purpose.

- CIS.HS.9.2.a Develop a storyboard, mock-up, and wireframes for a website and/or app.
- CIS.HS.9.2.b Explain the design process in regards to audience, layout, time, and budget.
- CIS.HS.9.2.c Identify the target market audience's needs.
- CIS.HS.9.2.d Evaluate clients' needs based on current trends.
- CIS.HS.9.2.e Plan for responsive design.

FOUNDATIONS OF WEB DESIGN (cont.)

CIS.HS.9.3 Analyze elements and principles of design to communicate ideas consistent with project goals.

CIS.HS.9.3.a	Apply appropriate font and font family concepts.
CIS.HS.9.3.b	Demonstrate knowledge of design decisions in regards to shapes, lines, colors.
CIS.HS.9.3.c	Demonstrate knowledge of design decisions in regards to white space, margins, and layout of graphic and text.
CIS.HS.9.3.d	Incorporate text layout techniques such as kerning, leading, and alignment.
CIS.HS.9.3.e	Incorporate audio, visual, and graphic elements.
CIS.HS.9.3.f	Develop a focused concept, clear methods of conveyance, and unified theme that solves the given problem.
CIS.HS.9.3.g	Identify accessibility and standard compliance measures in order to communicate with a broad audience.
CIS.HS.9.3.h	Explain design decisions in regards to themes.
CIS.HS.9.3.i	Evaluate the impact of design decisions on the theme of a design.
CIS.HS.9.3.j	Explain design and project goals using a storyboard, mock-up, and wireframes.

CIS.HS.9.4 Analyze legal and ethical responsibilities.

CIS.HS.9.4.a	Apply copyright laws as appropriate in website and app creation.
CIS.HS.9.4.b	Discuss security issues that are related to the utilization of the computer and/or Internet.
CIS.HS.9.4.c	Describe situations where web pages and/or apps may be used unethically.
CIS.HS.9.4.d	Describe licensing agreements.
CIS.HS.9.4.e	Discuss the importance of creative commons.

FOUNDATIONS OF WEB DESIGN (cont.)

CIS.HS.9.5 Create and test websites and/or apps designed for cross browser and mobile compatibility.

CIS.HS.9.5.a Utilize standards-compliant elements in code that delivers essential content and functionality if older browsers are not capable of displaying content.

CIS.HS.9.5.b Create websites and/or apps that utilize responsive design to allow for a variety of screen sizes and geometries to view the content in a meaningful and logical fashion.

CIS.HS.9.5.c Test an application on devices of varying geometries and operating system versions to ensure maximum compatibility.

CIS.HS.9.6 Implement quality assurance processes to deliver effective digital communication.

CIS.HS.9.6.a Evaluate the website and/or app functionality.

CIS.HS.9.6.b Test a website and/or app in a variety of environments.

CIS.HS.9.6.c Evaluate site effectiveness through user search and accessibility to meet all audience needs.

CIS.HS.9.6.d Investigate web hosts.

CIS.HS.9.6.e Troubleshoot and maintain a website and/or app.

CIS.HS.9.6.f Evaluate cross-browser compatibility.

CIS.HS.9.6.g Identify the process of securing a domain name.

FOUNDATIONS OF WEB DESIGN (cont.)

CIS.HS.9.7 Critique a website and/or app in accordance with web design principles.

- CIS.HS.9.7.a Assess download time.
- CIS.HS.9.7.b Assess readability of the website and/or app.
- CIS.HS.9.7.c Assess ease of navigation for both website and/or app.
- CIS.HS.9.7.d Assess the design theme of a website and/or app.
- CIS.HS.9.7.e Assess consistency of the theme across the entire website and/or app.
- CIS.HS.9.7.f Assess the functionality of links.

CIS.HS.9.8 Identify opportunities in an information technology career field including but not limited to entrepreneurial opportunities, responsibilities, education, and certification.

- CIS.HS.9.8.a Identify information technologies used in various industries.
- CIS.HS.9.8.b Discuss the impact of technology on all career fields.
- CIS.HS.9.8.c Identify common tasks in career fields.
- CIS.HS.9.8.d Discuss career opportunities in information technology career fields.
- CIS.HS.9.8.e Describe the impact of technological change and the importance of lifelong learning in this career field.

INFORMATION TECHNOLOGY APPLICATIONS I

COURSE DESCRIPTION

Students will explore emerging technologies as it applies to success in high school, college, and career. The focus will be on the importance of digital citizenship, professional communication practices, advanced document processing, professional presentations, and intermediate spreadsheet and database applications used personally and professionally.

STANDARDS AND INDICATORS:

CIS.HS.10.1 Model positive digital citizenship by applying industry-accepted ethical practices and behaviors.

- CIS.HS.10.1.a Examine and practice cultural, social, ethical, and legal issues associated with information technology.
- CIS.HS.10.1.b Formulate a critical stance by questioning the validity, accuracy, and appropriateness of information.
- CIS.HS.10.1.c Demonstrate a variety of strategies for effective and efficient searches.
- CIS.HS.10.1.d Evaluate safety and security measures for protecting information and developing digital footprints.

CIS.HS.10.2 Use document processing applications to prepare business communications.

- CIS.HS.10.2.a Create, edit, and customize documents using advanced techniques.
- CIS.HS.10.2.b Prepare and troubleshoot merged documents (e.g., envelopes, mailings, labels).
- CIS.HS.10.2.c Apply digital design strategies to design professional documents (e.g., graphic design, layout, typography, font face, font style).

INFORMATION TECHNOLOGY APPLICATIONS I (cont.)

CIS.HS.10.3 Develop and demonstrate effective communication skills and practices.

- CIS.HS.10.3.a Prepare and develop presentations that can be used in a current workplace.
- CIS.HS.10.3.b Compose electronic communication to communicate within a workplace.
- CIS.HS.10.3.c Customize a presentation using advanced features for a specific audience.

CIS.HS.10.4 Organize and manipulate data using spreadsheet applications.

- CIS.HS.10.4.a Enter and modify worksheet data and structure, format data, and problem solve in a worksheet.
- CIS.HS.10.4.b Sort and manipulate data using formulas and functions.
- CIS.HS.10.4.c Create visual representations of data (e.g., charts, pivot tables, sparklines, and conditional formatting)

CIS.HS.10.5 Identify database management concepts to manage, evaluate, and organize information.

- CIS.HS.10.5.a Compare and contrast methods for storing, organizing, and retrieving data.
- CIS.HS.10.5.b Sort and manipulate data using formulas and functions and create charts.
- CIS.HS.10.5.c Create and format a database.
- CIS.HS.10.5.d Create database objects (e.g., tables, forms, queries).
- CIS.HS.10.5.e Modify or enter records, create reports, and/or sort data.

INFORMATION TECHNOLOGY APPLICATIONS I (cont.)

CIS.HS.10.6 Identify opportunities in an information technology career field including but not limited to entrepreneurial opportunities, responsibilities, education, and certification.

CIS.HS.10.6.a Identify information technologies used in various industries.

CIS.HS.10.6.b Discuss the impact of technology on all career fields.

CIS.HS.10.6.c Identify common information technology tasks in career fields.

CIS.HS.10.6.d Discuss career opportunities in information technology career fields.

CIS.HS.10.6.e Describe the impact of technological change and the importance of lifelong learning in this career field.

CIS.HS.10.7 Describe emerging and evolving trends in information technology.

CIS.HS.10.7.a Investigate emerging trends in technology and their impact on business and industry.

CIS.HS.10.7.b Interact with new and emerging technologies.

CIS.HS.10.7.c Identify emerging technologies to create and evaluate forms of communication.

INFORMATION TECHNOLOGY APPLICATIONS II

COURSE DESCRIPTION

This course will focus on skill development in data science using word processing, spreadsheets, databases, and integration of applications utilizing advanced features. Students taking both Information Technology Applications I and II may be eligible for dual credit at a participating postsecondary institution. Skills, standards, and coursework align with industry certifications.

STANDARDS AND INDICATORS:

CIS.HS.11.1 Organize, aggregate, and manipulate data using advanced word processing features.

CIS.HS.11.1.a	Integrate other program files into word processing documents (insert, embed, and link).
CIS HS.11.1.b	Create and format tables using advanced features (formulas, styles).
CIS HS.11.1.c	Use advanced merge features to integrate spreadsheet and database information into the word processing document as fields and records.
CIS.HS.11.1.d	Create and manage styles.
CIS.HS.11.1.e	Plan, record, run, and edit Macros.

CIS.HS.11.2 Organize, aggregate, and manipulate data using advanced spreadsheet features.

CIS.HS.11.2.a	Create worksheet structures using formulas and advanced features. (e.g., logical statements, vLookup, financial, statistical functions, and named ranges).
CIS.HS.11.2.b	Interpret data through statistical analysis (e.g., sorting, filtering, forecasting, and pivot tables).
CIS.HS.11.2.c	Import, export, and share worksheet data.
CIS.HS.11.2.d	Customize formatting methods, including conditional formatting and other advanced formatting methods.

INFORMATION TECHNOLOGY APPLICATIONS II (cont.)

CIS.HS.11.3 Synthesize relational database concepts to design, manage, evaluate, and organize information.

CIS.HS.11.3.a Design tables specifying properties for data entry and relationships.

CIS.HS.11.3.b Construct multi-table queries to retrieve, organize, and aggregate data to draw conclusions.

CIS.HS.11.3.c Design forms and subforms for efficient and effective data entry or retrieval.

CIS.HS.11.3.d Design reports and subreports utilizing tables, graphs, sparklines, and pivot tables for displaying meaningful data.

CIS.HS.11.3.e Analyze relational data using Structure Query Language (SQL).

CIS.HS.11.4 Consider the relationship between different programs to utilize data in one program to the next to create new documents.

CIS.HS.11.4.a Utilize spreadsheets, presentation, and database information in word processing documents.

CIS.HS.11.4.b Utilize word processing, presentation, and database information in a spreadsheet.

CIS.HS.11.4.c Utilize word processing, spreadsheet, and database information in a presentation.

CIS.HS.11.4.d Utilize word processing and spreadsheet information in a database.

CIS.HS.11.5 Describe the importance of ethical data collection and applicable conclusions.

CIS.HS.11.5.a Analyze the privacy practices of data collection and use.

CIS.HS.11.5.b Analyze the security practices of data collection and use.

INFORMATION TECHNOLOGY APPLICATIONS II (cont.)

CIS.HS.11.6 Demonstrate critical thinking skills to integrate information technology tools to access, manage, and create new information.

CIS.HS.11.6.a Gather, evaluate, use, and disseminate information from multiple technology sources.

CIS.HS.11.6.b Create purposeful, digitally designed products (e.g., brochure, presentation, website, portfolio).

CIS.HS.11.7 Identify opportunities in an information technology career field including but not limited to entrepreneurial opportunities, responsibilities, education, and certification.

CIS.HS.11.7.a Identify information technologies used in various industries.

CIS.HS.11.7.b Discuss the impact of technology on all career fields.

CIS.HS 11.7.c Identify common tasks in career fields.

CIS.HS 11.7.d Discuss career opportunities in information technology career fields.

CIS.HS.11.7.e Describe the impact of technological change and the importance of lifelong learning in this career field.

CIS.HS.11.7.f Identify the benefits of industry certification and higher education Programs.

CIS.HS.11.7.g Identify the necessary skills to succeed in fields using data science.

DIGITAL DESIGN

COURSE DESCRIPTION

Students will focus on developing skills to plan, design, and create digital design projects using elements of composition, digital photography, and digital print design.

STANDARDS AND INDICATORS:

CIS.HS.6.1 Utilize composition techniques.

CIS.HS.6.1.a	Demonstrate rules of composition (e.g., rule of thirds, point-of-view, framing).
CIS.HS.6.1.b	Demonstrate a variety of photographic shots using a digital camera.
CIS.HS.6.1.c	Demonstrate elements of typographic design in print media (e.g., font selection, size, leading, tracking and kerning, measure, whitespace, hierarchy and scale).
CIS.HS.6.1.d	Demonstrate basic design principles such as consistency, dominance, palette, eye line, readability, alignment, and color theory.
CIS.HS.6.1.e	Differentiate between bitmap, raster, and vector images.

CIS.HS.6.2 Create and edit digital photographic images.

CIS.HS.6.2.a	Select appropriate hardware and software.
CIS.HS.6.2.b	Capture still photographic images.
CIS.HS.6.2.c	Edit still photos (e.g., cropping, color correction, layers, and levels).
CIS.HS.6.2.d	Apply multiple camera modes.
CIS.HS.6.2.e	Apply light and color principles to projects.
CIS.HS.6.2.f	Apply image stabilization.
CIS.HS.6.2.g	Apply exposure, shutter speed, and aperture.
CIS.HS.6.2.h	Export photos in a usable format.
CIS.HS.6.2.i	Name and store native and exported files in a manageable file structure (i.e.: Drive, Cloud, or external hard drive).

DIGITAL DESIGN (cont.)

CIS.HS.6.3 Create and edit digital print design.

CIS.HS.6.3.a	Select appropriate hardware and software.
CIS.HS.6.3.b	Apply elements of typographic design in print media (e.g., font selection, size, leading, tracking and kerning, measure, whitespace, hierarchy and scale).
CIS.HS.6.3.c	Apply basic design principles such as consistency, dominance, palette, eye line, readability, and alignment.
CIS.HS.6.3.d	Demonstrate knowledge of page layout (e.g.,negative space, alignment, symmetrical, and asymmetrical).
CIS.HS.6.3.e	Use layers to manage design elements and modify layer visibility using opacity and masks.
CIS.HS.6.3.f	Make, manage, and manipulate selections.
CIS.HS.6.3.g	Name and store native and exported files in a manageable file structure (ie: Drive, Cloud, or external hard drive).
CIS.HS.6.3.h	Explain the difference between modes of a print document: CMYK, RGB, grayscale, bitmap.

CIS.HS.6.4 Create and edit motion graphics objects for animation.

CIS.HS.6.4.a	Select appropriate hardware and software.
CIS.HS.6.4.b	Add motion to objects as a project or to enhance a project.
CIS.HS.6.4.c	Edit motion graphics (e.g., trim, delete, add effects, etc.).
CIS.HS.6.4.d	Export a motion graphic in a usable format.
CIS.HS.6.4.e	Name and store native and exported files in a manageable file structure i.e., Drive, Cloud, or external hard drive).

DIGITAL DESIGN (cont.)

CIS.HS.6.5 Describe working in the digital design field.

CIS.HS.6.5.a	Identify the purpose, audience, and audience needs for preparing images.
CIS.HS.6.5.b	Determine whether content is relevant to the purpose, audience, and audience needs.
CIS.HS.6.5.c	Demonstrate knowledge of basic design principles and understand best practices employed in the digital design field.
CIS.HS.6.5.d	Examine careers in the digital design field.
CIS.HS.6.5.e	Identify job market trends in the digital design field.
CIS.HS.6.5.f	Identify the benefits of industry certification and higher education in the field.

CIS.HS.6.6 Evaluate and comply with copyright laws.

CIS.HS.6.6.a	Determine the type of copyright, permissions, and licensing required to use specific content.
CIS.HS.6.6.b	Analyze the different types of copyright licenses and their uses. (e.g., Creative Commons, or Public Domain).
CIS.HS.6.6.c	Identify legal and ethical considerations for using third-party content, such as copyright, permissions, and licensing.
CIS.HS.6.6.d	Understand copyright as it applies to their own creative work.

FOUNDATIONS OF WEB DESIGN

COURSE DESCRIPTION

Students will demonstrate knowledge of web and mobile app design to create an effective website or app that captures and keeps visitors' interests. Students will demonstrate project management skills, while also enhancing creativity, problem solving, and critical thinking. Students will explore career opportunities in an information technology career field.

STANDARDS AND INDICATORS:

CIS.HS.9.1 Explain and apply appropriate web design language and terminology.

- CIS.HS.9.1.a Describe the principles and goals of website design.
- CIS.HS.9.1.b Describe the principles and goals of responsive design.
- CIS.HS.9.1.c Describe binary code.
- CIS.HS.9.1.d Define common industry terminology.

CIS.HS.9.2 Plan a website and/or app for a specific purpose.

- CIS.HS.9.2.a Develop a storyboard, mock-up, and wireframes for a website and/or app.
- CIS.HS.9.2.b Explain the design process in regards to audience, layout, time, and budget.
- CIS.HS.9.2.c Identify the target market audience's needs.
- CIS.HS.9.2.d Evaluate clients' needs based on current trends.
- CIS.HS.9.2.e Plan for responsive design.

FOUNDATIONS OF WEB DESIGN (cont.)

CIS.HS.9.3 Analyze elements and principles of design to communicate ideas consistent with project goals.

CIS.HS.9.3.a	Apply appropriate font and font family concepts.
CIS.HS.9.3.b	Demonstrate knowledge of design decisions in regards to shapes, lines, colors.
CIS.HS.9.3.c	Demonstrate knowledge of design decisions in regards to white space, margins, and layout of graphic and text.
CIS.HS.9.3.d	Incorporate text layout techniques such as kerning, leading, and alignment.
CIS.HS.9.3.e	Incorporate audio, visual, and graphic elements.
CIS.HS.9.3.f	Develop a focused concept, clear methods of conveyance, and unified theme that solves the given problem.
CIS.HS.9.3.g	Identify accessibility and standard compliance measures in order to communicate with a broad audience.
CIS.HS.9.3.h	Explain design decisions in regards to themes.
CIS.HS.9.3.i	Evaluate the impact of design decisions on the theme of a design.
CIS.HS.9.3.j	Explain design and project goals using a storyboard, mock-up, and wireframes.

CIS.HS.9.4 Analyze legal and ethical responsibilities.

CIS.HS.9.4.a	Apply copyright laws as appropriate in website and app creation.
CIS.HS.9.4.b	Discuss security issues that are related to the utilization of the computer and/or Internet.
CIS.HS.9.4.c	Describe situations where web pages and/or apps may be used unethically.
CIS.HS.9.4.d	Describe licensing agreements.
CIS.HS.9.4.e	Discuss the importance of creative commons.

FOUNDATIONS OF WEB DESIGN (cont.)

CIS.HS.9.5 Create and test websites and/or apps designed for cross browser and mobile compatibility.

CIS.HS.9.5.a Utilize standards-compliant elements in code that delivers essential content and functionality if older browsers are not capable of displaying content.

CIS.HS.9.5.b Create websites and/or apps that utilize responsive design to allow for a variety of screen sizes and geometries to view the content in a meaningful and logical fashion.

CIS.HS.9.5.c Test an application on devices of varying geometries and operating system versions to ensure maximum compatibility.

CIS.HS.9.6 Implement quality assurance processes to deliver effective digital communication.

CIS.HS.9.6.a Evaluate the website and/or app functionality.

CIS.HS.9.6.b Test a website and/or app in a variety of environments.

CIS.HS.9.6.c Evaluate site effectiveness through user search and accessibility to meet all audience needs.

CIS.HS.9.6.d Investigate web hosts.

CIS.HS.9.6.e Troubleshoot and maintain a website and/or app.

CIS.HS.9.6.f Evaluate cross-browser compatibility.

CIS.HS.9.6.g Identify the process of securing a domain name.

FOUNDATIONS OF WEB DESIGN (cont.)

CIS.HS.9.7 Critique a website and/or app in accordance with web design principles.

CIS.HS.9.7.a	Assess download time.
CIS.HS.9.7.b	Assess readability of the website and/or app.
CIS.HS.9.7.c	Assess ease of navigation for both website and/or app.
CIS.HS.9.7.d	Assess the design theme of a website and/or app.
CIS.HS.9.7.e	Assess consistency of the theme across the entire website and/or app.
CIS.HS.9.7.f	Assess the functionality of links.

CIS.HS.9.8 Identify opportunities in an information technology career field including but not limited to entrepreneurial opportunities, responsibilities, education, and certification.

CIS.HS.9.8.a	Identify information technologies used in various industries.
CIS.HS.9.8.b	Discuss the impact of technology on all career fields.
CIS.HS.9.8.c	Identify common tasks in career fields.
CIS.HS.9.8.d	Discuss career opportunities in information technology career fields.
CIS.HS.9.8.e	Describe the impact of technological change and the importance of lifelong learning in this career field.

BUSINESS COMMUNICATION

COURSE DESCRIPTION

Students will develop an understanding and appreciation for effective communication in business situations and environments. Emphasis is placed on all phases of communication: speaking, listening, thinking, responding, reading, writing, communicating non-verbally, and utilizing technology for communication.

STANDARDS AND INDICATORS:

BMM.HS.8.1 Demonstrate reading skills in a variety of business-related activities.

- BMM.HS.8.1.a Demonstrate reading comprehension by restating or summarizing information.
- BMM.HS.8.1.b Interpret and evaluate information from print and digital text features to support comprehension.
- BMM.HS.8.1.c Interpret and evaluate information from professional resources and related documents (e.g., manuals, company policies, annual reports, reference materials).

BMM.HS.8.2 Utilize active and attentive listening skills (e.g., eye contact, nonverbal cues, questioning, summarizing) for multiple situations and modalities (e.g., small/large group, presentation, one-to-one, digital).

- BMM.HS.8.2.a Integrate professional etiquette, techniques, and social protocols when communicating.
- BMM.HS.8.2.b Follow multi step directions.
- BMM.HS.8.2.c Identify barriers to listening.
- BMM.HS.8.2.d Assess and respond to non-verbal communication as an active listener.

BUSINESS COMMUNICATION (cont.)

BMM.HS.8.3 Create internal and external business correspondence to convey and obtain information effectively.

BMM.HS.8.3.a Assess the nature of effective written communications.

BMM.HS.8.3.b Utilize appropriate formats for professional writing.

BMM.HS.8.3.c Compose, edit, and revise a variety of written work consistent with professional standards.

BMM.HS.8.4 Apply skills and strategies for the delivery of effective oral communication.

BMM.HS.8.4.a Assess the nature of effective verbal communications.

BMM.HS.8.4.b Match verbal and nonverbal messages (e.g., expression, tone, body language, gestures).

BMM.HS.8.4.c Demonstrate effective oral communication skills.

BMM.HS.8.4.d Demonstrate preparation and organization of thoughts before speaking (outline, notes).

BMM.HS.8.5 Demonstrate technology and employability skills to enhance communication.

BMM.HS.8.5.a Apply the critical-thinking and career readiness skills needed to function in multiple roles in business and communities.

BMM.HS.8.5.b Analyze legal and ethical issues in organizations and society.

BMM.HS.8.5.c Demonstrate the proper etiquette used in a professional setting (e.g., professional language, device usage, and privacy) and use of technology tools, such as voice mail, video conferencing, social media, messaging, and mobile devices.

BMM.HS.8.5.d Examine perspectives and opinions of diverse employees and how these factors impact communication.

BMM.HS.8.5.e Identify appropriate spoken and written actions when applying for and leaving a job.

FOUNDATIONS OF COMPUTING

COURSE DESCRIPTION

Foundations of Computing is designed for students who have never programmed before and serves as a starting point for Computer Science. Students will explore the impact of computing on society. Beyond learning the fundamentals of programming, students build computational-thinking skills by applying computer science to collaboration tools, modeling and simulation, and data analysis.

STANDARDS AND INDICATORS:

CIS.HS.8.1 Summarize computational problems.

CIS.HS.8.1.a	Identify component parts or subproblems of a simple problem.
CIS.HS.8.1.b	Identify subproblems that make up a larger computational problem.
CIS.HS.8.1.c	Explain how solutions to multiple subproblems work together to solve a larger problem.
CIS.HS.8.1.d	Define the term algorithm and explain its relationship to computational solutions.

CIS.HS.8.2 Develop and use abstractions in computational artifacts.

CIS.HS.8.2.a	Define abstraction in terms of computer science and provide an example of how abstraction is used to manage complexity.
CIS.HS.8.2.b	Represent equivalent data using different encoding schemes (e.g., binary, unicode, Morse code, student-created codes).
CIS.HS.8.2.c	Use abstraction to manage complexity or avoid duplication of effort.
CIS.HS.8.2.d	Use and extend existing procedures within a program based on their documentation.
CIS.HS.8.2.e	Identify repetitive elements of program code and develop functionally equivalent versions that reduce redundant code or hide the complexity of a task.

FOUNDATIONS OF COMPUTING (cont.)

CIS.HS.8.3 Create computational artifacts.

CIS.HS.8.3.a	Create variables to store data in a program.
CIS.HS.8.3.b	Use and update data stored in variables.
CIS.HS.8.3.c	Develop programs that use sequences of statements, loops, and conditional statements.
CIS.HS.8.3.d	Design and develop computational artifacts that address personally- or socially relevant concerns.

CIS.HS.8.4 Use data to understand and model real-world situations.

CIS.HS.8.4.a	Filter or transform data using a computational tool.
CIS.HS.8.4.b	Explain the results of a data-driven investigation and a reproducible process for computing the results.
CIS.HS.8.4.c	Use and modify a computer simulation to understand a real-world system.
CIS.HS.8.4.d	Adjust inputs to an existing simulation to gain additional insights.

CIS.HS.8.5 Test and iteratively refine computational solutions.

CIS.HS.8.5.a	Describe an iterative design process used in creating computational artifacts.
CIS.HS.8.5.b	Apply an iterative design process to solve problems, both independently and collaboratively.
CIS.HS.8.5.c	Locate and diagnose errors in program code.
CIS.HS.8.5.d	Correct errors in program code.

IT FUNDAMENTALS

COURSE DESCRIPTION

IT Fundamentals develops the students' abilities to analyze, evaluate, strategize, and reflect upon technologies such as computer hardware, computer software, web technologies, databases, networking, security, and software development. Students will also be introduced to ever-changing information technology careers along with developing positive and ethical behaviors/practices.

STANDARDS AND INDICATORS:

CIS.HS.12.1 Identify and describe the basic components of information technology.

- CIS.HS.12.1.a Identify and distinguish the differences between input and output devices.
- CIS.HS.12.1.b Identify and explain how various components meet the needs of the user.
- CIS.HS.12.1.c Identify and analyze emerging technologies.
- CIS.HS.12.1.d Identify storage options.
- CIS.HS.12.1.e Identify the process to configure permissions for files and folders.
- CIS.HS.12.1.f Explain multiple methods of moving digital files.

CIS.HS.12.2 Identify and analyze hardware components.

- CIS.HS.12.2.a Identify the correct hardware to connect with external components.
- CIS.HS.12.2.b Determine and evaluate recommended hardware devices to solve specific problems.
- CIS.HS.12.2.c Troubleshoot basic computer hardware problems.
- CIS.HS.12.2.d Find and analyze resources to answer basic troubleshooting questions.
- CIS.HS.12.2.e Develop criteria for purchasing or upgrading computer system hardware.
- CIS.HS.12.2.f Identify and analyze proper input technologies for various tasks.

IT FUNDAMENTALS (cont.)

CIS.HS.12.3 Identify and analyze software components.

CIS.HS.12.3.a	Identify and analyze software appropriate for specific tasks.
CIS.HS.12.3.b	Research and analyze software installation and upgrade options.
CIS.HS.12.3.c	Troubleshoot potential problems with software installation (i.e. bloatware).
CIS.HS.12.3.d	Compare and contrast the functions, features, and limitations of different operating systems and utilities (i.e.,open source and mobile proprietary operating systems).

CIS.HS.12.4 Explain web technologies.

CIS.HS.12.4.a	Identify the components (e.g., wires, cables, routers, etc.) that make up the Internet.
CIS.HS.12.4.b	Describe the types of Internet connections.
CIS.HS.12.4.c	Explain Transmission Control Protocol/Internet Protocol (TCP/IP).
CIS.HS.12.4.d	Identify and compare different types of web technologies: blogs, wikis, podcasts, RSS feeds, etc.
CIS.HS.12.4.e	Explain browser cache and the process of clearing it.

CIS.HS.12.5 Design, administer, and deploy networks.

CIS.HS.12.5.a	Define basic networking terminology.
CIS.HS.12.5.b	Describe the characteristics and uses of networks, network devices, and components.
CIS.HS.12.5.c	Identify the purpose of networks and their functionality.
CIS.HS.12.5.d	Identify tools, diagnostic procedures, and troubleshooting techniques for networks.
CIS.HS.12.5.e	Describe the process of configuring, optimizing, and upgrading of networks.
CIS.HS.12.5.f	Explore and use cloud computing.
CIS.HS.12.5.g	Research and analyze basic network security solutions.
CIS.HS.12.5.h	Design a theoretical network environment and create protocols on deploying and maintaining the network.

IT FUNDAMENTALS (cont.)

CIS.HS.12.6 Apply database management strategies.

CIS.HS.12.6.a	Design and create database tables and relationships.
CIS.HS.12.6.b	Create database columns and specify properties.
CIS.HS.12.6.c	Name tables and fields in conformance with naming conventions.
CIS.HS.12.6.d	Insert, update, and delete records in a database.
CIS.HS.12.6.e	Import data into databases and transfer data between databases.
CIS.HS.12.6.f	Organize and store database files in a structured environment for users.
CIS.HS.12.6.g	Control user access to data and log access to the database by user and type of transaction.
CIS.HS.12.6.h	Backup, verify, and recover data in a database.
CIS.HS.12.6.i	Generate and print forms, reports, and results of queries (i.e., calculated fields, functions).

CIS.HS.12.7 Design, develop, test, and implement programs.

CIS.HS.12.7.a	Identify and define programming terminology.
CIS.HS.12.7.b	Explain the importance of life-long learning as a programmer.
CIS.HS.12.7.c	Analyze the strengths and weaknesses of different languages for solving a specific problem.
CIS.HS.12.7.d	Write code that uses logical operators (e.g., and, or, not, loops).
CIS.HS.12.7.e	Write code that uses conditional control structures (e.g., if, if-then-else).
CIS.HS.12.7.f	Test and debug code.
CIS.HS.12.7.g	Identify and analyze protocols to maintain the integrity of programs.

IT FUNDAMENTALS (cont.)

CIS.HS.12.8 Assess protocols for security and risk management.

CIS.HS.12.8.a	Identify the goals, objectives, and purposes of cybersecurity first principles.
CIS.HS.12.8.b	Identify different types of security threats and vulnerabilities.
CIS.HS.12.8.c	Identify and analyze policies procedures for security, privacy, and risk management.
CIS.HS.12.8.d	Explain intellectual property laws (e.g., copyright, trademark).
CIS.HS.12.8.e	Identify and analyze confidentiality concerns.
CIS.HS.12.8.f	Discuss risk loss and prevention methods.
CIS.HS.12.8.g	Analyze and evaluate passwords.
CIS.HS.12.8.h	Identify personal risks and create personal protocols to differentiate between home and work.

CIS.HS.12.9 Identify opportunities in an information technology career field.

CIS.HS.12.9.a	Identify information technologies used in various industries.
CIS.HS.12.9.b	Discuss the impact of technology on all career fields.
CIS.HS.12.9.c	Identify common tasks within the information technology career fields in occupations.
CIS.HS.12.9.d	Discuss career opportunities in information technology career fields.
CIS.HS.12.9.e	Describe the impact of technological change and the importance of lifelong learning in this career field.

COMPUTER SCIENCE PRINCIPLES - (1 YEAR)

COURSE DESCRIPTION

Computer Science Principles introduces students to the foundations of computer science with a focus on how computing powers the world. Along with the fundamentals of computing, students will learn to analyze data, create technology that has a practical impact (addresses a real-world problem or need), and gain a broader understanding of how computer science impacts people and society.

STANDARDS AND INDICATORS:

CIS.HS.2.1 Identify and develop computational problems and solutions.

CIS.HS.2.1.a	Utilize user-centered research and a development process to create innovative software solutions.
CIS.HS.2.1.b	Describe the identified algorithms using foundational principles of sequence, iteration, and selection with "non-code" techniques (e.g., pseudo code, flow charts, and sequence diagrams).
CIS.HS.2.1.c	Analyze the difference between algorithms that run in a reasonable amount of time, those that do not run in a reasonable amount of time, and those that are not solvable with a computer.
CIS.HS.2.1.d	Identify patterns between previously-solved computational problems and new problem scenarios.
CIS.HS.2.1.e	Describe linear and binary search techniques and explain their appropriateness for a given data set.
CIS.HS.2.1.f	Design a solution to a computational problem as a team.
CIS.HS.2.1.g	Explain how collaboration impacts the development of a solution.

COMPUTER SCIENCE PRINCIPLES (cont.)

CIS.HS.2.2 Construct abstractions in computational artifacts.

CIS.HS.2.2.a	Define how the term abstraction is used within the field of computer science.
CIS.HS.2.2.b	Deconstruct a complex problem into distinct functional parts using predefined constructs of a programming language (e.g., functions, procedures, and methods).
CIS.HS.2.2.c	Develop procedures or functions that use parameters to generalize behaviors in a program.
CIS.HS.2.2.d	Create an abstraction of data in order to manage problem complexity (e.g., using a list instead of multiple discrete variables).
CIS.HS.2.2.e	Investigate the advantages of a given data abstraction over others to manage complexity and/or readability in a program.
CIS.HS.2.2.f	Explain how modeling and simulation can be used to explore natural phenomena.

CIS.HS.2.3 Create computational artifacts.

CIS.HS.2.3.a	Create programs that demonstrate concepts of sequence, selection, and iteration.
CIS.HS.2.3.b	Develop programs with nested loops and/or nested conditionals.
CIS.HS.2.3.c	Implement interactive programs that process user input and/or respond to events in the system.
CIS.HS.2.3.d	Develop programs that use lists or other collection types to hold or manage data.
CIS.HS.2.3.e	Integrate grade-level-appropriate mathematical techniques, concepts, and processes in the creation of computing artifacts.
CIS.HS.2.3.f	Analyze and interpret documentation for functions and use them as part of a computational artifact.

COMPUTER SCIENCE PRINCIPLES (cont.)

CIS.HS.2.4 Use data to understand and model real-world situations.

CIS.HS.2.4.a	Explain how abstractions on binary numbers are used to represent and store various kinds of data in computer systems (e.g., hexadecimal color codes, Unicode characters, audio, and videos).
CIS.HS.2.4.b	Convert numbers between binary, decimal, and hexadecimal.
CIS.HS.2.4.c	Analyze the tradeoffs among various representations of a type of digital information (e.g., lossy versus lossless compression, encrypted vs. unencrypted, various image representations).
CIS.HS.2.4.d	Describe techniques for extracting information from data and identify common challenges with data processing.
CIS.HS.2.4.e	Use a computational tool to collect, transform, and analyze data to gain new insights and knowledge from the data.

CIS.HS.2.5 Evaluate and interpret representations of algorithms.

CIS.HS.2.5.a	Predict the output/effect of a code segment or program.
CIS.HS.2.5.b	Explain how a code segment or program functions both verbally and in writing.
CIS.HS.2.5.c	Identify and correct errors in algorithms and programs, including error discovery through testing.
CIS.HS.2.5.d	Reason about diagrammatic representations of algorithms and logic expressions, including flow charts.

COMPUTER SCIENCE PRINCIPLES (cont.)

CIS.HS.2.6 Explain how networks and computing systems work to transfer data.

CIS.HS.2.6.a	Define basic components of computer networks.
CIS.HS.2.6.b	Explain how data is sent through the Internet via packets.
CIS.HS.2.6.c	Describe properties of redundancy and fault tolerance in systems/networks like the Internet.
CIS.HS.2.6.d	Differentiate between sequential, parallel, and distributed computing approaches.

CIS.HS.2.7 Analyze the social impacts of technology and describe ethical IT practices.

CIS.HS.2.7.a	Interpret potential beneficial and harmful effects of computing innovations.
CIS.HS.2.7.b	Explain multiple causes for the digital divide and its impacts on society.
CIS.HS.2.7.c	Describe how algorithms may result in both intentional and unintentional bias.
CIS.HS.2.7.d	Investigate how computing innovations can have legal and ethical implications.
CIS.HS.2.7.e	Identify safe computing practices and how they address common vulnerabilities.

COMPUTER SCIENCE A - (1 YEAR)

COURSE DESCRIPTION

"Computer Science A introduces students to computer science through programming. Fundamental topics in this course include the design of solutions to problems, the use of data structures to organize large sets of data, the development and implementation of algorithms to process data and discover new information, the analysis of potential solutions, and the ethical and social implications of computing systems. The course emphasizes object-oriented programming and design".

-College Board, 2020, Page 7

STANDARDS AND INDICATORS:

CIS.HS.3.1 Define a computational problems and solve it.

CIS.HS.3.1.a	Define examples of computationally solvable problems and difficult-to-solve problems.
CIS.HS.3.1.b	Decompose a large-scale computational problem by identifying generalizable patterns.
CIS.HS.3.1.c	Determine code that would be used to complete code segments.
CIS.HS.3.1.d	Determine the efficiency of a program.

CIS.HS.3.2 Interpret existing code written with the Advanced Placement language subset.

CIS.HS.3.2.a	Determine the result or output of code execution, including code with and without method or function calls.
CIS.HS.3.2.b	Evaluate logical expressions to determine their resulting values.
CIS.HS.3.2.c	Predict the output of code that uses collections and multidimensional collections of data.
CIS.HS.3.2.d	Trace code involving hierarchies of classes to demonstrate how inheritance influences program behavior.
CIS.HS.3.2.e	Interpret documentation and/or a program description in order to write code that satisfies all conditions and requirements described.
CIS.HS.3.2.f	Explain common errors that will occur in given erroneous examples (e.g. null pointers, bounds exceptions, arithmetic errors, logic errors, stack overflows).
CIS.HS.3.2.g	Define recursion and diagram the behavior of a recursive function.

COMPUTER SCIENCE A (cont.)

CIS.HS.3.3 Write and implement program code with the AP language subset.

CIS.HS.3.3.a	Develop programs involving statements, logical expressions, conditionals, and iteration to satisfy design specifications.
CIS.HS.3.3.b	Process user input using an appropriate technique to solve a problem.
CIS.HS.3.3.c	Represent nested iterative and branching logical processes by using appropriate control structures.
CIS.HS.3.3.d	Write programs that organize and manipulate data in collections and multidimensional collections in order to solve a problem.
CIS.HS.3.3.e	Resolve errors in code using compiler and run-time error messages.

CIS.HS.3.4 Model real-world situations using data.

CIS.HS.3.4.a	Select appropriate data types for variables based on the needs of the problem.
CIS.HS.3.4.b	Convert extracted data to the appropriate data type for computation or storage (e.g., type casting, parsing, etc.).
CIS.HS.3.4.c	Manage numeric data types in calculations to account for floating point error and loss of precision.
CIS.HS.3.4.d	Extract relevant information from a string of text using parsing techniques within a program.
CIS.HS.3.4.e	Apply data sorting and searching algorithms in different contexts.
CIS.HS.3.4.f	Write a program that uses data analysis techniques to identify significant patterns in complex systems.
CIS.HS.3.4.g	Justify which collection type is appropriate for a given problem.

COMPUTER SCIENCE A (cont.)

CIS.HS.3.5 Develop and use abstractions in programs to promote code modularity

CIS.HS.3.5.a	Create programs using standard language-specific libraries including those explicitly identified in the Advanced Placement language subset.
CIS.HS.3.5.b	Evaluate procedural abstractions in terms of properties like efficiency, correctness, and readability.
CIS.HS.3.5.c	Define basic object-oriented concepts of encapsulation and information hiding and explain how they promote modularity.
CIS.HS.3.5.d	Implement object-oriented computer programs containing multiple student-designed classes.
CIS.HS.3.5.e	Explain is-a and has-a relationships between different data types and give examples of where each could be used within a program.
CIS.HS.3.5.f	Devise an algorithm that models a real-world phenomenon and implement it in code.

SOFTWARE DEVELOPMENT

COURSE DESCRIPTION

Software Development is intended as a integrative course in computer science and engineering programs of study. It is a research, design, and development course in which students work in groups to design, develop, and deploy an original solution to a valid, open-ended technical problem by applying a software lifecycle process. The course applies and concurrently develops secondary-level knowledge and skills in mathematics, science, technology, and other related areas.

STANDARDS AND INDICATORS:

CIS.HS.16.1 Define computational problems and solutions.

CIS.HS.16.1.a Employ user-centered research techniques to investigate the needs of one or more stakeholder groups.

CIS.HS.16.1.b Identify and design multiple potential computational solutions to a given problem.

CIS.HS.16.2 Develop abstractions in computational artifacts.

CIS.HS.16.2.a Design and evaluate the components of computational solution to an identified problem.

CIS.HS.16.2.b Use functional decomposition techniques to develop the framework for a computational solution.

CIS.HS.16.2.c Critique similar solutions or existing components of a solution to problems that have the potential for reuse in a new solution.

CIS.HS.16.3 Create computational artifacts as part of a team.

CIS.HS.16.3.a Apply knowledge of computational tools and programming language(s) to select components needed to implement a solution for a user audience.

CIS.HS.16.3.b Integrate computational components into a solution to the identified problem.

CIS.HS.16.3.c Use version control systems, integrated development environments (IDEs), and collaborative tools and practices (code documentation) in a group software project.

CIS.HS.16.3.d Define the components and structure of a standard software lifecycle process (e.g., waterfall, spiral, agile).

CIS.HS.16.3.e Demonstrate software lifecycle processes while participating on software project teams.

SOFTWARE DEVELOPMENT (cont.)

CIS.HS.16.4 Test computational solutions.

CIS.HS.16.4.a Develop a series of test cases to verify that a program performs according to its design specifications.

CIS.HS.16.4.b Evaluate programs using debugging techniques and test cases to ensure correctness of code.

CIS.HS.16.4.c Determine appropriate data collection techniques and use them to evaluate the usability, functionality, and user experience of a computational solution with stakeholders.

CIS.HS.16.4.d Use evidence and prioritize additional features and defects that should be addressed in subsequent development cycles.

CIS.HS.16.5 Apply social and ethical impacts of computing.

CIS.HS.16.5.a Identify potential threats or unintended consequences of the current iteration of a software solution.

CIS.HS.16.5.b Justify how the current version of a solution guards against external threats, bias, malicious uses, or unintended consequences.

CIS.HS.16.5.c Compare and contrast various software licensing schemes (e.g., open source, freeware, commercial).

CIS.HS.16.5.d Evaluate licenses that limit or restrict use of computational artifacts when reusing code or using resources such as libraries.

CIS.HS.16.5.e Justify an appropriate software licensing scheme for a particular computational artifact.

CIS.HS.16.5.f Demonstrate ethical attribution and adherence to applicable intellectual property licensing while using third party resources in a software solution.

SOFTWARE DEVELOPMENT (cont.)

CIS.HS.16.6 Communicate about computational artifacts and computational understandings.

CIS.HS.16.6.a	Develop and deploy a communication plan to communicate project progress with external stakeholders.
CIS.HS.16.6.b	Provide justifications for design decisions and the effect they will have on the final product.
CIS.HS.16.6.c	Present periodic updates on the development process to classmates and other stakeholders.
CIS.HS.16.6.d	Evaluate key qualities of a program through a process such as a code review.
CIS.HS.16.6.e	Communicate the final outcomes of the software solution, development process, intended use, and future development plans using an appropriate modality (e.g., portfolios, presentations).

INFORMATION TECHNOLOGY APPLICATIONS II

COURSE DESCRIPTION

This course will focus on skill development in data science using word processing, spreadsheets, databases, and integration of applications utilizing advanced features. Students taking both Information Technology Applications I and II may be eligible for dual credit at a participating postsecondary institution. Skills, standards, and coursework align with industry certifications.

STANDARDS AND INDICATORS:

CIS.HS.11.1 Organize, aggregate, and manipulate data using advanced word processing features.

CIS.HS.11.1.a	Integrate other program files into word processing documents (insert, embed, and link).
CIS HS.11.1.b	Create and format tables using advanced features (formulas, styles).
CIS HS.11.1.c	Use advanced merge features to integrate spreadsheet and database information into the word processing document as fields and records.
CIS.HS.11.1.d	Create and manage styles.
CIS.HS.11.1.e	Plan, record, run, and edit Macros.

CIS.HS.11.2 Organize, aggregate, and manipulate data using advanced spreadsheet features.

CIS.HS.11.2.a	Create worksheet structures using formulas and advanced features. (e.g., logical statements, vLookup, financial, statistical functions, and named ranges).
CIS.HS.11.2.b	Interpret data through statistical analysis (e.g., sorting, filtering, forecasting, and pivot tables).
CIS.HS.11.2.c	Import, export, and share worksheet data.
CIS.HS.11.2.d	Customize formatting methods, including conditional formatting and other advanced formatting methods.

INFORMATION TECHNOLOGY APPLICATIONS II (cont.)

CIS.HS.11.3 Synthesize relational database concepts to design, manage, evaluate, and organize information.

CIS.HS.11.3.a Design tables specifying properties for data entry and relationships.

CIS.HS.11.3.b Construct multi-table queries to retrieve, organize, and aggregate data to draw conclusions.

CIS.HS.11.3.c Design forms and subforms for efficient and effective data entry or retrieval.

CIS.HS.11.3.d Design reports and subreports utilizing tables, graphs, sparklines, and pivot tables for displaying meaningful data.

CIS.HS.11.3.e Analyze relational data using Structure Query Language (SQL).

CIS.HS.11.4 Consider the relationship between different programs to utilize data in one program to the next to create new documents.

CIS.HS.11.4.a Utilize spreadsheets, presentation, and database information in word processing documents.

CIS.HS.11.4.b Utilize word processing, presentation, and database information in a spreadsheet.

CIS.HS.11.4.c Utilize word processing, spreadsheet, and database information in a presentation.

CIS.HS.11.4.d Utilize word processing and spreadsheet information in a database.

CIS.HS.11.5 Describe the importance of ethical data collection and applicable conclusions.

CIS.HS.11.5.a Analyze the privacy practices of data collection and use.

CIS.HS.11.5.b Analyze the security practices of data collection and use.

INFORMATION TECHNOLOGY APPLICATIONS II (cont.)

CIS.HS.11.6 Demonstrate critical thinking skills to integrate information technology tools to access, manage, and create new information.

CIS.HS.11.6.a Gather, evaluate, use, and disseminate information from multiple technology sources.

CIS.HS.11.6.b Create purposeful, digitally designed products (e.g., brochure, presentation, website, portfolio).

CIS.HS.11.7 Identify opportunities in an information technology career field including but not limited to entrepreneurial opportunities, responsibilities, education, and certification.

CIS.HS.11.7.a Identify information technologies used in various industries.

CIS.HS.11.7.b Discuss the impact of technology on all career fields.

CIS.HS 11.7.c Identify common tasks in career fields.

CIS.HS 11.7.d Discuss career opportunities in information technology career fields.

CIS.HS.11.7.e Describe the impact of technological change and the importance of lifelong learning in this career field.

CIS.HS.11.7.f Identify the benefits of industry certification and higher education programs.

CIS.HS.11.7.g Identify the necessary skills to succeed in fields using data science.

DATA LITERACY AND VISUALIZATION

COURSE DESCRIPTION

This course provides an introduction to data literacy and visualization. The course focuses on practical applications of data analysis to give students concrete and applicable skills. Students will learn how to ask and answer questions with data and communicate the results to various audiences. The course also emphasizes the ethical implications of data collection and use.

STANDARDS AND INDICATORS:

CIS.HS.5.1 Collect and describe data.

CIS.HS.5.1.a	List and give examples of data types/formats (e.g., ordinal, ratio/interval, categorical, text, images).
CIS.HS.5.1.b	Recognize and define diverse sources of data.
CIS.HS.5.1.c	Identify ethical issues with data collection.
CIS.HS.5.1.d	Summarize a data set including properties of the data.
CIS.HS.5.1.e	Recognize outliers in data.
CIS.HS.5.1.f	Demonstrate appropriate course of action to handle outliers in data.
CIS.HS.5.1.g	Identify issues of representation in data and data collection, including sampling bias within broader populations.
CIS.HS.5.1.h	Describe distributions and Identify common shapes of data plots (e.g., normal curve, poisson).

DATA LITERACY AND VISUALIZATION (cont.)

CIS.HS.5.2 Analyze data

CIS.HS.5.2.a	Transform raw data from one form to another (e.g., numeric data to categorical).
CIS.HS.5.2.b	Explain and compute appropriate summary data statistics for the data.
CIS.HS.5.2.c	Use computational tools to explore relationships between variables using basic inferential statistics (e.g., correlation, t-tests, chi square).
CIS.HS.5.2.d	Identify the appropriate analysis to answer a question using data.
CIS.HS.5.2.e	Merge related data sets.

CIS.HS.5.3 Interpret data to provide greater understanding of information.

CIS.HS.5.3.a	Use results of data analysis to answer questions.
CIS.HS.5.3.b	Explain the results of a statistical analysis in light of the context of the data.
CIS.HS.5.3.c	Form and justify conclusions derived from data analysis.
CIS.HS.5.3.d	Identify threats to the interpretation of data analysis (e.g., validity, reliability, overgeneralization).

CIS.HS.5.4 Communicate data and results of analysis

CIS.HS.5.4.a	Recognize and define the elements of effective data display.
CIS.HS.5.4.b	Analyze multiple methods of representing data and justify how a representation effectively communicates a result to an intended audience.
CIS.HS.5.4.c	Use software tools to create effective visualizations of data (e.g., heat maps, scatter plots, radial graphs, etc.).
CIS.HS.5.4.d	Communicate results of data analysis to stakeholders and other audiences.
CIS.HS.5.4.e	Identify misconceptions that may arise from alternate visualizations/ representations of data.

DATA LITERACY AND VISUALIZATION (cont.)

CIS. HS 5.5 Describe how data can be used to create value for organizations and individuals.

CIS.HS.5.5.a	Identify questions that can be asked from a data set and, given a question, identify what data is needed to answer the question.
CIS.HS.5.5.b	Explain the implications of data analysis in making strategic decisions.
CIS.HS.5.5.c	Identify ethical issues with how data is collected and stored.
CIS.HS.5.5.d	Describe the difference between data privacy and data security, and how to protect both.
CIS.HS.5.5.e	Explain how data transparency can lead to replicability and identify potential concerns regarding sharing data.
CIS.HS.5.5.f	Identify how organizations collect data and meta-data and the implications for individual privacy and for organizational value.

INTRODUCTION TO DATA SCIENCE

COURSE DESCRIPTION

This course introduces data science concepts and skills at the intersection of data analysis, computer and information sciences, and mathematics. Students will work with large, real-world datasets, deploy statistical modeling techniques to make predictions based on that data, and communicate the results of their analyses. The course also critically considers the societal applications, implications, and ethics of data science.

STANDARDS AND INDICATORS:

CIS.HS.13.1 Acquire, Store, and Clean Data.

CIS.HS.13.1.a	Implement diverse methods of collecting data and recognize the implications of each method.
CIS.HS.13.1.b	Identify reliable sources of public data and use the data from them.
CIS.HS.13.1.c	Apply appropriate data cleaning techniques to handle messy data (e.g., missing values, errors, heterogeneous values, outliers, etc.).
CIS.HS.13.1.d	Determine potential ethical implications of various sources and forms of data acquisition (e.g,. Segmentation and demographic-based targeting).
CIS.HS.13.1.e	Organize data using a software tool for later retrieval and/or analysis (e.g., relational databases).
CIS.HS.13.1.f	Manipulate data to facilitate analysis (e.g., subset, reshape, classify).

INTRODUCTION TO DATA SCIENCE (cont.)

CIS.HS.13.2 Create models and draw statistical inferences from data.

CIS.HS.13.2.a Transform raw data into actionable results (e.g., scoring and ranking).

CIS.HS.13.2.b Use computational tools to understand and model the relationships between multiple variables.

CIS.HS.13.2.c Use data to predict future observations.

CIS.HS.13.2.d Analyze large and/or unstructured data.

CIS.HS.13.2.e Explain the basic mechanics of clustering algorithms and supervised/unsupervised learning from data.

CIS.HS.13.3 Evaluate the results of data analysis.

CIS.HS.13.3.a Generate and test hypotheses.

CIS.HS.13.3.b Evaluate the outcomes of data predictions.

CIS.HS.13.3.c Draw and justify conclusions using inferential analysis of data.

CIS.HS.13.3.d Make recommendations for future action based on the results of data analysis.

CIS.HS.13.3.e Identify flaws or limitations in the results of data analysis and their implications.

CIS.HS.13.4 Represent and communicate data and results of analysis.

CIS.HS.13.4.a Use computational tools to generate effective data visualizations, including spatial data.

CIS.HS.13.4.b Derive meaning from and summarize interactive visualizations of data.

CIS.HS.13.4.c Justify the efficacy of different visualizations for communicating data.

CIS.HS.13.4.d Analyze statistical representations to identify patterns and develop insight about data.

CIS.HS.13.4.e Communicate results of data analysis to various audiences.

CIS.HS.13.4.f Create and interpret visualizations of real-world processes as captured by data.

INTRODUCTION TO DATA SCIENCE (cont.)

CIS.HS.13.5 Explain the ethics and societal implications of data.

CIS.HS.13.5.a	Explain ways in which data use and analysis can benefit or threaten organizations and society.
CIS.HS.13.5.b	Describe applications and implications of artificial intelligence and automated decision making in society.
CIS.HS.13.5.c	Identify ethical and legal issues in data collection, handling, use, and retention (e.g., the CIA Triad, human subjects data, HIPAA, etc.).
CIS.HS.13.5.d	Assess tradeoffs between individual privacy and organizational/societal value arising from large-scale data collection and analysis.
CIS.HS.13.5.e	Discuss the implications of algorithmic bias and automated inequality on society.

IT FUNDAMENTALS

COURSE DESCRIPTION

IT Fundamentals develops the students' abilities to analyze, evaluate, strategize, and reflect upon technologies such as computer hardware, computer software, web technologies, databases, networking, security, and software development. Students will also be introduced to ever-changing information technology careers along with developing positive and ethical behaviors/practices.

STANDARDS AND INDICATORS:

CIS.HS.12.1 Identify and describe the basic components of information technology.

- CIS.HS.12.1.a Identify and distinguish the differences between input and output devices.
- CIS.HS.12.1.b Identify and explain how various components meet the needs of the user.
- CIS.HS.12.1.c Identify and analyze emerging technologies.
- CIS.HS.12.1.d Identify storage options.
- CIS.HS.12.1.e Identify the process to configure permissions for files and folders.
- CIS.HS.12.1.f Explain multiple methods of moving digital files.

CIS.HS.12.2 Identify and analyze hardware components.

- CIS.HS.12.2.a Identify the correct hardware to connect with external components.
- CIS.HS.12.2.b Determine and evaluate recommended hardware devices to solve specific problems.
- CIS.HS.12.2.c Troubleshoot basic computer hardware problems.
- CIS.HS.12.2.d Find and analyze resources to answer basic troubleshooting questions.
- CIS.HS.12.2.e Develop criteria for purchasing or upgrading computer system hardware.
- CIS.HS.12.2.f Identify and analyze proper input technologies for various tasks.

IT FUNDAMENTALS (cont.)

CIS.HS.12.3 Identify and analyze software components.

CIS.HS.12.3.a Identify and analyze software appropriate for specific tasks.

CIS.HS.12.3.b Research and analyze software installation and upgrade options.

CIS.HS.12.3.c Troubleshoot potential problems with software installation (i.e. bloatware).

CIS.HS.12.3.d Compare and contrast the functions, features, and limitations of different operating systems and utilities (i.e.,open source and mobile proprietary operating systems).

CIS.HS.12.4 Explain web technologies.

CIS.HS.12.4.a Identify the components (e.g., wires, cables, routers, etc.) that make up the Internet.

CIS.HS.12.4.b Describe the types of Internet connections.

CIS.HS.12.4.c Explain Transmission Control Protocol/Internet Protocol (TCP/IP).

CIS.HS.12.4.d Identify and compare different types of web technologies: blogs, wikis, podcasts, RSS feeds, etc.

CIS.HS.12.4.e Explain browser cache and the process of clearing it.

CIS.HS.12.5 Design, administer, and deploy networks.

CIS.HS.12.5.a Define basic networking terminology.

CIS.HS.12.5.b Describe the characteristics and uses of networks, network devices, and components.

CIS.HS.12.5.c Identify the purpose of networks and their functionality.

CIS.HS.12.5.d Identify tools, diagnostic procedures, and troubleshooting techniques for networks.

CIS.HS.12.5.e Describe the process of configuring, optimizing, and upgrading of networks.

CIS.HS.12.5.f Explore and use cloud computing.

CIS.HS.12.5.g Research and analyze basic network security solutions.

CIS.HS.12.5.h Design a theoretical network environment and create protocols on deploying and maintaining the network.

IT FUNDAMENTALS (cont.)

CIS.HS.12.6 Apply database management strategies.

CIS.HS.12.6.a	Design and create database tables and relationships.
CIS.HS.12.6.b	Create database columns and specify properties.
CIS.HS.12.6.c	Name tables and fields in conformance with naming conventions.
CIS.HS.12.6.d	Insert, update, and delete records in a database.
CIS.HS.12.6.e	Import data into databases and transfer data between databases.
CIS.HS.12.6.f	Organize and store database files in a structured environment for users.
CIS.HS.12.6.g	Control user access to data and log access to the database by user and type of transaction.
CIS.HS.12.6.h	Backup, verify, and recover data in a database.
CIS.HS.12.6.i	Generate and print forms, reports, and results of queries (i.e., calculated fields, functions).

CIS.HS.12.7 Design, develop, test, and implement programs.

CIS.HS.12.7.a	Identify and define programming terminology.
CIS.HS.12.7.b	Explain the importance of life-long learning as a programmer.
CIS.HS.12.7.c	Analyze the strengths and weaknesses of different languages for solving a specific problem.
CIS.HS.12.7.d	Write code that uses logical operators (e.g., and, or, not, loops).
CIS.HS.12.7.e	Write code that uses conditional control structures (e.g., if, if-then-else).
CIS.HS.12.7.f	Test and debug code.
CIS.HS.12.7.g	Identify and analyze protocols to maintain the integrity of programs.

IT FUNDAMENTALS (cont.)

CIS.HS.12.8 Assess protocols for security and risk management.

CIS.HS.12.8.a	Identify the goals, objectives, and purposes of cybersecurity first principles.
CIS.HS.12.8.b	Identify different types of security threats and vulnerabilities.
CIS.HS.12.8.c	Identify and analyze policies procedures for security, privacy, and risk management.
CIS.HS.12.8.d	Explain intellectual property laws (e.g., copyright, trademark).
CIS.HS.12.8.e	Identify and analyze confidentiality concerns.
CIS.HS.12.8.f	Discuss risk loss and prevention methods.
CIS.HS.12.8.g	Analyze and evaluate passwords.
CIS.HS.12.8.h	Identify personal risks and create personal protocols to differentiate between home and work.

CIS.HS.12.9 Identify opportunities in an information technology career field.

CIS.HS.12.9.a	Identify information technologies used in various industries.
CIS.HS.12.9.b	Discuss the impact of technology on all career fields.
CIS.HS.12.9.c	Identify common tasks within the information technology career fields in occupations.
CIS.HS.12.9.d	Discuss career opportunities in information technology career fields.
CIS.HS.12.9.e	Describe the impact of technological change and the importance of lifelong learning in this career field.

INFORMATION TECHNOLOGY APPLICATIONS II

COURSE DESCRIPTION

This course will focus on skill development in data science using word processing, spreadsheets, databases, and integration of applications utilizing advanced features. Students taking both Information Technology Applications I and II may be eligible for dual credit at a participating postsecondary institution. Skills, standards, and coursework align with industry certifications.

STANDARDS AND INDICATORS:

CIS.HS.11.1 Organize, aggregate, and manipulate data using advanced word processing features.

CIS.HS.11.1.a	Integrate other program files into word processing documents (insert, embed, and link).
CIS HS.11.1.b	Create and format tables using advanced features (formulas, styles).
CIS HS.11.1.c	Use advanced merge features to integrate spreadsheet and database information into the word processing document as fields and records.
CIS.HS.11.1.d	Create and manage styles.
CIS.HS.11.1.e	Plan, record, run, and edit Macros.

CIS.HS.11.2 Organize, aggregate, and manipulate data using advanced spreadsheet features.

CIS.HS.11.2.a	Create worksheet structures using formulas and advanced features. (e.g., logical statements, vLookup, financial, statistical functions, and named ranges).
CIS.HS.11.2.b	Interpret data through statistical analysis (e.g., sorting, filtering, forecasting, and pivot tables).
CIS.HS.11.2.c	Import, export, and share worksheet data.
CIS.HS.11.2.d	Customize formatting methods, including conditional formatting and other advanced formatting methods.

INFORMATION TECHNOLOGY APPLICATIONS II (cont.)

CIS.HS.11.3 Synthesize relational database concepts to design, manage, evaluate, and organize information.

CIS.HS.11.3.a Design tables specifying properties for data entry and relationships.

CIS.HS.11.3.b Construct multi-table queries to retrieve, organize, and aggregate data to draw conclusions.

CIS.HS.11.3.c Design forms and subforms for efficient and effective data entry or retrieval.

CIS.HS.11.3.d Design reports and subreports utilizing tables, graphs, sparklines, and pivot tables for displaying meaningful data.

CIS.HS.11.3.e Analyze relational data using Structure Query Language (SQL).

CIS.HS.11.4 Consider the relationship between different programs to utilize data in one program to the next to create new documents.

CIS.HS.11.4.a Utilize spreadsheets, presentation, and database information in word processing documents.

CIS.HS.11.4.b Utilize word processing, presentation, and database information in a spreadsheet.

CIS.HS.11.4.c Utilize word processing, spreadsheet, and database information in a presentation.

CIS.HS.11.4.d Utilize word processing and spreadsheet information in a database.

CIS.HS.11.5 Describe the importance of ethical data collection and applicable conclusions.

CIS.HS.11.5.a Analyze the privacy practices of data collection and use.

CIS.HS.11.5.b Analyze the security practices of data collection and use.

INFORMATION TECHNOLOGY APPLICATIONS II (cont.)

CIS.HS.11.6 Demonstrate critical thinking skills to integrate information technology tools to access, manage, and create new information.

CIS.HS.11.6.a Gather, evaluate, use, and disseminate information from multiple technology sources.

CIS.HS.11.6.b Create purposeful, digitally designed products (e.g., brochure, presentation, website, portfolio).

CIS.HS.11.7 Identify opportunities in an information technology career field including but not limited to entrepreneurial opportunities, responsibilities, education, and certification.

CIS.HS.11.7.a Identify information technologies used in various industries.

CIS.HS.11.7.b Discuss the impact of technology on all career fields.

CIS.HS 11.7.c Identify common tasks in career fields.

CIS.HS 11.7.d Discuss career opportunities in information technology career fields.

CIS.HS.11.7.e Describe the impact of technological change and the importance of lifelong learning in this career field.

CIS.HS.11.7.f Identify the benefits of industry certification and higher education Programs.

CIS.HS.11.7.g Identify the necessary skills to succeed in fields using data science.

CYBERSECURITY

COURSE DESCRIPTION

This is a survey course that explores fundamental knowledge and skills in the field of cybersecurity. Topics explored include cryptography, software and network vulnerabilities, governance, global impacts, and career fields in information assurance.

STANDARDS AND INDICATORS:

CIS.HS.4.1 Analyze classic and modern approaches to cryptography and cryptanalysis.

- CIS.HS.4.1.a Describe the historical evolution of cryptography, encryption, and ciphers.
- CIS.HS.4.1.b Explain the use of and mechanics behind public key encryption.
- CIS.HS.4.1.c Demonstrate how common cipher algorithms operate on sample data.
- CIS.HS.4.1.d Compare and contrast modern cryptographic techniques used to protect information in industry and government.
- CIS.HS.4.1.e Describe vulnerabilities of common cipher algorithms and demonstrate cryptanalysis techniques to decrypt messages based on these vulnerabilities.

CIS.HS.4.2 Analyze the core components of network systems, including the internet, relative to network security concerns.

- CIS.HS.4.2.a Differentiate between layers in the Open Systems Interconnection (OSI) model and explain how they work together to transmit data in networks.
- CIS.HS.4.2.b Analyze potential indicators and metrics associated with common network attacks (e.g., rogue wireless access points, man-in-the-middle, DNS poisoning, DDos, Malicious code execution, etc.).
- CIS.HS.4.2.c Propose a secure network architecture in response to a hypothetical scenario or set of design constraints (e.g. network segmentation, load balancing, network system access control, port security, wireless protocol configuration, etc.).
- CIS.HS.4.2.d Summarize virtualization and cloud computing concepts and describe how Internet of Things devices work.
- CIS.HS.4.2.e Use network reconnaissance and discovery tools to identify the properties and vulnerabilities of a network.

CYBERSECURITY (cont.)

CIS.HS.4.3 Explain the role of software in cybersecurity, including techniques to protect local host computers.

CIS.HS.4.3.a Explain the role of patching and software updates in reducing risk and compare the advantages and disadvantages of different patching strategies.

CIS.HS.4.3.b Propose and justify operating system configuration settings and policies to minimize security risks.

CIS.HS.4.3.c Analyze the tension between security and usability in software systems and describe how to minimize the impact of security policies on user experience.

CIS.HS.4.3.d Describe how scripting or other forms of automation are used to facilitate cyber attacks.

CIS.HS.4.3.e Identify abnormal indicators of software or computer performance that suggest the presence of a system attack or exploit.

CIS.HS.4.4 Identify and analyze applicable laws and policies, including principles of governance, risk, and compliance.

CIS.HS.4.4.a Analyze how social and cultural norms are mutually shaped by security policies and how this impacts both individuals and organizations.

CIS.HS.4.4.b Compare and contrast federal, state, local, and international cyber laws and regulations for individuals and businesses.

CIS.HS.4.4.c Illustrate examples of how local government decisions can impact global cybersecurity considerations.

CIS.HS.4.4.d Summarize risk management processes and concepts. (e.g., the NIST Cybersecurity Framework concepts identify, protect, detect, respond, recover).

CIS.HS.4.4.e Analyze the security policy of an enterprise environment and recommend appropriate security solutions.

CYBERSECURITY (cont.)

CIS.HS.4.5 Distinguish between data security concerns and practices.

CIS.HS.4.5.a Explain various interactions between confidentiality, integrity, and availability (i.e., "the CIA triad") for data in use, at rest, and in motion.

CIS.HS.4.5.b Explain the extent of individuals' digital footprints and discuss the potential implications thereof.

CIS.HS.4.5.c Determine and evaluate levels of access for various data classifications (e.g. confidential, private, public, sensitive, critical, proprietary).

CIS.HS.4.5.d Compare the advantages and tradeoffs of multiple authentication strategies.

CIS.HS.4.6 Identify threats, vulnerabilities and attacks that may be present in computing systems and assess their potential impacts on society.

CIS.HS.4.6.a Identify and differentiate between the different threat actors, vectors, and intelligence sources.

CIS.HS.4.6.b Identify and differentiate between the types of malware, web-based, and network attacks.

CIS.HS.4.6.c Categorize types of attacks and remedies based on their underlying similarities and differences.

CIS.HS.4.6.d Analyze system vulnerabilities, exploits, and payloads on a network (e.g. from MITRE ATT&CK® Framework), and describe potential countermeasures.

CIS.HS.4.6.e Explain how social engineering can be used to compromise individuals and organizations.

CIS.HS.4.7 Describe cybersecurity careers in a global economy.

CIS.HS.4.7.a Identify the role and responsibilities of cybersecurity professionals in diverse industries.

CIS.HS.4.7.b Map education and certification requirements to different cybersecurity careers.

CIS.HS.4.7.c Describe the impact of technological change and the importance of lifelong learning in a cybersecurity career.

CIS.HS.4.7.d Recognize the role of cybersecurity awareness in a multitude of careers.

NETWORKING

COURSE DESCRIPTION

This course is a study of the networking fundamentals in regards to managing home and corporate network systems and protocols. Students will design, plan, implement, and support computer networks. Students will also enhance problem solving, critical thinking, and analytical skills throughout this course.

STANDARDS AND INDICATORS:

CIS.HS.15.1 Explain network terminology and components.

- CIS.HS.15.1.a Define and analyze the abilities and features of a client.
- CIS.HS.15.1.b Define and analyze abilities and features of a server.
- CIS.HS.15.1.c Identify client and server functions.
- CIS.HS.15.1.d Describe how the Internet communicates through internet protocols and packets.
- CIS.HS.15.1.e Describe how routers work and how data routing helps to make the internet fault tolerant.

CIS.HS.15.2 Establish routines and procedures appropriate for network management.

- CIS.HS.15.2.a Identify hierarchies in networking file management systems.
- CIS.HS.15.2.b Describe permission issues related to file management systems.
- CIS.HS.15.2.c Use command prompt tools to access network information.
- CIS.HS.15.2.d Use the internet control message protocol to ping devices on a network.
- CIS.HS.15.2.e Exercise backup and system restoration.
- CIS.HS.15.2.f Configure a network to perform a specific function.
- CIS.HS.15.2.g Implement simple security administration.
- CIS.HS.15.2.h Perform user and group administration on a system.
- CIS.HS.15.2.i Create a virtual network environment.

NETWORKING (cont.)

CIS.HS.15.3 Apply and adapt network media and topologies to maintain a functional network.

CIS.HS.15.3.a	Describe basic network classifications, topologies, and network operating systems.
CIS.HS.15.3.b	Identify the characteristics and uses of network components (e.g., hub, switches, routers, firewall).
CIS.HS.15.3.c	Identify the characteristics of LAN transmission methods, standards, and protocols.
CIS.HS.15.3.d	Explain the difference between basic point-to-point (PTP) and point-to-multipoint (PTM) network topologies.
CIS.HS.15.3.e	Demonstrate (or map) the relationship between IP and DNS.
CIS.HS.15.3.f	Use the Developer Tools in an Internet browser to explore HTTP requests, status codes, and HTTP exchanges conducted over TCP/IP.
CIS.HS.15.3.g	Identify the basic capabilities of server operating systems.
CIS.HS.15.3.h	Identify the basic characteristics of WAN technologies.
CIS.HS.15.3.i	Identify the seven layers of the OSI model and their functions.
CIS.HS.15.3.j	Select the appropriate NIC and network configuration settings when given a network configuration.

CIS.HS.15.4 Distinguish the components and functions of network devices.

CIS.HS.15.4.a	Differentiate between major hardware components and their functions.
CIS.HS.15.4.b	Identify types of computer storage devices.
CIS.HS.15.4.c	Identify practices for hardware life cycle management.
CIS.HS.15.4.d	Analyze the cost/benefits of different networking system configurations and components.

NETWORKING (cont.)

CIS.HS.15.5 Plan, configure, and troubleshoot a network.

- CIS.HS.15.5.a Run computer diagnostics.
- CIS.HS.15.5.b Identify troubleshooting issues involving the boot process for a computer.
- CIS.HS.15.5.c Identify common symptoms and resolutions for hardware problems.
- CIS.HS.15.5.d Identify common symptoms and resolutions for software problems.
- CIS.HS.15.5.e Diagnose and resolve operating system problems with appropriate tools.

CIS.HS.15.6 Identify concepts of networking tools to manage and implement networks.

- CIS.HS.15.6.a Identify and describe the appropriate tools used by a technician.
- CIS.HS.15.6.b Describe the purpose of configuration management documentation.
- CIS.HS.15.6.c Predict the impact of a particular security implementation on network functionality when given a wiring task.
- CIS.HS.15.6.d Explain different methods and rationales of network performance optimization.
- CIS.HS.15.6.e Use the appropriate network monitoring resource to analyze traffic.

NETWORKING (cont.)

CIS.HS.15.7 Integrate security in the design and management of networks.

- CIS.HS.15.7.a Categorize different types of network security appliances and methods.
- CIS.HS.15.7.b Explain common threats, vulnerabilities, and mitigation techniques.
- CIS.HS.15.7.c Identify security protocols and describe their purpose and function.
- CIS.HS.15.7.d Define the function of remote access protocols and services.
- CIS.HS.15.7.e Explain the methods of network access security.
- CIS.HS.15.7.f Explain methods of user authentication.
- CIS.HS.15.7.g Identify the purpose, benefits, and characteristics of using a proxy.
- CIS.HS.15.7.h Implement appropriate wireless security measures.
- CIS.HS.15.7.i Install and configure a basic firewall.

CIS.HS.15.8 Identify opportunities in an information technology career field including but not limited to entrepreneurial opportunities, responsibilities, education, and certification.

- CIS.HS.15.8.a Identify information technologies used in various industries.
- CIS.HS.15.8.b Discuss the impact of technology on all career fields.
- CIS.HS.15.8.c Identify common tasks in career fields.
- CIS.HS.15.8.d Discuss career opportunities in information technology career fields.
- CIS.HS.15.8.e Describe the impact of technological change and the importance of lifelong learning in this career field.

IT FUNDAMENTALS

COURSE DESCRIPTION

IT Fundamentals develops the students' abilities to analyze, evaluate, strategize, and reflect upon technologies such as computer hardware, computer software, web technologies, databases, networking, security, and software development. Students will also be introduced to ever-changing information technology careers along with developing positive and ethical behaviors/practices.

STANDARDS AND INDICATORS:

CIS.HS.12.1 Identify and describe the basic components of information technology.

- CIS.HS.12.1.a Identify and distinguish the differences between input and output devices.
- CIS.HS.12.1.b Identify and explain how various components meet the needs of the user.
- CIS.HS.12.1.c Identify and analyze emerging technologies.
- CIS.HS.12.1.d Identify storage options.
- CIS.HS.12.1.e Identify the process to configure permissions for files and folders.
- CIS.HS.12.1.f Explain multiple methods of moving digital files.

CIS.HS.12.2 Identify and analyze hardware components.

- CIS.HS.12.2.a Identify the correct hardware to connect with external components.
- CIS.HS.12.2.b Determine and evaluate recommended hardware devices to solve specific problems.
- CIS.HS.12.2.c Troubleshoot basic computer hardware problems.
- CIS.HS.12.2.d Find and analyze resources to answer basic troubleshooting questions.
- CIS.HS.12.2.e Develop criteria for purchasing or upgrading computer system hardware.
- CIS.HS.12.2.f Identify and analyze proper input technologies for various tasks.

IT FUNDAMENTALS (cont.)

CIS.HS.12.3 Identify and analyze software components.

CIS.HS.12.3.a	Identify and analyze software appropriate for specific tasks.
CIS.HS.12.3.b	Research and analyze software installation and upgrade options.
CIS.HS.12.3.c	Troubleshoot potential problems with software installation (i.e. bloatware).
CIS.HS.12.3.d	Compare and contrast the functions, features, and limitations of different operating systems and utilities (i.e.,open source and mobile proprietary operating systems).

CIS.HS.12.4 Explain web technologies.

CIS.HS.12.4.a	Identify the components (e.g., wires, cables, routers, etc.) that make up the Internet.
CIS.HS.12.4.b	Describe the types of Internet connections.
CIS.HS.12.4.c	Explain Transmission Control Protocol/Internet Protocol (TCP/IP).
CIS.HS.12.4.d	Identify and compare different types of web technologies: blogs, wikis, podcasts, RSS feeds, etc.
CIS.HS.12.4.e	Explain browser cache and the process of clearing it.

CIS.HS.12.5 Design, administer, and deploy networks.

CIS.HS.12.5.a	Define basic networking terminology.
CIS.HS.12.5.b	Describe the characteristics and uses of networks, network devices, and components.
CIS.HS.12.5.c	Identify the purpose of networks and their functionality.
CIS.HS.12.5.d	Identify tools, diagnostic procedures, and troubleshooting techniques for networks.
CIS.HS.12.5.e	Describe the process of configuring, optimizing, and upgrading of networks.
CIS.HS.12.5.f	Explore and use cloud computing.
CIS.HS.12.5.g	Research and analyze basic network security solutions.
CIS.HS.12.5.h	Design a theoretical network environment and create protocols on deploying and maintaining the network.

IT FUNDAMENTALS (cont.)

CIS.HS.12.6 Apply database management strategies.

CIS.HS.12.6.a	Design and create database tables and relationships.
CIS.HS.12.6.b	Create database columns and specify properties.
CIS.HS.12.6.c	Name tables and fields in conformance with naming conventions.
CIS.HS.12.6.d	Insert, update, and delete records in a database.
CIS.HS.12.6.e	Import data into databases and transfer data between databases.
CIS.HS.12.6.f	Organize and store database files in a structured environment for users.
CIS.HS.12.6.g	Control user access to data and log access to the database by user and type of transaction.
CIS.HS.12.6.h	Backup, verify, and recover data in a database.
CIS.HS.12.6.i	Generate and print forms, reports, and results of queries (i.e., calculated fields, functions).

CIS.HS.12.7 Design, develop, test, and implement programs.

CIS.HS.12.7.a	Identify and define programming terminology.
CIS.HS.12.7.b	Explain the importance of life-long learning as a programmer.
CIS.HS.12.7.c	Analyze the strengths and weaknesses of different languages for solving a specific problem.
CIS.HS.12.7.d	Write code that uses logical operators (e.g., and, or, not, loops).
CIS.HS.12.7.e	Write code that uses conditional control structures (e.g., if, if-then-else).
CIS.HS.12.7.f	Test and debug code.
CIS.HS.12.7.g	Identify and analyze protocols to maintain the integrity of programs.

IT FUNDAMENTALS (cont.)

CIS.HS.12.8 Assess protocols for security and risk management.

CIS.HS.12.8.a	Identify the goals, objectives, and purposes of cybersecurity first principles.
CIS.HS.12.8.b	Identify different types of security threats and vulnerabilities.
CIS.HS.12.8.c	Identify and analyze policies procedures for security, privacy, and risk management.
CIS.HS.12.8.d	Explain intellectual property laws (e.g., copyright, trademark).
CIS.HS.12.8.e	Identify and analyze confidentiality concerns.
CIS.HS.12.8.f	Discuss risk loss and prevention methods.
CIS.HS.12.8.g	Analyze and evaluate passwords.
CIS.HS.12.8.h	Identify personal risks and create personal protocols to differentiate between home and work.

CIS.HS.12.9 Identify opportunities in an information technology career field.

CIS.HS.12.9.a	Identify information technologies used in various industries.
CIS.HS.12.9.b	Discuss the impact of technology on all career fields.
CIS.HS.12.9.c	Identify common tasks within the information technology career fields in occupations.
CIS.HS.12.9.d	Discuss career opportunities in information technology career fields.
CIS.HS.12.9.e	Describe the impact of technological change and the importance of lifelong learning in this career field.

INFORMATION TECHNOLOGY APPLICATIONS II

COURSE DESCRIPTION

This course will focus on skill development in data science using word processing, spreadsheets, databases, and integration of applications utilizing advanced features. Students taking both Information Technology Applications I and II may be eligible for dual credit at a participating postsecondary institution. Skills, standards, and coursework align with industry certifications.

STANDARDS AND INDICATORS:

CIS.HS.11.1 Organize, aggregate, and manipulate data using advanced word processing features.

CIS.HS.11.1.a	Integrate other program files into word processing documents (insert, embed, and link).
CIS HS.11.1.b	Create and format tables using advanced features (formulas, styles).
CIS HS.11.1.c	Use advanced merge features to integrate spreadsheet and database information into the word processing document as fields and records.
CIS.HS.11.1.d	Create and manage styles.
CIS.HS.11.1.e	Plan, record, run, and edit Macros.

CIS.HS.11.2 Organize, aggregate, and manipulate data using advanced spreadsheet features.

CIS.HS.11.2.a	Create worksheet structures using formulas and advanced features. (e.g., logical statements, vLookup, financial, statistical functions, and named ranges).
CIS.HS.11.2.b	Interpret data through statistical analysis (e.g., sorting, filtering, forecasting, and pivot tables).
CIS.HS.11.2.c	Import, export, and share worksheet data.
CIS.HS.11.2.d	Customize formatting methods, including conditional formatting and other advanced formatting methods.

INFORMATION TECHNOLOGY APPLICATIONS II (cont.)

CIS.HS.11.3 Synthesize relational database concepts to design, manage, evaluate, and organize information.

CIS.HS.11.3.a Design tables specifying properties for data entry and relationships.

CIS.HS.11.3.b Construct multi-table queries to retrieve, organize, and aggregate data to draw conclusions.

CIS.HS.11.3.c Design forms and subforms for efficient and effective data entry or retrieval.

CIS.HS.11.3.d Design reports and subreports utilizing tables, graphs, sparklines, and pivot tables for displaying meaningful data.

CIS.HS.11.3.e Analyze relational data using Structure Query Language (SQL).

CIS.HS.11.4 Consider the relationship between different programs to utilize data in one program to the next to create new documents.

CIS.HS.11.4.a Utilize spreadsheets, presentation, and database information in word processing documents.

CIS.HS.11.4.b Utilize word processing, presentation, and database information in a spreadsheet.

CIS.HS.11.4.c Utilize word processing, spreadsheet, and database information in a presentation.

CIS.HS.11.4.d Utilize word processing and spreadsheet information in a database.

CIS.HS.11.5 Describe the importance of ethical data collection and applicable conclusions.

CIS.HS.11.5.a Analyze the privacy practices of data collection and use.

CIS.HS.11.5.b Analyze the security practices of data collection and use.

INFORMATION TECHNOLOGY APPLICATIONS II (cont.)

CIS.HS.11.6 Demonstrate critical thinking skills to integrate information technology tools to access, manage, and create new information.

CIS.HS.11.6.a Gather, evaluate, use, and disseminate information from multiple technology sources.

CIS.HS.11.6.b Create purposeful, digitally designed products (e.g., brochure, presentation, website, portfolio).

CIS.HS.11.7 Identify opportunities in an information technology career field including but not limited to entrepreneurial opportunities, responsibilities, education, and certification.

CIS.HS.11.7.a Identify information technologies used in various industries.

CIS.HS.11.7.b Discuss the impact of technology on all career fields.

CIS.HS 11.7.c Identify common tasks in career fields.

CIS.HS 11.7.d Discuss career opportunities in information technology career fields.

CIS.HS.11.7.e Describe the impact of technological change and the importance of lifelong learning in this career field.

CIS.HS.11.7.f Identify the benefits of industry certification and higher education Programs.

CIS.HS.11.7.g Identify the necessary skills to succeed in fields using data science.

WEB DESIGN AND DEVELOPMENT

COURSE DESCRIPTION

Students will demonstrate advanced knowledge of web/app design and languages by creating a content-rich and visually-pleasing website/app that captures and keeps visitors' interests. Focus will be given to effective page layout, image creation and manipulation, interactivity, content creation, and project management. This course may be available for dual credit at a postsecondary institution.

STANDARDS AND INDICATORS:

CIS.HS.18.1 Use code that is clear, well-formatted, and appropriately documented.

CIS.HS.18.a	Identify alternative codes and discuss advantages and disadvantages that led to their decision.
CIS.HS.18.1.b	Review code to identify and fix errors.
CIS.HS.18.1.c	Determine if existing code opens a website up to vulnerabilities.

CIS.HS.18.2 Assess content for accessibility issues and discuss the issue and possible solutions.

CIS.HS.18.2.a	Analyze content flow and present alternative content with screen readers and other adaptive technologies.
CIS.HS.18.2.b	Consider mobile application functionality when network access is not available.

CIS.HS.18.3 Create a single functional web page based on a design mockup and user requirements.

CIS.HS.18.3.a	Explain client and target audience needs.
CIS.HS.18.3.b	Assess the needs of clients based on current trends.
CIS.HS.18.3.c	Demonstrate use of collaborative development tools.

WEB DESIGN AND DEVELOPMENT (cont.)

CIS.HS.18.4 Create a web program that will utilize multiple languages and servers and will run on multiple platforms.

CIS.HS.18.4.a Create a functional website with both front-end and back-end file management.

CIS.HS.18.4.b Employ a variety of web technologies to produce a final product that meets industry web development standards.

CIS.HS.18.5 Identify common tools used for workflows associated with content generation.

CIS.HS.18.5.a Identify one or more tools (i.e., proprietary, open source, or otherwise) that are capable of creating the required content (i.e., image, video, text).

CIS.HS.18.5.b Compare various tools designed for the same workflow.

CIS.HS.18.6 Create web pages/apps without the aid of a prefabricated template.

CIS.HS.18.6.a Illustrate industry standard development practices by coding web pages/apps.

CIS.HS.18.7 Identify information that may be private or subject to ethical consideration.

CIS.HS.18.7.a Identify issues with collected information such as usernames, passwords, location data, and preferences, and discuss the possible ramifications of misuse.

CIS.HS.18.7.b Identify the benefits of a minimal set of permissions when authoring a mobile app and possible consequences of over requesting permissions.

CIS.HS.18.8 Describe opportunities in an information technology career field including but not limited to entrepreneurial opportunities, responsibilities, education, and certification.

CIS.HS.18.8.a Identify information technologies used in various industries.

CIS.HS.18.8.b Discuss the impact of technology on all career fields.

CIS.HS.18.8.c Identify common tasks in career fields.

CIS.HS.18.8.d Discuss career opportunities in information technology career fields.

CIS.HS.18.8.e Describe the impact of technological change and the importance of lifelong learning in this career field.

FOUNDATIONS OF WEB DESIGN

COURSE DESCRIPTION

Students will demonstrate knowledge of web and mobile app design to create an effective website or app that captures and keeps visitors' interests. Students will demonstrate project management skills, while also enhancing creativity, problem solving, and critical thinking. Students will explore career opportunities in an information technology career field.

STANDARDS AND INDICATORS:

CIS.HS.9.1 Explain and apply appropriate web design language and terminology.

- CIS.HS.9.1.a Describe the principles and goals of website design.
- CIS.HS.9.1.b Describe the principles and goals of responsive design.
- CIS.HS.9.1.c Describe binary code.
- CIS.HS.9.1.d Define common industry terminology.

CIS.HS.9.2 Plan a website and/or app for a specific purpose.

- CIS.HS.9.2.a Develop a storyboard, mock-up, and wireframes for a website and/or app.
- CIS.HS.9.2.b Explain the design process in regards to audience, layout, time, and budget.
- CIS.HS.9.2.c Identify the target market audience's needs.
- CIS.HS.9.2.d Evaluate clients' needs based on current trends.
- CIS.HS.9.2.e Plan for responsive design.

FOUNDATIONS OF WEB DESIGN (cont.)

CIS.HS.9.3 Analyze elements and principles of design to communicate ideas consistent with project goals.

CIS.HS.9.3.a	Apply appropriate font and font family concepts.
CIS.HS.9.3.b	Demonstrate knowledge of design decisions in regards to shapes, lines, colors.
CIS.HS.9.3.c	Demonstrate knowledge of design decisions in regards to white space, margins, and layout of graphic and text.
CIS.HS.9.3.d	Incorporate text layout techniques such as kerning, leading, and alignment.
CIS.HS.9.3.e	Incorporate audio, visual, and graphic elements.
CIS.HS.9.3.f	Develop a focused concept, clear methods of conveyance, and unified theme that solves the given problem.
CIS.HS.9.3.g	Identify accessibility and standard compliance measures in order to communicate with a broad audience.
CIS.HS.9.3.h	Explain design decisions in regards to themes.
CIS.HS.9.3.i	Evaluate the impact of design decisions on the theme of a design.
CIS.HS.9.3.j	Explain design and project goals using a storyboard, mock-up, and wireframes.

CIS.HS.9.4 Analyze legal and ethical responsibilities.

CIS.HS.9.4.a	Apply copyright laws as appropriate in website and app creation.
CIS.HS.9.4.b	Discuss security issues that are related to the utilization of the computer and/or Internet.
CIS.HS.9.4.c	Describe situations where web pages and/or apps may be used unethically.
CIS.HS.9.4.d	Describe licensing agreements.
CIS.HS.9.4.e	Discuss the importance of creative commons.

FOUNDATIONS OF WEB DESIGN (cont.)

CIS.HS.9.5 Create and test websites and/or apps designed for cross browser and mobile compatibility.

CIS.HS.9.5.a Utilize standards-compliant elements in code that delivers essential content and functionality if older browsers are not capable of displaying content.

CIS.HS.9.5.b Create websites and/or apps that utilize responsive design to allow for a variety of screen sizes and geometries to view the content in a meaningful and logical fashion.

CIS.HS.9.5.c Test an application on devices of varying geometries and operating system versions to ensure maximum compatibility.

CIS.HS.9.6 Implement quality assurance processes to deliver effective digital communication.

CIS.HS.9.6.a Evaluate the website and/or app functionality.

CIS.HS.9.6.b Test a website and/or app in a variety of environments.

CIS.HS.9.6.c Evaluate site effectiveness through user search and accessibility to meet all audience needs.

CIS.HS.9.6.d Investigate web hosts.

CIS.HS.9.6.e Troubleshoot and maintain a website and/or app.

CIS.HS.9.6.f Evaluate cross-browser compatibility.

CIS.HS.9.6.g Identify the process of securing a domain name.

FOUNDATIONS OF WEB DESIGN (cont.)

CIS.HS.9.7 Critique a website and/or app in accordance with web design principles.

- CIS.HS.9.7.a Assess download time.
- CIS.HS.9.7.b Assess readability of the website and/or app.
- CIS.HS.9.7.c Assess ease of navigation for both website and/or app.
- CIS.HS.9.7.d Assess the design theme of a website and/or app.
- CIS.HS.9.7.e Assess consistency of the theme across the entire website and/or app.
- CIS.HS.9.7.f Assess the functionality of links.

CIS.HS.9.8 Identify opportunities in an information technology career field including but not limited to entrepreneurial opportunities, responsibilities, education, and certification.

- CIS.HS.9.8.a Identify information technologies used in various industries.
- CIS.HS.9.8.b Discuss the impact of technology on all career fields.
- CIS.HS.9.8.c Identify common tasks in career fields.
- CIS.HS.9.8.d Discuss career opportunities in information technology career fields.
- CIS.HS.9.8.e Describe the impact of technological change and the importance of lifelong learning in this career field.

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COMPUTER SCIENCE AND TECHNOLOGY

STANDARDS

COMPUTER SCIENCE AND TECHNOLOGY

STANDARDS AND INDICATORS:

CS.HS.1 Demonstrate and describe best practices of computer literacy.

CS.HS.1.a	Interpret potential beneficial and harmful effects of computing innovations and emerging technologies, including artificial intelligence.
CS.HS.1.b	Identify and explain how hardware components and software applications meet the needs of the end user.
CS.HS.1.c	Demonstrate effective and efficient searches.
CS.HS.1.d	Select and use appropriate software to complete tasks in a variety of educational and professional settings.
CS.HS.1.e	Identify information technologies used in various industries and potential careers in those industries.

CS.HS.2 Analyze ethical practices and behaviors of digital citizenship.

CS.HS.2.a	Examine and evaluate cultural, social, and ethical issues associated with information technology.
CS.HS.2.b	Apply digital literacy by assessing the validity, accuracy, and appropriateness of information.
CS.HS.2.c	Describe how algorithms may result in both intentional and unintentional bias.
CS.HS.2.d	Investigate how applications of computing can have legal implications.
CS.HS.2.e	Evaluate safety and security measures for protecting information and managing digital footprints.

COMPUTER SCIENCE AND TECHNOLOGY (cont.)

CS.HS.3 Apply concepts of information technology.

CS.HS.3.a	Identify and describe computing hardware components.
CS.HS.3.b	Perform operations on digital files stored on local devices and remote/cloud storage.
CS.HS.3.c	Compare and contrast the functions, features, and limitations of different operating systems and utilities.
CS.HS.3.d	Troubleshoot computer hardware and software.
CS.HS.3.e	Define components of computer networks.
CS.HS.3.f	Explain how data is sent through the Internet.
CS.HS.3.g	Interpret and draw conclusions based on a data set.

CS.HS.4 Analyze the fundamentals of cybersecurity.

CS.HS.4.a	Describe cryptography, encryption, and ciphers.
CS.HS.4.b	Identify methods to protect personal devices, information, and systems.
CS.HS.4.c	Compare and contrast federal, state, local, and international cybersecurity policies.

COMPUTER SCIENCE AND TECHNOLOGY (cont.)

CS.HS.5 Apply concepts of computational thinking.

CS.HS.5.a	Define the term algorithm and explain its relationship to computational solutions.
CS.HS.5.b	Decompose a complex problem into distinct parts.
CS.HS.5.c	Identify and develop computational solutions to problems.
CS.HS.5.d	Define abstraction in terms of computer science and explain how it is used to manage complexity.
CS.HS.5.e	Represent equivalent data using different encoding schemes.

CS.HS.6 Implement programming literacy practices to create computational artifacts.

CS.HS.6.a	Predict the result or output of code execution.
CS.HS.6.b	Develop programs that use sequences of statements, variables, loops, and conditionals.
CS.HS.6.c	Design and develop computational artifacts that address personally- or socially relevant concerns.
CS.HS.6.d	Use abstraction to manage complexity or avoid duplication of effort.
CS.HS.6.e	Use existing procedures within a program or language based on documentation.
CS.HS.6.f	Write documentation describing the function of computational artifacts.

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NEBRASKA DEPARTMENT OF EDUCATION

HUMAN SCIENCES AND EDUCATION

PROGRAM OF STUDY STANDARDS

EDUCATION & TRAINING

HUMAN SERVICES

LAW, PUBLIC SAFETY, CORRECTIONS, & SECURITY

GOVERNMENT & PUBLIC ADMINISTRATION

NEBRASKA CAREER AND TECHNICAL EDUCATION STATE MODEL PROGRAMS OF STUDY

CAREER FIELD OVERVIEW

The Human Sciences and Education Career Field Area provides opportunities for students to deepen their understanding of topics in areas such as family and consumer sciences, education and training, government and public administration, counseling and mental health, food and nutrition science, health and wellness, housing and interior design, human growth and development, early childhood education, personal relationships, textiles and apparel design, culinary arts, hospitality and tourism, family and community services, merchandising, and law, public safety, and security.

PROGRAMS OF STUDY

Programs of Study are the primary delivery model for Career and Technical Education (CTE) in Nebraska. They include a sequence of courses which progresses in specificity and rigor and are updated regularly to align with Nebraska's workforce needs and economic development priorities. This document includes the programs of study and course-based standards for the Human Sciences and Education career field. These state model programs of study were developed to:

- Assist secondary schools in creating meaningful sequences of courses that adequately prepare individuals for seamless transitions to postsecondary education and careers eliminating duplication of coursework;
- Assist students in identifying appropriate courses for high school and postsecondary education that lead to their chosen career;
- Encourage collaboration between secondary and postsecondary education through curricular alignment;
- Offer opportunities for high-quality workplace experiences aligned to students' career interests;
- Promote the advancement of early postsecondary opportunities (including dual-credit courses) for all students; and
- Support postsecondary education options for students to further prepare them for successful transitions to their future careers.

Nebraska's programs of study are organized around Nebraska's CTE Model, which provides a way for students to explore the diversity of career options available to them.

NEBRASKA CAREER AND TECHNICAL EDUCATION MODEL

1 CORE ACADEMICS AND CAREER READINESS

At the center of the NCE Model is the expectation for all students to develop a solid academic core. The next ring identifies specific career readiness standards and practices that prepare students for success in postsecondary education as well as entrepreneurship/employment.

2 CAREER FIELDS

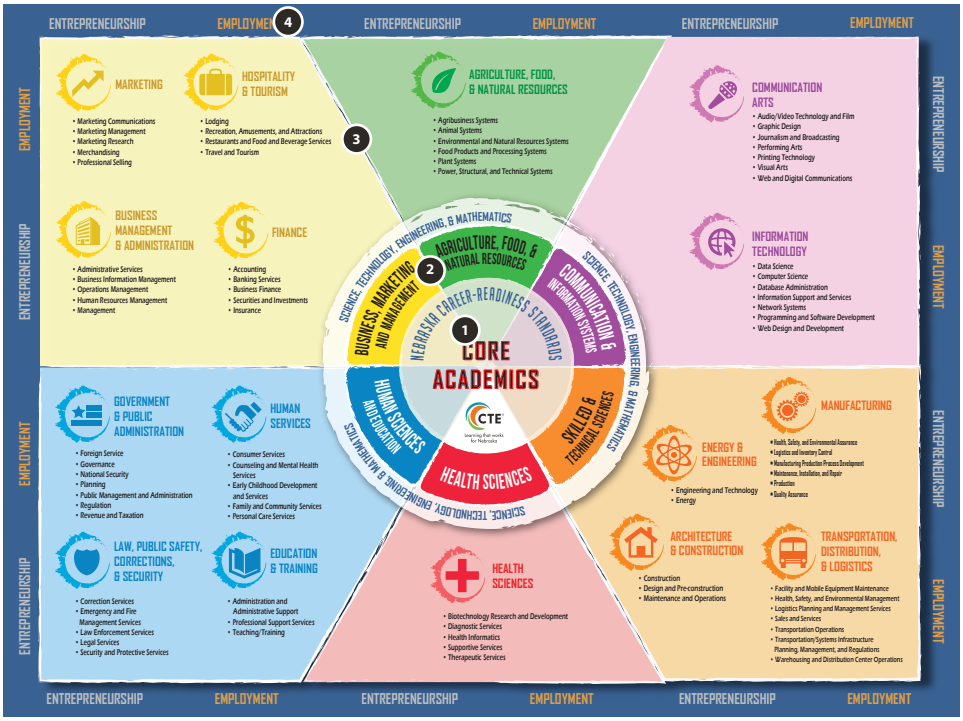
The six career fields represent broad sectors of the job market on which students may choose to focus.

3 CAREER CLUSTERS

Each career field is composed of career clusters radiating out from it. The clusters are more specific segments of the labor market. Each cluster is a grouping of careers that focus on similar subjects or similar skills. A basic understanding and exploration of each of the clusters will provide students with a solid foundation for career decision-making to conceptualize the entire world of work.

4 EMPLOYABILITY AND ENTREPRENEURSHIP

Career education provides the opportunity to gain the knowledge and skills for both employment and entrepreneurship. The reality for Nebraska and the United States is that entrepreneurship will help ensure economic growth and vitality. By infusing entrepreneurship competencies, career education is helping create the next generation of America's innovators and entrepreneurs.



The model is a visual map of "career fields" and "career clusters/pathways" and organizes the 16 National Career Clusters into six broad sectors of entrepreneurship and employment:

- Agriculture, Food and Natural Resources
- Business, Marketing and Management
- Communication and Information Systems
- Health Sciences
- Human Sciences and Education
- Skilled and Technical Sciences

These fields break down into more specific Career Clusters, Pathways and Occupational Specialties. The model provides a way for:

- Students to explore the diversity of career options available to them.
- Students to begin to prepare for their career with plans for secondary and post-secondary education.
- Schools to organize curriculum into Programs of Study that prepare students for opportunities in Nebraska's economy.

COURSE SEQUENCING

The courses within the State Model Program of Study are intended to be offered sequentially, to allow learners to build upon foundational knowledge and skills learned in introductory and intermediate courses and applied in more advanced capstone coursework. Non-duplicative sequences of courses ensure students transition to postsecondary education without duplication of classes and content. CTE enrollment data is collected at the course level. Students who participate and concentrate in CTE generally have more positive outcomes such as higher graduation rates along with postsecondary success.

Introductory Courses

Introductory courses set the foundation for a program of study by introducing students to broad foundational knowledge relative to an occupational area and career field.

Intermediate Courses

Intermediate courses build on the foundational knowledge of Introductory courses to further develop the academic, technical, and career readiness skills within a particular career field and occupational area.

Capstone Courses

Capstone courses are occupationally specific and further develop the necessary and required academic, technical, and career readiness skills needed for seamless transitions to postsecondary education and employment. Capstone courses often provide opportunities for students to earn postsecondary credit.

Levels of Participation

CTE Participant

A student who has earned one or more credits in any career and technical education program area.

CTE Concentrator

A secondary student who, in grades 9 through 12, has earned credit in at least two courses in a single career cluster program at the intermediate or capstone level.

State Model Programs of Study are coordinated, nonduplicative sequences of academic and technical content at the secondary and postsecondary levels that incorporate challenging State academic standards, address both academic and technical knowledge and skills, including Nebraska's Career Readiness Skills, are aligned with the needs of industries in Nebraska's economy, progress in specificity, have multiple entry and exit points that incorporate credentialing, and culminate in the attainment of a recognized postsecondary credential.

COURSE-BASED STANDARDS

Individual CTE courses, which make up the sequence of courses for Programs of Study, include content area standards and indicators to provide a framework for quality teaching and learning. While not required by state law, districts are encouraged to adopt these State Model Programs of Study and their related course-based standards. CTE State Model Programs of Study and course-based standards are revised on a five-year cycle to remain responsive to the rapid advances and needs of business and industry, help students explore a variety of postsecondary options and corresponding entrance requirements to help identify their next steps, and to align to changes in postsecondary programs.

Standards

At the highest level of generality, content area standards include a set of broad, overarching content-based statements that describe the basic cognitive, affective, or psychomotor expectations of students. They reflect long-term goals for learning.

Indicators

Under each standard are indicators, which further describe what a student must know and be able to do to meet the standard. Indicators are performance-based statements that provide educators with a clear understanding of the expected level of student learning and guidance. Indicators provide guidance for an assessment of student learning.

EXPANDED LEARNING OPPORTUNITIES

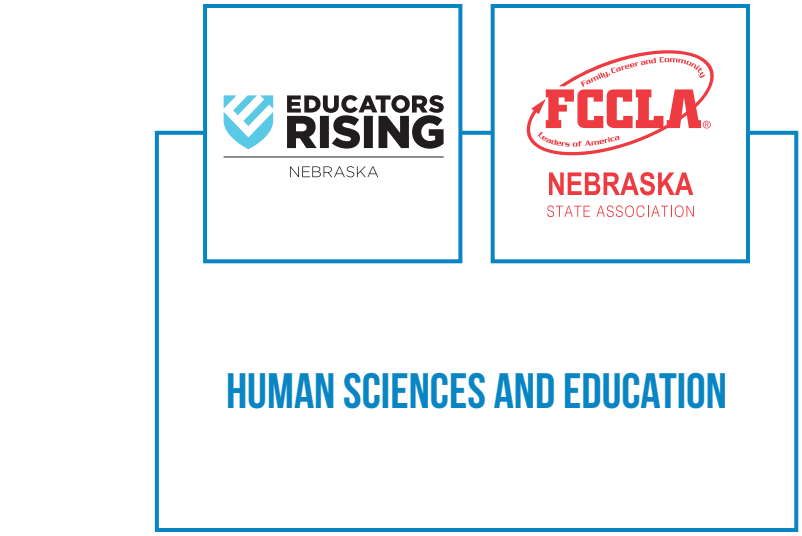
Expanded learning opportunities build on, support, and enhance learning within and outside of regular school programming. They are a critical component of Nebraska's educational landscape and should be intentionally supported to further develop students' college and career readiness. To signal aligned expanded learning opportunities, each Program of Study identifies additional areas where students may desire to personalize their program and take additional coursework or work-based learning that aligns with their interests. These expanded learning opportunities are not considered part of a Program of Study nor are they required, but rather a meaningful opportunity for students to continue to learn after completing the Program of Study sequence of courses within the context of their career interests. Along with aligned coursework, two prominent expanded learning opportunities include participating in Work-based Learning or a Career and Technical Student Organization.

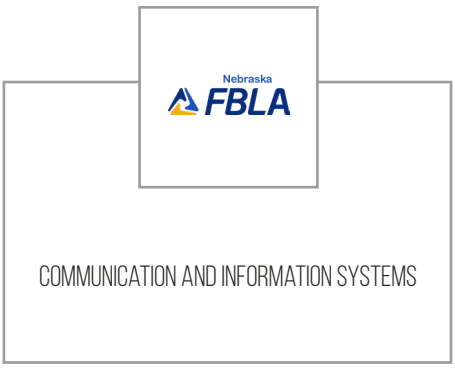
Work-Based Learning

Work-Based Learning (WBL) connects learners with employers to prepare them for success in an everchanging workplace. WBL is a planned program of meaningful experiences related to the career interests of learners that enables them to acquire knowledge and skills in a real or simulated work setting. It requires strong partnerships between schools, colleges, and local employers. WBL is learning through work, not simply learning about work. Expanding high-quality WBL opportunities for students is one of Nebraska's CTE strategic priorities and is a program quality accountability indicator. Nebraska CTE affirms WBL as a critical component of career development. Throughout the State Model Programs of Study, courses where WBL is embedded into the class is noted in the course title (e.g., "Education & Training Work-Based Learning Experience"). It is also signaled as an expanded learning opportunity across all programs of study.

Career And Technical Student Organizations

Career and Technical Student Organizations (CTSOs) are an extension of classroom instruction—applying classroom learning to real-world experiences. CTSOs provide opportunities for all students to develop career readiness skills through activities, competitions, and community service. Nebraska recognizes seven CTSOs aligned with the state's Programs of Study and career field areas. These include:





CAREER READINESS STANDARDS

Embedded into the State Model Programs of Study and courses are the Nebraska Career Readiness standards. These standards rest on important "practices and proficiencies" with long-standing importance in career education. These standards and related practices are not limited to formal CTE programs nor to the middle school or high school level. Rather, these standards and practices should be used over and over again with increasing complexity and relevance by students as they progress through their educational pathway. The standards themselves do not dictate curriculum, pedagogy or delivery of content. Schools and colleges may handle the teaching and assessing of these standards in many different ways.

THE CAREER READY INDIVIDUAL...

1. Applies appropriate academic and technical skills

2. Communicates effectively and appropriately

3. Contributes to employer and community success

4. Makes sense of problems and perseveres in solving them

5. Uses critical thinking

6. Demonstrates innovation and creativity

7. Models ethical leadership and effective management

8. Works productively in teams and demonstrates cultural competency

9. Utilizes technology

10. Manages personal career development

11. Attends to personal and financial well-being

HUMAN SCIENCES AND EDUCATION

PROGRAMS OF STUDY

EDUCATION & TRAINING CLUSTER

Program of Study Name	Introductory Course	Intermediate Course	Capstone Course	Expanded Learning Opportunity
EDUCATION & TRAINING (Pages 11–25)	350001 - Teaching as a Profession, AND 090123 - Lifespan Development	350002 - Best Practices in Education & Training with Work-Based Learning	350003 - Education & Training Practicum with Work-Based Learning	090119 - Child Development, OR 090127 - Families in Crisis, OR Introduction to Education Dual Credit, OR 320706 - Education & Training Work-Based Learning Experience

HUMAN SERVICES CLUSTER

Program of Study Name	Introductory Course	Intermediate Course	Capstone Course	Expanded Learning Opportunity
CHILD, YOUTH, & FAMILY STUDIES (Pages 26–49)	090123 - Lifespan Development, OR 090101 - Introduction to Family & Consumer Sciences	090119 - Child Development, OR 090117 - Parents & Families, OR 090127 - Families in Crisis	090116 - Interpersonal Relationships, OR 090132 - Family & Community Advocacy, OR	090104 - Life & Career Readiness, OR 320712 - Human Services Work-Based Learning Experience
COUNSELING & MENTAL HEALTH (Pages 50–69)	090101 - Introduction to Family & Consumer Sciences, OR 090128 - Careers in Mental Health	090127 - Families in Crisis	090132 - Family & Community Advocacy, OR 151200 - Psychology, OR 151210 - AP Psychology, OR 151300 - Sociology	090116 - Interpersonal Relationships, OR 077801 - Behavioral Health 1 (HS), OR 077802 - Behavioral Health 2 (HS), OR 320712 - Human Services Work-Based Learning Experience

HUMAN SERVICES CLUSTER **(CONTINUED)**

Program of Study Name	Introductory Course	Intermediate Course	Capstone Course	Expanded Learning Opportunity
DESIGN (Pages 70–89)	090126 - Introduction to Design	090103 - Apparel Production & Construction, OR 090109 - Home Design and Interiors, OR 090206 - Fashion Design	032370 - Entrepreneurship (BMM), OR 032600 - College Introduction to Entrepreneurship, OR 270613 - Advanced Digital Design (CIS)	038100 - Marketing (BMM), OR 038200 - Advanced Marketing (BMM), OR 320712 - Human Sciences Work-Based Learning Experence
EARLY CHILDHOOD EDUCATION (Pages 90–108)	090101 - Introduction to Family & Consumer Sciences, OR 090123 - Lifespan Development	090119 - Child Development, AND 090134 - Best Practices in Early Childhood Education with Work-Based Learning	090122 - Early Childhood Education Practicum with Work-Based Learning	Early Childhood Education Dual Credit, OR 090127 - Families in Crisis, OR 090132 - Family & Community Advocacy, OR 320712 - Human Services Work-Based Learning Experience
FOOD SCIENCE (Pages 109–126)	090107 - Fundamentals of Nutrition & Culinary Essentials,	090124 - Nutrition	090113 - Food Science	032370 - Entrepreneurship (BMM), OR 320702 - Introduction to AFNR, OR 090133 - Lifespan Nutrition & Wellness, OR 320712 - Human Sciences Work-Based Learning Experience
NUTRITION & WELLNESS (Pages 127–141)	090107 - Fundamentals of Nutrition & Culinary Essentials, OR 090101 - Introduction to Family & Consumer Sciences	090124 - Nutrition	090133 - Lifespan Nutrition & Wellness	090113 - Food Science, OR 077601 - Exercise Science, OR Nutrition Dual Credit, OR 320712 - Human Sciences Work-Based Learning Experience

LAW, PUBLIC SAFETY,
CORRECTIONS, & SECURITY CLUSTER

Program of Study Name	Introductory Course	Intermediate Course	Capstone Course	Expanded Learning Opportunity
CORRECTIONS & LAW ENFORCEMENT SERVICES (Pages 142–154)	390010 - Foundations of Law, Public Safety, Corrections, & Security	390015 - Introduction to Criminal Justice, OR 390030 - Introduction to Corrections	390025 - Courts & Judicial Processes, OR 390026 - Police & Society, OR	151200 - Psychology, OR 151210 - AP Psychology, OR 151300 - Sociology, OR 090127 - Families in Crisis, OR 320714 - Law, Public Safety, Corrections, & Security Work-Based Learning Experience
EMERGENCY & FIRE MANAGEMENT (Pages 155–159)	390010 - Foundations of Law, Public Safety, Corrections, & Security	390021 - Emergency & Fire Management	077402 - Emergency Medical Technical Certification (HS)	077600 - Medical Terminology (HS), OR 320714 - Law, Public Safety Work-Based Learning Experience

TEACHING AS A PROFESSION

COURSE DESCRIPTION

This introductory course is designed to introduce students to career opportunities and related skills in the field of education and training. Topics covered include history of education, the philosophy of education, roles of educators, instructional and assessment methods, diversity of cultures and communities, learner development, and professional development.

STANDARDS AND INDICATORS:

HSE.HS.35.1 Examine teaching career opportunities.

- HSE.HS.35.1.a Identify careers and roles within the educational system.
- HSE.HS.35.1.b Compare and contrast preschool, elementary, middle, and high school experiences.
- HSE.HS.35.1.c Investigate the educational and experience requirements for each profession.

HSE.HS.35.2 Examine the historical roots of education in the United States and the implications on education today.

- HSE.HS.35.2.a Describe the history of education through the centuries.
- HSE.HS.35.2.b Identify elements of the daily routine of school and how routines have differed throughout history.
- HSE.HS.35.2.c Discuss educational equity throughout history.
- HSE.HS.35.2.d Identify issues and trends for the future of education.

HSE.HS.35.3 Distinguish the roles and responsibilities for stakeholders within the education system.

- HSE.HS.35.3.a Identify the teacher's roles and responsibilities in educating students.
- HSE.HS.35.3.b Identify the students' roles and responsibilities for their own educational learning.
- HSE.HS.35.3.c Identify roles and responsibilities for administrators, counselors, coaches, and others in the educational setting.
- HSE.HS.35.3.d Identify roles and responsibilities for parents, guardians, and other caregivers.
- HSE.HS.35.3.e Identify roles and responsibilities for community members, including school board members, government representatives, and the general population.

TEACHING AS A PROFESSION (cont.)

HSE.HS.35.4 Analyze how learners grow and develop.

- HSE.HS.35.4.a Explain the physical, emotional, social, and intellectual development of humans.
- HSE.HS.35.4.b Explain how learning theory, human development, and individual differences impact teaching and learning.
- HSE.HS.35.4.c Identify learning environments and their potential impact on teaching and learning.
- HSE.HS.35.4.d Explain cultural, social, political, and economic aspects that impact student learning.
- HSE.HS.35.4.e Describe modalities of instruction (e.g., hybrid learning, remote, in person) and implications on learners.

HSE.HS.35.5 Analyze different teaching philosophies.

- HSE.HS.35.5.a Describe the history of various teaching philosophies.
- HSE.HS.35.5.b Analyze how teaching philosophies play a part in today's education.
- HSE.HS.35.5.c Recognize the difference between teacher-centered and learner-centered instruction.
- HSE.HS.35.5.d Relate student experiences to educational psychology theories

HSE.HS.35.6 Define different methods of assessment.

- HSE.HS.35.6.a Identify the role and function of assessment in classroom instruction.
- HSE.HS.35.6.b Recognize formative and summative assessments.
- HSE.HS.35.6.c Identify the purposes of different assessment types.

HSE.HS.35.7 Demonstrate career ready practices that develop leaders within education career pathways.

- HSE.HS.35.7.a Observe professionals within their work setting.
- HSE.HS.35.7.b Identify skills professionals must acquire to be effective educators.
- HSE.HS.35.7.c Demonstrate ethical behavior as a future education professional.

LIFESPAN DEVELOPMENT

COURSE DESCRIPTION

This introductory course explores the physical, intellectual, emotional, and social development of individuals across the lifespan from conception to death. Topics covered are external impacts on development including family structure and practices, theories of development, social and technological forces, and resources available to individuals and their outcomes.

STANDARDS AND INDICATORS:

HSE.HS.30.1 Evaluate principles of growth and development from conception through infancy.

HSE.HS.30.1.a	Describe theories, current issues, and trends.
HSE.HS.30.1.b	Identify physical, intellectual, emotional, and social development milestones.
HSE.HS.30.1.c	Explain conditions influencing development (e.g., abuse, trauma, stress, social and technological forces).
HSE.HS.30.1.d	Explain brain structure and development for this stage of life.
HSE.HS.30.1.e	Describe services and supports needed when developmental milestones are not met.
HSE.HS.30.1.f	Analyze family system roles and dynamics and how they contribute to development.
HSE.HS.30.1.g	Describe skills needed to work and engage with individuals in this stage of development.

HSE.HS.30.2 Evaluate principles of growth and development from infancy through childhood.

HSE.HS.30.2.a	Describe theories, current issues, and trends.
HSE.HS.30.2.b	Identify physical, intellectual, emotional, and social development milestones.
HSE.HS.30.2.c	Explain conditions influencing development (e.g., abuse, trauma, stress, social and technological forces).
HSE.HS.30.2.d	Explain brain structure and development for this stage of life.
HSE.HS.30.2.e	Describe services and supports needed when developmental milestones are not met.
HSE.HS.30.2.f	Analyze family system roles and dynamics and how they contribute to development.
HSE.HS.30.2.g	Demonstrate skills needed to work and engage with individuals in this stage of development.

LIFESPAN DEVELOPMENT (cont.)

HSE.HS.30.3 Evaluate principles of growth and development from childhood through adolescence.

HSE.HS.30.3.a Describe theories, current issues, and trends.

HSE.HS.30.3.b Identify physical, intellectual, emotional, and social development milestones.

HSE.HS.30.3.c Explain conditions influencing development (e.g., abuse, trauma, stress, social and technological forces).

HSE.HS.30.3.d Explain brain structure and development for this stage of life.

HSE.HS.30.3.e Describe services and supports needed when developmental milestones are not met.

HSE.HS.30.3.f Analyze family system roles and dynamics and how they contribute to development.

HSE.HS.30.3.g Demonstrate skills needed to work and engage with individuals in this stage of development.

HSE.HS.30.4 Evaluate principles of growth and development from adolescence through early adulthood.

HSE.HS.30.4.a Describe theories, current issues, and trends.

HSE.HS.30.4.b Identify physical, intellectual, emotional, and social development milestones.

HSE.HS.30.4.c Explain conditions influencing development (e.g., abuse, trauma, stress, social and technological forces).

HSE.HS.30.4.d Explain brain structure and development for this stage of life.

HSE.HS.30.4.e Describe services and supports needed when developmental milestones are not met.

HSE.HS.30.4.f Analyze family system roles and dynamics and how they contribute to development.

HSE.HS.30.4.g Demonstrate skills needed to work and engage with individuals in this stage of development.

LIFESPAN DEVELOPMENT (cont.)

HSE.HS.30.5 Evaluate principles of growth and development from middle to late adulthood through the end of life.

HSE.HS.30.5a	Describe theories, current issues, and trends.
HSE.HS.30.5.b	Identify physical, intellectual, emotional, and social milestones.
HSE.HS.30.5.c	Explain conditions influencing well-being (e.g., abuse, trauma, stress, social and technological forces).
HSE.HS.30.5.d	Explain brain structure and development for this stage of life.
HSE.HS.30.5.e	Describe services and supports needed for well-being.
HSE.HS.30.5.f	Analyze family system roles and dynamics and how they contribute to the well-being of individuals.
HSE.HS.30.5.g	Describe skills needed to work and engage with individuals in this stage of development.

BEST PRACTICES IN EDUCATION AND TRAINING WITH WORK-BASED LEARNING

COURSE DESCRIPTION

This intermediate course will focus on best practices in education building on concepts from the introductory courses. Topics covered include instructional and assessment methods, differentiated instruction, development of communication skills necessary for educators, and instruction planning. Knowledge and skills will be applied within a structured work-based learning experience, which may take place in a school, community, or business and industry setting. The focus of the hands-on experience will be immersion in an educational setting.

STANDARDS AND INDICATORS:

HSE.HS.3.1 Synthesize how learners grow and develop.

HSE.HS.3.1.a	Recognize that patterns of learning and development vary individually within and across the physical, intellectual, emotional, and social areas of development.
HSE.HS.3.1 b	Summarize conditions influencing development (e.g., abuse, trauma, stress, social and technological forces).
HSE.HS.3.1.c	Create developmentally appropriate instruction that meets student needs.

HSE.HS.3.2 Assess and implement appropriate strategies to differentiate instruction and engage all learners.

HSE.HS.3.2.a	Summarize the importance of differentiated instruction.
HSE.HS.3.2.b	Identify levels of cognition for the purposes of lesson planning.
HSE.HS.3.2.c	Implement different instructional strategies appropriate for varied levels of cognition.
HSE.HS.3.2.d	Utilize technology to support lesson planning.
HSE.HS.3.2.e	Develop appropriate sequencing of learning experiences and provide multiple ways for learners to demonstrate knowledge and skills.
HSE.HS.3.2.f	Evaluate appropriate assessment practices.

BEST PRACTICES IN EDUCATION AND TRAINING WITH WORK-BASED LEARNING (cont.)

HSE.HS.3.3 Analyze methods of assessment and their uses.

HSE.HS.3.3.a Differentiate between formative and summative assessments.

HSE.HS.3.3.c Construct appropriate assessments for a variety of concepts.

HSE.HS.3.3.d Analyze data from assessments to inform planning.

HSE.HS.3.3.e Utilize technology to support assessment practices.

HSE.HS.3.4 Integrate the diverse needs of students into lesson design.

HSE.HS.3.4.a Explain the Individuals with Disabilities Education Act.

HSE.HS.3.4.b Identify Individual Education Plans (IEPs) and 504 Plans.

HSE.HS.3.4.c Identify the needs of students who are English Language Learners (ELL).

HSE.HS.3.4.d Identify the needs of students who are High Ability Learners (HAL).

HSE.HS.3.4.e Develop learning strategies and assessments with student needs.

HSE.HS.3.5 Demonstrate effective communication and positive feedback strategies.

HSE.HS.3.5.a Practice effective communication skills needed for the education profession (e.g., listening, speaking, non-verbal communication, verbal communication and written communication).

HSE.HS.3.5.b Identify the differences between positive and negative feedback strategies.

HSE.HS.3.5.c Develop a variety of positive feedback strategies.

BEST PRACTICES IN EDUCATION AND TRAINING WITH WORK-BASED LEARNING (cont.)

HSE.HS.3.6 Differentiate leadership roles and opportunities for collaboration.

HSE.HS.3.6.a Describe the importance of professional development in the education field.

HSE.HS.3.6.b Identify patterns of involvement with students and families outside of the classroom and how that relates to student success.

HSE.HS.3.6.c Summarize the role of elected school board members, administrators, and teachers as leaders within the school system.

HSE.HS.3.7 Model best practices through a work-based learning experience.

HSE.HS.3.7.a Evaluate physical, intellectual, emotional, and social development at various grade levels.

HSE.HS.3.7.b Design lessons with strategies appropriate for all learners.

HSE.HS.3.7.c Evaluate assessments.

HSE.HS.3.7.d Demonstrate effective communication within the practicum experience.

HSE.HS.3.7.e Demonstrate effective leadership.

EDUCATION AND TRAINING PRACTICUM WITH WORK-BASED LEARNING

COURSE DESCRIPTION

This capstone course will focus on the thought processes needed in education building on concepts from the introductory and intermediate courses. Topics covered include ethics in education, instructional strategies, equitable learning opportunities, and effective, inclusive communication. Knowledge and skills will be applied within a structured work-based learning experience, which may take place in a school, community, or business and industry setting. The focus of the practicum experience will be on the improvement of instructional strategies.

STANDARDS AND INDICATORS:

HSE.HS.11.1 Analyze current policies and ethics of the education profession.

HSE.HS.11.1.a Explain safe, legal, and ethical use of information and technology including appropriate documentation of sources and respect for others in the use of social media.

HSE.HS.11.1.b Explain the laws related to learners' rights and teachers' responsibilities (e.g., FAPE, confidentiality, privacy, child abuse).

HSE.HS.11.1.c Explain the expectations of the profession including code of ethics and professional standards of practice, relevant law, and policies.

HSE.HS.11.1.e Identify opportunities to draw upon current education policy and research as sources of analysis and reflection to improve practice.

HSE.HS.11.2 Adapt a variety of instructional strategies for different levels of cognition.

HSE.HS.11.2.a Apply a variety of instructional strategies in lesson design.

HSE.HS.11.2.b Adapt instructional strategies for students with diverse needs.

HSE.HS.11.2.c Analyze assessment data to learn if instructional strategies were effective.

HSE.HS.11.3 Model cultural competence to provide fair and equitable learning opportunities.

HSE.HS.11.3.a Recognize implicit and explicit biases to establish an anti-bias learning environment.

HSE.HS.11.3.b Identify school-based inequities.

HSE.HS.11.3.c Establish environments where learners feel safe and appreciated.

EDUCATION AND TRAINING PRACTICUM WITH WORK-BASED LEARNING (cont.)

HSE.HS.11.4 Analyze how learner diversity can affect communication.

HSE.HS.11.4.a Differentiate knowledge of communication differences among diverse populations.

HSE.HS.11.4.b Demonstrate cultural competence while working productively in teams.

HSE.HS.11.5 Model teaching practices with the goal of continuous improvement through a work-based learning experience.

HSE.HS.11.5.a Evaluate the practicum experience.

HSE.HS.11.5.b Implement continual appraisal of performance and identify strengths and weaknesses.

HSE.HS.11.5.c Develop a plan for continuous professional learning.

HSE.HS.11.5.d Model the positive attributes of effective leaders (e.g., self awareness, self regulation, motivation, empathy).

CHILD DEVELOPMENT

COURSE DESCRIPTION

This intermediate course provides an overview of developmental stages in the prenatal period through 12 years of age building on concepts from the introductory course(s). Topics covered include how young children attain knowledge, behaviors, and skill and theories of child development to identify the effects of parenting practices, social, cultural, and linguistic diversity. The impact of quality child care and early childhood education on child growth and development will also be explored.

STANDARDS AND INDICATORS:

HSE.HS.5.1 Explain the basic principles of child development from conception to age 12.

HSE.HS.5.1.a Explain physical development milestones from conception to age 12.

HSE.HS.5.1.b Explain intellectual development milestones from conception to age 12.

HSE.HS.5.1.c Explain emotional development milestones from conception to age 12.

HSE.HS.5.1.d Explain social development milestones from conception to age 12.

HSE.HS.5.2 Evaluate child development theoretical perspectives and their applications.

HSE.HS.5.2.a Identify the various child development theorists and theories.

HSE.HS.5.2.b Evaluate developmentally appropriate child care skills from conception to age 12.

HSE.HS.5.2.c Identify parenting decisions and practices that impact healthy development from conception to age 12.

HSE.HS.5.3 Analyze family theoretical perspectives and their impact on child growth and development.

HSE.HS.5.3.a Compare and contrast theorists and theories related to family traits and child growth and development.

HSE.HS.5.3.b Classify different parenting types and styles.

HSE.HS.5.3.c Compare and contrast the different parenting styles.

HSE.HS.5.3.d Explain the impact parenting styles have on the development of young children.

CHILD DEVELOPMENT (cont.)

HSE.HS.5.4 Analyze the theoretical perspectives of social, cultural, and linguistic diversity traits and their impact on child growth and development.

HSE.HS.5.4.a Compare and contrast theorists and theories related to social, cultural, and linguistic diversity guiding childhood behaviors.

HSE.HS.5.4.b Recognize and classify different social, cultural, and linguistic diversity traits of children.

HSE.HS.5.4.c Compare and contrast the impact of the multiple influences that affect the social, cultural, and linguistic diversity traits of young children.

HSE.HS.5.4.d Explain the importance of early childhood education.

HSE.HS.5.5 Describe an understanding of career opportunities and early childhood community resources for supporting families in young children's development.

HSE.HS.5.5.a Describe career opportunities in the field of early childhood.

HSE.HS.5.5.b Identify college certificates and degree options in the field of early childhood.

HSE.HS.5.5.c Identify community resources available for supporting families with young children and their development.

HSE.HS.5.5.d Identify the purpose of the National Association for the Education of Young Children (NAEYC), Nebraska Early Childhood Profession Record System (NECPRS), and other early childhood education resources.

FAMILIES IN CRISIS

COURSE DESCRIPTION

This intermediate course will explore the impact of crisis situations on families building on concepts from the introductory course(s). Topics include stress, changes in the family life cycle, grief and loss, and mental health disorders. An emphasis will be placed on services available to support families while developing foundational knowledge and skills.

STANDARDS AND INDICATORS:

HSE.HS.13.1 Analyze non-therapeutic helper careers which serve individuals, families, and communities.

HSE.HS.13.1.a Outline the six types of helpers (professional helpers, paraprofessional helpers, helping as a part of their work, volunteer helpers, peer helpers, and informal helpers).

HSE.HS.13.1.b Describe the role of each of the six types of helpers in the process of supporting families in crisis situations.

HSE.HS.13.2 Analyze factors that influence crisis in a family.

HSE.HS.13.2.a List characteristics of healthy and unhealthy families and their effect on society.

HSE.HS.13.2.b Compare and contrast a variety of diverse family structures.

HSE.HS.13.2.c Describe how families help meet the needs of individuals using Maslow's Hierarchy of Needs.

HSE.HS.13.2.d Explain the importance of healthy communication and conflict resolution in a family.

HSE.HS.13.2.e Compare and contrast financial, physical, social, emotional, cultural, and spiritual issues and the role of stress in families.

HSE.HS.13.2.f Define crisis and differentiate a crisis situation from a stressful situation.

HSE.HS.13.2.g Identity common crisis situations families face (e.g., mental illness, abuse, addiction, grief, suicide, job loss, homelessness).

FAMILIES IN CRISIS (cont.)

HSE.HS.13.3 Evaluate societal views of mental health and common mental health disorders.

HSE.HS.13.3.a Define stigma and explain its effects on those with mental illness.

HSE.HS.13.3.b Identify ways to minimize stigma surrounding mental illness and seeking help for mental health problems.

HSE.HS.13.3.c Identify and analyze common risk factors for developing mental disorders (genetic, environmental).

HSE.HS.13.3.d Analyze the process of diagnosing mental illness.

HSE.HS.13.3.e Explain the effects mental illness and suicide has on the family.

HSE.HS.13.3.f Assess the signs and symptoms of a potential suicidal individual and steps that should be taken to seek help.

HSE.HS.13.3.g Identify community resources to help families facing mental health crises.

HSE.HS.13.4 Evaluate the effects of abuse on a family.

HSE.HS.13.4.a Identify types of abuse, causes, and common signs and symptoms in each stage of the family life cycle.

HSE.HS.13.4.b Analyze the roles and their characteristics in an abuse situation (bystander, abuser, victim/survivor).

HSE.HS.13.4.c Identify mandatory reporting laws and processes in Nebraska and resources available to help families.

HSE.HS.13.4.d Explain Adverse Childhood Experiences (ACEs) and their potential effects.

HSE.HS.13.4.e Compare and contrast healthy and unhealthy relationships.

HSE.HS.13.4.f Explain the stages of the Cycle of Abuse considering the barriers surrounding generational abuse.

FAMILIES IN CRISIS (cont.)

HSE.HS.13.5 Evaluate the effects of addiction on the family unit.

HSE.HS.13.5.a	Define addiction and explore the risk factors associated with developing an addiction (genetic, environmental).
HSE.HS.13.5.b	Analyze the science of physical and psychological addiction and how they are connected.
HSE.HS.13.5.c	Assess community resources, treatment, and recovery methods of addiction.
HSE.HS.13.5.d	Explain the connection (comorbidity) between mental illness and addiction.
HSE.HS.13.5.e	Analyze the effects of multiple family members living with addiction at the same time.

HSE.HS.13.6 Analyze the process of grieving.

HSE.HS.13.6.a	Define grief and explain that grief can occur with a variety of losses (e.g., loss of a friendship or pet, moving, loss of experience).
HSE.HS.13.6.b	Compare and contrast a variety of theories of grief (Five Stages, Tonkin's Model, Four Tasks of Grieving, Six Rs, Dual Process Model, Reconstruction of Meaning).
HSE.HS.13.6.c	Analyze family relationships in the grieving process.
HSE.HS.13.6.d	Compare and contrast healthy and unhealthy coping mechanisms for dealing with grief.
HSE.HS.13.6.e	Identify community resources to help families facing grief.

HSE.HS.13.7 Analyze methods of overcoming crisis.

HSE.HS.13.7.a	Describe the qualities of a resilient individual.
HSE.HS.13.7.b	Define mindfulness and techniques used to be mindful in everyday life.
HSE.HS.13.7.c	Explain the importance of mindfulness and self-awareness in overcoming crisis.
HSE.HS.13.7.d	Explain the importance of self-care and list strategies for implementing self-care.
HSE.HS.13.7.e	Describe the importance of growth mindset in regards to neuroplasticity.
HSE.HS.13.7.f	Identify common mental distortions (filtering, overgeneralizing, catastrophizing, personalization).

LIFESPAN DEVELOPMENT

COURSE DESCRIPTION

This introductory course explores the physical, intellectual, emotional, and social development of individuals across the lifespan from conception to death. Topics covered are external impacts on development including family structure and practices, theories of development, social and technological forces, and resources available to individuals and their outcomes.

STANDARDS AND INDICATORS:

HSE.HS.30.1 Evaluate principles of growth and development from conception through infancy.

HSE.HS.30.1.a	Describe theories, current issues, and trends.
HSE.HS.30.1.b	Identify physical, intellectual, emotional, and social development milestones.
HSE.HS.30.1.c	Explain conditions influencing development (e.g., abuse, trauma, stress, social and technological forces).
HSE.HS.30.1.d	Explain brain structure and development for this stage of life.
HSE.HS.30.1.e	Describe services and supports needed when developmental milestones are not met.
HSE.HS.30.1.f	Analyze family system roles and dynamics and how they contribute to development.
HSE.HS.30.1.g	Describe skills needed to work and engage with individuals in this stage of development.

HSE.HS.30.2 Evaluate principles of growth and development from infancy through childhood.

HSE.HS.30.2.a	Describe theories, current issues, and trends.
HSE.HS.30.2.b	Identify physical, intellectual, emotional, and social development milestones.
HSE.HS.30.2.c	Explain conditions influencing development (e.g., abuse, trauma, stress, social and technological forces).
HSE.HS.30.2.d	Explain brain structure and development for this stage of life.
HSE.HS.30.2.e	Describe services and supports needed when developmental milestones are not met.
HSE.HS.30.2.f	Analyze family system roles and dynamics and how they contribute to development.
HSE.HS.30.2.g	Demonstrate skills needed to work and engage with individuals in this stage of development.

LIFESPAN DEVELOPMENT (cont.)

HSE.HS.30.3 Evaluate principles of growth and development from childhood through adolescence.

HSE.HS.30.3.a Describe theories, current issues, and trends.

HSE.HS.30.3.b Identify physical, intellectual, emotional, and social development milestones.

HSE.HS.30.3.c Explain conditions influencing development (e.g., abuse, trauma, stress, social and technological forces).

HSE.HS.30.3.d Explain brain structure and development for this stage of life.

HSE.HS.30.3.e Describe services and supports needed when developmental milestones are not met.

HSE.HS.30.3.f Analyze family system roles and dynamics and how they contribute to development.

HSE.HS.30.3.g Demonstrate skills needed to work and engage with individuals in this stage of development.

HSE.HS.30.4 Evaluate principles of growth and development from adolescence through early adulthood.

HSE.HS.30.4.a Describe theories, current issues, and trends.

HSE.HS.30.4.b Identify physical, intellectual, emotional, and social development milestones.

HSE.HS.30.4.c Explain conditions influencing development (e.g., abuse, trauma, stress, social and technological forces).

HSE.HS.30.4.d Explain brain structure and development for this stage of life.

HSE.HS.30.4.e Describe services and supports needed when developmental milestones are not met.

HSE.HS.30.4.f Analyze family system roles and dynamics and how they contribute to development.

HSE.HS.30.4.g Demonstrate skills needed to work and engage with individuals in this stage of development.

LIFESPAN DEVELOPMENT (cont.)

HSE.HS.30.5 Evaluate principles of growth and development from middle to late adulthood through the end of life.

HSE.HS.30.5a	Describe theories, current issues, and trends.
HSE.HS.30.5.b	Identify physical, intellectual, emotional, and social milestones.
HSE.HS.30.5.c	Explain conditions influencing well-being (e.g., abuse, trauma, stress, social and technological forces).
HSE.HS.30.5.d	Explain brain structure and development for this stage of life.
HSE.HS.30.5.e	Describe services and supports needed for well-being.
HSE.HS.30.5.f	Analyze family system roles and dynamics and how they contribute to the well-being of individuals.
HSE.HS.30.5.g	Describe skills needed to work and engage with individuals in this stage of development.

INTRODUCTION TO FAMILY AND CONSUMER SCIENCES

COURSE DESCRIPTION

This introductory course is intended to provide a basic overview of all areas within Family and Consumer Sciences. Basic knowledge and career skills that are applicable to personal growth and career development will be covered. Additional course topics include: leadership, communication, child development, mental health, nutrition and food preparation, clothing and interior design, and personal finance.

STANDARDS AND INDICATORS:

HSE.HS.27.1 Apply career-readiness skills and identify potential career opportunities.

HSE.HS.27.1.a	Summarize the history of Family and Consumer Sciences and the impact of the field on individuals, families, and communities to make connections to current career-ready skills.
HSE.HS.27.1.b	Identify personal traits and compare them with potential career opportunities.
HSE.HS.27.1.c	Investigate career opportunities, including but not limited to careers within Family and Consumer Sciences.

HSE.HS.27.2 Apply leadership in family, workplace, and community.

HSE.HS.27.2.a	Investigate goal setting and resource management.
HSE.HS.27.2.b	Explain leadership styles and the impact of each style on others.
HSE.HS.27.2.c	Demonstrate strategies that utilize the strengths and minimize the limitations of team members.
HSE.HS.27.2.d	Describe the decision-making process.
HSE.HS.27.2.e	Demonstrate leadership skills within the family, workplace, or community.
HSE.HS.27.2.f	Investigate opportunities available for a member of FCCLA and/or Educators Rising.

INTRODUCTION TO FAMILY AND CONSUMER SCIENCES (cont.)

HSE.HE.27.3 Evaluate personal and work relationships.

HSE.HS.27.3.a Compare and contrast healthy and unhealthy personal and work relationships.

HSE.HS.27.3.b Evaluate personal traits and how they can be used to improve relationships.

HSE.HS.27.3.c Demonstrate effective communication using a variety of delivery methods that can improve personal and work relationships.

HSE.HS.27.3.d Demonstrate critical thinking and conflict resolution in personal and career settings.

HSE.HS.27.3.e Demonstrate inclusive teamwork in the family, workplace, or community.

HSE.HS.27.4 Assess the family unit during each stage of the lifespan.

HSE.HS.27.4.a Identify the stages of development across the lifespan.

HSE.HS.27.4.b Categorize milestones of development in the areas of physical, intellectual, emotional, and social across the lifespan.

HSE.HS.27.4.c Analyze family as the basic unit of society.

HSE.HS.27.4.d Describe the impact of conditions that could influence the well-being of individuals and families.

HSE.HS.27.5 Identify careers in counseling, mental health, and human behavior.

HSE.HS.27.5.a Identify the importance of self-care and self-awareness.

HSE.HS.27.5.b Summarize empathy.

HSE.HS.27.5.c Examine the influence of cultural and societal issues on mental and emotional health.

HSE.HS.27.5.d Connect the role of mental health and counseling to today's society

INTRODUCTION TO FAMILY AND CONSUMER SCIENCES (cont.)

HSE.HS.27.6 Differentiate skills for food preparation and maintaining nutrition and wellness.

HSE.HS.27.6.a Identify basic food safety and sanitation practices.

HSE.HS.27.6.b Demonstrate basic food preparation practices.

HSE.HS.27.6.c Create meal plans that utilize food availability and cost effectiveness.

HSE.HS.27.6.d Identify basic kitchen equipment and terminology.

HSE.HS.27.6.e Analyze effects of personal choices on nutrition and wellness.

HSE.HS.27.6.f Identify basic nutrients required for healthy living.

HSE.HS.27.7 Apply skills required for fashion construction, housing, and interior design.

HSE.HS.27.7.a Classify the elements and principles of design.

HSE.HS.27.7.b Describe the basic care of different textiles.

HSE.HS.27.7.c Compare and contrast design features in fashion and/or interior design.

HSE.HS.27.7.d Produce, alter, or repair fashion and apparel items.

HSE.HS.27.7.e Apply the principles and elements of design to design a room reflecting personal, family, or community style and needs.

HSE.HS.27.8 Explain consumerism and personal finance.

HSE.HS.27.8.a Identify factors that influence consumer choices.

HSE.HS.27.8.b Summarize the rights and responsibilities of consumers.

HSE.HS.27.8.c Outline the steps for creating a budget.

HSE.HS.27.8.d Describe procedures for using savings and checking accounts.

HSE.HS.27.8.e Compare the benefits and costs of credit.

CHILD DEVELOPMENT

COURSE DESCRIPTION

This intermediate course provides an overview of developmental stages in the prenatal period through 12 years of age building on concepts from the introductory course(s). Topics covered include how young children attain knowledge, behaviors, and skill and theories of child development to identify the effects of parenting practices, social, cultural, and linguistic diversity. The impact of quality child care and early childhood education on child growth and development will also be explored.

STANDARDS AND INDICATORS:

HSE.HS.5.1 Explain the basic principles of child development from conception to age 12.

HSE.HS.5.1.a Explain physical development milestones from conception to age 12.

HSE.HS.5.1.b Explain intellectual development milestones from conception to age 12.

HSE.HS.5.1.c Explain emotional development milestones from conception to age 12.

HSE.HS.5.1.d Explain social development milestones from conception to age 12.

HSE.HS.5.2 Evaluate child development theoretical perspectives and their applications.

HSE.HS.5.2.a Identify the various child development theorists and theories.

HSE.HS.5.2.b Evaluate developmentally appropriate child care skills from conception to age 12.

HSE.HS.5.2.c Identify parenting decisions and practices that impact healthy development from conception to age 12.

HSE.HS.5.3 Analyze family theoretical perspectives and their impact on child growth and development.

HSE.HS.5.3.a Compare and contrast theorists and theories related to family traits and child growth and development.

HSE.HS.5.3.b Classify different parenting types and styles.

HSE.HS.5.3.c Compare and contrast the different parenting styles.

HSE.HS.5.3.d Explain the impact parenting styles have on the development of young children.

CHILD DEVELOPMENT (cont.)

HSE.HS.5.4 Analyze the theoretical perspectives of social, cultural, and linguistic diversity traits and their impact on child growth and development.

HSE.HS.5.4.a Compare and contrast theorists and theories related to social, cultural, and linguistic diversity guiding childhood behaviors.

HSE.HS.5.4.b Recognize and classify different social, cultural, and linguistic diversity traits of children.

HSE.HS.5.4.c Compare and contrast the impact of the multiple influences that affect the social, cultural, and linguistic diversity traits of young children.

HSE.HS.5.4.d Explain the importance of early childhood education.

HSE.HS.5.5 Describe an understanding of career opportunities and early childhood community resources for supporting families in young children's development.

HSE.HS.5.5.a Describe career opportunities in the field of early childhood.

HSE.HS.5.5.b Identify college certificates and degree options in the field of early childhood.

HSE.HS.5.5.c Identify community resources available for supporting families with young children and their development.

HSE.HS.5.5.d Identify the purpose of the National Association for the Education of Young Children (NAEYC), Nebraska Early Childhood Profession Record System (NECPRS), and other early childhood education resources.

PARENTS AND FAMILIES

COURSE DESCRIPTION

This intermediate course will evaluate the effects of parenting roles and responsibilities building on concepts from the introductory course. Topics covered will include influences on parenting, decisions to parent, support services for parents, parenting theories, and family adjustment to parenthood. Emphasis will be placed on positive actions to support the physical, emotional, intellectual, and social development of family members.

STANDARDS AND INDICATORS:

HSE.HS.33.1 Analyze roles and responsibilities of parenting.

- HSE.HS.33.1.a Identify parenting roles across the lifespan.
- HSE.HS.33.1.b Differentiate the expectations and responsibilities of parenting.
- HSE.HS.33.1.c Explain the decision to parent, including family planning, infertility and unplanned parenthood.
- HSE.HS.33.1.d Summarize the impact of the decision to parent on the roles and responsibilities of parenting.
- HSE.HS.33.1.e Summarize current laws and policies related to parenting.
- HSE.HS.33.1.f Analyze consequences of parenting practices to the individual, family, and society.
- HSE.HS.33.1.g Differentiate societal and cultural influences on parenting roles and responsibilities across the lifespan.

HSE.HS.33.2 Assess the family unit and each individual's ability to manage work, family, and community commitments.

- HSE.HS.33.2.a Compare and contrast different types of families.
- HSE.HS.33.2.b Analyze alternatives to biological parenthood and the impacts on the family unit.
- HSE.HS.33.2.c Evaluate and prioritize family, work, and community obligations.
- HSE.HS.33.2.d Assess the importance of teamwork and leadership skills in the family, workplace and community.
- HSE.HS.33.2.e Identify resources available to families that increase positive outcomes for children.

PARENTS AND FAMILIES (cont.)

HSE.HS.33.3 Evaluate parenting factors and conditions that impact normal growth and development.

HSE.HS.33.3.a	Describe the effect of heredity and environment on child growth and development (e.g., nature, nurture).
HSE.HS.33.3.b	Analyze the effects of gender, ethnicity, and culture on a child's development.
HSE.HS.33.3.c	Compare and contrast parenting styles to examine the impact on development.
HSE.HS.33.3.d	Identify educational, community, and governmental resources available to prevent, address and improve developmental delays.

HSE.HS.33.4 Differentiate between effective and ineffective parenting and caregiver practices.

HSE.HS.33.4.a	Identify techniques for positive collaborative relationships with children.
HSE.HS.33.4.b	Summarize how nurturing and attachment create optimal parenting practices.
HSE.HS.33.4.c	Analyze discipline practices that follow emerging research on human growth and development.
HSE.HS.33.4.d	Identify forms of child abuse and neglect.
HSE.HS.33.4.e	Analyze the effects of abuse and neglect on children and families and determine methods for prevention.
HSE.HS.33.4.f	Describe strategies for overcoming negative and harmful parenting practices.

PARENTS AND FAMILIES (cont.)

HSE.HS.33.5 Evaluate services for individuals and families in a variety of circumstances.

HSE.HS.33.5.a	Identify resources available to individuals and families with specific needs.
HSE.HS.33.5.b	Describe strategies that help parents make informed choices, access resources, follow through on responsibilities, and take appropriate risks.
HSE.HS.33.5.c	Summarize the importance of friends, family, and community relationships for an individual.
HSE.HS.33.5.d	Identify policies and programs that influence health care, nutrition, education, child protection, and poverty.
HSE.HS.33.5.e	Analyze criteria for selecting care and services for children.
HSE.HS.33.5.f	Describe how a family's cultural identity, values, beliefs, and other factors may impact their decisions about accessing support services.

HSE.HS.33.6 Outline children's self-regulation of health and wellness choices.

HSE.HS.33.6.a	Plan healthy meals and snacks.
HSE.HS.33.6.b	Apply strategies to teach children health, safety, and hygiene habits.
HSE.HS.33.6.c	Critique behaviors (e.g., physical activity, nutrition choices) that develop positive lifelong wellness for children.

FAMILIES IN CRISIS

COURSE DESCRIPTION

This intermediate course will explore the impact of crisis situations on families building on concepts from the introductory course(s). Topics include stress, changes in the family life cycle, grief and loss, and mental health disorders. An emphasis will be placed on services available to support families while developing foundational knowledge and skills.

STANDARDS AND INDICATORS:

HSE.HS.13.1 Analyze non-therapeutic helper careers which serve individuals, families, and communities.

HSE.HS.13.1.a Outline the six types of helpers (professional helpers, paraprofessional helpers, helping as a part of their work, volunteer helpers, peer helpers, and informal helpers).

HSE.HS.13.1.b Describe the role of each of the six types of helpers in the process of supporting families in crisis situations.

HSE.HS.13.2 Analyze factors that influence crisis in a family.

HSE.HS.13.2.a List characteristics of healthy and unhealthy families and their effect on society.

HSE.HS.13.2.b Compare and contrast a variety of diverse family structures.

HSE.HS.13.2.c Describe how families help meet the needs of individuals using Maslow's Hierarchy of Needs.

HSE.HS.13.2.d Explain the importance of healthy communication and conflict resolution in a family.

HSE.HS.13.2.e Compare and contrast financial, physical, social, emotional, cultural, and spiritual issues and the role of stress in families.

HSE.HS.13.2.f Define crisis and differentiate a crisis situation from a stressful situation.

HSE.HS.13.2.g Identity common crisis situations families face (e.g., mental illness, abuse, addiction, grief, suicide, job loss, homelessness).

FAMILIES IN CRISIS (cont.)

HSE.HS.13.3 Evaluate societal views of mental health and common mental health disorders.

HSE.HS.13.3.a Define stigma and explain its effects on those with mental illness.

HSE.HS.13.3.b Identify ways to minimize stigma surrounding mental illness and seeking help for mental health problems.

HSE.HS.13.3.c Identify and analyze common risk factors for developing mental disorders (genetic, environmental).

HSE.HS.13.3.d Analyze the process of diagnosing mental illness.

HSE.HS.13.3.e Explain the effects mental illness and suicide has on the family.

HSE.HS.13.3.f Assess the signs and symptoms of a potential suicidal individual and steps that should be taken to seek help.

HSE.HS.13.3.g Identify community resources to help families facing mental health crises.

HSE.HS.13.4 Evaluate the effects of abuse on a family.

HSE.HS.13.4.a Identify types of abuse, causes, and common signs and symptoms in each stage of the family life cycle.

HSE.HS.13.4.b Analyze the roles and their characteristics in an abuse situation (bystander, abuser, victim/survivor).

HSE.HS.13.4.c Identify mandatory reporting laws and processes in Nebraska and resources available to help families.

HSE.HS.13.4.d Explain Adverse Childhood Experiences (ACEs) and their potential effects.

HSE.HS.13.4.e Compare and contrast healthy and unhealthy relationships.

HSE.HS.13.4.f Explain the stages of the Cycle of Abuse considering the barriers surrounding generational abuse.

FAMILIES IN CRISIS (cont.)

HSE.HS.13.5 Evaluate the effects of addiction on the family unit.

HSE.HS.13.5.a Define addiction and explore the risk factors associated with developing an addiction (genetic, environmental).

HSE.HS.13.5.b Analyze the science of physical and psychological addiction and how they are connected.

HSE.HS.13.5.c Assess community resources, treatment, and recovery methods of addiction.

HSE.HS.13.5.d Explain the connection (comorbidity) between mental illness and addiction.

HSE.HS.13.5.e Analyze the effects of multiple family members living with addiction at the same time.

HSE.HS.13.6 Analyze the process of grieving.

HSE.HS.13.6.a Define grief and explain that grief can occur with a variety of losses (e.g., loss of a friendship or pet, moving, loss of experience).

HSE.HS.13.6.b Compare and contrast a variety of theories of grief (Five Stages, Tonkin's Model, Four Tasks of Grieving, Six Rs, Dual Process Model, Reconstruction of Meaning).

HSE.HS.13.6.c Analyze family relationships in the grieving process.

HSE.HS.13.6.d Compare and contrast healthy and unhealthy coping mechanisms for dealing with grief.

HSE.HS.13.6.e Identify community resources to help families facing grief.

HSE.HS.13.7 Analyze methods of overcoming crisis.

HSE.HS.13.7.a Describe the qualities of a resilient individual.

HSE.HS.13.7.b Define mindfulness and techniques used to be mindful in everyday life.

HSE.HS.13.7.c Explain the importance of mindfulness and self-awareness in overcoming crisis.

HSE.HS.13.7.d Explain the importance of self-care and list strategies for implementing self-care.

HSE.HS.13.7.e Describe the importance of growth mindset in regards to neuroplasticity.

HSE.HS.13.7.f Identify common mental distortions (filtering, overgeneralizing, catastrophizing, personalization).

INTERPERSONAL RELATIONSHIPS

COURSE DESCRIPTION

This capstone course focuses on the effect of interpersonal relationships building on concepts from the introductory and intermediate courses. The course includes concepts such as effective communication, establishing and maintaining relationships, diverse family systems, characteristics of personal development, and the impact of relationships on personal and career success. The impact of relationships on the well-being of individuals, families, work, and society will also be explored.

STANDARDS AND INDICATORS:

HSE.HS.24.1 Analyze personal needs and characteristics and their effects on interpersonal relationships.

HSE.HS.24.1.a Examine the effects of personal characteristics and life events on relationships.

HSE.HS.24.1.b Describe the effects of self-esteem and self-image on relationships.

HSE.HS.24.1.c Describe the effects of lifespan events and conditions on relationships.

HSE.HS.24.1.d Explain the effects of personal values and behaviors on interpersonal relationships.

HSE.HS.24.2 Analyze the effects of family as a system on individuals and society.

HSE.HS.24.2.a Describe the function of the family as the basic unit of society.

HSE.HS.24.2.b Examine the role of family in teaching culture and traditions across the lifespan.

HSE.HS.24.2.c Summarize the family's role in developing independence, interdependence, and commitment of family members.

HSE.HS.24.2.d Describe the effects of various stages of the family life cycle on interpersonal relationships.

INTERPERSONAL RELATIONSHIPS (cont.)

HSE.HE.24.3 Evaluate the functions and expectations of various types of interpersonal relationships.

HSE.HS.24.3.a	Categorize the various types of interpersonal relationships.
HSE.HS.24.3.b	Identify the characteristics of healthy and unhealthy relationships.
HSE.HS.24.3.c	Describe processes for building, maintaining, and ending interpersonal relationships.
HSE.HS.24.3.d	Identify physical, intellectual, emotional, and social characteristics of healthy and unhealthy relationships and behaviors including limits, boundaries, and refusal skills.
HSE.HS.24.3.e	Analyze processes for handling unhealthy relationships.
HSE.HS.24.3.f	Relate personal values, rights, and responsibilities in relationships to overall health and decision making.

HSE.HS.24.4 Evaluate communication skills that contribute to healthy relationships.

HSE.HS.24.4.a	Compare communication styles and their effects on relationships.
HSE.HS.24.4.b	Analyze verbal and nonverbal behaviors and attitudes that contribute to effective communication.
HSE.HS.24.4.c	Demonstrate effective listening and feedback techniques.
HSE.HS.24.4.d	Analyze strategies to overcome communication barriers in family, community, and work settings.
HSE.HS.24.4.e	Apply ethical principles of communication in family, community, and work settings.
HSE.HS.24.4.f	Assess the effects of communication via technology in family, work, and community settings.

INTERPERSONAL RELATIONSHIPS (cont.)

HSE.HS.24.5 Outline principles that guide behavior in interpersonal relationships.

HSE.HS.24.5.a	Explain the principles of decision making and problem solving in reducing and managing conflict in interpersonal relationships.
HSE.HS.24.5.b	Identify nonviolent strategies that address conflict and model positive leadership. (e.g., self awareness, self-regulation, motivation, empathy and social skills).
HSE.HS.24.5.c	Identify stress management strategies for family, work, and community settings.

FAMILY AND COMMUNITY ADVOCACY

COURSE DESCRIPTION

This capstone course explores advocacy as it relates to individuals, families, and communities building on concepts from the introductory and intermediate courses. Topics covered include leadership within advocacy, careers related to advocacy, the role of community support in advocacy, importance of resiliency, and civic responsibilities. The importance of service-learning will also be addressed.

STANDARDS AND INDICATORS:

HSE.HS.14.1 Analyze the various dimensions of being an advocate for individuals, families, and communities.

HSE.HS.14.1.a Define what it means to be an advocate.

HSE.HS.14.1.b Explain the importance of advocating for others.

HSE.HS.14.1.c Identify situations where advocates would be involved.

HSE.HS.14.1.d Discuss the connection between crisis and advocacy.

HSE.HS.14.1.e Explain the history of advocacy and events or periods in time that required advocacy for individuals, families, and communities.

HSE.HS.14.1.f Explain the impact of advocacy on individuals, families, communities, and society.

HSE.HS.14.2 Assess the leadership role of the advocate.

HSE.HS.14.2.a Explain how an advocate is a leader.

HSE.HS.14.2.b Identify strong intrapersonal and interpersonal relationship skills (conflict resolution, teamwork, attentive listening skills).

HSE.HS.14.2.c Analyze how an individual's view of the world is impacted by their level of self-awareness as it relates to individual beliefs and values.

HSE.HS.14.2.d Analyze the importance of ethical behavior as a leader and advocate.

FAMILY AND COMMUNITY ADVOCACY(cont.)

HSE.HS.14.3 Identify careers related to serving families and communities.

HSE.HS.14.3.a Describe specific roles or careers that have a direct connection to advocating for families (e.g., child-life advocate, family advocate).

HSE.HS.14.3.b Assess the relationship between community demographics and advocacy needs.

HSE.HS.14.3.c Explain the role of each of the six types of helpers (professional helpers, paraprofessional helpers, helping as a part of their work, peer helpers, volunteer helpers, and informal helpers) in advocacy.

HSE.HS.14.4 Outline specific community outreach programs, resources, and connections as they relate to families.

HSE.HS.14.4.a Explain the role school organizations can play in advocating for schools and communities.

HSE.HS.14.4.b Describe local family and community services (e.g., organizations, government resources).

HSE.HS.14.4.c Locate local support resources for specific populations.

HSE.HS.14.5 Analyze the importance of individuals, families, and communities participating in their civic duties as local advocates.

HSE.HS.14.5.a Define civic duty.

HSE.HS.14.5.b Explain the role of individuals, families, and communities in advocacy as it relates to living in a democratic society.

HSE.HS.14.5.c Identify how individuals, families, and communities can work towards fulfilling their civic responsibilities.

HSE.HS.14.5.d Describe the process of advocating for an issue.

HSE.HS.14.5.e Explain the role elected officials could play in advocacy.

HSE.HS.14.5.f Describe what advocacy looks like at the local, state, and national levels.

FAMILY AND COMMUNITY ADVOCACY(cont.)

HSE.HS.14.6 Analyze the importance of resilience in families and communities.

HSE.HS.14.6.a Define resilience.

HSE.HS.14.6.b Describe what a resilient individual, family, and community look like and the correlation between them.

HSE.HS.14.6.c Analyze the importance of individuals and families being advocates for themselves and its effects on a community.

HSE.HS.14.7 Analyze service-learning and its connection to civic responsibility.

HSE.HS.14.7.a Identify ways to serve individuals, families, and communities.

HSE.HS.14.7.b Apply knowledge of advocacy and leadership to benefit individuals, families, and communities.

HSE.HS.14.7.c Identify opportunities for personal growth through serving individuals, families, and communities.

HSE.HS.14.7.d Explain how service-learning is a key to fulfilling civic responsibilities.

LIFE AND CAREER READINESS

COURSE DESCRIPTION

This course is designed to prepare students for responsibilities in a home, family, and work environment. Personal and career development will be expanded. Topics covered include adult roles and responsibilities, goal setting, decision making, communication, leadership, personal finance, consumer skills, and personal wellness.

STANDARDS AND INDICATORS:

HSE.HS.29.1 Integrate the characteristics of personal development.

HSE.HS.29.1.a	Identify adult roles and responsibilities of each.
HSE.HS.29.1.b	Describe theories of development related to the adolescent and adult life stages (e.g., Havighurst, Bronfenbrenner, Erikson).
HSE.HS.29.1.c	Summarize research on values, beliefs, character and personality traits, and behavior change models.
HSE.HS.29.1.d	Demonstrate goal setting skills to enhance lifestyle choices and behaviors.
HSE.HS.29.1.e	Analyze decision-making models.

HSE.HS.29.2 Apply career readiness skills to develop a personal career plan.

HSE.HS.29.2.a	Demonstrate effective and appropriate communication.
HSE.HS.29.2.b	Implement creative problem solving and critical thinking strategies.
HSE.HS.29.2.c	Model teamwork and leadership skills.
HSE.HS.29.2.d	Demonstrate effective use of technology as a responsible digital citizen.
HSE.HS.29.2.e	Identify personal qualities and qualifications needed for employment.
HSE.HS.29.2.f	Identify potential careers, including but not limited to Family and Consumer Sciences careers.
HSE.HS.29.2.g	Demonstrate the ability to effectively seek employment (e.g., completing applications, creating a resume, interviewing).

LIFE AND CAREER READINESS (cont.)

HSE.HS.29.3 Explain the process of calculating income and taxes.

HSE.HS.29.3.a Interpret a pay stub to calculate gross and net pay and identify benefits.

HSE.HS.29.3.b Define payroll withholdings and identify why deductions are made.

HSE.HS.29.3.c Describe information needed and required forms relevant to the completion of state and federal income tax forms (e.g., W-4, W-2, 1040)

HSE.HS.29.3.d Identify the purpose of taxes and differentiate between the different types of taxes (e.g., sales tax, property tax, income tax).

HSE.HS.29.4 Apply money management skills and strategies.

HSE.HS.29.4.a Compare and contrast the various types of financial institutions and the services they provide.

HSE.HS.29.4.b Compare and contrast a statement of financial position, income and expense statement, and spending plan.

HSE.HS.29.4.c Develop a personal spending plan/budget.

HSE.HS.29.4.d Compare and contrast different forms of financial exchange (e.g., cash, credit, debit, electronic funds transfer, emerging payment forms)

HSE.HS.29.5 Evaluate savings and investment strategies based on individual preferences and circumstances to achieve financial goals.

HSE.HS.29.5.a Identify the value of saving money and strategies to save money.

HSE.HS.29.5.b Compare the characteristics of savings tools (e.g., savings account, certificates of deposit, savings bonds) and how they relate to financial goals.

HSE.HS.29.5.c Distinguish between common types of investments.

HSE.HS.29.5.d Compare and contrast saving and investing strategies that consider risk, return, and building wealth.

LIFE AND CAREER READINESS (cont.)

HSE.HS.29.6 Evaluate factors that affect the choice of credit, the cost of credit, maintaining credit, and the legal aspects of using credit.

HSE.HS.29.6.a Evaluate the opportunity cost for each financial decision involving credit (e.g., credit cards, auto loans, student loans).

HSE.HS.29.6.b Describe the process to obtain various forms of credit.

HSE.HS.29.6.c Explain the importance of credit ratings and credit scores and the effect on an individual's credit report, cost of credit, and future use of credit.

HSE.HS.29.6.d Summarize the rights and responsibilities of consumers according to credit legislation (e.g., truth-in-lending, fair credit reporting, equal credit opportunity, fair debt collection).

HSE.HS.29.6.e Explain the risks associated with fraud and fraud protection guidelines.

HSE.HS.29.6.f Apply the planned buying process to housing and transportation decisions (buying, renting, leasing).

HSE.HS.29.7 Analyze appropriate and cost-effective risk management strategies.

HSE.HS.29.7.a Identify the terms, concepts, and practices instrumental to varied forms of insurance (e.g., deductible, premium, peril, risk).

HSE.HS.29.7.b Identify the type of insurance associated with different types of risk (e.g., automobile, personal and professional liability, property, health, life, long-term care, disability).

HSE.HS.29.7.c Compare and contrast insurance policies based on individual preferences and circumstances.

HSE.HS.29.7.d Compare sources of insurance coverage, including employee benefit plans.

LIFE AND CAREER READINESS (cont.)

HSE.HS.29.8 Apply various life ready skills that are needed for adulthood.

HSE.HS.29.8.a Identify consumer skills for providing and maintaining clothing, transportation, housing, and recreation needs of individuals and their families.

HSE.HS.29.8.b Demonstrate personal and family resource decision making to meet personal and family goals across the lifespan.

HSE.HS.29.8.c Compare and contrast potential impact of career path decisions on balancing work and family responsibilities.

HSE.HS.29.8.d Identify solutions to real-world problems related to career/life goal setting and balance (e.g., meal planning, family budgeting, time management).

HSE.HS.29.8.e Summarize the aspects of wellness (physical, intellectual, emotional, social, spiritual, financial, environmental) and the impact on personal development.

INTRODUCTION TO FAMILY AND CONSUMER SCIENCES

COURSE DESCRIPTION

This introductory course is intended to provide a basic overview of all areas within Family and Consumer Sciences. Basic knowledge and career skills that are applicable to personal growth and career development will be covered. Additional course topics include: leadership, communication, child development, mental health, nutrition and food preparation, clothing and interior design, and personal finance.

STANDARDS AND INDICATORS:

HSE.HS.27.1 Apply career-readiness skills and identify potential career opportunities.

HSE.HS.27.1.a	Summarize the history of Family and Consumer Sciences and the impact of the field on individuals, families, and communities to make connections to current career-ready skills.
HSE.HS.27.1.b	Identify personal traits and compare them with potential career opportunities.
HSE.HS.27.1.c	Investigate career opportunities, including but not limited to careers within Family and Consumer Sciences.

HSE.HS.27.2 Apply leadership in family, workplace, and community.

HSE.HS.27.2.a	Investigate goal setting and resource management.
HSE.HS.27.2.b	Explain leadership styles and the impact of each style on others.
HSE.HS.27.2.c	Demonstrate strategies that utilize the strengths and minimize the limitations of team members.
HSE.HS.27.2.d	Describe the decision-making process.
HSE.HS.27.2.e	Demonstrate leadership skills within the family, workplace, or community.
HSE.HS.27.2.f	Investigate opportunities available for a member of FCCLA and/or Educators Rising.

INTRODUCTION TO FAMILY AND CONSUMER SCIENCES (cont.)

HSE.HE.27.3 Evaluate personal and work relationships.

HSE.HS.27.3.a Compare and contrast healthy and unhealthy personal and work relationships.

HSE.HS.27.3.b Evaluate personal traits and how they can be used to improve relationships.

HSE.HS.27.3.c Demonstrate effective communication using a variety of delivery methods that can improve personal and work relationships.

HSE.HS.27.3.d Demonstrate critical thinking and conflict resolution in personal and career settings.

HSE.HS.27.3.e Demonstrate inclusive teamwork in the family, workplace, or community.

HSE.HS.27.4 Assess the family unit during each stage of the lifespan.

HSE.HS.27.4.a Identify the stages of development across the lifespan.

HSE.HS.27.4.b Categorize milestones of development in the areas of physical, intellectual, emotional, and social across the lifespan.

HSE.HS.27.4.c Analyze family as the basic unit of society.

HSE.HS.27.4.d Describe the impact of conditions that could influence the well-being of individuals and families.

HSE.HS.27.5 Identify careers in counseling, mental health, and human behavior.

HSE.HS.27.5.a Identify the importance of self-care and self-awareness.

HSE.HS.27.5.b Summarize empathy.

HSE.HS.27.5.c Examine the influence of cultural and societal issues on mental and emotional health.

HSE.HS.27.5.d Connect the role of mental health and counseling to today's society

INTRODUCTION TO FAMILY AND CONSUMER SCIENCES (cont.)

HSE.HS.27.6 Differentiate skills for food preparation and maintaining nutrition and wellness.

HSE.HS.27.6.a Identify basic food safety and sanitation practices.

HSE.HS.27.6.b Demonstrate basic food preparation practices.

HSE.HS.27.6.c Create meal plans that utilize food availability and cost effectiveness.

HSE.HS.27.6.d Identify basic kitchen equipment and terminology.

HSE.HS.27.6.e Analyze effects of personal choices on nutrition and wellness.

HSE.HS.27.6.f Identify basic nutrients required for healthy living.

HSE.HS.27.7 Apply skills required for fashion construction, housing, and interior design.

HSE.HS.27.7.a Classify the elements and principles of design.

HSE.HS.27.7.b Describe the basic care of different textiles.

HSE.HS.27.7.c Compare and contrast design features in fashion and/or interior design.

HSE.HS.27.7.d Produce, alter, or repair fashion and apparel items.

HSE.HS.27.7.e Apply the principles and elements of design to design a room reflecting personal, family, or community style and needs.

HSE.HS.27.8 Explain consumerism and personal finance.

HSE.HS.27.8.a Identify factors that influence consumer choices.

HSE.HS.27.8.b Summarize the rights and responsibilities of consumers.

HSE.HS.27.8.c Outline the steps for creating a budget.

HSE.HS.27.8.d Describe procedures for using savings and checking accounts.

HSE.HS.27.8.e Compare the benefits and costs of credit.

CAREERS IN MENTAL HEALTH

COURSE DESCRIPTION

This introductory course explores a variety of careers in the counseling and mental health field building on concepts from Introduction to Family & Consumer Sciences. Topics covered include personal qualities, skills, and educational requirements needed to enter this career field. The importance of ethical behavior required by mental health professionals will also be addressed.

STANDARDS AND INDICATORS:

HSE.HS.4.1 Analyze non-therapeutic helper careers where counseling practices are applied.

HS.HS.4.1.a	Describe the role and importance of helpers in society.
HS.HS.4.1.b	Identify the six types of helpers (professional helpers, paraprofessional helpers, helping as a part of their work, volunteer helpers, peer helpers, and informal helpers).
HS.HS.4.1.c	Explain how helping requires balancing both intellectual and emotional competence.

HSE.HS.4.2 Summarize professional character qualities required of a mental health professional.

HSE.HS.4.2.a	Explain the importance of being a lifelong learner within the mental health career field.
HSE.HS.4.2.b	Identify the importance of cultural literacy and equity as it applies to mental health services.
HSE.HS.4.2.c	Explain personal characteristics necessary to excel at providing mental health services.

CAREERS IN MENTAL HEALTH (cont.)

HSE.HS.4.3 Analyze American views of mental health throughout history up until present times, and the impact these views have had on individual or family health and wellness.

HSE.HS.4.3.a Describe the historical development of the mental health field.

HSE.HS.4.3.b Explain the role of mental health in society (e.g., school, local, state, national).

HSE.HS.4.3.c Compare and contrast mental health and behavioral health.

HSE.HS.4.3.d Explain how the discovery of Adverse Childhood Experiences (ACEs) has impacted views regarding the importance of mental health topics.

HSE.HS.4.3.e Compare and contrast mental health and mental illness.

HSE.HS.4.3.f Analyze current mental health issues and trends and how they impact society.

HSE.HS.4.4 Distinguish between careers in the mental health field.

HSE.HS.4.4.a Identify employment trends within the mental health career field.

HSE.HS.4.4.b Describe the role mental health professionals have in society.

HSE.HS.4.4.c Compare and contrast the roles of a variety of mental health professionals (e.g., LMHPs, non-clinical social workers, educational counselors, school psychologists, research psychologists, clinical psychologists, psychiatrists).

HSE.HS.4.4.d Compare and contrast training and education requirements for various careers in the mental health field.

HSE.HS.4.5 Identify the process for becoming a certified mental health professional.

HSE.HS.4.5.a Explain the process and requirements for education and licensure of mental health professionals in Nebraska.

HSE.HS.4.5.b Identify procedures and fees associated with professional licensing of mental health professionals in the State of Nebraska.

HSE.HS.4.5.c Identify colleges and other post-secondary options for students interested in pursuing a career in the mental health field.

CAREERS IN MENTAL HEALTH (cont.)

HSE.HS.4.6 Appraise the importance of ethical behavior within the mental health professions.

HSE.HS.4.6.a Identify the ethical obligations of those working in the mental health career field.

HSE.HS.4.6.b Outline client rights and responsibilities in the therapeutic process.

HSE.HS.4.6.c Describe the consequences of violating codes of ethics for mental health professionals.

HSE.HS.4.6.d Analyze the penalties for violations by mental health professionals as it pertains to confidentiality and HIPAA.

HSE.HS.4.6.e Examine the importance of ethical behavior when conducting psychological research on human subjects, including the Belmont Report and the role of Institutional Review Boards.

HSE.HS.4.6.f Analyze the basic principles of ethical behavior (e.g., beneficence, nonmaleficence, justice, autonomy, and fidelity).

HSE.HS.4.7 Analyze the importance of mental health professionals taking care of their own mental health.

HSE.HS.4.7.a Explain the essential need for mental health professionals to prioritize their own mental health.

HSE.HS.4.7.b Describe optimal mental health and well-being.

HSE.HS.4.7.c Implement strategies to practice self-care and develop personal mindfulness awareness plans.

HSE.HS.4.7.d Summarize how personal values and experiences influence one's usage of mental and behavioral health services.

HSE.HS.4.7.e Identify basic intervention techniques to improve one's mental health.

FAMILIES IN CRISIS

COURSE DESCRIPTION

This intermediate course will explore the impact of crisis situations on families building on concepts from the introductory course(s). Topics include stress, changes in the family life cycle, grief and loss, and mental health disorders. An emphasis will be placed on services available to support families while developing foundational knowledge and skills.

STANDARDS AND INDICATORS:

HSE.HS.13.1 Analyze non-therapeutic helper careers which serve individuals, families, and communities.

HSE.HS.13.1.a Outline the six types of helpers (professional helpers, paraprofessional helpers, helping as a part of their work, volunteer helpers, peer helpers, and informal helpers).

HSE.HS.13.1.b Describe the role of each of the six types of helpers in the process of supporting families in crisis situations.

HSE.HS.13.2 Analyze factors that influence crisis in a family.

HSE.HS.13.2.a List characteristics of healthy and unhealthy families and their effect on society.

HSE.HS.13.2.b Compare and contrast a variety of diverse family structures.

HSE.HS.13.2.c Describe how families help meet the needs of individuals using Maslow's Hierarchy of Needs.

HSE.HS.13.2.d Explain the importance of healthy communication and conflict resolution in a family.

HSE.HS.13.2.e Compare and contrast financial, physical, social, emotional, cultural, and spiritual issues and the role of stress in families.

HSE.HS.13.2.f Define crisis and differentiate a crisis situation from a stressful situation.

HSE.HS.13.2.g Identity common crisis situations families face (e.g., mental illness, abuse, addiction, grief, suicide, job loss, homelessness).

FAMILIES IN CRISIS (cont.)

HSE.HS.13.3 Evaluate societal views of mental health and common mental health disorders.

HSE.HS.13.3.a Define stigma and explain its effects on those with mental illness.

HSE.HS.13.3.b Identify ways to minimize stigma surrounding mental illness and seeking help for mental health problems.

HSE.HS.13.3.c Identify and analyze common risk factors for developing mental disorders (genetic, environmental).

HSE.HS.13.3.d Analyze the process of diagnosing mental illness.

HSE.HS.13.3.e Explain the effects mental illness and suicide has on the family.

HSE.HS.13.3.f Assess the signs and symptoms of a potential suicidal individual and steps that should be taken to seek help.

HSE.HS.13.3.g Identify community resources to help families facing mental health crises.

HSE.HS.13.4 Evaluate the effects of abuse on a family.

HSE.HS.13.4.a Identify types of abuse, causes, and common signs and symptoms in each stage of the family life cycle.

HSE.HS.13.4.b Analyze the roles and their characteristics in an abuse situation (bystander, abuser, victim/survivor).

HSE.HS.13.4.c Identify mandatory reporting laws and processes in Nebraska and resources available to help families.

HSE.HS.13.4.d Explain Adverse Childhood Experiences (ACEs) and their potential effects.

HSE.HS.13.4.e Compare and contrast healthy and unhealthy relationships.

HSE.HS.13.4.f Explain the stages of the Cycle of Abuse considering the barriers surrounding generational abuse.

FAMILIES IN CRISIS (cont.)

HSE.HS.13.5 Evaluate the effects of addiction on the family unit.

HSE.HS.13.5.a	Define addiction and explore the risk factors associated with developing an addiction (genetic, environmental).
HSE.HS.13.5.b	Analyze the science of physical and psychological addiction and how they are connected.
HSE.HS.13.5.c	Assess community resources, treatment, and recovery methods of addiction.
HSE.HS.13.5.d	Explain the connection (comorbidity) between mental illness and addiction.
HSE.HS.13.5.e	Analyze the effects of multiple family members living with addiction at the same time.

HSE.HS.13.6 Analyze the process of grieving.

HSE.HS.13.6.a	Define grief and explain that grief can occur with a variety of losses (e.g., loss of a friendship or pet, moving, loss of experience).
HSE.HS.13.6.b	Compare and contrast a variety of theories of grief (Five Stages, Tonkin's Model, Four Tasks of Grieving, Six Rs, Dual Process Model, Reconstruction of Meaning).
HSE.HS.13.6.c	Analyze family relationships in the grieving process.
HSE.HS.13.6.d	Compare and contrast healthy and unhealthy coping mechanisms for dealing with grief.
HSE.HS.13.6.e	Identify community resources to help families facing grief.

HSE.HS.13.7 Analyze methods of overcoming crisis.

HSE.HS.13.7.a	Describe the qualities of a resilient individual.
HSE.HS.13.7.b	Define mindfulness and techniques used to be mindful in everyday life.
HSE.HS.13.7.c	Explain the importance of mindfulness and self-awareness in overcoming crisis.
HSE.HS.13.7.d	Explain the importance of self-care and list strategies for implementing self-care.
HSE.HS.13.7.e	Describe the importance of growth mindset in regards to neuroplasticity.
HSE.HS.13.7.f	Identify common mental distortions (filtering, overgeneralizing, catastrophizing, personalization).

FAMILY AND COMMUNITY ADVOCACY

COURSE DESCRIPTION

This capstone course explores advocacy as it relates to individuals, families, and communities building on concepts from the introductory and intermediate courses. Topics covered include leadership within advocacy, careers related to advocacy, the role of community support in advocacy, importance of resiliency, and civic responsibilities. The importance of service-learning will also be addressed.

STANDARDS AND INDICATORS:

HSE.HS.14.1 Analyze the various dimensions of being an advocate for individuals, families, and communities.

HSE.HS.14.1.a Define what it means to be an advocate.

HSE.HS.14.1.b Explain the importance of advocating for others.

HSE.HS.14.1.c Identify situations where advocates would be involved.

HSE.HS.14.1.d Discuss the connection between crisis and advocacy.

HSE.HS.14.1.e Explain the history of advocacy and events or periods in time that required advocacy for individuals, families, and communities.

HSE.HS.14.1.f Explain the impact of advocacy on individuals, families, communities, and society.

HSE.HS.14.2 Assess the leadership role of the advocate.

HSE.HS.14.2.a Explain how an advocate is a leader.

HSE.HS.14.2.b Identify strong intrapersonal and interpersonal relationship skills (conflict resolution, teamwork, attentive listening skills).

HSE.HS.14.2.c Analyze how an individual's view of the world is impacted by their level of self-awareness as it relates to individual beliefs and values.

HSE.HS.14.2.d Analyze the importance of ethical behavior as a leader and advocate.

FAMILY AND COMMUNITY ADVOCACY(cont.)

HSE.HS.14.3 Identify careers related to serving families and communities.

HSE.HS.14.3.a Describe specific roles or careers that have a direct connection to advocating for families (e.g., child-life advocate, family advocate).

HSE.HS.14.3.b Assess the relationship between community demographics and advocacy needs.

HSE.HS.14.3.c Explain the role of each of the six types of helpers (professional helpers, paraprofessional helpers, helping as a part of their work, peer helpers, volunteer helpers, and informal helpers) in advocacy.

HSE.HS.14.4 Outline specific community outreach programs, resources, and connections as they relate to families.

HSE.HS.14.4.a Explain the role school organizations can play in advocating for schools and communities.

HSE.HS.14.4.b Describe local family and community services (e.g., organizations, government resources).

HSE.HS.14.4.c Locate local support resources for specific populations.

HSE.HS.14.5 Analyze the importance of individuals, families, and communities participating in their civic duties as local advocates.

HSE.HS.14.5.a Define civic duty.

HSE.HS.14.5.b Explain the role of individuals, families, and communities in advocacy as it relates to living in a democratic society.

HSE.HS.14.5.c Identify how individuals, families, and communities can work towards fulfilling their civic responsibilities.

HSE.HS.14.5.d Describe the process of advocating for an issue.

HSE.HS.14.5.e Explain the role elected officials could play in advocacy.

HSE.HS.14.5.f Describe what advocacy looks like at the local, state, and national levels.

FAMILY AND COMMUNITY ADVOCACY(cont.)

HSE.HS.14.6 Analyze the importance of resilience in families and communities.

HSE.HS.14.6.a Define resilience.

HSE.HS.14.6.b Describe what a resilient individual, family, and community look like and the correlation between them.

HSE.HS.14.6.c Analyze the importance of individuals and families being advocates for themselves and its effects on a community.

HSE.HS.14.7 Analyze service-learning and its connection to civic responsibility.

HSE.HS.14.7.a Identify ways to serve individuals, families, and communities.

HSE.HS.14.7.b Apply knowledge of advocacy and leadership to benefit individuals, families, and communities.

HSE.HS.14.7.c Identify opportunities for personal growth through serving individuals, families, and communities.

HSE.HS.14.7.d Explain how service-learning is a key to fulfilling civic responsibilities.

INTERPERSONAL RELATIONSHIPS

COURSE DESCRIPTION

This capstone course focuses on the effect of interpersonal relationships building on concepts from the introductory and intermediate courses. The course includes concepts such as effective communication, establishing and maintaining relationships, diverse family systems, characteristics of personal development, and the impact of relationships on personal and career success. The impact of relationships on the well-being of individuals, families, work, and society will also be explored.

STANDARDS AND INDICATORS:

HSE.HS.24.1 Analyze personal needs and characteristics and their effects on interpersonal relationships.

HSE.HS.24.1.a Examine the effects of personal characteristics and life events on relationships.

HSE.HS.24.1.b Describe the effects of self-esteem and self-image on relationships.

HSE.HS.24.1.c Describe the effects of lifespan events and conditions on relationships.

HSE.HS.24.1.d Explain the effects of personal values and behaviors on interpersonal relationships.

HSE.HS.24.2 Analyze the effects of family as a system on individuals and society.

HSE.HS.24.2.a Describe the function of the family as the basic unit of society.

HSE.HS.24.2.b Examine the role of family in teaching culture and traditions across the lifespan.

HSE.HS.24.2.c Summarize the family's role in developing independence, interdependence, and commitment of family members.

HSE.HS.24.2.d Describe the effects of various stages of the family life cycle on interpersonal relationships.

INTERPERSONAL RELATIONSHIPS (cont.)

HSE.HE.24.3 Evaluate the functions and expectations of various types of interpersonal relationships.

HSE.HS.24.3.a Categorize the various types of interpersonal relationships.

HSE.HS.24.3.b Identify the characteristics of healthy and unhealthy relationships.

HSE.HS.24.3.c Describe processes for building, maintaining, and ending interpersonal relationships.

HSE.HS.24.3.d Identify physical, intellectual, emotional, and social characteristics of healthy and unhealthy relationships and behaviors including limits, boundaries, and refusal skills.

HSE.HS.24.3.e Analyze processes for handling unhealthy relationships.

HSE.HS.24.3.f Relate personal values, rights, and responsibilities in relationships to overall health and decision making.

HSE.HS.24.4 Evaluate communication skills that contribute to healthy relationships.

HSE.HS.24.4.a Compare communication styles and their effects on relationships.

HSE.HS.24.4.b Analyze verbal and nonverbal behaviors and attitudes that contribute to effective communication.

HSE.HS.24.4.c Demonstrate effective listening and feedback techniques.

HSE.HS.24.4.d Analyze strategies to overcome communication barriers in family, community, and work settings.

HSE.HS.24.4.e Apply ethical principles of communication in family, community, and work settings.

HSE.HS.24.4.f Assess the effects of communication via technology in family, work, and community settings.

INTERPERSONAL RELATIONSHIPS (cont.)

HSE.HS.24.5 Outline principles that guide behavior in interpersonal relationships.

HSE.HS.24.5.a	Explain the principles of decision making and problem solving in reducing and managing conflict in interpersonal relationships.
HSE.HS.24.5.b	Identify nonviolent strategies that address conflict and model positive leadership. (e.g., self awareness, self-regulation, motivation, empathy and social skills).
HSE.HS.24.5.c	Identify stress management strategies for family, work, and community settings.

BEHAVIORAL HEALTH I (HS)

COURSE DESCRIPTION

This course establishes a foundation that is necessary to understand Behavioral Health and investigate the career field of Behavioral Health. Course emphasis is placed on teaching students to successfully investigate Behavioral Health, education preparation, workforce structure and acquire awareness and knowledge of this career area. It is recommended that students complete Behavioral Health I before taking Behavioral Health II.

STANDARDS AND INDICATORS:

HS.HS.1.1 Evaluate the impact of Behavioral Health in American society and on current health and wellness trends.

HS.HS.1.1.a	Identify current behavioral health issues and how they impact society
HS.HS.1.1.b	Interpret the historical overview and development of behavioral health in the United States.
HS.HS.1.1.c	Explain the role of behavioral health in society: your school, local, state, national, and international.
HS.HS.1.1.d	Explain the rationale behind the need for behavioral health.
HS.HS.1.1.g	Describe the code of ethics among professionals providing behavioral health services.
HS.HS.1.1.e	Differentiate between illness and mental illness.
HS.HS.1.1.f	Differentiate between behavioral health and mental health.
HS.HS.1.1.h	Evaluate the appropriateness and accuracy of information sources (e.g., literature, research, electronic information).

BEHAVIORAL HEALTH I (cont.)

HS.HS.1.2. Interpret behavioral health-related medical terms.

HS.HS.1.2.a Identify behavioral health prefixes, word roots, and suffixes.

HS.HS.1.2.b Construct behavioral health terms.

HS.HS.1.2.c Explain the reasoning behind standardized terminology in behavioral health.

HS.HS.1.3 Describe professional preparation, roles, and responsibilities of behavioral health providers.

HS.HS.1.3.a Describe the education requirements of behavioral health providers: psychologists, psychiatrists, psychiatric physician assistants, psychiatric nurses, licensed mental health practitioners, licensed drug and alcohol counselors, direct care professionals, school psychologists, and non-clinical social workers.

HS.HS.1.3.b Describe the professional roles and responsibilities of behavioral health providers: psychologists, psychiatrists, psychiatric physician assistants, psychiatric nurses, counselors and licensed mental health practitioners, licensed drug and alcohol counselors, marriage and family counselors, direct care professionals, school psychologists, and social workers.

HS.HS.1.4 Describe behavioral health interprofessional collaboration.

HS.HS.1.4.a Explain the role of the United States Department of Health as it relates to the state of Nebraska governing board for behavioral health professionals.

HS.HS.1.4.b Describe behavioral health professional organizations and the role they serve for the behavioral health professional: American Psychological Association, National Council for Counselors, WHO's Mental Health Atlas, etc.

HS.HS.1.5 Describe behavioral health and its integration into primary care providers.

HS.HS.1.5.a Explain the advantages/disadvantages of integrated behavioral health in a primary care environment.

HS.HS.1.5.b Summarize the levels of integrated behavioral health such as Boys Town, CHI Health, State Correctional Facility, Nebraska Medicine, etc.

BEHAVIORAL HEALTH II (HS)

COURSE DESCRIPTION

This course establishes a foundation that is necessary to understand Behavioral Health and investigate the career field of Behavioral Health. Course emphasis is placed on students successfully gaining skills in the field of Behavioral Health: explaining behavioral health assessments and treatments, addressing one's own mental health, investigating behavioral health career data in Nebraska, and advocating for the needs of others. It is recommended that students complete Behavioral Health I before taking Behavioral Health II.

STANDARDS AND INDICATORS:

HS.HS.2.1 Explain behavioral health assessments and treatments.

HS.HS.2.1.a	Explain how the Diagnostic and Statistical Manual of Mental Disorders (DSM) handbook is used in diagnosis and treatment in behavioral health.
HS.HS.2.1.b	Compare behavioral health assessment and treatment plans (e.g., ADHD, depression, anxiety).
HS.HS.2.1.c	Describe progression of services from group to individualized therapy.
HS.HS.2.1.d	Describe theories and interventions being used in mental and social health (cognitive behavioral therapy (CBT), dialectical behavior therapy (DBT), creative arts therapy (CAT), emotionally focused therapy (EFT), and solution-focused brief therapy (SFBT).
HS.HS.2.1.e	Describe informed consent and how it impacts behavioral health.
HS.HS.2.1.f	Describe an individual treatment plan and its use.

BEHAVIORAL HEALTH II (cont.)

HS.HS.2.2 Create a plan and related actions and activities to improve one's own mental health and general well-being.

HS.HS.2.2.a Summarize how personal values and experiences influence one's usage of behavioral health services.

HS.HS.2.2.b Describe strategies to develop and evaluate personal mindfulness awareness plans.

HS.HS.2.2.c Explain how social and behavioral interventions are used to improve behavioral and social health in schools and communities.

HS.HS.2.3 Describe behavioral health career outlook projections and preparation in Nebraska

HS.HS.2.3.a Describe a behavioral health career path.

HS.HS.2.3.b Explain a personal career interest area, employment outlook, salary scale, and Nebraska licensing requirements.

HS.HS.2.3.c Describe the challenges and opportunities for behavioral health careers in Nebraska.

HS.HS.2.3.d Interpret data on behavioral health services deficit areas in Nebraska.

HS.HS.2.3.e Describe the educational path to a career in behavioral health.

HS.HS.2.3.f Explain educational costs (e.g., scholarships, grants, federal loans, personal bank loans, and cost of interest and loan repayment).

BEHAVIORAL HEALTH II (cont.)

HS.HS.2.4 Demonstrate advocacy that supports the needs and rights of others.

HS.HS.2.4.a	Identify conferences, workshops, and retreats that educate and support behavioral health issues.
HS.HS.2.4.b	Explain advocacy and its application to behavioral health.
HS.HS.2.4.c	Describe efforts to reduce stigma of mental health through public education (e.g., Substance Abuse and Mental Health Services Administration).
HS.HS.2.4.d	Describe barriers to behavioral health provider access.
HS.HS.2.4.e	Demonstrate ways to advocate for friends and family members who need support for behavioral health issues.
HS.HS.2.4.f	Demonstrate ways to advocate for a positive, respectful school environment that supports pro-social behavior (e.g., handling teasing and bullying and reducing stigma associated with mental and behavioral health).

INTRODUCTION TO DESIGN

COURSE DESCRIPTION

This introductory course explores the definition, application and evaluation of elements and principles of design in the interior and apparel industries. Topics covered include knowledge of textiles, apparel skills, and interior design skills. Design technology, career opportunities and the skills necessary for careers in design will also be included.

STANDARDS AND INDICATORS:

HSE.HS.26.1 Apply the use of elements and principles of design.

HSE.HS.26.1.a Identify the elements and principles of design.

HSE.HS.26.1.b Apply elements of design.

HSE.HS.26.1.c Apply principles of design.

HSE.HS.26.1.d Explain the interactions between color and design.

HSE.HS.26.1.e Explain components of design for their effect on various products.

HSE.HS.26.2 Repurpose a used item using the technology available within the design industry.

HSE.HS.26.2.a Apply elements of design.

HSE.HS.26.2.b Apply principles of design.

HSE.HS.26.2.c Compare the use of elements and principles of design.

HSE.HS.26.2.d Generate information, knowledge, and experience to generate original ideas and challenge assumptions.

HSE.HS.26.2.e Identify solutions to problems to maximize opportunities related to repurposing.

HSE.HS.26.2.f Apply the use of appropriate technology tools for conveying information, solving problems, expediting workplace processes, and effectively presenting information.

INTRODUCTION TO DESIGN (cont.)

HSE.HS.26.3 Analyze the effect of textile characteristics on design, construction, care, use, and maintenance of items.

HSE.HS.26.3.a Identify characteristics of natural fibers (e.g, cotton, wool, silk, linen, bamboo, hemp).

HSE.HS.26.3.b Identify characteristics of synthetic and/or manmade fibers (e.g., polyester, nylon, rayon, acrylic, acetate, Spandex, Olefin, fiberglass).

HSE.HS.26.3.c Differentiate between the characteristics of common textiles.

HSE.HS.26.3.d Compare textiles for different purposes in apparel and interiors.

HSE.HS.26.3.e Assess and select textiles for their quality and appropriateness.

HSE.HS.26.4 Demonstrate basic apparel construction and interior design skills.

HSE.HS.26.4.a Demonstrate proper use of sewing and interior design tools and equipment.

HSE.HS.26.4.b Demonstrate proper measuring, pinning, cutting, and construction techniques to construct an apparel or fashion item.

HSE.HS.26.4.c Demonstrate proper measuring techniques, scaling techniques, furniture placement, and selection of appropriate materials to construct an interior design product.

HSE.HS.26.5 Analyze career paths within the design field.

HSE.HS.26.5.a Explain the roles and functions of individuals engaged in design careers.

HSE.HS.26.5.b Summarize education, training, and credentialing requirements and opportunities for careers in the design field.

HSE.HS.26.5.c Describe the opportunities for entrepreneurship in the design field.

HSE.HS.26.5.d Analyze the role of professional organizations in design professions.

HSE.HS.26.5.e Analyze personal attitudes, traits, and values of design professionals with regard to responsibility, accountability, ethics, and effectiveness.

APPAREL PRODUCTION AND CONSTRUCTION

COURSE DESCRIPTION

This intermediate course provides an understanding of garment and apparel construction building on concepts from the introductory course. Topics covered will include career exploration, textile and apparel design, creation, alteration, selection, and maintenance. This course integrates knowledge, skills, technology, and practices required for careers in the apparel and textiles industry.

STANDARDS AND INDICATORS:

HSE.HS.1.1 Generate textiles, fashion, and apparel design products using a variety of equipment, tools, and supplies.

- HSE.HS.1.1.a Create apparel products using methods including flat pattern, pattern alterations, repurposing, and clothing design and construction.
- HSE.HS.1.1.b Produce, alter, or repair fashion and apparel items.
- HSE.HS.1.1.c Apply sewing construction skills to create fashion and apparel items.
- HSE.HS.1.1.d Use appropriate products and materials for cleaning, pressing, and finishing fashion and apparel items.
- HSE.HS.1.1.e Apply appropriate math skills in apparel construction.

HSE.HS.1.2 Analyze effects of textile characteristics on design, construction, care, use, and maintenance of products.

- HSE.HS.1.2.a Identify emerging fibers and fabric technologies (e.g., antimicrobial, wicking, electronic textiles, performance textiles).
- HSE.HS.1.2.b Explain how fabric selection affects the finish of products.
- HSE.HS.1.2.c Identify various types of fabric finishes (e.g., stain resistant, fire resistant, wrinkle resistant, waterproof).
- HSE.HS.1.2.d Apply methods of coloring, dyeing, printing, and finishing fabrics.
- HSE.HS.1.2.e Select textiles for their quality and appropriateness for use.

APPAREL PRODUCTION AND CONSTRUCTION (cont.)

HSE.HS.1.3 Produce fashion and apparel items using design industry technology.

HSE.HS.1.3.a Identify the workplace value of technology tools and applications.

HSE.HS.1.3.b Use the appropriate technology tools for conveying information, solving problems, and expediting workplace processes.

HSE.HS.1.3.c Analyze current technology, trends, and innovations that facilitate the design and production of textiles, fashion, and apparel.

HSE.HS.1.3.d Appraise the effect of fast fashion and sustainability practices.

HSE.HS.1.3.e Create apparel items using design industry technology.

HSE.HS.1.4 Apply business principles in the apparel and textiles industry.

HSE.HS.1.4.a Explain how products are priced for selling (material costs, labor costs, overhead costs).

HSE.HS.1.4.b Apply the 4P's of marketing (product, place, price, promotion).

HSE.HS.1.4.c Describe the opportunities for entrepreneurship.

HSE.HS.1.4.d Describe the knowledge and skills required of an entrepreneur.

HSE.HS.1.5 Demonstrate skills and develop a plan that could lead to a career within the apparel and textiles industry.

HSE.HS.1.5.a Carry out tasks with minimal supervision.

HSE.HS.1.5.b Execute tasks to ensure progress toward stated objectives.

HSE.HS.1.5.c Demonstrate the ability to reason critically and systematically.

HSE.HS.1.5.d Demonstrate a willingness to learn new knowledge and skills.

HSE.HS.1.5.e Exhibit professional etiquette in all interactions.

HSE.HS.1.5.f Create an employment portfolio to use when seeking job opportunities in the apparel and textiles industry.

HOME DESIGN AND INTERIORS

COURSE DESCRIPTION

This intermediate course focuses on the physical, psychological and social influences of housing styles building on concepts from the introductory course. Materials are analyzed for the selection, use and care of home interior items to improve living space for individual and family needs. Content integrates knowledge, skills, technology and practices required for careers in housing and interior design.

STANDARDS AND INDICATORS:

HSE.HS.22.1 Evaluate housing and design concepts and theories, including sustainability and universal design, in relation to available resources and options.

- HSE.HS.22.1.a Apply principles of human behavior to the design of housing, interiors and furnishings.
- HSE.HS.22.1.b Evaluate the use of elements and principles of design in housing design and commercial and residential interiors.
- HSE.HS.22.1.c Analyze the psychological impact that the principles and elements of design have on the individual.
- HSE.HS.22.1.d Analyze the effects that the principles and elements of design have on aesthetics and function.
- HSE.HS.22.1.e Explain how fabric selection affects the finish of products.

HSE.HS.22.2 Evaluate the influence of architecture, interior design, and furnishings throughout history.

- HSE.HS.22.2.a Distinguish between the styles of architecture, interior design, furniture, and furnishings.
- HSE.HS.22.2.b Describe the development of architectural styles throughout history.
- HSE.HS.22.2.c Compare and contrast historical architectural details to current housing and interior design trends.
- HSE.HS.22.2.d Explain societal and technological trends and their impact on architecture and interior design styles throughout history.
- HSE.HS.22.2.e Assess design and development trends in architecture, interior design, and furnishings.

HOME DESIGN AND INTERIORS (cont.)

HSE.HS.22.3 Evaluate the design and function of interior space.

HSE.HS.22.3.a Evaluate living space needs and apply space management guidelines to interior designs.

HSE.HS.22.3.b Determine traffic flow, activity, and existing architectural features in creating floor plans responding to needs of all populations (e.g., aging, handicapped).

HSE.HS.22.3.c Arrange furniture placement with reference to design principles, traffic flow, activity, and existing architectural features.

HSE.HS.22.3.d Evaluate floor plans for efficiency and safety, including but not limited to zones, traffic patterns, furniture placement, storage, and electrical and mechanical systems.

HSE.HS.22.4 Generate a design using technology utilized within the design industry.

HSE.HS.22.4.a Identify the workplace value of technology tools and applications.

HSE.HS.22.4.b Use the appropriate technology tools for conveying information, solving problems, expediting workplace processes, and effectively presenting information.

HSE.HS.22.4.c Create designs using technology commonly used in the interior design field.

HSE.HS.22.4.d Prepare visual presentations using a variety of media methods to communicate the design concept.

HOME DESIGN AND INTERIORS (cont.)

HSE.HS.22.5 Evaluate the needs, goals, and resources of a client to design interiors.

HSE.HS.22.5.a	Identify how geographic locations, safety, security, energy efficiency, aesthetic preferences, and required maintenance affect housing choices for individuals, families, and communities.
HSE.HS.22.5.b	Assess financial resources needed to achieve housing and interior design goals.
HSE.HS.22.5.c	Apply adaptive and universal design concepts to meet client needs.
HSE.HS.22.5.d	Evaluate and select furnishings, fixtures, and appliances to meet specific design needs.
HSE.HS.22.5.e	Summarize the purposes of various views in architectural drawings including plan views, elevation view, and section and detail views, as well as the use of renderings, models, and isometric drawings.
HSE.HS.22.5.f	Demonstrate scaling, 2D elevations, utilization of architectural symbols, and the manual drawing used for interior design.
HSE.HS.22.5.g	Demonstrate design board planning and sample curation.

HSE.HS.22.6 Apply business principles in the design industry.

HSE.HS.22.6.a	Explain how products and services are priced for selling (material costs, labor costs, overhead costs).
HSE.HS.22.6.b	Demonstrate measuring, estimating, ordering, purchasing, and pricing skills for design products (e.g., furnishings, appliances, floor coverings).
HSE.HS.22.6.c	Apply the 4P's of marketing (product, place, price, promotion).
HSE.HS.22.6.d	Incorporate recycle and redesign principles.

HOME DESIGN AND INTERIORS (cont.)

HSE.HS.22.7 Analyze career paths within the housing and interior design industries.

HSE.HS.22.7.a Explain the roles and functions of professionals in the housing and interior design industries.

HSE.HS.22.7.b Summarize education, training, and credentialing requirements and career opportunities in the housing and interior design industries.

HSE.HS.22.7.c Describe the knowledge and skills required of an entrepreneur.

HSE.HS.22.7.d Analyze opportunities for employment and entrepreneurial endeavors in the housing and interior design industries.

FASHION DESIGN

COURSE DESCRIPTION

This intermediate course explores skills needed for the evolving field of the fashion and apparel industry building on concepts from the introductory course. Topics covered include examining fashion history, fashion trends, distinguishing characteristics of garments, career opportunities, and business principles. The design process will be practiced from fashion concept to implementation through the use of technology.

STANDARDS AND INDICATORS:

HSE.HS.12.1 Evaluate the influence of history on fashion.

HSE.HS.12.1.a	Compare theories of various fashion movements.
HSE.HS.12.1.b	Interpret the impact of trends and fashion cycles on fashion.
HSE.HS.12.1.c	Summarize the achievements of notable fashion designers (e.g., Coco Chanel, Gianni Versace, Giorgio Armani, Marc Jacobs, Yves Saint Laurent).
HSE.HS.12.1.d	Relate current fashions to various historical influences.
HSE.HS.12.1.e	Compare and contrast sustainability practices throughout history.
HSE.HS.12.1.f	Evaluate the impact of history, arts and culture, and global influences on textiles, fashion, and apparel.

HSE.HS.12.2 Analyze the effects of textile characteristics on design, construction, care, use, and maintenance of products.

HSE.HS.12.2.a	Identify emerging sustainability trends in design.
HSE.HS.12.2.b	Describe methods of coloring, dyeing, printing, and finishing fabrics.
HSE.HS.12.2.c	Explain how fabric selection affects the finish of products.
HSE.HS.12.2.d	Identify emerging fibers and fabric technologies (e.g., antimicrobial, wicking, electronic textiles, performance textiles).
HSE.HS.12.2.e	Analyze the quality of fashion and apparel items, including the construction and fit.
HSE.HS.12.2.f	Explain the ways in which fabric, texture, pattern, and finish can affect visual appearance.

FASHION DESIGN (cont.)

HSE.HS.12.3 Analyze the components of design and their effect on various products.

HSE.HS.12.3.a Explain how to use elements and principles of design for optimal aesthetics.

HSE.HS.12.3.b Analyze garment styles and parts and their effect on fit and appearance.

HSE.HS.12.4 Design, produce, alter, and repair fashion and apparel items.

HSE.HS.12.4.a Utilize the elements and principles of design to design and/or alter fashion and apparel items.

HSE.HS.12.3.b Apply color theory to enhance visual effect.

HSE.HS.12.4.c Demonstrate techniques used in apparel design (e.g., draping, digital design, flat pattern).

HSE.HS.12.4.d Execute a design considering ecological, environmental, ethical, sociological, psychological, technical, and economical factors, trends, and issues.

HSE.HS.12.4.e Demonstrate professional and technical sewing skills and use of traditional and technologically innovative equipment, tools, and supplies in fashion and apparel item construction, alteration, repair, and recycling.

HSE.HS.12.4.f Use appropriate industry products and materials for cleaning, pressing, and finishing fashion and apparel items.

HSE.HS.12.4.g Demonstrate appropriate procedures for recycling and care and disposal of textile products, considering diverse needs locally and globally.

HSE.HS.12.5 Create designs utilizing technology within the design industry.

HSE.HS.12.5.a Identify the workplace value of technology tools and applications.

HSE.HS.12.5.b Use the appropriate technology tools for conveying information, solving problems, expediting workplace processes, and effectively presenting information.

HSE.HS.12.5.c Analyze current technology, trends, and innovations that facilitate the design and production of textiles, fashion, and apparel.

FASHION DESIGN (cont.)

HSE.HS.12.6 Develop an apparel collection based on client interest.

HSE.HS.12.6.a Develop a design concept foundation through customer identification and research.

HSE.HS.12.6.b Outline the stages in the apparel design process (e.g., inspiration, research, fabric development, sketching, prototypes, final samples).

HSE.HS.12.6.c Analyze the influences of cultural expectations as a factor in customer relations.

HSE.HS.12.6.d Generate original ideas and challenge assumptions.

HSE.HS.12.6.e Develop croquis sketch variations to discover design possibilities and solutions.

HSE.HS.12.6.f Revise the collection through an editing process to maintain cohesion and consistency.

HSE.HS.12.7 Analyze professional practice and procedures for business profitability and career success in the design industry.

HSE.HS.12.7.a Explain how products are priced for selling (material costs, labor costs, overhead costs).

HSE.HS.12.7.b Apply the marketing mix (product, place, price, promotion).

HSE.HS.12.7.c Analyze opportunities for employment and entrepreneurial endeavors in the fashion design field.

HSE.HS.12.7.d Summarize education and training requirements and career opportunities in the textiles, fashion, and apparel industries.

HSE.HS.12.7.e Analyze the effects of the textiles, fashion, and apparel industries on local, state, national, and global economies.

HSE.HS.12.7.f Describe the progression of ethical practices in the design industry (sustainability--public health, welfare, environment; environmental responsibility; human ethical impact of fibers used in the industry--labor, labeling information).

ENTREPRENEURSHIP (BMM)

COURSE DESCRIPTION

Entrepreneurship is a course with emphasis on the evaluation of the business skills and commitment necessary to successfully operate an entrepreneurial venture and review the challenges and rewards of entrepreneurship. The role of entrepreneurial businesses in the United States and the impact on the national and global economy will be explored.

STANDARDS AND INDICATORS:

BMM.HS.13.1 Identify characteristics and skills of entrepreneurs.

BMM.HS.13.1.a	Analyze personal strengths, skills, and talents necessary to be an entrepreneur.
BMM.HS.13.1.b	Identify responsible behavior, attitude, and leadership ability.
BMM.HS.13.1.c	Demonstrate problem-solving skills.
BMM.HS.13.1.d	Describe the history and development of successful and non-successful entrepreneurial ventures.
BMM.HS.13.1.e	Explore career opportunities in entrepreneurship.

BMM.HS.13.2 Evaluate business ownership as related to entrepreneurship.

BMM.HS.13.2.a	Identify and compare advantages and disadvantages of various forms of business ownership.
BMM.HS.13.2.b	Explain the legal and ethical issues affecting businesses.
BMM.HS.13.2.c	Analyze the advantages and disadvantages of methods of entering an entrepreneurial venture.

ENTREPRENEURSHIP (cont.)

BMM.HS.13.3 Analyze the management, financial, marketing, and legal skills necessary to successfully operate and grow an entrepreneurial venture.

- BMM.HS.13.3.a Describe the importance of strategic management to a small entrepreneurial business.
- BMM.HS.13.3.b Develop vision, mission, goals, objectives, and policies for an entrepreneurial venture.
- BMM.HS.13.3.c Explain the importance of effective financial management in developing, growing, and sustaining an entrepreneurial venture.
- BMM.HS.13.3.d Develop a marketing plan and strategies to position the product and/or service in the target market.
- BMM.HS.13.3.e Identify the legal documents and financial records for business operations.
- BMM.HS.13.3.f Evaluate the venture idea utilizing the components of a business plan.

BMM.HS.13.4 Analyze the role of entrepreneurship in the global economy.

- BMM.HS.13.4.a Identify entrepreneurial venture opportunities in international trade.
- BMM.HS.13.4.b Analyze global issues and trends for entrepreneurial ventures.
- BMM.HS.13.4.c Determine the impact of cultural and social requirements on international trade.

ADVANCED DIGITAL DESIGN (CIS)

COURSE DESCRIPTION

Students will focus on utilizing advanced skills to plan, design, and create a design portfolio to showcase elements of composition, digital photography, or digital print design. These skills will prepare students for entry-level positions in the digital design field.

STANDARDS AND INDICATORS:

CIS.HS.1.1 Design client-based or personal projects utilizing composition techniques.

- CIS.HS.1.1.a Compose photographic, digital print design, or animation projects utilizing design and composition rules.
- CIS.HS.1.1.b Select appropriate hardware and software based on the final product needed by client.
- CIS.HS.1.1.c Demonstrate rules of composition.
- CIS.HS.1.1.d Construct a project and justify chosen design principles.
- CIS.HS.1.1.e Name and store native and exported files in a manageable file structure (e.g., Drive, Cloud, external hard drive).

CIS.HS.1.2 Design graphics and text that clearly express the personal perspective of intended audiences.

- CIS.HS.1.2.a Identify purpose, audience, and audience needs for preparing images.
- CIS.HS.1.2.b Determine whether content is relevant to the purpose, audience, and audience needs.
- CIS.HS.1.2.c Prepare a production schedule (e.g., creating and using a work plan, establishing milestones and deliverables).
- CIS.HS.1.2.d Assess and utilize design principles and best practices employed in the design field.

ADVANCED DIGITAL DESIGN (cont.)

CIS.HS.1.3 Simulate working in the digital design field through creation of client-based design projects.

CIS.HS.1.3.a Describe the client's purpose and audience when preparing projects to ensure the content is relevant to the client's needs.

CIS.HS.1.3.b Prepare a production schedule (e.g., creating and using a work plan, establishing milestones and deliverables).

CIS.HS.1.3.c Assess and utilize design principles and best practices employed in the design field.

CIS.HS.1.3.d Describe the importance of branding as it applies to client-based design projects.

CIS.HS.1.3.e Communicate effectively in person and through written communication with peers and clients about design plans and processes.

CIS.HS.1.4 Analyze working in the digital design field.

CIS.HS.1.4.a Analyze careers in the digital design field.

CIS.HS.1.4.b Analyze job market trends in the digital design field.

CIS.HS.1.4.c Analyze the benefits of industry certification and higher education in the field.

CIS.HS.1.4.d Investigate careers in digital design through pursuit of a job shadowing or internship experience.

ADVANCED DIGITAL DESIGN (cont.)

CIS.HS.1.5 Evaluate and comply with copyright laws.

CIS.HS.1.5.a	Determine the type of copyright, permissions, and licensing required to use specific content.
CIS.HS.1.5.b	Analyze the different types of copyright licenses and their uses. (e.g., Creative Commons, Public Domain).
CIS.HS.1.5.c	Identify legal and ethical considerations for using third-party content, such as copyright, permissions, and licensing.
CIS.HS.1.5.d	Apply copyright as it pertains to their own creative work.

CIS.HS.1.6 Create a digital portfolio which demonstrates competency in the digital design field.

CIS.HS.1.6.a	Examine professional digital portfolios as models.
CIS.HS.1.6.b	Evaluate all elements of the portfolio for compliance with copyright.
CIS.HS.1.6.c	Curate works for the portfolio that demonstrate mastery of design.
CIS.HS.1.6.d	Design portfolio itself so that it demonstrates mastery of design.
CIS.HS.1.6.e	Choose language to ensure copyright protections of the student work.
CIS.HS.1.6.f	Describe the importance of branding as it applies to their portfolio of creative work.

MARKETING (BMM)

COURSE DESCRIPTION

This course develops basic student understanding and skills in the functions of marketing. Emphasis is placed on the impact of marketing activities on the individual, business, and society. Topics include market analysis, marketing information management, target customer identification, the development of marketing-mix strategies, and an in-depth look at the selling process.

STANDARDS AND INDICATORS:

BMM.HS.19.1 Recognize the customer-oriented nature of marketing and analyze the impact of marketing activities on the individual, business, and society.

- BMM.HS.19.1.a Describe marketing functions and related activities.
- BMM.HS.19.1.b Distinguish between economic goods and services.
- BMM.HS.19.1.c Explain the principles of supply and demand.
- BMM.HS.19.1.d Determine economic utilities created by business activities.
- BMM.HS.19.1.e Explain the concept of competition.
- BMM.HS.19.1.f Identify employment opportunities in marketing.

BMM.HS.19.2 Identify marketing-information management strategies to understand its nature and scope.

- BMM.HS.19.2.a Identify the need for marketing data used to monitor marketing decision making.
- BMM.HS.19.2.b Explain the role of ethics in marketing information management.
- BMM.HS.19.2.c Discuss the nature of data mining.
- BMM.HS.19.2.d Describe the use of technology in the marketing-information management function.
- BMM.HS.19.2.d Describe the regulation of marketing-information management.

MARKETING (cont.)

BMM.HS.19.3 Apply the concepts and marketing strategies utilized to determine and target a select market.

BMM.HS.19.3.a Analyze and describe the importance of each of the components of the marketing mix.

BMM.HS.19.3.b Explain factors that influence customer/client/business buying behavior.

BMM.HS.19.3.c Analyze customer's rational and emotional buying motives and decisions.

BMM.HS.19.3.d Select target market appropriate for product/business to obtain the best return on marketing investment (ROMI).

BMM.HS.19.3.e Explain the concept of market and market identification.

BMM.HS.19.3.f Identify strategies utilized in the elements of market segmentation.

BMM.HS.19.4 Identify the concepts and actions needed to determine client needs and wants and respond through planned, personalized communication that influences purchase decisions and enhances future business opportunities.

BMM.HS.19.4.a Explain the nature and scope of the selling function.

BMM.HS.19.4.b Explain the role of customer service as a component of selling relationships for building a clientele.

BMM.HS.19.4.c Utilize sales processes and techniques to determine and satisfy customer needs.

BMM.HS.19.4.d Acquire product knowledge to communicate product benefits and to ensure appropriateness of product for the customer.

BMM.HS.19.4.e Explain legal and ethical considerations in selling.

ADVANCED MARKETING (BMM)

COURSE DESCRIPTION

This course is an expansion and application of previous marketing studies with an emphasis on learning to develop responsive marketing strategies that meet customer needs. Students will focus on organization and society where they will develop a marketing plan. Topics include market research, product development, promotion, channel management, and pricing.

STANDARDS AND INDICATORS:

BMM.HS.5.1 Analyze marketing, the marketing concept, and marketing management.

BMM.HS.5.1.a	Define the role of marketing in organizations.
BMM.HS.5.1.b	Describe how marketers create value for a product or service.
BMM.HS.5.1.c	Analyze the environment in which firms operate to develop effective marketing strategies and decisions.
BMM.HS.5.1.d	Select strategies to obtain the best return on marketing investment (ROMI).
BMM.HS.5.1.e	Evaluate marketing mix strategies in response to market opportunities and customer expectations.

BMM.HS.5.2 Analyze methods of information gathering and investigate research techniques.

BMM.HS.5.2.a	Describe the nature of marketing research.
BMM.HS.5.2.b	Investigate qualitative and quantitative research sources.
BMM.HS.5.2.c	Select and apply methods of data collection (e.g., observations, surveys, discussion forums, scanners).
BMM.HS.5.2.d	Interpret marketing information and/or data mining to test hypotheses and/or resolve issues.

ADVANCED MARKETING (cont.)

BMM.HS.5.3 Identify market segments and positioning strategies.

BMM.HS.5.3.a Identify market segmentation strategies (e.g., demographics, geographics, psychographics, and behaviors).

BMM.HS.5.3.b Analyze the elements of the marketing mix, their interrelationships, how they are used in the marketing process, and their role in positioning.

BMM.HS.5.3.c Recommend the positioning strategy that communicates the firm's or the product's value proposition.

BMM.HS.5.3.d Describe the impact of consumer differences (e.g., life stages, benefits sought, usage rate, brand loyalty, and socio-economic characteristics) on buying decisions.

BMM.HS.5.4 Evaluate marketing mix strategies.

BMM.HS.5.4.a Develop marketing mix strategies that focus on meeting customer needs and wants.

BMM.HS.5.4.b Assess current product and service strategies to determine growth strategy (e.g., market penetration, market development, product development, diversification).

BMM.HS.5.4.c Identify factors that drive channel management design (e.g., Internet, Social Media, competitive advantage).

BMM.HS.5.4.d Distinguish concepts and strategies utilized in determining and adjusting prices to maximize return and meet customers' perception of value.

BMM.HS.5.4.e Research, analyze, and recommend promotional goals and strategies as they relate to profitability and/or effectiveness in reaching the target market.

BMM.HS.5.5 Demonstrate the importance of an effective marketing plan.

BMM.HS.5.5.a Apply project management competencies in working with a viable business in the creation of a marketing plan.

BMM.HS.5.5.b Analyze current marketing strategies utilized by business.

BMM.HS.5.5.c Initiate a marketing plan by identifying target market, conducting market analysis, and reviewing SWOT analysis.

BMM.HS.5.5.d Develop marketing strategies to position and/or reposition business effectively.

BMM.HS.5.5.e Access cost effectiveness of recommended marketing strategies.

BMM.HS.5.5.f Monitor and evaluate performance of marketing plan.

INTRODUCTION TO FAMILY AND CONSUMER SCIENCES

COURSE DESCRIPTION

This introductory course is intended to provide a basic overview of all areas within Family and Consumer Sciences. Basic knowledge and career skills that are applicable to personal growth and career development will be covered. Additional course topics include: leadership, communication, child development, mental health, nutrition and food preparation, clothing and interior design, and personal finance.

STANDARDS AND INDICATORS:

HSE.HS.27.1 Apply career-readiness skills and identify potential career opportunities.

HSE.HS.27.1.a	Summarize the history of Family and Consumer Sciences and the impact of the field on individuals, families, and communities to make connections to current career-ready skills.
HSE.HS.27.1.b	Identify personal traits and compare them with potential career opportunities.
HSE.HS.27.1.c	Investigate career opportunities, including but not limited to careers within Family and Consumer Sciences.

HSE.HS.27.2 Apply leadership in family, workplace, and community.

HSE.HS.27.2.a	Investigate goal setting and resource management.
HSE.HS.27.2.b	Explain leadership styles and the impact of each style on others.
HSE.HS.27.2.c	Demonstrate strategies that utilize the strengths and minimize the limitations of team members.
HSE.HS.27.2.d	Describe the decision-making process.
HSE.HS.27.2.e	Demonstrate leadership skills within the family, workplace, or community.
HSE.HS.27.2.f	Investigate opportunities available for a member of FCCLA and/or Educators Rising.

INTRODUCTION TO FAMILY AND CONSUMER SCIENCES (cont.)

HSE.HE.27.3 Evaluate personal and work relationships.

HSE.HS.27.3.a	Compare and contrast healthy and unhealthy personal and work relationships.
HSE.HS.27.3.b	Evaluate personal traits and how they can be used to improve relationships.
HSE.HS.27.3.c	Demonstrate effective communication using a variety of delivery methods that can improve personal and work relationships.
HSE.HS.27.3.d	Demonstrate critical thinking and conflict resolution in personal and career settings.
HSE.HS.27.3.e	Demonstrate inclusive teamwork in the family, workplace, or community.

HSE.HS.27.4 Assess the family unit during each stage of the lifespan.

HSE.HS.27.4.a	Identify the stages of development across the lifespan.
HSE.HS.27.4.b	Categorize milestones of development in the areas of physical, intellectual, emotional, and social across the lifespan.
HSE.HS.27.4.c	Analyze family as the basic unit of society.
HSE.HS.27.4.d	Describe the impact of conditions that could influence the well-being of individuals and families.

HSE.HS.27.5 Identify careers in counseling, mental health, and human behavior.

HSE.HS.27.5.a	Identify the importance of self-care and self-awareness.
HSE.HS.27.5.b	Summarize empathy.
HSE.HS.27.5.c	Examine the influence of cultural and societal issues on mental and emotional health.
HSE.HS.27.5.d	Connect the role of mental health and counseling to today's society

INTRODUCTION TO FAMILY AND CONSUMER SCIENCES (cont.)

HSE.HS.27.6 Differentiate skills for food preparation and maintaining nutrition and wellness.

HSE.HS.27.6.a Identify basic food safety and sanitation practices.

HSE.HS.27.6.b Demonstrate basic food preparation practices.

HSE.HS.27.6.c Create meal plans that utilize food availability and cost effectiveness.

HSE.HS.27.6.d Identify basic kitchen equipment and terminology.

HSE.HS.27.6.e Analyze effects of personal choices on nutrition and wellness.

HSE.HS.27.6.f Identify basic nutrients required for healthy living.

HSE.HS.27.7 Apply skills required for fashion construction, housing, and interior design.

HSE.HS.27.7.a Classify the elements and principles of design.

HSE.HS.27.7.b Describe the basic care of different textiles.

HSE.HS.27.7.c Compare and contrast design features in fashion and/or interior design.

HSE.HS.27.7.d Produce, alter, or repair fashion and apparel items.

HSE.HS.27.7.e Apply the principles and elements of design to design a room reflecting personal, family, or community style and needs.

HSE.HS.27.8 Explain consumerism and personal finance.

HSE.HS.27.8.a Identify factors that influence consumer choices.

HSE.HS.27.8.b Summarize the rights and responsibilities of consumers.

HSE.HS.27.8.c Outline the steps for creating a budget.

HSE.HS.27.8.d Describe procedures for using savings and checking accounts.

HSE.HS.27.8.e Compare the benefits and costs of credit.

LIFESPAN DEVELOPMENT

COURSE DESCRIPTION

This introductory course explores the physical, intellectual, emotional, and social development of individuals across the lifespan from conception to death. Topics covered are external impacts on development including family structure and practices, theories of development, social and technological forces, and resources available to individuals and their outcomes.

STANDARDS AND INDICATORS:

HSE.HS.30.1 Evaluate principles of growth and development from conception through infancy.

HSE.HS.30.1.a	Describe theories, current issues, and trends.
HSE.HS.30.1.b	Identify physical, intellectual, emotional, and social development milestones.
HSE.HS.30.1.c	Explain conditions influencing development (e.g., abuse, trauma, stress, social and technological forces).
HSE.HS.30.1.d	Explain brain structure and development for this stage of life.
HSE.HS.30.1.e	Describe services and supports needed when developmental milestones are not met.
HSE.HS.30.1.f	Analyze family system roles and dynamics and how they contribute to development.
HSE.HS.30.1.g	Describe skills needed to work and engage with individuals in this stage of development.

HSE.HS.30.2 Evaluate principles of growth and development from infancy through childhood.

HSE.HS.30.2.a	Describe theories, current issues, and trends.
HSE.HS.30.2.b	Identify physical, intellectual, emotional, and social development milestones.
HSE.HS.30.2.c	Explain conditions influencing development (e.g., abuse, trauma, stress, social and technological forces).
HSE.HS.30.2.d	Explain brain structure and development for this stage of life.
HSE.HS.30.2.e	Describe services and supports needed when developmental milestones are not met.
HSE.HS.30.2.f	Analyze family system roles and dynamics and how they contribute to development.
HSE.HS.30.2.g	Demonstrate skills needed to work and engage with individuals in this stage of development.

LIFESPAN DEVELOPMENT (cont.)

HSE.HS.30.3 Evaluate principles of growth and development from childhood through adolescence.

HSE.HS.30.3.a Describe theories, current issues, and trends.

HSE.HS.30.3.b Identify physical, intellectual, emotional, and social development milestones.

HSE.HS.30.3.c Explain conditions influencing development (e.g., abuse, trauma, stress, social and technological forces).

HSE.HS.30.3.d Explain brain structure and development for this stage of life.

HSE.HS.30.3.e Describe services and supports needed when developmental milestones are not met.

HSE.HS.30.3.f Analyze family system roles and dynamics and how they contribute to development.

HSE.HS.30.3.g Demonstrate skills needed to work and engage with individuals in this stage of development.

HSE.HS.30.4 Evaluate principles of growth and development from adolescence through early adulthood.

HSE.HS.30.4.a Describe theories, current issues, and trends.

HSE.HS.30.4.b Identify physical, intellectual, emotional, and social development milestones.

HSE.HS.30.4.c Explain conditions influencing development (e.g., abuse, trauma, stress, social and technological forces).

HSE.HS.30.4.d Explain brain structure and development for this stage of life.

HSE.HS.30.4.e Describe services and supports needed when developmental milestones are not met.

HSE.HS.30.4.f Analyze family system roles and dynamics and how they contribute to development.

HSE.HS.30.4.g Demonstrate skills needed to work and engage with individuals in this stage of development.

LIFESPAN DEVELOPMENT (cont.)

HSE.HS.30.5 Evaluate principles of growth and development from middle to late adulthood through the end of life.

HSE.HS.30.5a	Describe theories, current issues, and trends.
HSE.HS.30.5.b	Identify physical, intellectual, emotional, and social milestones.
HSE.HS.30.5.c	Explain conditions influencing well-being (e.g., abuse, trauma, stress, social and technological forces).
HSE.HS.30.5.d	Explain brain structure and development for this stage of life.
HSE.HS.30.5.e	Describe services and supports needed for well-being.
HSE.HS.30.5.f	Analyze family system roles and dynamics and how they contribute to the well-being of individuals.
HSE.HS.30.5.g	Describe skills needed to work and engage with individuals in this stage of development.

CHILD DEVELOPMENT

COURSE DESCRIPTION

This intermediate course provides an overview of developmental stages in the prenatal period through 12 years of age building on concepts from the introductory course(s). Topics covered include how young children attain knowledge, behaviors, and skill and theories of child development to identify the effects of parenting practices, social, cultural, and linguistic diversity. The impact of quality child care and early childhood education on child growth and development will also be explored.

STANDARDS AND INDICATORS:

HSE.HS.5.1 Explain the basic principles of child development from conception to age 12.

HSE.HS.5.1.a Explain physical development milestones from conception to age 12.

HSE.HS.5.1.b Explain intellectual development milestones from conception to age 12.

HSE.HS.5.1.c Explain emotional development milestones from conception to age 12.

HSE.HS.5.1.d Explain social development milestones from conception to age 12.

HSE.HS.5.2 Evaluate child development theoretical perspectives and their applications.

HSE.HS.5.2.a Identify the various child development theorists and theories.

HSE.HS.5.2.b Evaluate developmentally appropriate child care skills from conception to age 12.

HSE.HS.5.2.c Identify parenting decisions and practices that impact healthy development from conception to age 12.

HSE.HS.5.3 Analyze family theoretical perspectives and their impact on child growth and development.

HSE.HS.5.3.a Compare and contrast theorists and theories related to family traits and child growth and development.

HSE.HS.5.3.b Classify different parenting types and styles.

HSE.HS.5.3.c Compare and contrast the different parenting styles.

HSE.HS.5.3.d Explain the impact parenting styles have on the development of young children.

CHILD DEVELOPMENT (cont.)

HSE.HS.5.4 Analyze the theoretical perspectives of social, cultural, and linguistic diversity traits and their impact on child growth and development.

HSE.HS.5.4.a Compare and contrast theorists and theories related to social, cultural, and linguistic diversity guiding childhood behaviors.

HSE.HS.5.4.b Recognize and classify different social, cultural, and linguistic diversity traits of children.

HSE.HS.5.4.c Compare and contrast the impact of the multiple influences that affect the social, cultural, and linguistic diversity traits of young children.

HSE.HS.5.4.d Explain the importance of early childhood education.

HSE.HS.5.5 Describe an understanding of career opportunities and early childhood community resources for supporting families in young children's development.

HSE.HS.5.5.a Describe career opportunities in the field of early childhood.

HSE.HS.5.5.b Identify college certificates and degree options in the field of early childhood.

HSE.HS.5.5.c Identify community resources available for supporting families with young children and their development.

HSE.HS.5.5.d Identify the purpose of the National Association for the Education of Young Children (NAEYC), Nebraska Early Childhood Profession Record System (NECPRS), and other early childhood education resources.

BEST PRACTICES IN EARLY CHILDHOOD EDUCATION WITH WORK-BASED LEARNING

COURSE DESCRIPTION

This intermediate course will focus on assessment, observation, and curriculum within early childhood education building on concepts from the introductory course and Child Development. Topics covered include assessing children from birth to eight years of age, observing aspects of development, analyzing observational data, and creating inclusive early childhood education environments that are safe, responsive, and nurturing. Knowledge and skills will be applied within a structured work-based learning experience. The focus of the hands-on experience will include active engagement in various early childhood education programs.

STANDARDS AND INDICATORS:

HSE.HS.9.1 Differentiate between observation and assessment and skills needed to observe young children and the early childhood environment.

HSE.HS.9.1.a Define what observation is in early childhood practices in regards to child development, environment, and engagement between adults and children.

HSE.HS.9.1.b Describe the skills needed for observation.

HSE.HS.9.1.c Define what assessment is in early childhood practices in regards to child development, environment, and engagement between adults and children.

HSE.HS.9.1.d Describe the importance of observation and assessment in early childhood.

HSE.HS.9.1.e Explain how observation and assessment are used in early childhood.

HSE.HS.9.2 Analyze the progression of the areas (PIES - physical, intellectual, emotional and social) of development for young children.

HSE.HS.9.2.a Identify the developmental progression of infants and toddlers (birth to 36 months), preschool children (3-5 years), and primary grade (K-3rd) children (6-8 years).

HSE.HS.9.2.b Observe infants and toddlers, preschoolers, and primary grade (K-3rd) children and record developmental progression observations.

HSE.HS.9.2.c Analyze observational data from infants and toddlers, preschoolers, and primary grade (K-3rd) children to determine the developmental age level.

BEST PRACTICES IN EARLY CHILDHOOD EDUCATION WITH WORK-BASED LEARNING (cont.)

HSE.HS.9.3 Analyze developmentally appropriate early childhood environments.

HSE.HS.9.3.a Define developmentally appropriate for infants and toddlers, preschoolers, and primary grade (K-3rd) children.

HSE.HS.9.3.b Identify various materials, resources, and components of developmentally appropriate environments for infants and toddlers, preschoolers, and primary grade (K-3rd) children.

HSE.HS.9.3.c Identify the elements of an environmental checklist for assessing an infants and toddlers, preschool, and primary grade (K-3rd) environment.

HSE.HS.9.3.d Observe development tasks of infants and toddlers, preschool, and primary grade (K-3rd) environments.

HSE.HS.9.3.e Compare and contrast the birth through age eight environments.

HSE.HS.9.3.f Analyze observational data from infants and toddlers, preschool, and primary grade (K-3rd) environments to assess environment quality.

HSE.HS.9.4 Develop lesson plans for infants and toddlers, preschoolers, and/or primary grade (K-3rd) children using developmentally appropriate practices.

HSE.HS.9.4.a Identify the components of an effective early childhood lesson plan.

HSE.HS.9.4.b Describe various instructional strategies appropriate for infants and toddlers, preschooler, and primary grade (K-3rd) children.

HSE.HS.9.4.c Create large group, small group, and individual lesson plans that fit within the overall curriculum.

HSE.HS.9.5 Utilize feedback to continuously improve teaching practices.

HSE.HS.9.5.a Evaluate the practicum experience.

HSE.HS.9.5.b Implement continual appraisal of performance and identify strengths and weaknesses.

HSE.HS.9.5.c Develop a plan for continuous professional learning.

EARLY CHILDHOOD EDUCATION PRACTICUM WITH WORK-BASED LEARNING

COURSE DESCRIPTION

This capstone course will focus on analyzing various approaches to early childhood education curriculum models building on concepts from the introductory and intermediate courses. Topics covered will include the critical role of developmentally appropriate practices related to curriculum and planning, the development and implementation of developmentally appropriate learning experiences, and gathering evidence of professional knowledge and skill attainment. Knowledge and skills will be applied within a structured work-based learning experience. The focus of the practicum experience will include creating and gathering evidence of early childhood education skill attainment.

STANDARDS AND INDICATORS:

HSE.HS.10.1 Analyze various components of curriculum models.

HSE.HS.10.1.a Identify different types of curriculum models used in early childhood.

HSE.HS.10.1.b Summarize the relationship among theory, research, and practice in the various curriculum models.

HSE.HS.10.1.c Describe the importance of play in the curriculum to support children's development and learning.

HSE.HS.10.1.d Describe how developmentally appropriate teaching practices relate to the importance of play and curriculum.

HSE.HS.10.1.e Recognize the importance of inclusion for all families and cultural issues for unifying curriculum and learning opportunities.

HSE.HS.10.2 Demonstrate appropriate teaching strategies that enhance each child's learning and development.

HSE.HS.10.2.a Explain the current areas of skills from Nebraska's Core Competencies for Early Childhood Professionals (Child Growth and Development; Health, Safety, and Nutrition; Learning Environments; Planning, Learning Experiences, and Curriculum; Relationships and Social-Emotional Guidance; Observation, Documentation, and Assessment; Partnerships with Families and Communities; Professionalism and Leadership; Administration, Program Planning, and Development).

HSE.HS.10.2.b Demonstrate the skills required in each of the current areas of Nebraska's Core Competencies for Early Childhood Professionals.

EARLY CHILDHOOD EDUCATION PRACTICUM WITH WORK-BASED LEARNING (cont.)

HSE.HS.10.3 Demonstrate integration of curriculum and instruction within a daily schedule.

HSE.HS.10.3.a Develop a daily schedule for an infant-toddler classroom.

HSE.HS.10.3.b Develop a daily schedule for a preschool classroom.

HSE.HS.10.3.c Develop a daily schedule for a kindergarten classroom.

HSE.HS.10.3.d Develop a daily schedule for one primary grade classroom (grades 1-3).

HSE.HS.10.3.e Compare and contrast differences between early childhood settings.

HSE.HS.10.4 Integrate developmentally appropriate learning experiences using effective teaching strategies.

HSE.HS.10.4.a Develop learning opportunities to teach individual children and small groups specific skills through exploration and play.

HSE.HS.10.4.b Implement learning experiences for social and emotional development.

HSE.HS.10.4.c Implement learning experiences for approaches to learning (e.g., support initiative, self-direction, curiosity).

HSE.HS.10.4.e Implement learning experiences for health and physical development.

HSE.HS.10.4.f Implement learning experiences for language and literacy.

HSE.HS.10.4.g Implement learning experiences for mathematics.

HSE.HS.10.4.h Implement learning experiences for science.

HSE.HS.10.4.i Implement learning experiences for creative arts.

EARLY CHILDHOOD EDUCATION PRACTICUM WITH WORK-BASED LEARNING (cont.)

HSE.HS.10.5 Provide evidence of professional knowledge and skills attained from early childhood education coursework and field experiences.

HSE.HS.10.5.a Collect artifacts to demonstrate professional knowledge of working with children ages birth to 36 months, 3-5, and 5-8 (e.g., lesson plans, skill attainment records, evidence of experience).

HSE.HS.10.5.b Write an early childhood education philosophy statement.

HSE.HS.10.5.c Develop an early childhood education resource collection.

HSE.HS.10.6 Model teaching practices with the goal of continuous improvement through a work-based learning experience.

HSE.HS.10.6.a Evaluate the practicum experience.

HSE.HS.10.6.b Implement continual appraisal of performance and identify strengths and weaknesses.

HSE.HS.10.6.c Develop a plan for continuous professional learning.

FAMILIES IN CRISIS

COURSE DESCRIPTION

This intermediate course will explore the impact of crisis situations on families building on concepts from the introductory course(s). Topics include stress, changes in the family life cycle, grief and loss, and mental health disorders. An emphasis will be placed on services available to support families while developing foundational knowledge and skills.

STANDARDS AND INDICATORS:

HSE.HS.13.1 Analyze non-therapeutic helper careers which serve individuals, families, and communities.

HSE.HS.13.1.a Outline the six types of helpers (professional helpers, paraprofessional helpers, helping as a part of their work, volunteer helpers, peer helpers, and informal helpers).

HSE.HS.13.1.b Describe the role of each of the six types of helpers in the process of supporting families in crisis situations.

HSE.HS.13.2 Analyze factors that influence crisis in a family.

HSE.HS.13.2.a List characteristics of healthy and unhealthy families and their effect on society.

HSE.HS.13.2.b Compare and contrast a variety of diverse family structures.

HSE.HS.13.2.c Describe how families help meet the needs of individuals using Maslow's Hierarchy of Needs.

HSE.HS.13.2.d Explain the importance of healthy communication and conflict resolution in a family.

HSE.HS.13.2.e Compare and contrast financial, physical, social, emotional, cultural, and spiritual issues and the role of stress in families.

HSE.HS.13.2.f Define crisis and differentiate a crisis situation from a stressful situation.

HSE.HS.13.2.g Identity common crisis situations families face (e.g., mental illness, abuse, addiction, grief, suicide, job loss, homelessness).

FAMILIES IN CRISIS (cont.)

HSE.HS.13.3 Evaluate societal views of mental health and common mental health disorders.

HSE.HS.13.3.a Define stigma and explain its effects on those with mental illness.

HSE.HS.13.3.b Identify ways to minimize stigma surrounding mental illness and seeking help for mental health problems.

HSE.HS.13.3.c Identify and analyze common risk factors for developing mental disorders (genetic, environmental).

HSE.HS.13.3.d Analyze the process of diagnosing mental illness.

HSE.HS.13.3.e Explain the effects mental illness and suicide has on the family.

HSE.HS.13.3.f Assess the signs and symptoms of a potential suicidal individual and steps that should be taken to seek help.

HSE.HS.13.3.g Identify community resources to help families facing mental health crises.

HSE.HS.13.4 Evaluate the effects of abuse on a family.

HSE.HS.13.4.a Identify types of abuse, causes, and common signs and symptoms in each stage of the family life cycle.

HSE.HS.13.4.b Analyze the roles and their characteristics in an abuse situation (bystander, abuser, victim/survivor).

HSE.HS.13.4.c Identify mandatory reporting laws and processes in Nebraska and resources available to help families.

HSE.HS.13.4.d Explain Adverse Childhood Experiences (ACEs) and their potential effects.

HSE.HS.13.4.e Compare and contrast healthy and unhealthy relationships.

HSE.HS.13.4.f Explain the stages of the Cycle of Abuse considering the barriers surrounding generational abuse.

FAMILIES IN CRISIS (cont.)

HSE.HS.13.5 Evaluate the effects of addiction on the family unit.

HSE.HS.13.5.a	Define addiction and explore the risk factors associated with developing an addiction (genetic, environmental).
HSE.HS.13.5.b	Analyze the science of physical and psychological addiction and how they are connected.
HSE.HS.13.5.c	Assess community resources, treatment, and recovery methods of addiction.
HSE.HS.13.5.d	Explain the connection (comorbidity) between mental illness and addiction.
HSE.HS.13.5.e	Analyze the effects of multiple family members living with addiction at the same time.

HSE.HS.13.6 Analyze the process of grieving.

HSE.HS.13.6.a	Define grief and explain that grief can occur with a variety of losses (e.g., loss of a friendship or pet, moving, loss of experience).
HSE.HS.13.6.b	Compare and contrast a variety of theories of grief (Five Stages, Tonkin's Model, Four Tasks of Grieving, Six Rs, Dual Process Model, Reconstruction of Meaning).
HSE.HS.13.6.c	Analyze family relationships in the grieving process.
HSE.HS.13.6.d	Compare and contrast healthy and unhealthy coping mechanisms for dealing with grief.
HSE.HS.13.6.e	Identify community resources to help families facing grief.

HSE.HS.13.7 Analyze methods of overcoming crisis.

HSE.HS.13.7.a	Describe the qualities of a resilient individual.
HSE.HS.13.7.b	Define mindfulness and techniques used to be mindful in everyday life.
HSE.HS.13.7.c	Explain the importance of mindfulness and self-awareness in overcoming crisis.
HSE.HS.13.7.d	Explain the importance of self-care and list strategies for implementing self-care.
HSE.HS.13.7.e	Describe the importance of growth mindset in regards to neuroplasticity.
HSE.HS.13.7.f	Identify common mental distortions (filtering, overgeneralizing, catastrophizing, personalization).

FAMILY AND COMMUNITY ADVOCACY

COURSE DESCRIPTION

This capstone course explores advocacy as it relates to individuals, families, and communities building on concepts from the introductory and intermediate courses. Topics covered include leadership within advocacy, careers related to advocacy, the role of community support in advocacy, importance of resiliency, and civic responsibilities. The importance of service-learning will also be addressed.

STANDARDS AND INDICATORS:

HSE.HS.14.1 Analyze the various dimensions of being an advocate for individuals, families, and communities.

HSE.HS.14.1.a Define what it means to be an advocate.

HSE.HS.14.1.b Explain the importance of advocating for others.

HSE.HS.14.1.c Identify situations where advocates would be involved.

HSE.HS.14.1.d Discuss the connection between crisis and advocacy.

HSE.HS.14.1.e Explain the history of advocacy and events or periods in time that required advocacy for individuals, families, and communities.

HSE.HS.14.1.f Explain the impact of advocacy on individuals, families, communities, and society.

HSE.HS.14.2 Assess the leadership role of the advocate.

HSE.HS.14.2.a Explain how an advocate is a leader.

HSE.HS.14.2.b Identify strong intrapersonal and interpersonal relationship skills (conflict resolution, teamwork, attentive listening skills).

HSE.HS.14.2.c Analyze how an individual's view of the world is impacted by their level of self-awareness as it relates to individual beliefs and values.

HSE.HS.14.2.d Analyze the importance of ethical behavior as a leader and advocate.

FAMILY AND COMMUNITY ADVOCACY(cont.)

HSE.HS.14.3 Identify careers related to serving families and communities.

HSE.HS.14.3.a Describe specific roles or careers that have a direct connection to advocating for families (e.g., child-life advocate, family advocate).

HSE.HS.14.3.b Assess the relationship between community demographics and advocacy needs.

HSE.HS.14.3.c Explain the role of each of the six types of helpers (professional helpers, paraprofessional helpers, helping as a part of their work, peer helpers, volunteer helpers, and informal helpers) in advocacy.

HSE.HS.14.4 Outline specific community outreach programs, resources, and connections as they relate to families.

HSE.HS.14.4.a Explain the role school organizations can play in advocating for schools and communities.

HSE.HS.14.4.b Describe local family and community services (e.g., organizations, government resources).

HSE.HS.14.4.c Locate local support resources for specific populations.

HSE.HS.14.5 Analyze the importance of individuals, families, and communities participating in their civic duties as local advocates.

HSE.HS.14.5.a Define civic duty.

HSE.HS.14.5.b Explain the role of individuals, families, and communities in advocacy as it relates to living in a democratic society.

HSE.HS.14.5.c Identify how individuals, families, and communities can work towards fulfilling their civic responsibilities.

HSE.HS.14.5.d Describe the process of advocating for an issue.

HSE.HS.14.5.e Explain the role elected officials could play in advocacy.

HSE.HS.14.5.f Describe what advocacy looks like at the local, state, and national levels.

FAMILY AND COMMUNITY ADVOCACY(cont.)

HSE.HS.14.6 Analyze the importance of resilience in families and communities.

HSE.HS.14.6.a Define resilience.

HSE.HS.14.6.b Describe what a resilient individual, family, and community look like and the correlation between them.

HSE.HS.14.6.c Analyze the importance of individuals and families being advocates for themselves and its effects on a community.

HSE.HS.14.7 Analyze service-learning and its connection to civic responsibility.

HSE.HS.14.7.a Identify ways to serve individuals, families, and communities.

HSE.HS.14.7.b Apply knowledge of advocacy and leadership to benefit individuals, families, and communities.

HSE.HS.14.7.c Identify opportunities for personal growth through serving individuals, families, and communities.

HSE.HS.14.7.d Explain how service-learning is a key to fulfilling civic responsibilities.

FUNDAMENTALS OF NUTRITION AND CULINARY ESSENTIALS

COURSE DESCRIPTION

This introductory course provides students with foundational knowledge and skills in food preparation and nutrition planning. Topics covered include career exploration, global food systems, six essential nutrients, dietary recommendations, kitchen and food safety and sanitation, food preparation skills, and meal planning concepts.

STANDARDS AND INDICATORS:

HSE.HS.21.1 Apply skills to meet career goals within the food, nutrition, and culinary industries.

HSE.HS.21.1.a	Demonstrate working as a member of a diverse team.
HSE.HS.21.1.b	Demonstrate professional practices required in the workplace.
HSE.HS.21.1.c	Summarize roles, responsibilities, education, training, and credentialing requirements for careers within the food, nutrition, and culinary industries.
HSE.HS.21.1.d	Compare and contrast personal strengths, talents, interests, and passions to the skills and traits required of the workplace.

HSE.HS.21.2 Analyze U.S. and global food systems and their impact on personal health.

HSE.HS.21.2.a	Compare and contrast definitions of health and wellness.
HSE.HS.21.2.b	Analyze farm to table for a variety of food products grown locally and globally.
HSE.HS.21.2.c	Identify issues surrounding global production of food and how sustainability and conservation practices are connected.

HSE.HS.21.3 Analyze the six essential nutrients and their purposes in the body.

HSE.HS.21.3.a	Identify key bodily functions of the six essential nutrients and the components of each.
HSE.HS.21.3.b	Summarize the digestion, absorption, and metabolic processes associated with the use of nutrients in the digestive system.
HSE.HS.21.3.c	Identify the nutrient density of a variety of foods for each of the nutrients.
HSE.HS.21.3.d	Interpret the impact and effects of over or underconsumption of each nutrient.
HSE.HS.21.3.e	Explain the concept of calories and energy density of foods.
HSE.HS.21.3.f	Apply nutrition mathematical concepts to calculate energy from nutrients and the energy composition of a food item.

FUNDAMENTALS OF NUTRITION AND CULINARY ESSENTIALS (cont.)

HSE.HS.21.4 Integrate current dietary recommendations and guidelines to plan and analyze a healthy diet.

HSE.HS.21.4.a Recognize reliable sources of nutrition information (e.g., Dietary Reference Intakes, Dietary Guidelines, MyPlate model, food labels).

HSE.HS.21.4.b Compare and contrast personal eating habits to current recommendations for a healthy diet.

HSE.HS.21.4.c Apply current dietary recommendations and guidelines to meal planning.

HSE.HS.21.4.d Identify package labeling components.

HSE.HS.21.4.e Analyze the Nutrition Facts label to determine nutrient contributions of a variety of foods.

HSE.HS.21.5 Demonstrate effective food and kitchen safety and sanitation procedures.

HSE.HS.21.5.a Identify microorganisms which are related to food spoilage and foodborne illnesses.

HSE.HS.21.5.b Apply proper personal hygiene, health habits, and industry-standard apparel.

HSE.HS.21.5.c Sequence the requirements for proper receiving and storage of prepared foods and identify signs of food spoilage and contamination (e.g., FIFO - first in first out).

HSE.HS.21.5.d Identify the critical control points and the Temperature Danger Zone during all food handling processes as a method for minimizing the risk of foodborne illness (HACCP system).

HSE.HS.21.5.e Demonstrate kitchen safety practices to prevent accidents (e.g., slips, burns, fires, shock, cuts, equipment accidents, poisoning).

HSE.HS.21.5.f Implement a safety and sanitation inspection and identify modifications necessary for compliance with standards.

FUNDAMENTALS OF NUTRITION AND CULINARY ESSENTIALS (cont.)

HSE.HS.21.6 Demonstrate foundational food preparation techniques.

HSE.HS.21.6.a Demonstrate foundational culinary techniques (measuring, knife skills, folding, creaming) and correct use of kitchen equipment.

HSE.HS.21.6.b Demonstrate mise en place.

HSE.HS.21.6.c Demonstrate proper scaling techniques to convert recipes to yield smaller and larger quantities.

HSE.HS.21.6.d Apply the fundamentals of time, temperature, and cooking methods (dry, moist, combination) to cooking, cooling, reheating, and holding a variety of foods.

HSE.HS.21.6.e Demonstrate the preparation techniques for common essential nutrient-dense food sources (fruits, vegetables, proteins, carbohydrates, dairy products).

HSE.HS.21.6.f Label and store fresh and finished food products appropriately to reduce spoilage.

HSE.HS.21.7 Create a meal plan based on the dietary recommendations for individuals and families across the lifespan.

HSE.HS.21.7.a Identify food purchasing strategies used by consumers (e.g., store layout, comparison shopping).

HSE.HS.21.7.b Develop a market order and time management plan.

HSE.HS.21.7.c Identify the categories of a menu (e.g., appetizers, sandwiches, entrees).

HSE.HS.21.7.d Apply recommended portion sizes to food preparation and serving.

HSE.HS.21.7.e Recognize and make dietary modifications for special dietary needs.

NUTRITION

COURSE DESCRIPTION

This intermediate course provides students with an introduction to the science of nutrition building on concepts from the introductory course. Topics covered include careers in nutrition, digestion and metabolism, functions of the six essential nutrients, nutrient recommendations, diets, meal planning, creating accommodations for consumers, and impacts of the national food system on production and consumerism. Food safety will also be reinforced in this course through hands-on learning opportunities.

STANDARDS AND INDICATORS:

HSE.HS.18.1 Analyze career paths within the food, nutrition, and wellness field.

HSE.HS.18.1.a Summarize education, training, and credentialing requirements and career opportunities in the food, nutrition, and wellness field.

HSE.HS.18.1.b Differentiate between personal attitudes and traits of food, nutrition, and wellness professionals in regards to responsibility, accountability, ethics, and effectiveness in the workplace.

HSE.HS.18.2 Identify and Explain the parts and functions of the digestive system.

HSE.HS.18.2.a Identify the anatomy of the gastrointestinal system.

HSE.HS.18.2.b Explain the digestive process.

HSE.HS.18.2.c Explain the utilization and short, medium, and long-term storage of nutrients inside the body.

HSE.HS.18.2.d Explain how the body excretes waste products.

NUTRITION (cont.)

HSE.HS.18.3 Analyze individual characteristics specific to macronutrients, micronutrients, and water.

HSE.HS.18.3.a Identify the chemical composition and energy yield of carbohydrates, proteins, and fats.

HSE.HS.18.3.b Differentiate between soluble and insoluble fiber and complete and incomplete proteins.

HSE.HS.18.3.c Identify the functions of vitamins, minerals, and water.

HSE.HS.18.3.d Identify the categories of vitamins (including fat and water soluble) and minerals (including major and trace).

HSE.HS.18.3.e Identify the recommended intake levels of and food sources high in vitamins, minerals, and water.

HSE.HS.18.3.f Explain deficiencies and toxicities related to vitamin and mineral consumption.

HSE.HS.18.4 Analyze current dietary recommendations and guidelines for planning a healthy diet.

HSE.HS.18.4.a Explain the Dietary Reference Intake terms Estimated Average Requirement (EAR), Recommended Daily Allowance (RDA), Adequate Intake (AI), and Tolerable Upper Intake Level (UL).

HSE.HS.18.4.b Describe the concepts of variety, moderation, and balance as the foundation of a healthy diet.

HSE.HS.18.4.c Compare and contrast various food recording tools.

HSE.HS.18.4.d Utilize nutrition information to calculate nutrient composition of foods, meals, and daily intake.

HSE.HS.18.4.e Discuss short- and long-term impact of current dietary intake habits.

HSE.HS.18.4.f Compare and contrast the nutrient density of whole foods, convenience foods, and prepared foods to make informed food choices.

NUTRITION (cont.)

HSE.HS.18.5 Analyze the effects of dietary patterns and practices on an individual's health and well-being across the lifespan.

HSE.HS.18.5.a Identify a variety of healthy dietary patterns.

HSE.HS.18.5.b Compare and contrast popular fad diets and food industry trends.

HSE.HS.18.5.c Describe energy balance, physical activity, and weight control to prevent obesity and achieve nutritional adequacy.

HSE.HS.18.5.d Explain weight gain/weight loss concepts considering basal metabolic rate (BMR) and total daily energy expenditure (TDEE).

HSE.HS.18.5.e Identify the prevention, symptoms, and treatment of eating disorders.

HSE.HS.18.5.f Compare and contrast food allergies and food intolerances.

HSE.HS.18.5.g Apply dietary recommendations and guidelines to design meal plans for individuals with special dietary needs (e.g., heart disease, diabetes, celiac disease).

HSE.HS.18.6 Analyze U.S. and global food systems and impacts on individual, family, and community health.

HSE.HS.18.6.a Explain the biological, social, psychological, economic, political, and/or cultural influences on individual and community nutrition practices.

HSE.HS.18.6.b Summarize the effects of social determinants on personal food choices, food systems, and public health.

HSE.HS.18.6.c Explain the impact of cultural influences on food consumption and traditions within family units.

HSE.HS.18.6.d Analyze the impact of the rising cost of food, poverty, food deserts, food insecurity, and the growing world population on individuals, families, communities, and society.

HSE.HS.18.6.e Compare and contrast food and nutrition policies and their impact on individuals, families, communities, and society.

HSE.HS.18.6.f Discuss different approaches and solutions including the critical science perspective to address food system change through advocacy, policy, and/or political action.

FOOD SCIENCE

COURSE DESCRIPTION

This capstone course focuses on food science and the food science industry building on concepts from the introductory and intermediate courses. Topics of study include food science history and career opportunities, evaluation of the six essential nutrients, role of science and technology in food products, and food development, production, and marketing. Food safety will also be reinforced in this course through hands-on learning opportunities.

STANDARDS AND INDICATORS:

HSE.HS.19.1 Analyze the food science industry.

HSE.HS.19.1.a Explain the history of food science.

HSE.HS.19.1.b Identify career opportunities within the food science industry.

HSE.HS.19.1.c Compare and contrast food production companies and their products.

HSE.HS.19.1.d Analyze career opportunities matched to personal life skills, talents, career goals, and local industry trends within the food science industry.

HSE.HS.19.2 Demonstrate the recommended procedures and safe equipment use in the food science lab facility.

HSE.HS.19.2.a Demonstrate leadership, effective communication, and teamwork skills in the food science lab.

HSE.HS.19.2.b Demonstrate the safe and accurate use of measuring, preparation, heating, packaging, and storage equipment in the lab setting.

HSE.HS.19.2.c Utilize the scientific method.

HSE.HS.19.3 Identify and evaluate the basic principles of proper nutrition, including the identification and evaluation of the six essential nutrients needed for good health.

HSE.HS.19.3.a Identify the roles and properties of carbohydrates, fats, proteins, vitamins, minerals and water.

HSE.HS.19.3.b Analyze the effects of food science and technology on meeting nutritional needs.

HSE.HS.19.3.c Analyze how the scientific and technical advances in product development, food processing, storage, and distribution influence nutrition and wellness.

FOOD SCIENCE (cont.)

HSE.HS.19.4 Outline the fundamentals of food chemistry.

HSE.HS.19.4.a Define basic food chemistry principles (e.g., elements, compounds, heterogeneous and homogeneous mixtures, solutions, colloidal dispersions, emulsions, pH applications, catalysts, use of enzymes, use of leavening agents, thermodynamics).

HSE.HS.19.4.b Describe basic chemical reactions that happen during food preparation and their effect(s) on nutrition.

HSE.HS.19.4.c Differentiate between simple and complex carbohydrates and their uses in foods for impact on digestion, nutrition, and food preparation procedures.

HSE.HS.19.4.d Describe the functions of amino acids and proteins and their uses in foods for impact on digestion, nutrition, and food preparation procedures.

HSE.HS.19.4.e Relate the composition of fats and proteins to their functions in foods and their i mpact on digestion, nutrition, and food preparation procedures.

HSE.HS.19.4.f Identify the role of water in food production.

HSE.HS.19.5 Analyze the role of food safety and sanitation on microorganisms in food products.

HSE.HS.19.5.a Differentiate between parasites, bacteria, yeasts, molds, and viruses.

HSE.HS.19.5.b Identify microorganisms that cause foodborne illness in humans and how to control or eliminate them.

HSE.HS.19.5.c Analyze the effects of technological advances on selection, preparation, packaging, and storage of food.

HSE.HS.19.5.d Analyze state and federal laws and regulations governing food inspection standards.

HSE.HS.19.5.e Identify appropriate packaging for food safety and label requirements.

HSE.HS.19.5.f Demonstrate safe preparation/heating/storage methods on a variety of food products.

FOOD SCIENCE (cont.)

HSE.HS.19.6 Assess the biology and physics of food production.

HSE.HS.19.6.a	Describe the structure of water in different states and its influence on a food product's viscosity/fluidity and water activity.
HSE.HS.19.6.b	Explain the difference between smoke point, flash point, and fire point when dealing with oils in processing foods.
HSE.HS.19.6.c	Classify the chemical reactions and physical changes that occur in a variety of cooking/preparation methods.
HSE.HS.19.6.d	Identify the purpose of natural and artificial food additives.
HSE.HS.19.6.e	Identify agencies involved in regulating food additives.
HSE.HS.19.5.f	Describe properties of a desirable food preservative.

HSE.HS.19.7 Evaluate food products for appropriate production and marketing strategies.

HSE.HS.19.7.a	Analyze various factors that affect food preferences in the marketing of food to a variety of populations.
HSE.HS.19.7.b	Compare and contrast flavor, texture, aroma, and appearance of various foods.
HSE.HS.19.7.c	Analyze the impact of food presentation methods and techniques on consumer appeal of food and products.
HSE.HS.19.7.d	Analyze data when making development and marketing decisions.
HSE.HS.19.7.e	Review food product cost and price recommendations for wholesale and retail sales.

ENTREPRENEURSHIP (BMM)

COURSE DESCRIPTION

Entrepreneurship is a course with emphasis on the evaluation of the business skills and commitment necessary to successfully operate an entrepreneurial venture and review the challenges and rewards of entrepreneurship. The role of entrepreneurial businesses in the United States and the impact on the national and global economy will be explored.

STANDARDS AND INDICATORS:

BMM.HS.13.1 Identify characteristics and skills of entrepreneurs.

BMM.HS.13.1.a	Analyze personal strengths, skills, and talents necessary to be an entrepreneur.
BMM.HS.13.1.b	Identify responsible behavior, attitude, and leadership ability.
BMM.HS.13.1.c	Demonstrate problem-solving skills.
BMM.HS.13.1.d	Describe the history and development of successful and non-successful entrepreneurial ventures.
BMM.HS.13.1.e	Explore career opportunities in entrepreneurship.

BMM.HS.13.2 Evaluate business ownership as related to entrepreneurship.

BMM.HS.13.2.a	Identify and compare advantages and disadvantages of various forms of business ownership.
BMM.HS.13.2.b	Explain the legal and ethical issues affecting businesses.
BMM.HS.13.2.c	Analyze the advantages and disadvantages of methods of entering an entrepreneurial venture.

ENTREPRENEURSHIP (cont.)

BMM.HS.13.3 Analyze the management, financial, marketing, and legal skills necessary to successfully operate and grow an entrepreneurial venture.

BMM.HS.13.3.a	Describe the importance of strategic management to a small entrepreneurial business.
BMM.HS.13.3.b	Develop vision, mission, goals, objectives, and policies for an entrepreneurial venture.
BMM.HS.13.3.c	Explain the importance of effective financial management in developing, growing, and sustaining an entrepreneurial venture.
BMM.HS.13.3.d	Develop a marketing plan and strategies to position the product and/or service in the target market.
BMM.HS.13.3.e	Identify the legal documents and financial records for business operations.
BMM.HS.13.3.f	Evaluate the venture idea utilizing the components of a business plan.

BMM.HS.13.4 Analyze the role of entrepreneurship in the global economy.

BMM.HS.13.4.a	Identify entrepreneurial venture opportunities in international trade.
BMM.HS.13.4.b	Analyze global issues and trends for entrepreneurial ventures.
BMM.HS.13.4.c	Determine the impact of cultural and social requirements on international trade.

INTRODUCTION TO AGRICULTURE, FOOD, AND NATURAL RESOURCES (AFNR)

COURSE DESCRIPTION

The introductory course for the Agriculture, Food, and Natural Resources Career Cluster provides a knowledge base in the major components of the industry. Learners will be exposed to a broad range of agriculture, food, and natural resources careers, cluster foundation knowledge and skills, and introduction to leadership development and the National FFA Organization (FFA). Classroom and laboratory activities are supplemented through supervised agricultural experiences, career exploration activities, and FFA leadership programs and activities.

STANDARDS AND INDICATORS:

AFNR.HS.20.1 Apply leadership skills and knowledge through the study of the FFA Career and Technical Student Organization (CTSO).

AFNR.HS.20.1.a	Summarize the three-component model of a comprehensive Agricultural Education Program.
AFNR.HS.20.1.b	Recognize the mission, purpose, and key historical moments in the National FFA Organization.
AFNR.HS.20.1.c	Investigate opportunities available for a member of FFA.
AFNR.HS.20.1.d	Examine and practice public speaking.
AFNR.HS.20.1.e	Apply the basics of Parliamentary Procedure.

AFNR.HS.20.2 Apply career readiness principles in an authentic workplace environment.

AFNR.HS.20.2.a	Summarize the five components of a Foundational Supervised Agricultural Experience (SAE).
AFNR.HS.20.2.b	Investigate the five options for an Immersion SAE (Work-Based Learning experience).
AFNR.HS.20.2.c	Articulate elements of career plans (e.g., academic, AFNR/CTE coursework, FFA/CTSO participation, immersion SAE) required in an AFNR workplace setting.

INTRODUCTION TO AGRICULTURE, FOOD, AND NATURAL RESOURCES (AFNR) (cont.)

AFNR.HS.20.3 Examine career options within agriculture, food, and natural resource systems and perform research based on personal interests.

AFNR.HS.20.3.a	Summarize the three-component model of a comprehensive Agricultural Education Program.
AFNR.HS.20.3.b	Recognize the mission, purpose, and key historical moments in the National FFA Organization.
AFNR.HS.20.3.c	Investigate opportunities available for a member of FFA.
AFNR.HS.20.3.d	Examine and practice public speaking.
AFNR.HS.20.3.e	Apply the basics of Parliamentary Procedure.
AFNR.HS.20.3.c	Determine common qualities of a specific career area (e.g., educational requirements, work environment).
AFNR.HS.20.3.d	Identify necessary steps to prepare for a specific AFNR careers (coursework, post-secondary, needed skills).
AFNR.HS.20.3.e	Identify opportunities for work placed learning within your community.

AFNR.HS.20.4 Evaluate the role of water, air, soil, and habitat in the management of natural resource systems.

AFNR.HS.20.4.a	Summarize and classify the different natural resources (e.g., water, soil, renewable, non-renewable).
AFNR.HS.20.4.b	Summarize the components that comprise all ecosystems.
AFNR.HS.20.4.c	Compare and categorize biotic and abiotic factors in various habitats.
AFNR.HS.20.4.d	Identify the importance of water and air quality.
AFNR.HS.20.4.e	Identify the physical qualities of the soil that determine use for the environmental service system.
AFNR.HS.20.4.f	Describe the importance of water conservation.

INTRODUCTION TO AGRICULTURE, FOOD, AND NATURAL RESOURCES (AFNR) (cont.)

AFNR.HS.20.5 Differentiate key terms, components, and uses for animals in animal systems.

AFNR.HS.20.5.a	Identify and summarize key terminology used in animal systems (e.g., heifer vs. cow, bull vs. steer, calving, farrowing, bovine, equine).
AFNR.HS.20.5.b	Define the function of basic external and internal organs of animals.
AFNR.HS.20.5.c	Differentiate production animals from companion animals.
AFNR.HS.20.5.d	Classify the major components of production animal systems (e.g., feedlots, cow-calf operations, farrow, finish) and regional distribution.
AFNR.HS.20.5.e	Categorize uses for and products generated from production animals.
AFNR.HS.20.5.f	Classify and determine uses for companion animals.

AFNR.HS.20.6 Summarize knowledge of plant anatomy and the functions of plant structures and processes to activities associated with plant systems.

AFNR.HS.20.6.a	Classify major components of the plant industry.
AFNR.HS.20.6.b	Classify plants according to life cycles.
AFNR.HS.20.6.c	Identify the function of plant parts.
AFNR.HS.20.6.d	Identify basic processes and role of photosynthesis, respiration, and transpiration.
AFNR.HS.20.6.e	Differentiate between sexual and asexual propagation techniques.

AFNR.HS.20.7 Synthesize the historical, social, cultural, and potential applications of biotechnology.

AFNR.HS.20.7.a	Summarize biotechnology and the historical impact it has had on agriculture.
AFNR.HS.20.7.b	Identify current and future applications of biotechnology in agriculture, food, and natural resources.
AFNR.HS.20.7.c	Identify common methodologies used in biotechnology.
AFNR.HS.20.7.d	Identify basic cellular structures and genetic terminology.
AFNR.HS.20.7.e	Summarize the scientific and social implications of modern genetically modified organisms.

INTRODUCTION TO AGRICULTURE, FOOD, AND NATURAL RESOURCES (AFNR) (cont.)

AFNR.HS.20.8 Summarize knowledge of the food products & processing industry.

AFNR.HS.20.8.a Evaluate how different foods affect the human body and its physical and cellular processes.

AFNR.HS.20.8.b Identify food safety and sanitation procedures for handling and processing to as sure food quality.

AFNR.HS.20.8.c Summarize food safety procedures when storing and distributing products to consumption.

AFNR.HS.20.8.d Explain the producer-to-consumer processes in the food industry.

AFNR.HS.20.9 Summarize management principles, skills, and practices in agribusiness.

AFNR.HS.20.9.a Define major sectors within the agribusiness industry.

AFNR.HS.20.9.b Identify standard production and agribusiness records and plans.

AFNR.HS.20.9.c Identify common agribusiness terminology and tools to track and analyze business decisions and transactions.

AFNR.HS.20.9.d Articulate the role of markets, trade, competition, and price in relation to business sales and market planning.

AFNR.HS.20.9.e Identify aspects needed to develop and implement an effective record keeping strategy for financial and human resources.

AFNR.HS.20.10 Synthesize the historical, social, cultural, and potential applications of biotechnology.

AFNR.HS.20.10.a Identify and practice safe laboratory practices and procedures.

AFNR.HS.20.10.b Select and operate proper tools and equipment related to agricultural processes observing all safety precautions.

AFNR.HS.20.10.c Develop an agricultural project plan with the required project plan components (e.g., purpose, materials, budget, skills required, timeframe).

AFNR.HS.20.10.d Assess a project plan to completion.

LIFESPAN NUTRITION AND WELLNESS

COURSE DESCRIPTION

This capstone course focuses on nutritional needs throughout the lifespan building on concepts from the introductory and intermediate courses. This course focuses on connecting lifespan development to nutrition and exercise practices with the intent of contributing to wellness and longevity. Food safety will also be reinforced in this course through hands-on learning opportunities.

STANDARDS AND INDICATORS:

HSE.HS.31.1 Identify and explain basic nutrition principles for meeting nutrition and wellness needs.

- HSE.HS.31.1.a Identify the function and nutrient dense sources of the six essential nutrients.
- HSE.HS.31.1.b Explain current dietary recommendations.
- HSE.HS.31.1.c Calculate energy intake for weight management.
- HSE.HS.31.1.d Describe useful nutrition assessment tools for use with each stage of the lifespan.
- HSE.HS.31.1.e Explain resources for nutrition and wellness needs to use with each stage of the lifespan.

HSE.HS.31.2 Evaluate nutrition and wellness needs during pre-conception, pregnancy, and lactation.

- HSE.HS.31.2.a Analyze the essential nutrients for optimal health for individuals during pre-conception, pregnancy and lactation.
- HSE.HS.31.2.b Explain nutrition-related medical conditions that may occur during pregnancy and their impact on the mother and fetus.
- HSE.HS.31.2.c Classify the recommendations for physical activity during preconception and pregnancy.
- HSE.HS.31.2.d Compare and contrast the ideal diet for a pregnant woman with the ideal diet for a lactating mother, highlighting the specific nutritional differences.
- HSE.HS.31.2.e Explain circumstances under which a mother should not breastfeed.

LIFESPAN NUTRITION & WELLNESS (cont.)

HSE.HS.31.3 Evaluate nutrition and wellness needs during infancy, toddler, preschool, and middle childhood stages.

HSE.HS.31.3.a Summarize the connection between good nutrition and physical, intellectual, emotional, and social development.

HSE.HS.31.3.b Identify diet recommendations for infants, toddlers, preschoolers, and primary grade children.

HSE.HS.31.3.c Compare the nutritional value of breastmilk to the nutritional value of formula.

HSE.HS.31.3.d Explain specific nutrient roles in the body of a developing child, giving special attention to vitamins and minerals.

HSE.HS.31.3.e Examine the role of a caregiver in providing food from infancy through middle childhood.

HSE.HS.31.3.f Describe the challenges associated with children's diets and outline strategies for dealing with such problems (e.g., childhood allergies, childhood obesity, aversions, influence of media and screen time).

HSE.HS.31.4 Evaluate nutrition and wellness needs during adolescence.

HSE.HS.31.4.a Explain the growth and consequent nutritional needs of adolescence.

HSE.HS.31.4.b Describe how eating patterns in adolescents affect overall health (e.g., sleep quality, energy, mood, physical development).

HSE.HS.31.4.c Identify nutrition-related medical conditions that may occur during adolescence along with prevention/intervention strategies.

HSE.HS.31.4.d Explain the spectrum of body dissatisfaction, dieting, disordered eating, and eating disorders.

HSE.HS.31.4.e Explain the recommendations for physical activity during adolescence.

LIFESPAN NUTRITION & WELLNESS (cont.)

HSE.HS.31.5 Evaluate the difference between the recommendations for a typical adolescent versus an adolescent involved in vigorous physical activity.

HSE.HS.31.5.a Describe the role of each nutrient for peak performance of the physically active adolescent.

HSE.HS.31.5.b Differentiate nutrient needs based on type, frequency, intensity, and duration of exercise.

HSE.HS.31.5.c Summarize the recommendations for assessing and maintaining healthy hydration.

HSE.HS.31.5.d Evaluate pre- and post-workout diet plans and timing of meals and snack intake for the physically active adolescent.

HSE.HS.3156.e Describe supplements and their use.

HSE.HS.31.6 Evaluate nutrition and wellness needs during adulthood and older adulthood.

HSE.HS.31.6.a Identify nutrient needs for adulthood and why they change over time.

HSE.HS.31.6.b Outline nutrition-related medical conditions that may occur during adulthood along with prevention/intervention strategies.

HSE.HS.31.6.c Identify strategies for weight management and the challenges of weight management during adulthood and older adulthood.

HSE.HS.31.6.d Examine the role of nutrition in fostering longevity and in reducing the risk of chronic diseases.

HSE.HS.31.6.e Explain the recommendations for physical activity during adulthood.

HSE.HS.31.7 Identify career options as they pertain to nutrition and wellness throughout the lifespan.

HSE.HS.31.7.a Identify a variety of careers related to nutrition and wellness through the lifespan (e.g., job shadowing, guest speakers, interview professionals, visit a professional or educational setting).

HSE.HS.31.7.b Summarize skills and knowledge necessary for a successful career in nutrition and wellness careers.

HSE.HS.31.7.c Identify professional and ethical considerations in various nutrition and wellness work settings.

FUNDAMENTALS OF NUTRITION AND CULINARY ESSENTIALS

COURSE DESCRIPTION

This introductory course provides students with foundational knowledge and skills in food preparation and nutrition planning. Topics covered include career exploration, global food systems, six essential nutrients, dietary recommendations, kitchen and food safety and sanitation, food preparation skills, and meal planning concepts.

STANDARDS AND INDICATORS:

HSE.HS.21.1 Apply skills to meet career goals within the food, nutrition, and culinary industries.

HSE.HS.21.1.a Demonstrate working as a member of a diverse team.

HSE.HS.21.1.b Demonstrate professional practices required in the workplace.

HSE.HS.21.1.c Summarize roles, responsibilities, education, training, and credentialing requirements for careers within the food, nutrition, and culinary industries.

HSE.HS.21.1.d Compare and contrast personal strengths, talents, interests, and passions to the skills and traits required of the workplace.

HSE.HS.21.2 Analyze U.S. and global food systems and their impact on personal health.

HSE.HS.21.2.a Compare and contrast definitions of health and wellness.

HSE.HS.21.2.b Analyze farm to table for a variety of food products grown locally and globally.

HSE.HS.21.2.c Identify issues surrounding global production of food and how sustainability and conservation practices are connected.

HSE.HS.21.3 Analyze the six essential nutrients and their purposes in the body.

HSE.HS.21.3.a Identify key bodily functions of the six essential nutrients and the components of each.

HSE.HS.21.3.b Summarize the digestion, absorption, and metabolic processes associated with the use of nutrients in the digestive system.

HSE.HS.21.3.c Identify the nutrient density of a variety of foods for each of the nutrients.

HSE.HS.21.3.d Interpret the impact and effects of over or underconsumption of each nutrient.

HSE.HS.21.3.e Explain the concept of calories and energy density of foods.

HSE.HS.21.3.f Apply nutrition mathematical concepts to calculate energy from nutrients and the energy composition of a food item.

FUNDAMENTALS OF NUTRITION AND CULINARY ESSENTIALS (cont.)

HSE.HS.21.4 Integrate current dietary recommendations and guidelines to plan and analyze a healthy diet.

HSE.HS.21.4.a Recognize reliable sources of nutrition information (e.g., Dietary Reference Intakes, Dietary Guidelines, MyPlate model, food labels).

HSE.HS.21.4.b Compare and contrast personal eating habits to current recommendations for a healthy diet.

HSE.HS.21.4.c Apply current dietary recommendations and guidelines to meal planning.

HSE.HS.21.4.d Identify package labeling components.

HSE.HS.21.4.e Analyze the Nutrition Facts label to determine nutrient contributions of a variety of foods.

HSE.HS.21.5 Demonstrate effective food and kitchen safety and sanitation procedures.

HSE.HS.21.5.a Identify microorganisms which are related to food spoilage and foodborne illnesses.

HSE.HS.21.5.b Apply proper personal hygiene, health habits, and industry-standard apparel.

HSE.HS.21.5.c Sequence the requirements for proper receiving and storage of prepared foods and identify signs of food spoilage and contamination (e.g., FIFO - first in first out).

HSE.HS.21.5.d Identify the critical control points and the Temperature Danger Zone during all food handling processes as a method for minimizing the risk of foodborne illness (HACCP system).

HSE.HS.21.5.e Demonstrate kitchen safety practices to prevent accidents (e.g., slips, burns, fires, shock, cuts, equipment accidents, poisoning).

HSE.HS.21.5.f Implement a safety and sanitation inspection and identify modifications necessary for compliance with standards.

FUNDAMENTALS OF NUTRITION AND CULINARY ESSENTIALS (cont.)

HSE.HS.21.6 Demonstrate foundational food preparation techniques.

HSE.HS.21.6.a Demonstrate foundational culinary techniques (measuring, knife skills, folding, creaming) and correct use of kitchen equipment.

HSE.HS.21.6.b Demonstrate mise en place.

HSE.HS.21.6.c Demonstrate proper scaling techniques to convert recipes to yield smaller and larger quantities.

HSE.HS.21.6.d Apply the fundamentals of time, temperature, and cooking methods (dry, moist, combination) to cooking, cooling, reheating, and holding a variety of foods.

HSE.HS.21.6.e Demonstrate the preparation techniques for common essential nutrient-dense food sources (fruits, vegetables, proteins, carbohydrates, dairy products).

HSE.HS.21.6.f Label and store fresh and finished food products appropriately to reduce spoilage.

HSE.HS.21.7 Create a meal plan based on the dietary recommendations for individuals and families across the lifespan.

HSE.HS.21.7.a Identify food purchasing strategies used by consumers (e.g., store layout, comparison shopping).

HSE.HS.21.7.b Develop a market order and time management plan.

HSE.HS.21.7.c Identify the categories of a menu (e.g., appetizers, sandwiches, entrees, etc).

HSE.HS.21.7.d Apply recommended portion sizes to food preparation and serving.

HSE.HS.21.7.e Recognize and make dietary modifications for special dietary needs.

INTRODUCTION TO FAMILY AND CONSUMER SCIENCES

COURSE DESCRIPTION

This introductory course is intended to provide a basic overview of all areas within Family and Consumer Sciences. Basic knowledge and career skills that are applicable to personal growth and career development will be covered. Additional course topics include: leadership, communication, child development, mental health, nutrition and food preparation, clothing and interior design, and personal finance.

STANDARDS AND INDICATORS:

HSE.HS.27.1 Apply career-readiness skills and identify potential career opportunities.

HSE.HS.27.1.a	Summarize the history of Family and Consumer Sciences and the impact of the field on individuals, families, and communities to make connections to current career-ready skills.
HSE.HS.27.1.b	Identify personal traits and compare them with potential career opportunities.
HSE.HS.27.1.c	Investigate career opportunities, including but not limited to careers within Family and Consumer Sciences.

HSE.HS.27.2 Apply leadership in family, workplace, and community.

HSE.HS.27.2.a	Investigate goal setting and resource management.
HSE.HS.27.2.b	Explain leadership styles and the impact of each style on others.
HSE.HS.27.2.c	Demonstrate strategies that utilize the strengths and minimize the limitations of team members.
HSE.HS.27.2.d	Describe the decision-making process.
HSE.HS.27.2.e	Demonstrate leadership skills within the family, workplace, or community.
HSE.HS.27.2.f	Investigate opportunities available for a member of FCCLA and/or Educators Rising.

INTRODUCTION TO FAMILY AND CONSUMER SCIENCES (cont.)

HSE.HE.27.3 Evaluate personal and work relationships.

HSE.HS.27.3.a Compare and contrast healthy and unhealthy personal and work relationships.

HSE.HS.27.3.b Evaluate personal traits and how they can be used to improve relationships.

HSE.HS.27.3.c Demonstrate effective communication using a variety of delivery methods that can improve personal and work relationships.

HSE.HS.27.3.d Demonstrate critical thinking and conflict resolution in personal and career settings.

HSE.HS.27.3.e Demonstrate inclusive teamwork in the family, workplace, or community.

HSE.HS.27.4 Assess the family unit during each stage of the lifespan.

HSE.HS.27.4.a Identify the stages of development across the lifespan.

HSE.HS.27.4.b Categorize milestones of development in the areas of physical, intellectual, emotional, and social across the lifespan.

HSE.HS.27.4.c Analyze family as the basic unit of society.

HSE.HS.27.4.d Describe the impact of conditions that could influence the well-being of individuals and families.

HSE.HS.27.5 Identify careers in counseling, mental health, and human behavior.

HSE.HS.27.5.a Identify the importance of self-care and self-awareness.

HSE.HS.27.5.b Summarize empathy.

HSE.HS.27.5.c Examine the influence of cultural and societal issues on mental and emotional health.

HSE.HS.27.5.d Connect the role of mental health and counseling to today's society

INTRODUCTION TO FAMILY AND CONSUMER SCIENCES (cont.)

HSE.HS.27.6 Differentiate skills for food preparation and maintaining nutrition and wellness.

HSE.HS.27.6.a Identify basic food safety and sanitation practices.

HSE.HS.27.6.b Demonstrate basic food preparation practices.

HSE.HS.27.6.c Create meal plans that utilize food availability and cost effectiveness.

HSE.HS.27.6.d Identify basic kitchen equipment and terminology.

HSE.HS.27.6.e Analyze effects of personal choices on nutrition and wellness.

HSE.HS.27.6.f Identify basic nutrients required for healthy living.

HSE.HS.27.7 Apply skills required for fashion construction, housing, and interior design.

HSE.HS.27.7.a Classify the elements and principles of design.

HSE.HS.27.7.b Describe the basic care of different textiles.

HSE.HS.27.7.c Compare and contrast design features in fashion and/or interior design.

HSE.HS.27.7.d Produce, alter, or repair fashion and apparel items.

HSE.HS.27.7.e Apply the principles and elements of design to design a room reflecting personal, family, or community style and needs.

HSE.HS.27.8 Explain consumerism and personal finance.

HSE.HS.27.8.a Identify factors that influence consumer choices.

HSE.HS.27.8.b Summarize the rights and responsibilities of consumers.

HSE.HS.27.8.c Outline the steps for creating a budget.

HSE.HS.27.8.d Describe procedures for using savings and checking accounts.

HSE.HS.27.8.e Compare the benefits and costs of credit.

NUTRITION

COURSE DESCRIPTION

This intermediate course provides students with an introduction to the science of nutrition building on concepts from the introductory course. Topics covered include careers in nutrition, digestion and metabolism, functions of the six essential nutrients, nutrient recommendations, diets, meal planning, creating accommodations for consumers, and impacts of the national food system on production and consumerism. Food safety will also be reinforced in this course through hands-on learning opportunities.

STANDARDS AND INDICATORS:

HSE.HS.18.1 Analyze career paths within the food, nutrition, and wellness field.

HSE.HS.18.1.a Summarize education, training, and credentialing requirements and career opportunities in the food, nutrition, and wellness field.

HSE.HS.18.1.b Differentiate between personal attitudes and traits of food, nutrition, and wellness professionals in regards to responsibility, accountability, ethics, and effectiveness in the workplace.

HSE.HS.18.2 Identify and Explain the parts and functions of the digestive system.

HSE.HS.18.2.a Identify the anatomy of the gastrointestinal system.

HSE.HS.18.2.b Explain the digestive process.

HSE.HS.18.2.c Explain the utilization and short, medium, and long-term storage of nutrients inside the body.

HSE.HS.18.2.d Explain how the body excretes waste products.

NUTRITION (cont.)

HSE.HS.18.3 Analyze individual characteristics specific to macronutrients, micronutrients, and water.

HSE.HS.18.3.a Identify the chemical composition and energy yield of carbohydrates, proteins, and fats.

HSE.HS.18.3.b Differentiate between soluble and insoluble fiber and complete and incomplete proteins.

HSE.HS.18.3.c Identify the functions of vitamins, minerals, and water.

HSE.HS.18.3.d Identify the categories of vitamins (including fat and water soluble) and minerals (including major and trace).

HSE.HS.18.3.e Identify the recommended intake levels of and food sources high in vitamins, minerals, and water.

HSE.HS.18.3.f Explain deficiencies and toxicities related to vitamin and mineral consumption.

HSE.HS.18.4 Analyze current dietary recommendations and guidelines for planning a healthy diet.

HSE.HS.18.4.a Explain the Dietary Reference Intake terms Estimated Average Requirement (EAR), Recommended Daily Allowance (RDA), Adequate Intake (AI), and Tolerable Upper Intake Level (UL).

HSE.HS.18.4.b Describe the concepts of variety, moderation, and balance as the foundation of a healthy diet.

HSE.HS.18.4.c Compare and contrast various food recording tools.

HSE.HS.18.4.d Utilize nutrition information to calculate nutrient composition of foods, meals, and daily intake.

HSE.HS.18.4.e Discuss short- and long-term impact of current dietary intake habits.

HSE.HS.18.4.f Compare and contrast the nutrient density of whole foods, convenience foods, and prepared foods to make informed food choices.

NUTRITION (cont.)

HSE.HS.18.5 Analyze the effects of dietary patterns and practices on an individual's health and well-being across the lifespan.

HSE.HS.18.5.a Identify a variety of healthy dietary patterns.

HSE.HS.18.5.b Compare and contrast popular fad diets and food industry trends.

HSE.HS.18.5.c Describe energy balance, physical activity, and weight control to prevent obesity and achieve nutritional adequacy.

HSE.HS.18.5.d Explain weight gain/weight loss concepts considering basal metabolic rate (BMR) and total daily energy expenditure (TDEE).

HSE.HS.18.5.e Identify the prevention, symptoms, and treatment of eating disorders.

HSE.HS.18.5.f Compare and contrast food allergies and food intolerances.

HSE.HS.18.5.g Apply dietary recommendations and guidelines to design meal plans for individuals with special dietary needs (e.g., heart disease, diabetes, celiac disease).

HSE.HS.18.6 Analyze U.S. and global food systems and impacts on individual, family, and community health.

HSE.HS.18.6.a Explain the biological, social, psychological, economic, political, and/or cultural influences on individual and community nutrition practices.

HSE.HS.18.6.b Summarize the effects of social determinants on personal food choices, food systems, and public health.

HSE.HS.18.6.c Explain the impact of cultural influences on food consumption and traditions within family units.

HSE.HS.18.6.d Analyze the impact of the rising cost of food, poverty, food deserts, food insecurity, and the growing world population on individuals, families, communities, and society.

HSE.HS.18.6.e Compare and contrast food and nutrition policies and their impact on individuals, families, communities, and society.

HSE.HS.18.6.f Discuss different approaches and solutions including the critical science perspective to address food system change through advocacy, policy, and/or political action.

LIFESPAN NUTRITION AND WELLNESS

COURSE DESCRIPTION

This capstone course focuses on nutritional needs throughout the lifespan building on concepts from the introductory and intermediate courses. This course focuses on connecting lifespan development to nutrition and exercise practices with the intent of contributing to wellness and longevity. Food safety will also be reinforced in this course through hands-on learning opportunities.

STANDARDS AND INDICATORS:

HSE.HS.31.1 Identify and explain basic nutrition principles for meeting nutrition and wellness needs.

- HSE.HS.31.1.a Identify the function and nutrient dense sources of the six essential nutrients.
- HSE.HS.31.1.b Explain current dietary recommendations.
- HSE.HS.31.1.c Calculate energy intake for weight management.
- HSE.HS.31.1.d Describe useful nutrition assessment tools for use with each stage of the lifespan.
- HSE.HS.31.1.e Explain resources for nutrition and wellness needs to use with each stage of the lifespan.

HSE.HS.31.2 Evaluate nutrition and wellness needs during pre-conception, pregnancy, and lactation.

- HSE.HS.31.2.a Analyze the essential nutrients for optimal health for individuals during pre-conception, pregnancy and lactation.
- HSE.HS.31.2.b Explain nutrition-related medical conditions that may occur during pregnancy and their impact on the mother and fetus.
- HSE.HS.31.2.c Classify the recommendations for physical activity during preconception and pregnancy.
- HSE.HS.31.2.d Compare and contrast the ideal diet for a pregnant woman with the ideal diet for a lactating mother, highlighting the specific nutritional differences.
- HSE.HS.31.2.e Explain circumstances under which a mother should not breastfeed.

LIFESPAN NUTRITION & WELLNESS (cont.)

HSE.HS.31.3 Evaluate nutrition and wellness needs during infancy, toddler, preschool, and middle childhood stages.

HSE.HS.31.3.a Summarize the connection between good nutrition and physical, intellectual, emotional, and social development.

HSE.HS.31.3.b Identify diet recommendations for infants, toddlers, preschoolers, and primary grade children.

HSE.HS.31.3.c Compare the nutritional value of breastmilk to the nutritional value of formula.

HSE.HS.31.3.d Explain specific nutrient roles in the body of a developing child, giving special attention to vitamins and minerals.

HSE.HS.31.3.e Examine the role of a caregiver in providing food from infancy through middle childhood.

HSE.HS.31.3.f Describe the challenges associated with children's diets and outline strategies for dealing with such problems (e.g., childhood allergies, childhood obesity, aversions, influence of media and screen time).

HSE.HS.31.4 Evaluate nutrition and wellness needs during adolescence.

HSE.HS.31.4.a Explain the growth and consequent nutritional needs of adolescence.

HSE.HS.31.4.b Describe how eating patterns in adolescents affect overall health (e.g., sleep quality, energy, mood, physical development).

HSE.HS.31.4.c Identify nutrition-related medical conditions that may occur during adolescence along with prevention/intervention strategies.

HSE.HS.31.4.d Explain the spectrum of body dissatisfaction, dieting, disordered eating, and eating disorders.

HSE.HS.31.4.e Explain the recommendations for physical activity during adolescence.

LIFESPAN NUTRITION & WELLNESS (cont.)

HSE.HS.31.5 Evaluate the difference between the recommendations for a typical adolescent versus an adolescent involved in vigorous physical activity.

HSE.HS.31.5.a Describe the role of each nutrient for peak performance of the physically active adolescent.

HSE.HS.31.5.b Differentiate nutrient needs based on type, frequency, intensity, and duration of exercise.

HSE.HS.31.5.c Summarize the recommendations for assessing and maintaining healthy hydration.

HSE.HS.31.5.d Evaluate pre- and post-workout diet plans and timing of meals and snack intake for the physically active adolescent.

HSE.HS.31.6.e Describe supplements and their use.

HSE.HS.31.6 Evaluate nutrition and wellness needs during adulthood and older adulthood.

HSE.HS.31.6.a Identify nutrient needs for adulthood and why they change over time.

HSE.HS.31.6.b Outline nutrition-related medical conditions that may occur during adulthood along with prevention/intervention strategies.

HSE.HS.31.6.c Identify strategies for weight management and the challenges of weight management during adulthood and older adulthood.

HSE.HS.31.6.d Examine the role of nutrition in fostering longevity and in reducing the risk of chronic diseases.

HSE.HS.31.6.e Explain the recommendations for physical activity during adulthood.

HSE.HS.31.7 Identify career options as they pertain to nutrition and wellness throughout the lifespan.

HSE.HS.31.7.a Identify a variety of careers related to nutrition and wellness through the lifespan (e.g., job shadowing, guest speakers, interview professionals, visit a professional or educational setting).

HSE.HS.31.7.b Summarize skills and knowledge necessary for a successful career in nutrition and wellness careers.

HSE.HS.31.7.c Identify professional and ethical considerations in various nutrition and wellness work settings.

FOOD SCIENCE

COURSE DESCRIPTION

This capstone course focuses on food science and the food science industry building on concepts from the introductory and intermediate courses. Topics of study include food science history and career opportunities, evaluation of the six essential nutrients, role of science and technology in food products, and food development, production, and marketing. Food safety will also be reinforced in this course through hands-on learning opportunities.

STANDARDS AND INDICATORS:

HSE.HS.19.1 Analyze the food science industry.

HSE.HS.19.1.a Explain the history of food science.

HSE.HS.19.1.b Identify career opportunities within the food science industry.

HSE.HS.19.1.c Compare and contrast food production companies and their products.

HSE.HS.19.1.d Analyze career opportunities matched to personal life skills, talents, career goals, and local industry trends within the food science industry.

HSE.HS.19.2 Demonstrate the recommended procedures and safe equipment use in the food science lab facility.

HSE.HS.19.2.a Demonstrate leadership, effective communication, and teamwork skills in the food science lab.

HSE.HS.19.2.b Demonstrate the safe and accurate use of measuring, preparation, heating, packaging, and storage equipment in the lab setting.

HSE.HS.19.2.c Utilize the scientific method.

HSE.HS.19.3 Identify and evaluate the basic principles of proper nutrition, including the identification and evaluation of the six essential nutrients needed for good health.

HSE.HS.19.3.a Identify the roles and properties of carbohydrates, fats, proteins, vitamins, minerals and water.

HSE.HS.19.3.b Analyze the effects of food science and technology on meeting nutritional needs.

HSE.HS.19.3.c Analyze how the scientific and technical advances in product development, food processing, storage, and distribution influence nutrition and wellness.

FOOD SCIENCE (cont.)

HSE.HS.19.4 Outline the fundamentals of food chemistry.

HSE.HS.19.4.a Define basic food chemistry principles (e.g., elements, compounds, heterogeneous and homogeneous mixtures, solutions, colloidal dispersions, emulsions, pH applications, catalysts, use of enzymes, use of leavening agents, thermodynamics).

HSE.HS.19.4.b Describe basic chemical reactions that happen during food preparation and their effect(s) on nutrition.

HSE.HS.19.4.c Differentiate between simple and complex carbohydrates and their uses in foods for impact on digestion, nutrition, and food preparation procedures.

HSE.HS.19.4.d Describe the functions of amino acids and proteins and their uses in foods for impact on digestion, nutrition, and food preparation procedures.

HSE.HS.19.4.e Relate the composition of fats and proteins to their functions in foods and their i mpact on digestion, nutrition, and food preparation procedures.

HSE.HS.19.4.f Identify the role of water in food production.

HSE.HS.19.5 Analyze the role of food safety and sanitation on microorganisms in food products.

HSE.HS.19.5.a Differentiate between parasites, bacteria, yeasts, molds, and viruses.

HSE.HS.19.5.b Identify microorganisms that cause foodborne illness in humans and how to control or eliminate them.

HSE.HS.19.5.c Analyze the effects of technological advances on selection, preparation, packaging, and storage of food.

HSE.HS.19.5.d Analyze state and federal laws and regulations governing food inspection standards.

HSE.HS.19.5.e Identify appropriate packaging for food safety and label requirements.

HSE.HS.19.5.f Demonstrate safe preparation/heating/storage methods on a variety of food products.

FOOD SCIENCE (cont.)

HSE.HS.19.6 Assess the biology and physics of food production.

HSE.HS.19.6.a	Describe the structure of water in different states and its influence on a food product's viscosity/fluidity and water activity.
HSE.HS.19.6.b	Explain the difference between smoke point, flash point, and fire point when dealing with oils in processing foods.
HSE.HS.19.6.c	Classify the chemical reactions and physical changes that occur in a variety of cooking/preparation methods.
HSE.HS.19.6.d	Identify the purpose of natural and artificial food additives.
HSE.HS.19.6.e	Identify agencies involved in regulating food additives.
HSE.HS.19.5.f	Describe properties of a desirable food preservative.

HSE.HS.19.7 Evaluate food products for appropriate production and marketing strategies.

HSE.HS.19.7.a	Analyze various factors that affect food preferences in the marketing of food to a variety of populations.
HSE.HS.19.7.b	Compare and contrast flavor, texture, aroma, and appearance of various foods.
HSE.HS.19.7.c	Analyze the impact of food presentation methods and techniques on consumer appeal of food and products.
HSE.HS.19.7.d	Analyze data when making development and marketing decisions.
HSE.HS.19.7.e	Review food product cost and price recommendations for wholesale and retail sales.

FOUNDATIONS OF LAW, PUBLIC SAFETY, CORRECTIONS, AND SECURITY

COURSE DESCRIPTION

This introductory course focuses on the career options in law and public safety. The topics covered provide foundational knowledge of the five career fields within this career cluster: correction services, emergency and fire management services, law enforcement services, legal services, and security and protective services including exposure to careers and concepts across all career fields.

STANDARDS AND INDICATORS:

HSE.HS.15.1 Describe various career opportunities in law, public safety, corrections, and security.

HSE.HS.15.1.a Identify the career pathways in law, public safety, corrections, and security.

HSE.HS.15.1.b Explain the role of each career pathway in society.

HSE.HS.15.1.c Describe possible careers in each law, public safety, corrections, and security field (e.g., correction services, emergency and fire management services, law enforcement services, legal services, and security and protective services).

HSE.HS.15.1.d Compare and contrast various law, public safety, corrections, and security careers.

HSE.HS.15.1.e Identify personal traits and compare them with potential career opportunities.

HSE.HS.15.2 Analyze the qualities needed for employment in the law, public safety, corrections, and security fields.

HSE.HS.15.2.a Recall personal qualities and professional skills used in various workplaces.

HSE.HS.15.2.b Describe biases and personality traits that could influence service to others.

HSE.HS.15.2.c Distinguish between appropriate and inappropriate characteristics for a public safety career.

HSE.HS.15.2.d Describe the importance of service, professionalism, and personal qualities in law, public safety, corrections, and security.

FOUNDATIONS OF LAW, PUBLIC SAFETY, CORRECTIONS, AND SECURITY (cont.)

HSE.HS.15.3 Analyze the role of the public safety agencies and occupations at the local, state, and federal levels.

HSE.HS.15.3.a Identify the origin and source of United States law.

HSE.HS.15.3.b Outline the structure and organization of the federal, state, and local government.

HSE.HS.15.3.c Identify public safety agencies and their role.

HSE.HS.15.3.d Explain public safety agencies and their relation to the public.

HSE.HS.15.4 Describe ethical and professional behavior while acknowledging diverse perspectives, backgrounds, and populations.

HSE.HS.15.4.a Explain the importance of integrity, professionalism, and confidentiality in the workplace.

HSE.HS.15.4.b Define ethical conduct.

HSE.HS.15.4.c Identify factors in making ethical decisions.

HSE.HS.15.4.d Identify the value and impact of diverse perspectives on ethical actions and decision-making.

INTRODUCTION TO CRIMINAL JUSTICE

COURSE DESCRIPTION

This intermediate course will provide an overview of the history, development, and philosophies for crime control building on concepts from the introductory course. Topics include an examination of the criminal justice system with an emphasis on the police, courts (prosecution and defense), and correctional agencies, the role of law enforcement within a democratic society, and exposure to careers related to criminal justice.

STANDARDS AND INDICATORS:

HSE.HS.28.1 Analyze the criminal justice system.

HSE.HS.28.1.a Identify the three areas of criminal justice.

HSE.HS.28.1.b Summarize the history and development of the modern criminal justice system.

HSE.HS.28.1.c Distinguish the relationship between individual rights and the rule of law.

HSE.HS.28.1.d Differentiate between the various roles within the criminal justice system.

HSE.HS.28.2 Analyze crime, criminal behavior, and criminal law.

HSE.HS.28.2.a Define crime, criminal behavior, and criminal law.

HSE.HS.28.2.b Identify theories of criminal behavior.

HSE.HS.28.2.c Recognize the effects that crime has on individuals, society, and laws.

HSE.HS.28.2.d Apply theories of crime causation to understand crime and law.

HSE.HS.28.3 Explain the role of law enforcement in criminal justice.

HSE.HS.28.3.a Identify and define law enforcement.

HSE.HS.28.3.b Describe the development of law enforcement.

HSE.HS.28.3.c Identify the responsibilities, authority, and roles of various law enforcement agencies.

HSE.HS.28.3.d Summarize the changing role of law enforcement and its impact on society.

INTRODUCTION TO CRIMINAL JUSTICE (cont.)

HSE.HS.28.4 Distinguish the role and process of the courts in criminal justice.

HSE.HS.28.4.a Describe the sequence of the court process.

HSE.HS.28.4.b Categorize each component and actor in the court process.

HSE.HS.28.4.c Differentiate between the juvenile and adult court systems.

HSE.HS.28.4.d Explain various sequences of court processes.

HSE.HS.28.5 Explain the role of corrections in the criminal justice field.

HSE.HS.28.5.a Compare and contrast jails and prisons.

HSE.HS.28.5.b Summarize probation, parole, and community corrections.

HSE.HS.28.5.c Summarize characteristics of those that work in corrections and their roles.

HSE.HS.28.5.d Analyze the impact of social constructs on the correctional setting.

INTRODUCTION TO CORRECTIONS

COURSE DESCRIPTION

This intermediate course focuses on the history, progression, and current state of corrections within the United States building on concepts from the introductory course. Topics covered include corrections within the American criminal justice system, the historical evolution of corrections within the United States, the organization, culture of correctional institutions, and the progress and future of corrections.

STANDARDS AND INDICATORS:

HSE.HS.36.1 Explain the history of punishment and corrections in the modern era.

HSE.HS.36.1.a Define crime, punishment, and corrections.

HSE.HS.36.1.b Describe the various approaches and movements in corrections over time.

HSE.HS.36.1.c Relate societal changes over time with various movements/eras in corrections.

HSE.HS.36.2 Analyze the relationship between parole, probation, jail, and prison within the correctional system in the United States.

HSE.HS.36.2.a Define parole and probation.

HSE.HS.36.2.b Compare and contrast between the roles of jails and prisons in society.

HSE.HS.36.2.c Differentiate between probation and parole.

HSE.HS.36.2.d Analyze the strengths and weaknesses of parole, probation, jail, and prison.

HSE.HS.36.3 Analyze the correctional experience from diverse perspectives.

HSE.HS.36.3.a Identify the various roles and perspectives found in the American correctional system.

HSE.HS.36.3.b Identify various prison cultures and subcultures.

HSE.HS.36.3.c Explain the impact of race, gender, and roles in the correctional system.

HSE.HS.36.3.d Compare the experiences of correctional clients and correctional officers.

INTRODUCTION TO CORRECTIONS (cont.)

HSE.HS.36.4 Evaluate the organization and processes of correctional institutions in the United States.

HSE.HS.36.4.a Summarize the general organization of a correctional agency.

HSE.HS.36.4.b Summarize the general intake and management processes of correctional institutions.

HSE.HS.36.4.c Differentiate between various organization and management approaches used in corrections.

HSE.HS.36.5 Evaluate the relationship between trends in corrections and social problems.

HSE.HS.36.5.a Identify the impact of society and law on corrections in the United States.

HSE.HS.36.5.b Describe modern changes and trends in the correctional field.

HSE.HS.36.5.c Assess the impact and response of corrections in addressing societal problems.

HSE.HS.36.6 Describe the progress and trends of corrections in the United States.

HSE.HS.36.6.a Identify the modern trends of corrections.

HSE.HS.36.6.b Identify the changes over time in the American correctional system.

HSE.HS.36.6.c Compare new approaches to corrections and punishment including rehabilitation and education.

HSE.HS.36.6.d Explain the impact of new approaches to corrections on the future.

COURTS AND JUDICIAL PROCESSES

COURSE DESCRIPTION

This capstone course examines courts and judicial processes in the United States building on concepts from the introductory and intermediate courses. The primary focus is on police and correctional due process, application of the law, and civil liability concerns. Topics include search and seizure, arrest and interrogation, revocation and probation and parole, probable cause and other timely issues.

STANDARDS AND INDICATORS:

HSE.HS.7.1 Analyze the history and structure of courts in the United States.

- HSE.HS.7.1.a Describe the purpose of the courts.
- HSE.HS.7.1.b Explain the functions of the court.
- HSE.HS.7.1.c Describe the evolution of the court system.
- HSE.HS.7.1.d Summarize the role of courts within the criminal justice system.
- HSE.HS.7.1.e Differentiate between state courts, federal courts, and specialized courts.

HSE.HS.7.2 Differentiate between the various types of law.

- HSE.HS.7.2.a Define public law and civil law.
- HSE.HS.7.2.b Compare and contrast criminal law, procedural law, and civil law.
- HSE.HS.7.2.c Summarize the importance of law in society.

HSE.HS.7.3 Analyze the roles and responsibilities of individuals within the court system.

- HSE.HS.7.3.a Identify the roles within the court system (e.g., judge, prosecuting attorney, defense attorney).
- HSE.HS.7.3.b Describe how technology has changed the court system.
- HSE.HS.7.3.c Describe the responsibilities of a judge.
- HSE.HS.7.3.d Explain the roles of prosecuting attorney and defense attorney.
- HSE.HS.7.3.e Summarize the roles and rights of the defendants, victims, witnesses, and others involved in the case (e.g., advocates, experts).

COURTS AND JUDICIAL PROCESSES (cont.)

HSE.HS.7.4 Outline the steps in the court process.

HSE.HS.7.4.a Summarize the arrest process.

HSE.HS.7.4.b Describe pre-trial procedures.

HSE.HS.7.4.c Compare and contrast the types of pleas.

HSE.HS.7.4.d Describe plea bargaining, sentencing, and appeals.

HSE.HS.7.4.e Explain the jury selection process.

HSE.HS.7.4.f Outline the trial process.

HSE.HS.7.5 Analyze how current issues affect the courts and the court process.

HSE.HS.7.5.a Identify the impact of historical discrimination on courts.

HSE.HS.7.5.b Analyze how gender, race, and income affect court outcomes.

HSE.HS.7.5.c Evaluate wrongful convictions and exonerations.

POLICE AND SOCIETY

COURSE DESCRIPTION

This capstone course will examine the relationship between the police and the community building on concepts from the introductory and intermediate courses. Topics covered include the history, practices, and issues related to the law enforcement function in our society and an overview of police functions and responsibilities at the local, state, and federal levels. Police operations will be examined relative to effectiveness in crime control, delivery of services, and maintenance of order.

STANDARDS AND INDICATORS:

HSE.HS.32.1 Explain the history of police and policing in American society.

HSE.HS.32.1.a Identify events that have impacted the development of policing in America.

HSE.HS.32.1.b Describe major factors that have shaped modern policing.

HSE.HS.32.1.c Describe the effect of political influence on policing.

HSE.HS.32.1.d. Summarize the police professionalism movement.

HSE.HS.32.2 Outline the general structure and organization of police agencies.

HSE.HS.32.2.a Differentiate between local, state, and federal police agencies.

HSE.HS.32.2.b Explain the requirements for the selection process for police officers.

HSE.HS.32.2.c Discuss qualities of an ethical, professional, and respected police officer.

HSE.HS.32.2.d Explain the hierarchy and promotion process of police.

HSE.HS.32.2.e Describe the responsibilities of a police officer.

HSE.HS.32.2.f Describe the management of police agencies.

POLICE AND SOCIETY (cont.)

HSE.HS.32.3 Analyze the impact of serving a multicultural society.

HSE.HS.32.3.a Describe the implications of working in a multicultural society and the challenges facing law enforcement.

HSE.HS.32.3.b Examine patterns of interaction between police and the diverse American population.

HSE.HS.32.3.c Analyze the issues of gender and race in hiring within police agencies.

HSE.HS.32.3.d Identify current crime trends and how crime is policed.

HSE.HS.32.3.e Analyze the effects of social trends and police reforms.

HSE.HS.32.4 Evaluate the importance of ethics, professionalism, discretion, and integrity within policing.

HSE.HS.32.4.a Define ethics, professionalism, discretion, and integrity within policing.

HSE.HS.32.4.b Summarize the impact of ethics, professionalism, discretion, and integrity within policing.

HSE.HS.32.4.c Analyze ethical decision making in American policing.

HSE.HS.32.5 Explain the impact of politics, police cultures, and police subcultures on law enforcement in the United States.

HSE.HS.32.5.a Identify police culture and subcultures in law enforcement.

HSE.HS.32.5.b Describe the characteristics of the police personality.

HSE.HS.32.5.c Summarize the "code of silence" and its impact on police and society.

HSE.HS.32.5.d Describe the current impact of special interest groups and politics on policing.

FAMILIES IN CRISIS

COURSE DESCRIPTION

This intermediate course will explore the impact of crisis situations on families building on concepts from the introductory course(s). Topics include stress, changes in the family life cycle, grief and loss, and mental health disorders. An emphasis will be placed on services available to support families while developing foundational knowledge and skills.

STANDARDS AND INDICATORS:

HSE.HS.13.1 Analyze non-therapeutic helper careers which serve individuals, families, and communities.

HSE.HS.13.1.a Outline the six types of helpers (professional helpers, paraprofessional helpers, helping as a part of their work, volunteer helpers, peer helpers, and informal helpers).

HSE.HS.13.1.b Describe the role of each of the six types of helpers in the process of supporting families in crisis situations.

HSE.HS.13.2 Analyze factors that influence crisis in a family.

HSE.HS.13.2.a List characteristics of healthy and unhealthy families and their effect on society.

HSE.HS.13.2.b Compare and contrast a variety of diverse family structures.

HSE.HS.13.2.c Describe how families help meet the needs of individuals using Maslow's Hierarchy of Needs.

HSE.HS.13.2.d Explain the importance of healthy communication and conflict resolution in a family.

HSE.HS.13.2.e Compare and contrast financial, physical, social, emotional, cultural, and spiritual issues and the role of stress in families.

HSE.HS.13.2.f Define crisis and differentiate a crisis situation from a stressful situation.

HSE.HS.13.2.g Identity common crisis situations families face (e.g., mental illness, abuse, addiction, grief, suicide, job loss, homelessness).

FAMILIES IN CRISIS (cont.)

HSE.HS.13.3 Evaluate societal views of mental health and common mental health disorders.

HSE.HS.13.3.a Define stigma and explain its effects on those with mental illness.

HSE.HS.13.3.b Identify ways to minimize stigma surrounding mental illness and seeking help for mental health problems.

HSE.HS.13.3.c Identify and analyze common risk factors for developing mental disorders (genetic, environmental).

HSE.HS.13.3.d Analyze the process of diagnosing mental illness.

HSE.HS.13.3.e Explain the effects mental illness and suicide has on the family.

HSE.HS.13.3.f Assess the signs and symptoms of a potential suicidal individual and steps that should be taken to seek help.

HSE.HS.13.3.g Identify community resources to help families facing mental health crises.

HSE.HS.13.4 Evaluate the effects of abuse on a family.

HSE.HS.13.4.a Identify types of abuse, causes, and common signs and symptoms in each stage of the family life cycle.

HSE.HS.13.4.b Analyze the roles and their characteristics in an abuse situation (bystander, abuser, victim/survivor).

HSE.HS.13.4.c Identify mandatory reporting laws and processes in Nebraska and resources available to help families.

HSE.HS.13.4.d Explain Adverse Childhood Experiences (ACEs) and their potential effects.

HSE.HS.13.4.e Compare and contrast healthy and unhealthy relationships.

HSE.HS.13.4.f Explain the stages of the Cycle of Abuse considering the barriers surrounding generational abuse.

FAMILIES IN CRISIS (cont.)

HSE.HS.13.5 Evaluate the effects of addiction on the family unit.

HSE.HS.13.5.a	Define addiction and explore the risk factors associated with developing an addiction (genetic, environmental).
HSE.HS.13.5.b	Analyze the science of physical and psychological addiction and how they are connected.
HSE.HS.13.5.c	Assess community resources, treatment, and recovery methods of addiction.
HSE.HS.13.5.d	Explain the connection (comorbidity) between mental illness and addiction.
HSE.HS.13.5.e	Analyze the effects of multiple family members living with addiction at the same time.

HSE.HS.13.6 Analyze the process of grieving.

HSE.HS.13.6.a	Define grief and explain that grief can occur with a variety of losses (e.g., loss of a friendship or pet, moving, loss of experience).
HSE.HS.13.6.b	Compare and contrast a variety of theories of grief (Five Stages, Tonkin's Model, Four Tasks of Grieving, Six Rs, Dual Process Model, Reconstruction of Meaning).
HSE.HS.13.6.c	Analyze family relationships in the grieving process.
HSE.HS.13.6.d	Compare and contrast healthy and unhealthy coping mechanisms for dealing with grief.
HSE.HS.13.6.e	Identify community resources to help families facing grief.

HSE.HS.13.7 Analyze methods of overcoming crisis.

HSE.HS.13.7.a	Describe the qualities of a resilient individual.
HSE.HS.13.7.b	Define mindfulness and techniques used to be mindful in everyday life.
HSE.HS.13.7.c	Explain the importance of mindfulness and self-awareness in overcoming crisis.
HSE.HS.13.7.d	Explain the importance of self-care and list strategies for implementing self-care.
HSE.HS.13.7.e	Describe the importance of growth mindset in regards to neuroplasticity.
HSE.HS.13.7.f	Identify common mental distortions (filtering, overgeneralizing, catastrophizing, personalization).

FOUNDATIONS OF LAW, PUBLIC SAFETY, CORRECTIONS, AND SECURITY

COURSE DESCRIPTION

This introductory course focuses on the career options in law and public safety. The topics covered provide foundational knowledge of the five career fields within this career cluster: correction services, emergency and fire management services, law enforcement services, legal services, and security and protective services including exposure to careers and concepts across all career fields.

STANDARDS AND INDICATORS:

HSE.HS.15.1 Describe various career opportunities in law, public safety, corrections, and security.

HSE.HS.15.1.a Identify the career pathways in law, public safety, corrections, and security.

HSE.HS.15.1.b Explain the role of each career pathway in society.

HSE.HS.15.1.c Describe possible careers in each law, public safety, corrections, and security field (e.g., correction services, emergency and fire management services, law enforcement services, legal services, and security and protective services).

HSE.HS.15.1.d Compare and contrast various law, public safety, corrections, and security careers.

HSE.HS.15.1.e Identify personal traits and compare them with potential career opportunities.

HSE.HS.15.2 Analyze the qualities needed for employment in the law, public safety, corrections, and security fields.

HSE.HS.15.2.a Recall personal qualities and professional skills used in various workplaces.

HSE.HS.15.2.b Describe biases and personality traits that could influence service to others.

HSE.HS.15.2.c Distinguish between appropriate and inappropriate characteristics for a public safety career.

HSE.HS.15.2.d Describe the importance of service, professionalism, and personal qualities in law, public safety, corrections, and security.

FOUNDATIONS OF LAW, PUBLIC SAFETY, CORRECTIONS, AND SECURITY (cont.)

HSE.HS.15.3 Analyze the role of the public safety agencies and occupations at the local, state, and federal levels.

HSE.HS.15.3.a Identify the origin and source of United States law.

HSE.HS.15.3.b Outline the structure and organization of the federal, state, and local government.

HSE.HS.15.3.c Identify public safety agencies and their role.

HSE.HS.15.3.d Explain public safety agencies and their relation to the public.

HSE.HS.15.4 Describe ethical and professional behavior while acknowledging diverse perspectives, backgrounds, and populations.

HSE.HS.15.4.a Explain the importance of integrity, professionalism, and confidentiality in the workplace.

HSE.HS.15.4.b Define ethical conduct.

HSE.HS.15.4.c Identify factors in making ethical decisions.

HSE.HS.15.4.d Identify the value and impact of diverse perspectives on ethical actions and decision-making.

EMERGENCY AND FIRE MANAGEMENT

COURSE DESCRIPTION

This intermediate course focuses on the skills needed within fire and emergency services building on concepts from the introductory course. The topics covered include careers within the emergency response field, skills needed to take control over emergency situations, essential leadership qualities, and safety protocols. The technical skills and responsibilities of fire and emergency services professionals will be demonstrated and explored.

STANDARDS AND INDICATORS:

HSE.HS.8.1 Analyze the characteristics of different careers within the emergency response field.

HSE.HS.8.1.a Identify emergency response employee qualifications, training, and certification requirements.

HSE.HS.8.1.b Describe the roles and responsibilities of emergency response agencies.

HSE.HS.8.1.c Identify the responsibilities, requirements, and advancement opportunities in emergency response careers.

HSE.HS.8.1.d Summarize the laws, regulations, and organizational protocol that define the guideline governing emergency agency and service.

HSE.HS.8.2 Analyze the processes by which emergency personnel exert command and control.

HSE.HS.8.2.a Identify the core set of concepts, principles, terminology, and technologies of emergency response management.

HSE.HS.8.2.b Describe the principles and responsibilities of the Incident Command System (ICS) and the National Incident Management System (NIMS).

HSE.HS.8.2.c Explain multiagency coordination, unified command, training, identification and management of resources, qualification and certification, and the collection, tracking, evaluation, and dissemination of information.

HSE.HS.8.2.d Examine the importance of an organized Command and Control System to provide for interoperability, efficiency, and effectiveness.

EMERGENCY AND FIRE MANAGEMENT (cont.)

HSE.HS.8.3 Analyze leadership qualities, team concepts, and personal integrity for emergency response personnel.

HSE.HS.8.3.a Identify the characteristics of successful teams (e.g., leadership, cooperation, collaboration, effective decision-making skills).

HSE.HS.8.3.b Describe emergency response techniques and methods of active listening.

HSE.HS.8.3.c Identify a variety of effective methods of communication.

HSE.HS.8.3.d Summarize effective professional approaches to the Health Insurance Portability and Accountability Act (HIPAA) regulations and agency guidelines regarding public and media communications.

HSE.HS.8.4 Apply safety procedures and protocols associated with local, state, and federal regulations within fire and emergency services.

HSE.HS.8.4.a Describe the basic elements of safety and survival for emergency response personnel.

HSE.HS.8.4.b Explain how to establish situational awareness, identify hazards, and assess personal, team, or environmental risks.

HSE.HS.8.4.c Demonstrate the use of appropriate personal protective equipment (PPE) required for emergency services duties.

HSE.HS.8.4.d Describe the function of emergency vehicles, use of medical and communication equipment, and the necessity of maintaining inventory.

HSE.HS.8.4.e Identify various communication methods used by local, state, and federal agencies.

HSE.HS.8.4.f Summarize how to respond to emergency situations with interagency communication.

EMERGENCY AND FIRE MANAGEMENT (cont.)

HSE.HS.8.5 Analyze fire services occupations and responsibilities.

HSE.HS.8.5.a Identify the history, organization, and operation of fire services.

HSE.HS.8.5.b Describe the skills and knowledge necessary for an entry-level firefighter.

HSE.HS.8.5.c Outline standard operating procedures for a fire service agency.

HSE.HS.8.5.d Explain the fundamentals and scientific principles of fire behavior, combustible materials, extinguishing agents, hazardous and toxic materials, forms of energy, and fire prevention/suppression techniques for all types of fires and conditions.

HSE.HS.8.5.e Explain the operation of fire protection equipment and systems.

HSE.HS.8.6 Demonstrate the immediate basic life support and interim medical care for a sick, injured, or compromised person.

HSE.HS.8.6.a Apply medical terminology and related knowledge of anatomy, physiology, diseases, diagnoses, pharmacology, therapeutics, and common abbreviations necessary for emergency medical services.

HSE.HS.8.6.b Describe the common acronyms used in fire and emergency services.

HSE.HS.8.6.c Explain the protocols in emergency management response.

HSE.HS.8.6.d Assess the nature and extent of an illness or injury to establish and prioritize medical response.

HSE.HS.8.6.e Apply technical skills and equipment required in emergency response situations (e.g., airway, oxygen, and ventilation procedures, suction, bleeding control, immobilization techniques, wound management).

NEBRASKA CAREER AND TECHNICAL EDUCATION

CTE®
Learning that works for Nebraska

NEBRASKA DEPARTMENT OF EDUCATION

SKILLED AND TECHNICAL SCIENCES

PROGRAM OF STUDY STANDARDS

ARCHITECTURE & CONSTRUCTION

ENERGY & ENGINEERING

MANUFACTURING

TRANSPORTATION, DISTRIBUTION, & LOGISTICS

NEBRASKA CAREER AND TECHNICAL EDUCATION STATE MODEL PROGRAMS OF STUDY

CAREER FIELD OVERVIEW

The Skilled and Technical Sciences Career Field Area provides opportunities for students to deepen their understanding of topics in areas such as architectural and design drafting, construction, electricity/electronics, home maintenance, welding, manufacturing, engineering, energy, technical education, and transportation, distribution, and logistics.

PROGRAMS OF STUDY

Programs of Study are the primary delivery model for Career and Technical Education (CTE) in Nebraska. They include a sequence of courses which progresses in specificity and rigor and are updated regularly to align with Nebraska's workforce needs and economic development priorities. This document includes the programs of study and course-based standards for the Skilled and Technical Sciences career field. These state model programs of study were developed to:

- Assist secondary schools in creating meaningful sequences of courses that adequately prepare individuals for seamless transitions to postsecondary education and careers eliminating duplication of coursework;
- Assist students in identifying appropriate courses for high school and postsecondary education that lead to their chosen career;
- Encourage collaboration between secondary and postsecondary education through curricular alignment;
- Offer opportunities for high-quality workplace experiences aligned to students' career interests;
- Promote the advancement of early postsecondary opportunities (including dual-credit courses) for all students; and
- Support postsecondary education options for students to further prepare them for successful transitions to their future careers.

Nebraska's programs of study are organized around Nebraska's CTE Model, which provides a way for students to explore the diversity of career options available to them.

NEBRASKA CAREER AND TECHNICAL EDUCATION MODEL

1 CORE ACADEMICS AND CAREER READINESS

At the center of the NCE Model is the expectation for all students to develop a solid academic core. The next ring identifies specific career readiness standards and practices that prepare students for success in postsecondary education as well as entrepreneurship/employment.

2 CAREER FIELDS

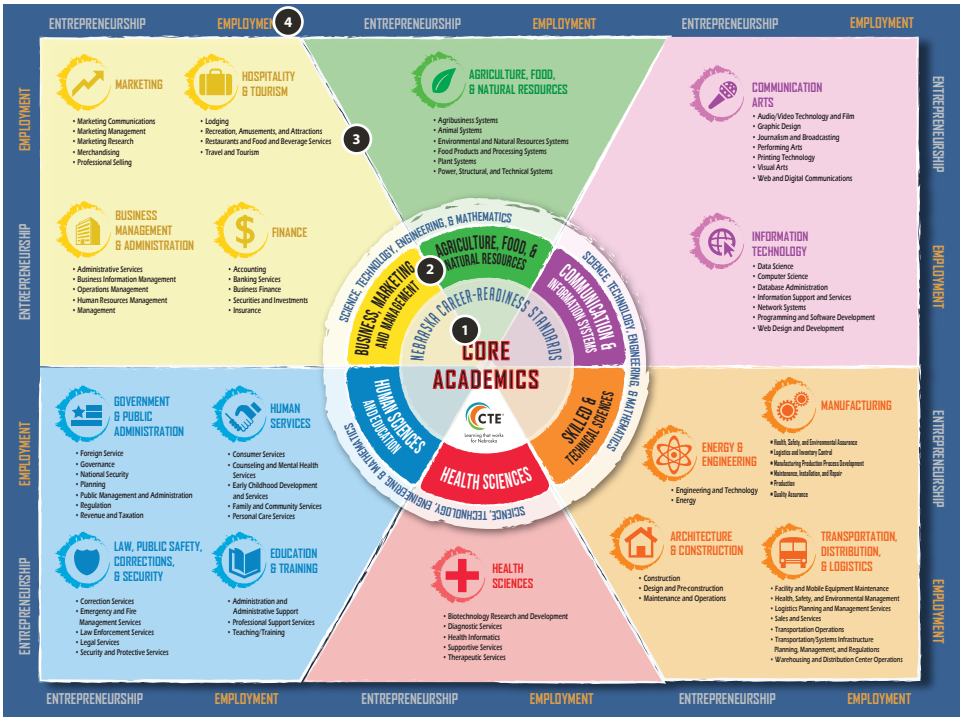
The six career fields represent broad sectors of the job market on which students may choose to focus.

3 CAREER CLUSTERS

Each career field is composed of career clusters radiating out from it. The clusters are more specific segments of the labor market. Each cluster is a grouping of careers that focus on similar subjects or similar skills. A basic understanding and exploration of each of the clusters will provide students with a solid foundation for career decision-making to conceptualize the entire world of work.

4 EMPLOYABILITY AND ENTREPRENEURSHIP

Career education provides the opportunity to gain the knowledge and skills for both employment and entrepreneurship. The reality for Nebraska and the United States is that entrepreneurship will help ensure economic growth and vitality. By infusing entrepreneurship competencies, career education is helping create the next generation of America's innovators and entrepreneurs.



The model is a visual map of "career fields" and "career clusters/pathways" and organizes the 16 National Career Clusters into six broad sectors of entrepreneurship and employment:

- Agriculture, Food and Natural Resources
- Business, Marketing and Management
- Communication and Information Systems
- Health Sciences
- Human Sciences and Education
- Skilled and Technical Sciences

These fields break down into more specific Career Clusters, Pathways and Occupational Specialties. The model provides a way for:

- Students to explore the diversity of career options available to them.
- Students to begin to prepare for their career with plans for secondary and post-secondary education.
- Schools to organize curriculum into Programs of Study that prepare students for opportunities in Nebraska's economy.

COURSE SEQUENCING

The courses within the State Model Program of Study are intended to be offered sequentially, to allow learners to build upon foundational knowledge and skills learned in introductory and intermediate courses and applied in more advanced capstone coursework. Non-duplicative sequences of courses ensure students transition to postsecondary education without duplication of classes and content. CTE enrollment data is collected at the course level. Students who participate and concentrate in CTE generally have more positive outcomes such as higher graduation rates along with postsecondary success.

Introductory Courses

Introductory courses set the foundation for a program of study by introducing students to broad foundational knowledge relative to an occupational area and career field.

Intermediate Courses

Intermediate courses build on the foundational knowledge of Introductory courses to further develop the academic, technical, and career readiness skills within a particular career field and occupational area.

Capstone Courses

Capstone courses are occupationally specific and further develop the necessary and required academic, technical, and career readiness skills needed for seamless transitions to postsecondary education and employment. Capstone courses often provide opportunities for students to earn postsecondary credit.

Levels of Participation

CTE Participant

A student who has earned one or more credits in any career and technical education program area.

CTE Concentrator

A secondary student who, in grades 9 through 12, has earned credit in at least two courses in a single career cluster program at the intermediate or capstone level.

State Model Programs of Study are coordinated, nonduplicative sequences of academic and technical content at the secondary and postsecondary levels that incorporate challenging State academic standards, address both academic and technical knowledge and skills, including Nebraska's Career Readiness Skills, are aligned with the needs of industries in Nebraska's economy, progress in specificity, have multiple entry and exit points that incorporate credentialing, and culminate in the attainment of a recognized postsecondary credential.

COURSE-BASED STANDARDS

Individual CTE courses, which make up the sequence of courses for Programs of Study, include content area standards and indicators to provide a framework for quality teaching and learning. While not required by state law, districts are encouraged to adopt these State Model Programs of Study and their related course-based standards. CTE State Model Programs of Study and course-based standards are revised on a five-year cycle to remain responsive to the rapid advances and needs of business and industry, help students explore a variety of postsecondary options and corresponding entrance requirements to help identify their next steps, and to align to changes in postsecondary programs.

Standards

At the highest level of generality, content area standards include a set of broad, overarching content-based statements that describe the basic cognitive, affective, or psychomotor expectations of students. They reflect long-term goals for learning.

Indicators

Under each standard are indicators, which further describe what a student must know and be able to do to meet the standard. Indicators are performance-based statements that provide educators with a clear understanding of the expected level of student learning and guidance. Indicators provide guidance for an assessment of student learning.

EXPANDED LEARNING OPPORTUNITIES

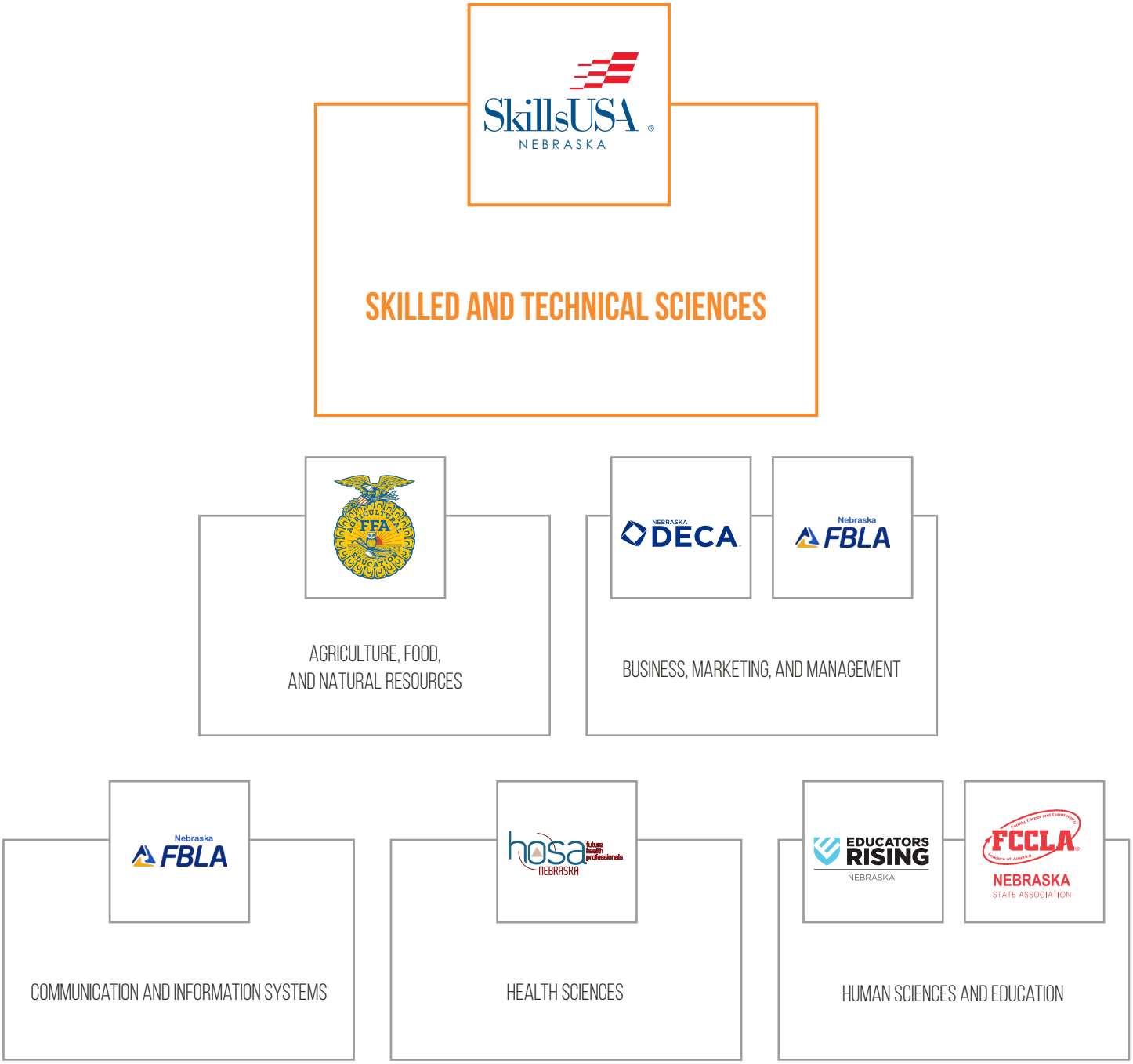
Expanded learning opportunities build on, support, and enhance learning within and outside of regular school programming. They are a critical component of Nebraska's educational landscape and should be intentionally supported to further develop students' college and career readiness. To signal aligned expanded learning opportunities, each Program of Study identifies additional areas where students may desire to personalize their program and take additional coursework or work-based learning that aligns with their interests. These expanded learning opportunities are not considered part of a Program of Study nor are they required, but rather a meaningful opportunity for students to continue to learn after completing the Program of Study sequence of courses within the context of their career interests. Along with aligned coursework, two prominent expanded learning opportunities include participating in Work-based Learning or a Career and Technical Student Organization.

Work-Based Learning

Work-Based Learning (WBL) connects learners with employers to prepare them for success in an everchanging workplace. WBL is a planned program of meaningful experiences related to the career interests of learners that enables them to acquire knowledge and skills in a real or simulated work setting. It requires strong partnerships between schools, colleges, and local employers. WBL is learning through work, not simply learning about work. Expanding high-quality WBL opportunities for students is one of Nebraska's CTE strategic priorities and is a program quality accountability indicator. Nebraska CTE affirms WBL as a critical component of career development. Throughout the State Model Programs of Study, courses where WBL is embedded into the class is noted in the course title (e.g., "Architecture & Construction Work-Based Learning Experience"). It is also signaled as an expanded learning opportunity across all programs of study.

Career And Technical Student Organizations

Career and Technical Student Organizations (CTSOs) are an extension of classroom instruction—applying classroom learning to real-world experiences. CTSOs provide opportunities for all students to develop career readiness skills through activities, competitions, and community service. Nebraska recognizes seven CTSOs aligned with the state's Programs of Study and career field areas. These include:



CAREER READINESS STANDARDS

Embedded into the State Model Programs of Study and courses are the Nebraska Career Readiness standards. These standards rest on important "practices and proficiencies" with long-standing importance in career education. These standards and related practices are not limited to formal CTE programs nor to the middle school or high school level. Rather, these standards and practices should be used over and over again with increasing complexity and relevance by students as they progress through their educational pathway. The standards themselves do not dictate curriculum, pedagogy or delivery of content. Schools and colleges may handle the teaching and assessing of these standards in many different ways.

THE CAREER READY INDIVIDUAL...

1. Applies appropriate academic and technical skills

2. Communicates effectively and appropriately

3. Contributes to employer and community success

4. Makes sense of problems and perseveres in solving them

5. Uses critical thinking

6. Demonstrates innovation and creativity

7. Models ethical leadership and effective management

8. Works productively in teams and demonstrates cultural competency

9. Utilizes technology

10. Manages personal career development

11. Attends to personal and financial well-being

SKILLED AND TECHNICAL SCIENCES
PROGRAMS OF STUDY

ARCHITECTURE AND CONSTRUCTION CLUSTER

Program of Study Name	Introductory Course	Intermediate Course	Capstone Course	Expanded Learning Opportunity
ARCHITECTURAL DESIGN (Pages 10–17)	100100 - Introduction to Skilled and Technical Sciences	100140 - Architectural Design 1, OR 090109 - Home Design and Interiors (FCS)	100141 - Architectural Design 2	320703 - Architecture & Construction Work-Based Learning Experience
CONSTRUCTION (Pages 18–26)	100100 - Introduction to Skilled and Technical Sciences, OR 100405 - Residential Electrical Wiring	1000110 - Construction Trades 1, OR 016000 - Power, Structural, & Technology Systems Fundamentals (AFNR)	100120 - Construction Trades 2	320703 - Architecture & Construction Work-Based Learning Experience

ENERGY AND ENGINEERING CLUSTER

Program of Study Name	Introductory Course	Intermediate Course	Capstone Course	Expanded Learning Opportunity
ENERGY (Pages 27–35)	100406 - Fundamentals of Energy	100408 - Sustainable Energy	100407 - Physics & Mathematics of Energy	320707 - Energy & Engineering Work-Based Learning Experience
ENGINEERING (Pages 36–47)	100100 - Introduction to Skilled and Technical Sciences, OR 103191- Engineering Design & Systems Thinking, OR 100160 - PLTW Principles of Engineering, OR 100161 - PLTW Introduction to Engineering Design	103192 - Engineering Problem Solving, OR 103194 - Robotics, OR 100164 - PLTW Aerospace Engineering, OR 100162 - PLTW Civil Engineering & Architecture, OR 101901 - PLTW Computer Integrated Manufacturing, OR 100403 - PLTW Digital Electronics	103193 - Systems Engineering & Project Management, OR 103195 - Advanced Robotics, OR 100163 - PLTW Engineering Design & Development	320707 - Energy & Engineering Work-Based Learning Experience

MANUFACTURING CLUSTER

Program of Study Name	Introductory Course	Intermediate Course	Capstone Course	Expanded Learning Opportunity
MANUFACTURING (Pages 48–84)	100100 - Introduction to Skilled and Technical Sciences, OR 100130 - Drafting & Design	101920 - Manufacturing Processes - Woods, OR 101400 - Manufacturing Processes - Metals, OR 101950 - Manufacturing Processes - Plastics, OR 100401 - Introduction to Electronics	101921 - Manufacturing Production - Woods, OR 101401 - Manufacturing Production - Metals, OR 101951 - Manufacturing Production - Plastics, OR 101900 - Introduction to Mechatronics, OR 100402 - Advanced Electronics, OR	320715 - Manufacturing Work-Based Learning Experience 101922 - Advanced Manufacturing & Fabrication – Woods, OR 101402 - Advanced Manufacturing & Fabrication – Metals, OR 101952 - Advanced Manufacturing & Fabrication – Plastics
WELDING (Pages 85–95)	100100 - Introduction to Skilled and Technical Sciences	101930 - Welding 1, OR 016004 - Welding (AFNR)	101940 - Welding 2, OR 016005 - Metals & Fabrication (AFNR)	101941 - Welding 3, OR 320715 - Manufacturing/ Welding Work-Based Learning Experience

TRANSPORTATION, DISTRIBUTION, AND LOGISTICS CLUSTER

Program of Study Name	Introductory Course	Intermediate Course	Capstone Course	Expanded Learning Opportunity
TRANSPORTATION, DISTRIBUTION, & LOGISTICS - SUPPLY CHAIN (Pages 96–100)	101601 - Introduction to Transportation, Distribution & Logistics	100610 - Distribution & Logistics	101650 - Business Logistics	320717- Transportation, Distribution & Logistics Work-Based Learning Experience
TRANSPORTATION, DISTRIBUTION, & LOGISTICS - TECHNICIAN (Pages 101–116)	100100 - Introduction to Skilled and Technical Sciences, OR 101651 - Power Equipment, OR 016003 - Power, Structural, and Technical Systems (AFNR)	101600 - Transportation 1	101620 - Transportation 2, OR 101640 - Collision Repair	101630 - Transportation 3, OR 320717 - Transportation, Distribution, & Logistics Work-Based Learning Experience

INTRODUCTION TO SKILLS AND TECHNICAL SCIENCES

COURSE DESCRIPTION

This introductory course provides the skills and technical knowledge for a beginning student in areas of industry, safety, material, equipment, and process understanding. This entry level course helps students gain a foundation in all areas of Skilled and Technical Sciences including Architecture and Construction; Energy and Engineering; Manufacturing; and Transportation, Distribution, and Logistics.

Target Grades 9-12.

STANDARDS AND INDICATORS:

STS.HS.19.1 Apply safety principles, practices, philosophy, and guidelines to the work environment.

STS.HS.19.1.a Complete applicable safety assessment with 100% accuracy.

STS.HS.19.1.b Employ appropriate Personal Protective Equipment (PPE) while in the lab setting.

STS.HS.19.1.c Employ eye protection in compliance with Neb. Rev. Statute 79-715.

STS.HS.19.1.d Employ the safe application of tools and machines.

STS.HS.19.1.e Explain the main hazards that are possible in the lab setting.

STS.HS.19.1.f Demonstrate proper handling and storing of materials.

STS.HS.19.2 Identify career opportunities in Skilled and Technical Sciences areas.

STS.HS.19.2.a Identify responsibilities and characteristics of professionals in a skilled and technical sciences industry.

STS.HS.19.2.b Describe work behaviors needed to be employable in a skilled and technical sciences industry.

STS.HS.19.2.c Identify the training, education, certification, and licensing requirements for various careers in a skilled and technical sciences industry.

STS.HS.19.2.d Identify high wage, high demand, and high skill careers in skilled and technical sciences.

INTRODUCTION TO SKILLS AND TECHNICAL SCIENCES (cont.)

STS.HS.19.3 Apply appropriate academic and technical skills to produce a product.

STS.HS.19.3.a Employ project-related math operations and formulas.

STS.HS.19.3.b Employ effective verbal, written, and/or visual communication skills.

STS.HS.19.3.c Define course content vocabulary.

STS.HS.19.3.d Conduct the accurate use of measurement tools.

STS.HS.19.4 Identify the materials, tools, machines, and equipment required to produce a product.

STS.HS.19.4.a Identify types of materials to be used for various products.

STS.HS.19.4.b Identify types of fasteners for various products.

STS.HS.19.4.c Identify types of adhesives for various products.

STS.HS.19.4.d Identify types of finishes for various products.

STS.HS.19.4.e Identify the correct tools, machines, and equipment appropriate for a specific operation or process.

STS.HS.19.5 Produce a product(s).

STS.HS.19.5.a Interpret working drawings of a product to be produced.

STS.HS.19.5.b Select the proper materials adhesives, fasteners and finishes for a product.

STS.HS.19.5.c Demonstrate the proper tool, machine, or equipment selection and usage for each corresponding operation needed to produce a product.

STS.HS.19.5.d Execute a plan of procedure.

ARCHITECTURAL DESIGN 1

COURSE DESCRIPTION

This intermediate course provides students with an introduction into Computer-Aided-Drafting (CAD) and the foundation for architectural design. Architectural styles, design and construction procedures as well as knowledge of working drawings needed to build a structure will be included.

Target Grades: 10-12.

STANDARDS AND INDICATORS:

STS.HS.6.1 Apply safety principles, practices, philosophy, and guidelines to the work environment.

STS.HS.6.1.a	Employ eye protection in compliance with Neb. Rev. Statute 79-715.
STS.HS.6.1.b	Identify office safety hazards.
STS.HS.6.1.c	Employ appropriate Personal Protective Equipment (PPE).
STS.HS.6.1.d	Employ proper ergonomics.
STS.HS.6.1.e	Complete applicable safety assessment with 100% accuracy.

STS.HS.6.2 Identify architectural career opportunities.

STS.HS.6.2.a	Identify the primary duties and attributes of an architect or architectural technician.
STS.HS.6.2.b	Describe the various careers within the architectural profession (i.e., drafting technician, designer, project manager, architect, landscape architect, and interior designer) and the training and certification needed for each.
STS.HS.6.2.c	Identify the relationships between all stakeholders involved in a construction project.
STS.HS.6.2.d	Identify positive work behaviors and personal qualities needed to be employable.

ARCHITECTURAL DESIGN 1 (cont.)

STS.HS.6.3 Apply math terminology, functions, and formulas to architectural design.

STS.HS.6.3.a	Identify whole numbers, decimals, fractions, and complex numbers.
STS.HS.6.3.b	Apply arithmetic operations.
STS.HS.6.3.c	Solve decimal/fraction conversions.
STS.HS.6.3.d	Apply algebraic skills to solve problems involving area, volume, and angles.
STS.HS.6.3.e	Explain scale using architect or engineer scales.

STS.HS.6.4 Utilize drafting and design technology.

STS.HS.6.4.a	Employ the appropriate technology tools (i.e., CAD, SolidWorks, Fusion 360, Inventor, etc.) for conveying information, solving problems, and expediting workplace processes.
STS.HS.6.4.b	Employ basic computer and information technology skills used in the drafting industry.
STS.HS.6.4.c	Employ ethical digital citizenship.

ARCHITECTURAL DESIGN 1 (cont.)

STS.HS.6.5 Analyze architectural styles across time.

STS.HS.6.5.a	Identify design principles, elements, and architectural styles.
STS.HS.6.5.b	Identify the building materials, locations, and design that have historically influenced architecture.
STS.HS. 6.5.c	Identify the influence that historical buildings have on today's architecture.

STS.HS.6.6 Identify typical building design and construction methods and practices.

STS.HS.6.6.a	Identify terms and definitions commonly used in the architectural profession.
STS.HS.6.6.b	Identify various digital drafting and modeling options (i.e., CAD/BIM).
STS.HS.6.6.c	Identify the types of materials, their properties, and applications used in building construction.
STS.HS.6.6.d	Identify different types of fasteners, adhesives, and finishes.

STS.HS.6.7 Communicate design solutions.

STS.HS.6.7.a	Identify common line types, symbols, and components that comprise architectural construction working drawings.
STS.HS.6.7.b	Identify dimensions on working drawing.
STS.HS.6.7.c	Create multi-page working drawings.
STS.HS.6.7.d	Employ correct annotation of line type, section line labels, and dimensions.
STS.HS.6.7.e	Create shaded and rendered presentation drawings.

ARCHITECTURAL DESIGN 2

COURSE DESCRIPTION

This capstone course allows students to create working drawings for residential construction and systems that meet industry standards and codes. Students will create working drawings of residential construction systems.

Target Grades: 11-12.

STANDARDS AND INDICATORS:

STS.HS.7.1 Apply safety principles, practices, and guidelines to the work environment.

STS.HS.7.1.a	Complete applicable safety assessment with 100% accuracy.
STS.HS.7.7.b	Employ eye protection in compliance with Neb. Rev. Statute 79-715.
STS.HS.7.1.c	Identify office safety hazards.
STS.HS.7.1.d	Employ appropriate Personal Protective Equipment (PPE).
STS.HS.7.1.e	Employ proper ergonomics.

STS.HS.7.2 Identify architectural career opportunities.

STS.HS.7.2.a	Identify the primary duties and attributes of an architect or architectural technician.
STS.HS.7.2.b	Identify various careers within the architectural profession as well as the training and certification needed for each.
STS.HS.7.2.c	Identify the relationships between stakeholders involved in a construction project.
STS.HS.7.2.d	Identify positive work behaviors and personal qualities needed to be employable.

ARCHITECTURAL DESIGN 2 (cont.)

STS.HS.7.3 Apply math terminology, functions, and formulas to architectural design.

STS.HS.7.3.a Identify whole numbers, decimals, fractions, and complex numbers.

STS.HS.7.3.b Apply arithmetic operations.

STS.HS.7.3.c Solve decimal/fraction conversions.

STS.HS.7.3.d Apply mathematical functions used to solve problems.

STS.HS.7.3.e Interpret scale using architect or engineer scales.

STS.HS.7.4 Explain site characteristics and how they affect building design and land development.

STS.HS.7.4.a Identify the impact of infrastructure (i.e., storm water runoff, pedestrian and vehicular access).

STS.HS.7.4.b Explain environmental factors essential to design and construction.

STS.HS.7.5 Explain residential and commercial building systems.

STS.HS.7.5.a Identify general categories of structural systems in residential and commercial buildings.

STS.HS.7.5.b Explain code requirements and constraints as they pertain to current local and national building codes.

STS.HS.7.5.c Identify alternative construction methods and materials.

ARCHITECTURAL DESIGN 2 (cont.)

STS.HS.7.6 Create design solutions.

STS.HS.7.6.a Create multipage working drawings.

STS.HS.7.6.b Create applicable drawing views, details, schedules, notes, and index tables.

STS.HS.7.6.c Employ correct annotation of line type, section line labels, and dimensions.

STS.HS.7.7 Produce a project proposal.

STS.HS.7.7.a Employ architectural terminology in all communication.

STS.HS.7.7.b Employ correct annotation of line type, section line labels, and dimensions.

STS.HS.7.7.c Create shaded and rendered presentation drawings.

STS.HS.7.7.d Identify plan review requirements needed to obtain a building permit.

INTRODUCTION TO SKILLS AND TECHNICAL SCIENCES

COURSE DESCRIPTION

This introductory course provides the skills and technical knowledge for a beginning student in areas of industry, safety, material, equipment, and process understanding. This entry level course helps students gain a foundation in all areas of Skilled and Technical Sciences including Architecture and Construction; Energy and Engineering; Manufacturing; and Transportation, Distribution, and Logistics.

Target Grades 9-12.

STANDARDS AND INDICATORS:

STS.HS.19.1 Apply safety principles, practices, philosophy, and guidelines to the work environment.

STS.HS.19.1.a Complete applicable safety assessment with 100% accuracy.

STS.HS.19.1.b Employ appropriate Personal Protective Equipment (PPE) while in the lab setting.

STS.HS.19.1.c Employ eye protection in compliance with Neb. Rev. Statute 79-715.

STS.HS.19.1.d Employ the safe application of tools and machines.

STS.HS.19.1.e Explain the main hazards that are possible in the lab setting.

STS.HS.19.1.f Demonstrate proper handling and storing of materials.

STS.HS.19.2 Identify career opportunities in Skilled and Technical Sciences areas.

STS.HS.19.2.a Identify responsibilities and characteristics of professionals in a skilled and technical sciences industry.

STS.HS.19.2.b Describe work behaviors needed to be employable in a skilled and technical sciences industry.

STS.HS.19.2.c Identify the training, education, certification, and licensing requirements for various careers in a skilled and technical sciences industry.

STS.HS.19.2.d Identify high wage, high demand, and high skill careers in skilled and technical sciences.

INTRODUCTION TO SKILLS AND TECHNICAL SCIENCES (cont.)

STS.HS.19.3 Apply appropriate academic and technical skills to produce a product.

STS.HS.19.3.a Employ project-related math operations and formulas.

STS.HS.19.3.b Employ effective verbal, written, and/or visual communication skills.

STS.HS.19.3.c Define course content vocabulary.

STS.HS.19.3.d Conduct the accurate use of measurement tools

STS.HS.19.4 Identify the materials, tools, machines, and equipment required to produce a product.

STS.HS.19.4.a Identify types of materials to be used for various products.

STS.HS.19.4.b Identify types of fasteners for various products.

STS.HS.19.4.c Identify types of adhesives for various products.

STS.HS.19.4.d Identify types of finishes for various products.

STS.HS.19.4.e Identify the correct tools, machines, and equipment appropriate for a specific operation or process.

STS.HS.19.5 Produce a product(s).

STS.HS.19.5.a Interpret working drawings of a product to be produced.

STS.HS.19.5.b Select the proper materials adhesives, fasteners and finishes for a product.

STS.HS.19.5.c Demonstrate the proper tool, machine, or equipment selection and usage for each corresponding operation needed to produce a product.

STS.HS.19.5.d Execute a plan of procedure.

RESIDENTIAL ELECTRICTRICAL WIRING

COURSE DESCRIPTION

This introductory course provides an overview of the theory, terminology, tools, and practical experience in the skills needed for a career in the field of residential wiring. Emphasis will be placed on electrical safety, types of electricity components used in residential wiring, and an opportunity to practice the knowledge and skills learned in the class.

Target Grades: 10-12.

STANDARDS AND INDICATORS:

STS.HS.29.1 Apply safety principles, practices, philosophy, and guidelines to the work environment.

STS.HS.29.1.a Complete applicable safety assessment with 100% accuracy.

STS.HS.29.1.b Employ appropriate Personal Protective Equipment (PPE) while in the lab setting.

STS.HS.29.1.c Employ eye protection in compliance with Neb. Rev. Statute 79–715.

STS.HS.29.1.d Employ the safe application of tools and machines.

STS.HS.29.1.e Explain the main hazards that are possible in the lab setting.

STS.HS.29.1.f Demonstrate proper handling and storing of materials.

STS.HS.29.1.g List the techniques and practices used to prevent fires.

STS.HS.29.2 Identify career opportunities in the electrical industry.

STS.HS.29.2.a Describe work behaviors needed to be employable.

STS.HS.29.2.b Identify employment trends in the electrical industry.

STS.HS.29.2.c Identify the responsibilities and characteristics of professionals in the electrical industry.

STS.HS.29.2.d Identify the training, education, certification, and licensing requirements for careers in the electrical industry.

RESIDENTIAL ELECTRICTRICAL WIRING (cont.)

STS.HS.29.3 Demonstrate the use of electrical communications.

STS.HS.29.3.a Recall vocabulary related to the electrical environment.

STS.HS.29.3.b Apply math calculations for measurements and OHM'S law.

STS.HS.29.3.c Interpret electrical symbols, plans, drawings, and codes.

STS.HS.29.4 Demonstrate the proper uses of electrical components.

STS.HS.29.4.a Employ National Electric Code (NEC) standards when wiring electrical components.

STS.HS.29.4.b Demonstrate the rough-in of electrical devices to meet NEC standards.

STS.HS.29.4.c Demonstrate the connection of electrical devices to meet NEC standards.

STS.HS.29.4.d Demonstrate the installation of electrical devices to meet NEC standards.

STS.HS.29.5 Demonstrate the use of materials, tools, and equipment needed in electricity.

STS.HS.29.5.a Demonstrate the proper use of electrical tools and equipment.

STS.HS.29.5.b Identify the different types of wires used for electricity.

STS.HS.29.5.c Demonstrate the proper use of electrical hardware.

STS.HS.29.5.d Demonstrate the proper use of low and high voltage circuits.

CONSTRUCTION TRADES 1

COURSE DESCRIPTION

This intermediate course provides an overview of construction materials, tools, and processes needed for a basic construction project. This course will lay the groundwork for higher-level construction projects and for careers in the construction industry.

Target Grades: 10-12.

STANDARDS AND INDICATORS:

STS.HS.10.1 Apply safety principles, practices, philosophy, and guidelines to the work environment.

- STS.HS.10.1.a Complete applicable safety assessment with 100% accuracy.
- STS.HS.10.1.b Employ appropriate Personal Protective Equipment (PPE) while in the lab setting.
- STS.HS.10.1.c Employ eye protection in compliance with Neb. Rev. Statute 79-715.
- STS.HS.10.1.d Employ the safe application of tools and machines.
- STS.HS.10.1.e Explain the main hazards that are possible in the lab setting.
- STS.HS.10.1.f Demonstrate proper handling and storing of materials.
- STS.HS.10.1.g Demonstrate proper use of a ladder.

STS.HS.10.2 Identify career opportunities in the construction industry.

- STS.HS.10.2.a Describe work behaviors needed to be employable.
- STS.HS.10.2.b Identify employment trends in various construction sectors (e.g., residential, commercial, industrial, energy, green technologies, etc.).
- STS.HS.10.2.c Identify the responsibilities and characteristics of professionals in the construction industry.
- STS.HS.10.2.d Identify the training, education, certification, and licensing requirements for various careers in the construction industry.

CONSTRUCTION TRADES 1 (cont.)

STS.HS.10.3 Demonstrate use of construction communications.

STS.HS.10.3.a Interpret construction terminology.

STS.HS.10.3.b Identify construction tools and equipment.

STS.HS.10.3.c Interpret construction plans, drawings, and schedules.

STS.HS.10.4 Summarize building systems and components.

STS.HS.10.4.a Identify construction materials needed to complete a project (i.e., dimensional, engineered, and steel.

STS.HS.10.4.b Identify different types of fasteners, adhesives, and finishes needed to complete a project.

STS.HS.10.5 Demonstrate the building process

STS.HS.10.5.a Identify, receive, and inspect materials.

STS.HS.10.5.b Apply math functions and formulas to complete tasks.

STS.HS.10.5.c Correctly and accurately use tools and equipment to perform material takeoff (MTO) from the drawings and meeting specifications.

STS.HS.10.5.d Construct a project using dimensional, engineered, or steel components.

CONSTRUCTION TRADES 2

COURSE DESCRIPTION

This capstone course is designed for the student pursuing a career as a construction professional and combines technical skills with planning and management to prepare the student for all stages of a construction project.

Target Grades: 11-12.

STANDARDS AND INDICATORS:

STS.HS.11.1 Apply safety principles, practices, philosophy and guidelines to the work environment.

STS.HS.11.1.a	Complete applicable safety assessment with 100% accuracy.
STS.HS.11.1.b	Employ appropriate Personal Protective Equipment (PPE) while in the lab setting.
STS.HS.11.1.c	Employ eye protection in compliance with Neb. Rev. Statute 79-715.
STS.HS.11.1.d	Employ the safe application of tools and machines.
STS.HS.11.1.e	Explain the main hazards that are possible in the lab setting.
STS.HS.11.1.f	Demonstrate proper handling and storing of materials.
STS.HS.11.1.g	Demonstrate proper use of a ladder.
STS.HS.11.1.h	Identify the role of OSHA in establishing and maintaining safe work environments.

STS.HS.11.2 Identify career opportunities in the construction industry.

STS.HS.11.2.a	Describe work behaviors needed to be employable.
STS.HS.11.2.b	Identify employment trends in various construction sectors (residential, commercial, industrial, energy, green technologies, etc.).
STS.HS.11.2.c	Identify the responsibilities and characteristics of professionals in the construction industry.
STS.HS.11.2.d	Identify the training, education, certification and licensing requirements for various careers in the construction industry.

CONSTRUCTION TRADES 2 (cont.)

STS.HS.11.3 Demonstrate use of construction communications.

STS.HS.11.3.a Define construction terminology.

STS.HS.11.3.b Identify construction tools and equipment needed for a project.

STS.HS.11.3.c Interpret construction plans, drawings and schedules.

STS.HS.11.4 Summarize building systems and components.

STS.HS.11.4.a Identify and inspect construction materials needed to complete a project (ie. dimensional, engineered, or steel).

STS.HS.11.4.b Identify different types of fasteners, adhesives, and finishes needed to complete a project.

STS.HS.11.4.c Describe the building systems needed to complete a construction project.

STS.HS.11.4.d Describe the building components needed to complete a construction project (i.e. trusses, joists, beams, etc.).

STS.HS.11.4.e Identify emerging building trends/technology.

STS.HS.11.5 Identify building codes and permitting processes.

STS.HS.11.5.a Identify local, state, and national building regulations and codes.

STS.HS.11.5.b Describe the requirements needed to obtain a building permit.

STS.HS.11.5.c Identify appropriate building inspections.

CONSTRUCTION TRADES 2 (cont.)

STS.HS.11.6 Demonstrate the building process.

STS.HS.11.6.a Identify, receive, and inspect materials.

STS.HS.11.6.b Apply math functions and formulas to complete job/workplace tasks.

STS.HS.11.6.c Employ tools and equipment to perform material takeoff (MTO) from the drawings and meeting specifications.

STS.HS.11.6.d Construct a project using dimensional, engineered, or steel components.

STS.HS.11.7 Install construction sub-systems (ie. electrical, plumbing, HVAC, etc.).

STS.HS.11.7.a Identify, receive, and inspect materials.

STS.HS.11.7.b Apply math functions and formulas to complete construction job/workplace tasks.

STS.HS.11.7.c Install structural, mechanical, and finish sub-systems correctly to meet current local, state, and national codes.

FUNDAMENTALS OF ENERGY

COURSE DESCRIPTION

This introductory course will focus on the various types, principles, and distribution methods of energy and energy systems.

Target Grades: 9-12.

STANDARDS AND INDICATORS:

STS.HS.16.1 Apply safety principles, practice, philosophy, and guidelines to the work environment.

STS.HS.16.1.a	Complete applicable safety assessment with 100% accuracy.
STS.HS.16.1.b	Employ appropriate Personal Protective Equipment (PPE) while in the lab setting.
STS.HS.16.1.c	Employ eye protection in compliance with Neb. Rev. Statute 79–715.
STS.HS.16.1.d	Employ the safe application of tools and machines.
STS.HS.16.1.e	Explain the main hazards that are possible in the lab setting.
STS.HS.16.1.f	Demonstrate proper handling and storing of materials.

STS.HS.16.2 Determine career opportunities in the energy field.

STS.HS.16.2.a	Identify opportunities and employment trends in various energy sectors.
STS.HS.16.2.b	Identify the training, education, certification, and licensing requirements for energy occupation choices.
STS.HS.16.2.c	Identify the responsibilities of professionals in the energy industry.

FUNDAMENTALS OF ENERGY (cont.)

STS.HS.16.3 Summarize the history of energy generation and distribution.

STS.HS.16.3.a Summarize the history of electric power generation and distribution.

STS.HS.16.3.b Summarize the history of fluid and liquid fuel production and distribution.

STS.HS.16.3.c Identify emerging trends in energy generation and distribution.

STS.HS.16.4 Identify legal and societal influences affecting energy production and distribution.

STS.HS.16.4.a Identify the legal factors that impact the production and distribution of energy.

STS.HS.16.4.b Identify the impact society has on energy production and distribution.

STS.HS.16.4.c Identify the design and project creation process for energy production and distribution.

STS.HS.16.5 Classify the types of energy and their uses.

STS.HS.16.5.a Identify the seven forms of energy.

STS.HS.16.5.b Recognize energy transformations in various settings.

STS.HS.16.5.c Recognize renewable and non-renewable energy sources.

STS.HS.16.5.d Identify the law of conservation of energy.

FUNDAMENTALS OF ENERGY (cont.)

STS.HS.16.6 Appraise energy storage and distribution methods.

STS.HS.16.6.a Summarize the components of an energy delivery system.

STS.HS.16.6.b Identify key pieces of equipment used in the distribution and storage of fluid fuels and electrical power.

STS.HS.16.6.c Compare centralized power generation to distributed generation.

STS.HS.16.7 Apply units of measure used in the evaluation of energy production and delivery.

STS.HS.16.7.a Calculate equations using Ohm's Law.

STS.HS.16.7.b Calculate equations using thermal energy formulas.

STS.HS.16.8 Produce an energy-related product or structure.

STS.HS.16.8.a Generate sketches and plans for an energy-related product or structure.

STS.HS.16.8.b Determine structural requirements, specifications, and estimate costs of structures.

STS.HS.16.8.c Execute plans for construction of energy related products or structures.

SUSTAINABLE ENERGY

COURSE DESCRIPTION

This intermediate course will focus on energy sources and alternative forms of energy and their uses.

Target Grades: 10-12.

STANDARDS AND INDICATORS:

STS.HS.31.1 Apply safety principles, practice, philosophy, and guidelines to the work environment.

STS.HS.31.1.a	Complete applicable safety assessment with 100% accuracy.
STS.HS.31.1.b	Employ appropriate Personal Protective Equipment (PPE) while in the lab setting.
STS.HS.31.1.c	Employ eye protection in compliance with Neb. Rev. Statute 79–715.
STS.HS.31.1.d	Employ the safe application of tools and machines.
STS.HS.31.1.e	Explain the main hazards that are possible in the lab setting.
STS.HS.31.1.f	Demonstrate proper handling and storing of materials.

STS.HS.31.2 Identify career opportunities in the sustainable energy field.

STS.HS.31.2.a	Identify the responsibilities of professionals in the sustainable energy industry.
STS.HS.31.2.b	Identify opportunities and employment trends in various sustainable energy sectors.
STS.HS.31.2.c	Identify the training, education, certification, and licensing requirements for occupation choices within sustainable energy.

SUSTAINABLE ENERGY (cont.)

STS.HS.31.3 Explain societal topics concerning sustainable energy.

STS.HS.31.3.a Summarize energy systems' relation to the conservation and interaction of energy and matter.

STS.HS.31.3.b Explain the responsibilities and considerations involved in making decisions in the energy industry.

STS.HS.31.3.c Explain the economic and political ramifications of the energy industry.

STS.HS.31.4 Identify the various types of energy and their uses.

STS.HS.31.4.a Explain the characteristics of wind as an energy source.

STS.HS.31.4.b Explain how solar energy may be used as an alternative energy source.

STS.HS.31.4.c Explain how geothermal energy can be used as a form of energy.

STS.HS.31.4.d Explain how biomass is used as an alternative form of energy.

STS.HS.31.4.e Explain how water may be used in energy production.

STS.HS.31.5 Determine the materials, tools, and equipment needed to manufacture a sustainable energy product.

STS.HS.31.5.a Determine types of materials, fasteners, adhesives, and finishes needed to produce a specific product related to sustainable energy.

STS.HS.31.5.b Determine the correct tools and equipment needed to produce a specific product related to sustainable energy.

STS.HS.31.5.c Identify the components of an effective sustainable energy product construction plan.

SUSTAINABLE ENERGY (cont.)

STS.HS.31.6 Explain current trends and information related to sustainable energy production and distribution.

STS.HS.31.6.a Identify pros and cons of sustainable energy.

STS.HS.31.6.b Locate, organize, and reference reliable information from various sources to communicate trends in sustainable energy.

STS.HS.31.7 Execute accurate measurements using math and measurement tools pertaining to sustainable energy.

STS.HS.31.7.a Identify types of measurement tools used in sustainable energy.

STS.HS.31.7.b Demonstrate the accurate use of measurement and layout tools to 1/16" precision.

STS.HS.31.7.c Solve math functions and formulas to complete tasks within the sustainable energy field.

STS.HS.31.8 Construct a sustainable energy related product or structure.

STS.HS.31.8.a Create sketches and plans for a sustainable energy related product or structure.

STS.HS.31.8.b Determine structural requirements, specifications, and estimate costs of structures.

STS.HS.31.8.c Interpret plans to construct, maintain, or repair sustainable energy-related products or structures.

STS.HS.31.8.d Properly plan, build, and maintain the product or structure.

PHYSICS AND MATHEMATICS OF ENERGY

COURSE DESCRIPTION

This capstone course provides the skills and technical knowledge for a student in areas of industry, safety, material, equipment, and process understanding in various energy industries. Students will use knowledge and skills from previous energy courses.

Target Grades: 9-12.

STANDARDS AND INDICATORS:

STS.HS.27.1 Apply safety principles, practices, philosophy, and guidelines to the work environment.

- STS.HS.27.1.a Complete applicable safety assessment with 100% accuracy.
- STS.HS.27.1.b Employ appropriate Personal Protective Equipment (PPE) while in the lab setting.
- STS.HS.27.1.c Employ eye protection in compliance with Neb. Rev. Statute 79–715.
- STS.HS.27.1.d Employ the safe application of tools and machines.
- STS.HS.27.1.e Explain the main hazards that are possible in the lab setting.
- STS.HS.27.1.f Demonstrate proper handling and storing of materials.

STS.HS.27.2 Identify career opportunities in fields related to the physics and mathematics of energy.

- STS.HS.27.2.a Identify the responsibilities and characteristics of professionals in the energy industry.
- STS.HS.27.2.b Identify career opportunities in the energy field.
- STS.HS.27.2.c Identify the training, education, certification, and licensing requirements for various careers in the energy industry.

PHYSICS AND MATHEMATICS OF ENERGY (cont.)

STS.HS.27.3 Execute accurate measurements using measurement tools.

STS.HS.27.3.a Identify types of measurement tools.

STS.HS.27.3.b Categorize measurement tools by use.

STS.HS.27.3.c Demonstrate the accurate use of measurement and layout tools to 1/16" precision.

STS.HS.27.4 Apply principles of physics and mathematics to the energy industry.

STS.HS.27.4.a Identify the applications of physics in energy production, distribution, and use.

STS.HS.27.4.b Identify the applications of mathematics in energy production, distribution, and use.

STS.HS.27.4.c Apply principles of physics and mathematics to the problem solving and product creation process.

STS.HS.27.5 Apply appropriate academic and technical skills to energy-centric activities and projects.

STS.HS.27.5.a Identify whole numbers, decimals, fractions, and complex numbers.

STS.HS.27.5.b Solve decimal/fraction conversions.

STS.HS.27.5.c Employ math functions and formulas to complete an energy job and workplace tasks.

STS.HS.27.5.d Communicate principles and terminology associated with the study and use of mathematics and physics.

PHYSICS AND MATHEMATICS OF ENERGY (cont.)

STS.HS.27.6 Identify the materials, tools, and equipment needed to manufacture a product used in the energy industry.

STS.HS.27.6.a Determine types of materials, fasteners, adhesives, and finishes needed to produce an energy product.

STS.HS.27.6.b Determine the correct tools and equipment needed to produce a specific product.

STS.HS.27.6.c Identify components of an effective plan to build an energy product.

STS.HS.27.7 Produce an energy product.

STS.HS.27.7.a Devise a plan to build an energy product.

STS.HS.27.7.b Execute a plan to create an energy product.

STS.HS.27.7.c Identify the elements of a finished energy product.

INTRODUCTION TO SKILLS AND TECHNICAL SCIENCES

COURSE DESCRIPTION

This introductory course provides the skills and technical knowledge for a beginning student in areas of industry, safety, material, equipment, and process understanding. This entry level course helps students gain a foundation in all areas of Skilled and Technical Sciences including Architecture and Construction; Energy and Engineering; Manufacturing; and Transportation, Distribution, and Logistics.

Target Grades 9-12.

STANDARDS AND INDICATORS:

STS.HS.19.1 Apply safety principles, practices, philosophy, and guidelines to the work environment.

STS.HS.19.1.a Complete applicable safety assessment with 100% accuracy.

STS.HS.19.1.b Employ appropriate Personal Protective Equipment (PPE) while in the lab setting.

STS.HS.19.1.c Employ eye protection in compliance with Neb. Rev. Statute 79-715.

STS.HS.19.1.d Employ the safe application of tools and machines.

STS.HS.19.1.e Explain the main hazards that are possible in the lab setting.

STS.HS.19.1.f Demonstrate proper handling and storing of materials.

STS.HS.19.2 Identify career opportunities in Skilled and Technical Sciences areas.

STS.HS.19.2.a Identify responsibilities and characteristics of professionals in a skilled and technical sciences industry.

STS.HS.19.2.b Describe work behaviors needed to be employable in a skilled and technical sciences industry.

STS.HS.19.2.c Identify the training, education, certification, and licensing requirements for various careers in a skilled and technical sciences industry.

STS.HS.19.2.d Identify high wage, high demand, and high skill careers in skilled and technical sciences.

INTRODUCTION TO SKILLS AND TECHNICAL SCIENCES (cont.)

STS.HS.19.3 Apply appropriate academic and technical skills to produce a product.

STS.HS.19.3.a Employ project-related math operations and formulas.

STS.HS.19.3.b Employ effective verbal, written, and/or visual communication skills.

STS.HS.19.3.c Define course content vocabulary.

STS.HS.19.3.d Conduct the accurate use of measurement tools

STS.HS.19.4 Identify the materials, tools, machines, and equipment required to produce a product.

STS.HS.19.4.a Identify types of materials to be used for various products.

STS.HS.19.4.b Identify types of fasteners for various products.

STS.HS.19.4.c Identify types of adhesives for various products.

STS.HS.19.4.d Identify types of finishes for various products.

STS.HS.19.4.e Identify the correct tools, machines, and equipment appropriate for a specific operation or process.

STS.HS.19.5 Produce a product(s).

STS.HS.19.5.a Interpret working drawings of a product to be produced.

STS.HS.19.5.b Select the proper materials adhesives, fasteners and finishes for a product.

STS.HS.19.5.c Demonstrate the proper tool, machine, or equipment selection and usage for each corresponding operation needed to produce a product.

STS.HS.19.5.d Execute a plan of procedure.

ENGINEERING DESIGN AND SYSTEMS THINKING

COURSE DESCRIPTION

This course gives students the opportunity to develop skills and understanding of engineering. Students will learn about various elements of engineering design and how engineering requires systematic thinking. Topics will include safety, tools, math and science concepts, and engineering principles and processes.

Target Grades 9-12.

STANDARDS AND INDICATORS:

STS.HS.14.1 Apply safety principles, practice, philosophy, and guidelines to the work environment.

- STS.HS.14.1.a Complete applicable safety assessment with 100% accuracy.
- STS.HS.14.1.b Employ eye protection in compliance with Neb. Rev. Statute 79–715.
- STS.HS.14.1.c Employ appropriate Personal Protective Equipment (PPE) while in the lab setting.
- STS.HS.14.1.d Employ the safe application of tools and machines.
- STS.HS.14.1.e Explain the main hazards that are possible in the lab setting.
- STS.HS.14.1.f Demonstrate proper handling and storing of materials.

STS.HS.14.2 Execute accurate measurements using measurement tools commonly used in engineering.

- STS.HS.14.2.a Identify types of engineering measurement tools.
- STS.HS.14.2.b Categorize engineering measurement tools by use.
- STS.HS.14.2.c Demonstrate the accurate use of engineering measurement and layout tools to 1/16" precision.

ENGINEERING DESIGN AND SYSTEMS THINKING (cont.)

STS.HS.14.3 Solve math functions and formulas to complete engineering job/workplace tasks.

STS.HS.14.3.a Identify whole numbers, decimals, fractions, and complex numbers.

STS.HS.14.3.b Apply basic arithmetic operations.

STS.HS.14.3.c Solve decimal or fraction conversions.

STS.HS.14.4 Compare the primary engineering branches.

STS.HS.14.4.a Summarize each branch of engineering.

STS.HS.14.4.b Compare the engineering branches.

STS.HS.14.5 Explain engineering systems thinking.

STS.HS.14.5.a Define "system" in an engineering context.

STS.HS.14.5.b Explain a current system in an engineering context.

STS.HS.14.6 Produce an engineered solution.

STS.HS.14.6.a Identify engineering principles needed for a solution.

STS.HS.14.6.b Apply engineering principles.

STS.HS.14.6.c Identify engineering processes needed for a solution.

STS.HS.14.6.d Apply engineering processes.

STS.HS.14.6.e Apply task specific mathematical concepts.

STS.HS.14.6.f Apply task specific scientific concepts.

STS.HS.14.6.g Demonstrate proper use of engineering tools and software.

ENGINEERING PROBLEM-SOLVING

COURSE DESCRIPTION

This intermediate course exposes students to some of the major concepts that they will encounter in a postsecondary engineering course of study. Students will learn how to identify an engineering problem, research possible solutions, and determine the best solution for the problem.

Target Grades 10-12.

STANDARDS AND INDICATORS:

STS.HS.15.1 Apply safety principles, practices, philosophy, and guidelines to the work environment.

STS.HS.15.1.a	Complete applicable safety assessment with 100% accuracy.
STS.HS.15.1.b	Employ eye protection in compliance with Neb. Rev. Statute 79–715.
STS.HS.15.1.c	Employ appropriate Personal Protective Equipment (PPE) while in the lab setting.
STS.HS.15.1.d	Employ the safe application of tools and machines.
STS.HS.15.1.e	Explain the main hazards that are possible in the lab setting.
STS.HS.15.1.f	Demonstrate proper handling and storing of materials.

STS.HS.15.2 Describe engineering as a profession.

STS.HS.15.2.a	Identify opportunities and employment trends in the engineering branches.
STS.HS.15.2.b	Identify training, education, certification, and licensing requirements for careers in the different engineering branches.

ENGINEERING PROBLEM-SOLVING (cont.)

STS.HS.15.3 Employ the engineering design process to solve an engineering problem.

STS.HS.15.3.a	Define an engineering problem.
STS.HS.15.3.b	Research possible solutions.
STS.HS.15.3.c	Design viable solutions.
STS.HS.15.3.d	Identify the materials, tools, emerging technologies, and equipment needed to manufacture a solution to an engineering problem.
STS.HS.15.3.e	Solve mathematical and scientific problems required to create engineering solutions.
STS.HS.15.3.f	Determine structural requirements and specifications.
STS.HS.15.3.g	Estimate costs for the solution.

STS.HS.15.4 Explain professional engineering communications.

STS.HS.15.4.a	Identify a concise problem statement.
STS.HS.15.4.b	Explain the use of informal and formal presentations, using appropriate media, to engage and inform audiences.
STS.HS.15.4.c	Explain the documentation of the design process and project work using engineering drawings, engineering standards, and documentation protocols.

ROBOTICS

COURSE DESCRIPTION

This intermediate course is designed to explore the current and future use, design, construction, operation, and use of robots and automation technology. Students will apply mathematics formulas and calculations to design and construct a robot.

Target Grades 10-12.

STANDARDS AND INDICATORS:

STS.HS.30.1 Apply safety principles, practices, philosophy, and guidelines to the work environment.

- STS.HS.30.1.a Complete applicable safety assessment with 100% accuracy.
- STS.HS.30.1.b Employ eye protection in compliance with Neb. Rev. Statute 79–715.
- STS.HS.30.1.c Employ appropriate Personal Protective Equipment (PPE) while in the lab setting.
- STS.HS.30.1.d Employ the safe application of tools and machines.
- STS.HS.30.1.e Explain the main hazards that are possible in the lab setting.
- STS.HS.30.1.f Demonstrate proper handling and storing of materials.

STS.HS.30.2 Solve robotics-related mathematics.

- STS.HS.30.2.a Solve calculations using whole numbers, decimals, fractions, and complex numbers.
- STS.HS.30.2.b Solve basic arithmetic and measurement operations.
- STS.HS.30.2.c Solve decimal/fraction conversions.
- STS.HS.30.2.d Calculate area.
- STS.HS.30.2.e Calculate circumference.
- STS.HS.30.2.f Calculate average.

ROBOTICS (cont.)

STS.HS.30.3 Employ robotics-related science principles.

STS.HS.30.3.a Calculate fundamental electrical measurements using laws of electricity.

STS.HS.30.3.b Calculate torque.

STS.HS.30.3.c Calculate the center of gravity.

STS.HS.30.3.d Calculate mechanical advantage.

STS.HS.30.3.e Calculate gear ratios.

STS.HS.30.3.f Calculate angular momentum.

STS.HS.30.3.g Calculate trajectory.

STS.HS.30.4 Identify the different specialized areas of robotics.

STS.HS.30.4.a Summarize each specialized field of robotics.

STS.HS.30.4.b Identify the diversity of the robotics usage.

STS.HS.30.4.c Identify the education, certification, or licensure required in a robotics-related career.

STS.HS.30.5 Design and assemble automation or robots that are functionally and mechanically correct.

STS.HS.30.5.a Demonstrate use of a physical or simulated robot.

STS.HS.30.5.b Demonstrate basic programming concepts: variables, data structures, control structures, and syntax.

STS.HS.30.5.c Generate a mechanical solution for a robot to overcome a physical or simulated physics challenge.

STS.HS.30.5.d Generate a programming solution for a robot to overcome a physical or simulated autonomous challenge.

STS.HS.30.5.g Assemble various physical or simulated mechanisms to understand mechanical setups.

STS.HS.30.5.h Construct a physical or simulated fully functioning robot that has proof of concept through engineering documentation protocols.

SYSTEMS ENGINEERING AND PROJECT MANAGEMENT

COURSE DESCRIPTION

This is a capstone engineering research course in which students will design and develop an original solution to a valid open-ended technical problem by applying the engineering design process.

Target Grades 11-12.

STANDARDS AND INDICATORS:

STS.HS.32.1 Apply safety principles, practices, philosophy, and guidelines to the work environment.

STS.HS.32.1.a	Complete applicable safety assessment with 100% accuracy.
STS.HS.32.1.b	Employ eye protection in compliance with Neb. Rev. Statute 79-715.
STS.HS.32.1.c	Employ appropriate Personal Protective Equipment (PPE) while in the lab setting.
STS.HS.32.1.d	Employ the safe application of tools and machines.
STS.HS.32.1.e	Explain the main hazards that are possible in the lab setting.
STS.HS.32.1.f	Demonstrate proper handling and storing of materials.

STS.HS.32.2 Identify career opportunities in engineering areas.

STS.HS.32.2.a	Identify responsibilities and characteristics of professionals in an engineering industry.
STS.HS.32.2.b	Describe work behaviors needed to be employable in an engineering industry.
STS.HS.32.2.c	Identify the training, education, certification, and licensing requirements for various careers in an engineering industry.
STS.HS.32.2.d	Identify high wage, high demand, and high skill careers in engineering.

SYSTEMS ENGINEERING AND PROJECT MANAGEMENT (cont.)

STS.HS.32.3 Employ a formal engineering design process to create a solution to an existing problem.

STS.HS.32.3.a	Collaborate with industry experts, mentors, or advanced students.
STS.HS.32.3.b	Demonstrate authentic engineering methods and documentation.
STS.HS.32.3.c	Apply task-specific mathematical concepts.
STS.HS.32.3.d	Apply task-specific scientific concepts.
STS.HS.32.3.e	Complete a prototype or minimum viable product (MVP).
STS.HS.32.3.f	Perform engineering tests to evaluate the prototype or MVP.
STS.HS.32.3.g	Develop a marketing plan and production plan.
STS.HS.32.3.h	Report on the importance of each step of the engineering process.

ADVANCED ROBOTICS

COURSE DESCRIPTION

This course is a capstone experience in which students engineer robot solutions to complete a task. This includes design, construction, and programming a robot.

Target Grades 11-12.

STANDARDS AND INDICATORS:

STS.HS.5.1 Apply safety principles, practices, philosophy, and guidelines to the work environment.

- STS.HS.5.1.a Complete applicable safety assessment with 100% accuracy.
- STS.HS.5.1.b Employ eye protection in compliance with Neb. Rev. Statute 79–715.
- STS.HS.5.1.c Employ appropriate Personal Protective Equipment (PPE) while in the lab setting.
- STS.HS.5.1.d Employ the safe application of tools and machines.
- STS.HS.5.1.e Explain the main hazards that are possible in the lab setting.
- STS.HS.5.1.f Demonstrate proper handling and storing of materials.

STS.HS.5.2 Identify careers in robotics.

- STS.HS.5.2.a Identify robotics industry vocabulary.
- STS.HS.5.2.b Identify the responsibilities of robotics professionals.
- STS.HS.5.2.c Identify the education, certification, or licensure required in a robotics-related career.

ADVANCED ROBOTICS (cont.)

STS.HS.5.3 Create a robotic solution (physical or simulated), using a formal engineering design process, to solve an existing problem.

STS.HS.5.3.a Demonstrate authentic engineering methods and documentation.

STS.HS.5.3.b Apply task-specific mathematical concepts.

STS.HS.5.3.c Apply task-specific scientific concepts.

STS.HS.5.3.d Explain each step of the design process.

INTRODUCTION TO SKILLS AND TECHNICAL SCIENCES

COURSE DESCRIPTION

This introductory course provides the skills and technical knowledge for a beginning student in areas of industry, safety, material, equipment, and process understanding. This entry level course helps students gain a foundation in all areas of Skilled and Technical Sciences including Architecture and Construction; Energy and Engineering; Manufacturing; and Transportation, Distribution, and Logistics.

Target Grades 9-12.

STANDARDS AND INDICATORS:

STS.HS.19.1 Apply safety principles, practices, philosophy, and guidelines to the work environment.

STS.HS.19.1.a Complete applicable safety assessment with 100% accuracy.

STS.HS.19.1.b Employ appropriate Personal Protective Equipment (PPE) while in the lab setting.

STS.HS.19.1.c Employ eye protection in compliance with Neb. Rev. Statute 79-715.

STS.HS.19.1.d Employ the safe application of tools and machines.

STS.HS.19.1.e Explain the main hazards that are possible in the lab setting.

STS.HS.19.1.f Demonstrate proper handling and storing of materials.

STS.HS.19.2 Identify career opportunities in Skilled and Technical Sciences areas.

STS.HS.19.2.a Identify responsibilities and characteristics of professionals in a skilled and technical sciences industry.

STS.HS.19.2.b Describe work behaviors needed to be employable in a skilled and technical sciences industry.

STS.HS.19.2.c Identify the training, education, certification, and licensing requirements for various careers in a skilled and technical sciences industry.

STS.HS.19.2.d Identify high wage, high demand, and high skill careers in skilled and technical sciences.

INTRODUCTION TO SKILLS AND TECHNICAL SCIENCES (cont.)

STS.HS.19.3 Apply appropriate academic and technical skills to produce a product.

STS.HS.19.3.a Employ project-related math operations and formulas.

STS.HS.19.3.b Employ effective verbal, written, and/or visual communication skills.

STS.HS.19.3.c Define course content vocabulary.

STS.HS.19.3.d Conduct the accurate use of measurement tools

STS.HS.19.4 Identify the materials, tools, machines, and equipment required to produce a product.

STS.HS.19.4.a Identify types of materials to be used for various products.

STS.HS.19.4.b Identify types of fasteners for various products.

STS.HS.19.4.c Identify types of adhesives for various products.

STS.HS.19.4.d Identify types of finishes for various products.

STS.HS.19.4.e Identify the correct tools, machines, and equipment appropriate for a specific operation or process.

STS.HS.19.5 Produce a product(s).

STS.HS.19.5.a Interpret working drawings of a product to be produced.

STS.HS.19.5.b Select the proper materials adhesives, fasteners and finishes for a product.

STS.HS.19.5.c Demonstrate the proper tool, machine, or equipment selection and usage for each corresponding operation needed to produce a product.

STS.HS.19.5.d Execute a plan of procedure.

DRAFTING AND DESIGN

COURSE DESCRIPTION

This introductory course builds the skills necessary to understand ideas being communicated through drawings and documents, and in turn, convey ideas, duties, and tasks to others in a form representing the industry. Students will use and follow industry-specific verbal and visual skills to accomplish workplace/jobsite communications. Students will review traditional project phases and various roles within them to plan for and implement phases within a project. Students will develop working drawings that will be used in design and manufacturing. Computer-aided drafting/design (CADD) may be used.

Target Grades 11-12.

STANDARDS AND INDICATORS:

STS.HS.13.1 Apply safety principles, practice, philosophy, and guidelines to the work environment.

STS.HS.13.1.a	Employ eye protection in compliance with Neb. Rev. Statute 79-715.
STS.HS.13.1.b	Identify office safety hazards.
STS.HS.13.1.c	Employ appropriate Personal Protective Equipment (PPE).
STS.HS.13.1.d	Employ proper ergonomics.
STS.HS.13.1.e	Complete applicable safety assessment with 100% accuracy.

STS.HS.13.2 Identify career opportunities in the drafting industry.

STS.HS.13.2.a	Identify the various careers, primary duties, and attributes of a drafting technician or a design engineer.
STS.HS.13.2.b	Identify the training, education, certification and licensing requirements for various careers of a drafting technician or design engineer.
STS.HS.13.2.c	Identify the relationships between stakeholders involved in a manufacturing project.
STS.HS.13.2.d	Identify positive work behaviors and personal qualities needed to be employable.
STS.HS.13.2.e	Identify high-wage, high-demand, and high-skill drafting careers.

DRAFTING AND DESIGN (cont.)

STS.HS.13.3 Apply math terminology, functions, and formulas to mechanical drafting.

STS.HS.13.3.a Identify whole numbers, decimals, fractions, and complex numbers.

STS.HS.13.3.b Apply arithmetic operations.

STS.HS.13.3.c Solve decimal/fraction conversions.

STS.HS.13.3.d Explain scale using architect or engineer scales.

STS.HS.13.4 Apply conventional drafting standards used in mechanical drafting.

STS.HS.13.4.a Identify terms and definitions commonly used in the mechanical drafting profession.

STS.HS.13.4.b Employ multiple sketching methods such as oblique, isometric and/or orthographic projection.

STS.HS.13.4.c Apply dimensional information and general notes in mechanical plans.

STS.HS.13.5 Utilize drafting and design technology.

STS.HS.13.5.a Employ the appropriate technology tools (i.e., CAD, SolidWorks, Fusion 360, Inventor, etc.) for conveying information, solving problems, and expediting workplace processes.

STS.HS.13.5.b Employ basic computer and information technology skills used in the drafting industry.

STS.HS.13.5.c Employ ethical digital citizenship.

DRAFTING AND DESIGN (cont.)

STS.HS.13.6 Produce a multiview working drawing.

STS.HS.13.6.a	Explain working drawings.
STS.HS.13.6.b	Determine types of materials, fasteners, adhesives, and finishes needed to build a product.
STS.HS.13.6.c	Produce applicable drawing views, schedules, notes, and index tables.
STS.HS.13.6.d	Produce and label section lines.
STS.HS.13.6.e	Produce and label detail drawings.
STS.HS.13.6.f	Produce dimensions.

MANUFACTURING PROCESSES – WOODS

COURSE DESCRIPTION

In this intermediate class, students will be introduced to the basic manufacturing process in wood. An emphasis will be placed on safe tool and machine usage as well as reading plans and using materials to take a project from conception to reality.

Target Grades 9-12.

STANDARDS AND INDICATORS:

STS.HS.23.1 Apply safety principles, practices, philosophy, and guidelines to the work environment.

STS.HS.23.1.a	Complete applicable safety assessment with 100% accuracy.
STS.HS.23.1.b	Employ appropriate Personal Protective Equipment (PPE) while in the lab setting.
STS.HS.23.1.c	Employ eye protection in compliance with Neb. Rev. Statute 79-715.
STS.HS.23.1.d	Employ the safe application of tools and machines.
STS.HS.23.1.e	Explain the main hazards that are possible in the lab setting.
STS.HS.23.1.f	Demonstrate proper handling and storing of materials and chemicals.

STS.HS.23.2 Identify career opportunities in woodworking areas.

STS.HS.23.2.a	Identify responsibilities and characteristics of professionals in a woods industry.
STS.HS.23.2.b	Describe work behaviors needed to be employable in a woods industry.
STS.HS.23.2.c	Identify the training, education, certification, and licensing requirements for various careers in a woods industry.
STS.HS.23.2.d	Identify high wage, high demand, and high skill careers in woodworking.

MANUFACTURING PROCESSES – WOODS (cont.)

STS.HS.23.3 Demonstrate accurate measurements using measurement tools used in woods.

- STS.HS.23.3.a Identify types of woods measurement tools.
- STS.HS.23.3.b Explain woods measurement tools by use.
- STS.HS.23.3.c Demonstrate the accurate use of woods measurement and layout tools to 1/16" precision.

STS.HS.23.4 Solve math functions and formulas to complete woods manufacturing tasks.

- STS.HS.23.4.a Identify whole numbers, decimals, fractions, and complex numbers.
- STS.HS.23.4.b Apply basic arithmetic operations used in woods manufacturing.
- STS.HS.23.4.c Solve decimal/fraction conversions used in woods manufacturing.

STS.HS.23.5 Explain the use of woods manufacturing communications.

- STS.HS.23.5.a Define woods manufacturing terminology.
- STS.HS.23.5.b Explain the language of wood manufacturing.
- STS.HS.23.5.c Explain business and interpersonal communication appropriate to the work in the woods manufacturing environment.

STS.HS.23.6 Determine the materials, tools, machines, and processes required to manufacture a woods product.

- STS.HS.23.6.a Identify the characteristics, properties, and origin of diverse woods.
- STS.HS.23.6.b Differentiate additive and subtractive woods manufacturing.
- STS.HS.23.6.c Identify woods fasteners by their industry standard applications.
- STS.HS.23.6.d Determine feed rate and/or speed settings for a wood material and process.
- STS.HS.23.6.e Explain the operation and application of common woods industry chemicals.
- STS.HS.23.6.f Determine the correct tools, machines, and processes needed to produce a specific wood product.
- STS.HS.23.6.g Estimate the amount of materials and supplies needed to manufacture a wood product.

MANUFACTURING PROCESSES – WOODS (cont.)

STS.HS.23.7 Manufacture a product that uses wood as its primary material.

STS.HS.23.7.a	Interpret plans, drawings, and specifications to process wood materials.
STS.HS.23.7.b	Employ the standard operation and application of tools and machines along the wood manufacturing process.
STS.HS.23.7.c	Employ the process of applying the correct types of materials, fasteners, adhesives, and finishes required to manufacture a specific wood product.
STS.HS.23.7.d	Critique a finished product.
STS.HS.23.7.e	Appraise the manufactured product.

MANUFACTURING PROCESSES – METALS

COURSE DESCRIPTION

In this intermediate class, students will be introduced to the basic manufacturing process in metal. An emphasis will be placed on safe tool and machine usage as well as reading plans and using materials to take a project from conception to reality.

Target Grades 10-12.

STANDARDS AND INDICATORS:

STS.HS.21.1 Apply safety principles, practices, philosophy, and guidelines to the work environment.

STS.HS.21.1.a	Complete applicable safety assessment with 100% accuracy.
STS.HS.21.1.b	Employ appropriate Personal Protective Equipment (PPE) while in the lab setting.
STS.HS.21.1.c	Employ eye protection in compliance with Neb. Rev. Statute 79-715.
STS.HS.21.1.d	Employ the safe application of tools and machines.
STS.HS.21.1.e	Explain the main hazards that are possible in the lab setting.
STS.HS.21.1.f	Demonstrate proper handling and storing of materials and chemicals.

STS.HS.21.2 Identify career opportunities in metals areas.

STS.HS.21.2.a	Identify responsibilities and characteristics of professionals in a metals industry.
STS.HS.21.2.b	Describe work behaviors needed to be employable in a metals industry.
STS.HS.21.2.c	Identify the training, education, certification, and licensing requirements for various careers in a metals industry.
STS.HS.21.2.d	Identify high wage, high demand, and high skill careers in metals.

MANUFACTURING PROCESSES – METALS (cont.)

STS.HS.21.3 Demonstrate accurate measurements using measurement tools used in metals.

- STS.HS.21.3.a Identify types of metals measurement tools.
- STS.HS.21.3.b Explain metals measurement tools by use.
- STS.HS.21.3.c Demonstrate the accurate use of metals measurement and layout tools to 1/16" precision.

STS.HS.21.4 Solve math functions and formulas to complete metals manufacturing tasks.

- STS.HS.21.4.a Identify whole numbers, decimals, fractions, and complex numbers.
- STS.HS.21.4.b Apply basic arithmetic operations used in metals manufacturing.
- STS.HS.21.4.c Solve decimal/fraction conversions used in metals manufacturing.

STS.HS.21.5 Analyze the use of metals manufacturing communications.

- STS.HS.21.5.a Define metals manufacturing terminology.
- STS.HS.21.5.b Interpret the language of metals manufacturing.
- STS.HS.21.5.c Explain business and interpersonal communication appropriate to the work in the metals manufacturing environment.

STS.HS.21.6 Determine the materials, tools, machines, and processes required to manufacture a metals product.

- STS.HS.21.6.a Identify the characteristics, properties, and origin of diverse metals.
- STS.HS.21.6.b Differentiate additive and subtractive metals manufacturing.
- STS.HS.21.6.c Identify metals fasteners by their industry standard applications.
- STS.HS.21.6.d Determine feed rate and/or speed settings for a metal material and process.
- STS.HS.21.6.e Explain the operation and application of common metals industry chemicals.
- STS.HS.21.6.f Determine the correct tools, machines, and processes needed to produce a specific metal product.
- STS.HS.21.6.g Estimate the amount of materials and supplies needed to manufacture a metal product.

MANUFACTURING PROCESSES – METALS (cont.)

STS.HS.21.7 Manufacture a product that uses metal as its primary material.

STS.HS.23.7.a	Interpret plans, drawings, and specifications to process metal materials.
STS.HS.23.7.b	Employ the standard operation and application of tools and machines along the metal manufacturing process.
STS.HS.23.7.c	Apply the correct types of materials, fasteners, adhesives, and finishes required to manufacture a specific metal product.
STS.HS.23.7.d	Explain how to critique a finished product.
STS.HS.23.7.e	Explain how to appraise the manufactured product.

MANUFACTURING PROCESSES – PLASTICS

COURSE DESCRIPTION

In this intermediate class, students will be introduced to the basic manufacturing process in plastics. An emphasis will be placed on safe tool and machine usage as well as reading plans and using materials to take a project from conception to reality.

Target Grades 9-12.

STANDARDS AND INDICATORS:

STS.HS.22.1 Apply safety principles, practices, philosophy, and guidelines to the work environment.

STS.HS.22.1.a Complete applicable safety assessment with 100% accuracy.

STS.HS.22.1.b Employ appropriate Personal Protective Equipment (PPE) while in the lab setting.

STS.HS.22.1.c Employ eye protection in compliance with Neb. Rev. Statute 79-715.

STS.HS.22.1.d Employ the safe application of tools and machines.

STS.HS.22.1.e Explain the main hazards that are possible in the lab setting.

STS.HS.22.1.f Demonstrate proper handling and storing of materials and chemicals.

STS.HS.22.2 Identify career opportunities in plastics areas.

STS.HS.22.2.a Identify responsibilities and characteristics of professionals in a plastics industry.

STS.HS.22.2.b Describe work behaviors needed to be employable in a plastics industry.

STS.HS.22.2.c Identify the training, education, certification, and licensing requirements for various careers in a plastics industry.

STS.HS.22.2.d Identify information concerning high wage, high demand, and high skill careers in plastics.

MANUFACTURING PROCESSES – PLASTICS (cont.)

STS.HS.22.3 Demonstrate accurate measurements using measurement tools used in plastics.

STS.HS.22.3.a Identify types of plastics measurement tools.

STS.HS.22.3.b Explain plastics measurement tools by use.

STS.HS.22.3.c Demonstrate the accurate use of plastics measurement and layout tools to 1/16" precision.

STS.HS.22.4 Solve math functions and formulas to complete plastics manufacturing tasks.

STS.HS.22.4.a Identify whole numbers, decimals, fractions, and complex numbers.

STS.HS.22.4.b Apply basic arithmetic operations used in plastics manufacturing.

STS.HS.22.4.c Solve decimal/fraction conversions used in plastics manufacturing.

STS.HS.22.5 Identify the use of plastics manufacturing communications.

STS.HS.22.5.a Define plastics manufacturing terminology.

STS.HS.22.5.b Identify the language of plastics manufacturing.

STS.HS.22.5.c Explain business and interpersonal communication appropriate to the work in the plastics manufacturing environment.

MANUFACTURING PROCESSES – PLASTICS (cont.)

STS.HS.22.6 Determine the materials, tools, machines, and processes required to manufacture a plastics product.

STS.HS.22.6.a Identify the characteristics, properties, and origin of diverse plastics.

STS.HS.22.6.b Differentiate additive and subtractive plastics manufacturing.

STS.HS.22.6.c Identify plastics fasteners by their industry standard applications.

STS.HS.22.6.d Determine feed rate and/or speed settings for a plastic material and process.

STS.HS.22.6.e Explain the operation and application of common plastics industry chemicals.

STS.HS.22.6.f Determine the correct tools, machines, and processes needed to produce a specific plastic product.

STS.HS.22.6.g Estimate the amount of materials and supplies needed to manufacture a plastic product.

STS.HS.22.7 Manufacture a product that uses plastic as its primary material.

STS.HS.23.7.a Interpret plans, drawings, and specifications to process plastic materials.

STS.HS.23.7.b Employ the standard operation and application of tools and machines along the plastic manufacturing process.

STS.HS.23.7.c Apply the correct types of materials, fasteners, adhesives, and finishes required to manufacture a specific plastic product.

STS.HS.23.7.d Critique a finished product.

STS.HS.23.7.e Appraise the manufactured product.

INTRODUCTION TO ELECTRONICS

COURSE DESCRIPTION

This intermediate course includes the theory, terminology, equipment, and practical experiences needed to begin developing career skills relevant to the electronics industry. Electronics measurements, calculations, and circuitry will be applied.

Target Grades 10-12.

STANDARDS AND INDICATORS:

STS.HS.17.1 Apply safety principles, practices, philosophy, and guidelines to the work environment.

STS.HS.17.1.a Complete applicable safety assessment with 100% accuracy.

STS.HS.17.1.b Employ appropriate Personal Protective Equipment (PPE) while in the lab setting.

STS.HS.17.1.c Employ eye protection in compliance with Neb. Rev. Statute 79–715.

STS.HS.17.1.d Employ the safe application of tools and machines.

STS.HS.17.1.e Explain the main hazards that are possible in the lab setting.

STS.HS.17.1.f Demonstrate proper handling and storing of materials and chemicals.

STS.HS.17.2 Identify career opportunities in the electronics industry.

STS.HS.17.2.a Describe work behaviors needed to be employable.

STS.HS.17.2.b Identify employment trends in various electronics industries.

STS.HS.17.2.c Identify the responsibilities and characteristics of professionals in the electronics industry.

STS.HS.17.2.d Identify the training, education, certification, and licensing requirements for various careers in the electronics industry.

INTRODUCTION TO ELECTRONICS (cont.)

STS.HS.17.3 Employ electronic terminology, symbols, laws, and equipment.

STS.HS.17.3.a Identify proper electronic terminology and symbols.

STS.HS.17.3.b Compute the Laws of Electronics (i.e., Ohms, Watts, Kirchhoff's).

STS.HS.17.3.c Identify and operate basic electronic equipment.

STS.HS.17.4 Classify components and their uses in electronic circuits.

STS.HS.17.4.a Identify connections and components in electronic circuits.

STS.HS.17.4.b Explain the purpose of individual components in electronic circuits.

STS.HS.17.4.c Explain how individual components will affect the function of a circuit.

STS.HS.17.5 Design and construct electronic circuits.

STS.HS.17.5.a Illustrate locations and order for components in a functioning electronic circuit.

STS.HS.17.5.b Construct circuits that function in the way they are designed.

STS.HS.17.5.c Move and replace components to change the function of an electronic circuit.

MANUFACTURING PRODUCTION – WOODS

COURSE DESCRIPTION

In the capstone course for the wood manufacturing track, students will utilize tools and equipment to produce parts and projects within specifications. Students will use the knowledge and skills from previous manufacturing courses.

Target Grades 10-12.

STANDARDS AND INDICATORS:

STS.HS.26.1 Apply safety principles, practices, philosophy, and guidelines to the work environment.

- STS.HS.26.1.a Complete applicable safety assessment with 100% accuracy.
- STS.HS.26.1.b Employ appropriate Personal Protective Equipment (PPE) while in the lab setting.
- STS.HS.26.1.c Employ eye protection in compliance with Neb. Rev. Statute 79–715.
- STS.HS.26.1.d Employ the safe application of tools and machines.
- STS.HS.26.1.e Explain the main hazards that are possible in the lab setting.
- STS.HS.26.1.f Demonstrate proper handling and storing of materials and chemicals.

STS.HS.26.2 Execute accurate measurements using woodworking measurement and layout tools.

- STS.HS.26.2.a Identify types of woodworking measurement and layout tools.
- STS.HS.26.2.b Categorize woodworking measurement and layout tools by use.
- STS.HS.26.2.c Demonstrate the accurate use of measurement and layout tools to 1/16" precision.

MANUFACTURING PRODUCTION – WOODS (cont.)

STS.HS.26.3 Solve math functions and formulas to complete woodworking job/workplace tasks.

STS.HS.26.3.a Identify whole numbers, decimals, fractions, and complex numbers.

STS.HS.26.3.b Apply basic arithmetic operations.

STS.HS.26.3.c Solve decimal and fraction conversions.

STS.HS.26.4 Identify career opportunities in the wood manufacturing industry.

STS.HS.26.4.a Describe work behaviors needed to be employable.

STS.HS.26.4.b Describe appropriate work behavior that meets or exceeds wood manufacturing industry standards.

STS.HS.26.4.c Identify the education, certification, or licensure required in wood manufacturing careers.

STS.HS.26.4.d Identify the value that may be added to the community by wood manufacturing professionals.

STS.HS.26.4.e Identify the industry standard compensation for a wood manufacturing professional.

STS.HS.26.5 Demonstrate the use of wood manufacturing communications.

STS.HS.26.5.a Define wood manufacturing terminology.

STS.HS.26.5.b Estimate manufacturing timelines based on criteria.

STS.HS.26.5.c Utilize business and interpersonal communication appropriate to the work environment.

MANUFACTURING PRODUCTION – WOODS (cont.)

STS.HS.26.6 Select the materials, tools, machines, and processes required to manufacture a wood product.

STS.HS.26.6.a	Identify the origins, characteristics, and properties of softwoods.
STS.HS.26.6.b	Identify the origins, characteristics, and properties of hardwoods.
STS.HS.26.6.c	Categorize fasteners by their industry standard applications.
STS.HS.26.6.d	Differentiate between various types of mechanical and chemical fasteners.
STS.HS.26.6.e	Estimate amount of materials and supplies needed for a wood product.
STS.HS.26.6.f	Explain the operation and application of common industry finishes.
STS.HS.26.6.g	Assess potential environmental and health impacts of using specific materials or processes.
STS.HS.26.6.h	Determine the correct tools and machines needed to produce a specific wood product.

STS.HS.26.7 Manufacture a production level product that uses wood as its primary material.

STS.HS.26.7.a	Interpret plans, drawings, and specifications to process materials.
STS.HS.26.7.b	Coordinate the standard operation and application of tools and machines along the manufacturing process.
STS.HS.26.7.c	Plan and apply the type of materials, fasteners, adhesives, and finishes required to manufacture a specific product.
STS.HS.26.7.d	Critique a finished product.
STS.HS.26.7.e	Appraise the manufacturing process for streamlining opportunities.

MANUFACTURING PRODUCTION – METALS

COURSE DESCRIPTION

In the capstone course for the metal manufacturing track, students will utilize tools and equipment to produce parts and projects within specifications. Students will use knowledge and skills from previous manufacturing courses.

Target Grades 10-12.

STANDARDS AND INDICATORS:

STS.HS.24.1 Apply safety principles, practices, philosophy, and guidelines to the work environment.

STS.HS.24.1.a	Complete applicable safety assessment with 100% accuracy.
STS.HS.24.1.b	Employ appropriate Personal Protective Equipment (PPE) while in the lab setting.
STS.HS.24.1.c	Employ eye protection in compliance with Neb. Rev. Statute 79–715.
STS.HS.24.1.d	Employ the safe application of tools and machines.
STS.HS.24.1.e	Explain the main hazards that are possible in the lab setting.
STS.HS.24.1.f	Demonstrate proper handling and storing of materials and chemicals.

STS.HS.24.2 Execute accurate measurements using metals measurement and layout tools.

STS.HS.24.2.a	Identify types of metals measurement and layout tools.
STS.HS.24.2.b	Categorize metals measurement and layout tools by use.
STS.HS.24.2.c	Demonstrate the accurate use of measurement and layout tools to 0.010" or 0.001" precision or 1mm precision.

MANUFACTURING PRODUCTION – METALS (cont.)

STS.HS.24.3 Solve math functions and formulas to complete metals job/workplace tasks.

STS.HS.24.3.a Identify whole numbers, decimals, fractions, and complex numbers.

STS.HS.24.3.b Apply basic arithmetic operations.

STS.HS.24.3.c Solve decimal and fraction conversions.

STS.HS.24.4 Identify career opportunities in the metals manufacturing industry.

STS.HS.24.4.a Describe work behaviors needed to be employable.

STS.HS.24.4.b Describe appropriate work behavior that meets or exceeds metals manufacturing industry standards.

STS.HS.24.4.c Identify the education, certification, or licensure required in metals manufacturing careers.

STS.HS.24.4.d Identify the value that may be added to the community by metals manufacturing professionals.

STS.HS.24.4.e Identify the industry standard compensation for a metals manufacturing professional.

STS.HS.23.5 Demonstrate use of metal manufacturing communications.

STS.HS.24.5.a Define metal manufacturing terminology.

STS.HS.24.5.b Estimate metal manufacturing timelines based on criteria.

STS.HS.24.5.c Demonstrate business and interpersonal communication appropriate to the work environment.

MANUFACTURING PRODUCTION – METALS (cont.)

STS.HS.24.6 Describe the materials, tools, machines, and processes required to manufacture a metal product.

STS.HS.24.6.a Identify the characteristics, properties, and origin of diverse metals.

STS.HS.24.6.b Differentiate between additive and subtractive manufacturing.

STS.HS.24.6.c Categorize fasteners by their industry standard applications.

STS.HS.24.6.d Differentiate between various types of mechanical fasteners.

STS.HS.24.6.e Determine feed rate and speed settings for a material and process.

STS.HS.24.6.f Explain the operation and application of common industry chemicals.

STS.HS.24.6.g Assess potential environmental and health impacts of using specific materials and/or processes.

STS.HS.24.6.h Estimate amount of materials and supplies needed for a product.

STS.HS.24.6.i Determine the correct tools, machines and processes needed to produce a specific metal product.

STS.HS.24.7 Produce a production-level metalworking project.

STS.HS.24.7.a Interpret plans, drawings, and specifications to process materials.

STS.HS.24.7.b Coordinate the standard operation and application of tools and machines along the manufacturing process.

STS.HS.24.7.c Apply the type of materials, processes, and finishes required to manufacture a specific metal product.

STS.HS.24.7.d Critique a finished product.

STS.HS.24.7.e Appraise the manufacturing process for streamlining opportunities.

MANUFACTURING PRODUCTION – PLASTICS

COURSE DESCRIPTION

In the capstone course for the plastic manufacturing track, students will utilize tools and equipment to produce parts and projects within specifications. Students will use the knowledge and skills from previous manufacturing courses.

Target Grades 10-12.

STANDARDS AND INDICATORS:

STS.HS.25.1 Apply safety principles, practices, philosophy, and guidelines to the work environment.

STS.HS.25.1.a Complete applicable safety assessment with 100% accuracy.

STS.HS.25.1.b Employ appropriate Personal Protective Equipment (PPE) while in the lab setting.

STS.HS.25.1.c Employ eye protection in compliance with Neb. Rev. Statute 79–715.

STS.HS.25.1.d Employ the safe application of tools and machines.

STS.HS.25.1.e Explain the main hazards that are possible in the lab setting.

STS.HS.25.1.f Demonstrate proper handling and storing of materials and chemicals.

STS.HS.25.2 Execute accurate measurements using plastics measurement and layout tools.

STS.HS.25.2.a Identify types of plastics measurement and layout tools.

STS.HS.25.2.b Categorize plastics measurement and layout tools by use.

STS.HS.25.2.c Demonstrate the accurate use of measurement and layout tools to 1/16" precision.

MANUFACTURING PRODUCTION – PLASTICS (cont.)

STS.HS.25.3 Solve math functions and formulas to complete plastics job/workplace tasks.

STS.HS.25.3.a Identify whole numbers, decimals, fractions, and complex numbers used in the workplace.

STS.HS.25.3.b Apply basic arithmetic operations used in the workplace.

STS.HS.25.3.c Solve decimal and fraction conversions used in the workplace.

STS.HS.25.4 Identify career opportunities in the plastics manufacturing industry.

STS.HS.25.4.a Describe work behaviors needed to be employable.

STS.HS.25.4.b Describe appropriate work behavior that meets or exceeds plastics manufacturing industry standards.

STS.HS.25.4.c Identify the education, certification, or licensure required in plastics manufacturing careers.

STS.HS.25.4.d Identify the value that may be added to the community by plastics manufacturing professionals.

STS.HS.25.5 Demonstrate the use of plastic manufacturing communications.

STS.HS.25.5.a Define plastic manufacturing terminology.

STS.HS.25.5.b Estimate manufacturing timelines based on criteria.

STS.HS.25.5.c Utilize business and interpersonal communication appropriate to the plastics manufacturing work environment.

STS.HS.25.4.d Identify the industry standard compensation for a plastics manufacturing professional.

MANUFACTURING PRODUCTION – PLASTICS (cont.)

STS.HS.25.6 Select the materials, tools, machines, and processes required to manufacture a plastic product.

STS.HS.25.6.a Identify the origins, characteristics, and properties of various types of plastics.

STS.HS.25.6.b Categorize fasteners by their industry standard applications.

STS.HS.25.6.c Differentiate between various types of mechanical and chemical fasteners.

STS.HS.25.6.d Estimate amount of materials and supplies needed for a plastic product.

STS.HS.25.6.e Explain the operation and application of common industry finishes.

STS.HS.25.6.f Assess potential environmental and health impacts of using specific materials or processes.

STS.HS.25.6.g Determine the correct tools and machines needed to produce a specific plastic product.

STS.HS.25.7 Manufacture a production level product that uses plastic as its primary material.

STS.HS.25.7.a Interpret plans, drawings, and specifications to process materials.

STS.HS.25.7.b Coordinate the standard operation and application of tools and machines along the manufacturing process.

STS.HS.25.7.c Plan and apply the type of materials, fasteners, adhesives, and finishes required to manufacture a specific product.

STS.HS.25.7.d Critique a finished product.

STS.HS.25.7.e Appraise the manufacturing process for streamlining opportunities.

INTRODUCTION TO MECHATRONICS

COURSE DESCRIPTION

Mechatronics combines the industrial skills of mechanics, electronics, hydraulics, and computer-based controls.

Target Grades: 11-12.

STANDARDS AND INDICATORS:

STS.HS.18.1 Apply safety principles, practices, philosophy, and guidelines to the work environment.

STS.HS.18.1.a	Complete applicable safety assessment with 100% accuracy.
STS.HS.18.1.b	Employ eye protection in compliance with Neb. Rev. Statute 79–715.
STS.HS.18.1.c	Employ appropriate Personal Protective Equipment (PPE) while in the lab setting.
STS.HS.18.1.d	Employ the safe application of tools and machines.
STS.HS.18.1.e	Explain the main hazards that are possible in the lab setting.
STS.HS.18.1.f	Demonstrate proper handling and storing of materials.

STS.HS.18.2 Identify career opportunities in mechatronics.

STS.HS.18.2.a	Describe work behaviors needed to be employable.
STS.HS.18.2.b	Identify employment trends in mechatronics.
STS.HS.18.2.c	Identify the responsibilities and characteristics of professionals in mechatronics.
STS.HS.18.2.d	Identify the training, education, certification, and licensing requirements for careers in mechatronics.

INTRODUCTION TO MECHATRONICS (cont.)

STS.HS.18.3 Solve math functions and formulas to complete mechatronics job or workplace tasks.

STS.HS.18.3.a Identify whole numbers, decimals, fractions, and complex numbers.

STS.HS.18.3.b Apply basic algebraic operations.

STS.HS.18.3.c Interpret scientific notation.

STS.HS.18.3.d Interpret engineering notation.

STS.HS.18.4 Explain mechatronics systems.

STS.HS.18.4.a Explain the theory and applications of hydraulics.

STS.HS.18.4.b Explain the theory and application of electronics.

STS.HS.18.4.c Explain the theory and application of pneumatics.

STS.HS.18.4.d Explain the theory and applications of control systems.

STS.HS.18.4.e Explain the theory and applications of computer systems.

STS.HS.18.5 Demonstrate use of mechatronics communications.

STS.HS.18.5.a Define mechatronics terminology.

STS.HS.18.5.b Interpret the language of mechatronics.

STS.HS.18.5.c Interpret electrical schematics, spec sheets, mechanical drawings, and hydraulic circuit diagrams.

STS.HS.18.5.d Employ business and interpersonal communication appropriate to the work environment.

INTRODUCTION TO MECHATRONICS (cont.)

STS.HS.18.6 Construct a mechatronic device based upon given specifications.

STS.HS.18.6.a Employ measurement tools.

STS.HS.18.6.b Select fasteners to mount components.

STS.HS.18.6.c Employ appropriate wires or tubing to make correct electrical, hydraulic, or pneumatic connections.

STS.HS.18.6.d Employ best practices in laying out wires and tubes for neatness, security, and safe operation.

STS.HS.18.6.e Adjust and calibrate subsystems by using interdisciplinary skills.

STS.HS.18.6.f Explain construction, electrical, and mechanical blueprints.

STS.HS.18.7 Integrate instrumentation to identify and troubleshoot problems in a mechatronics system.

STS.HS.18.7.a Employ meters to test resistance, voltage, and current to assess electrical equipment.

STS.HS.18.7.b Perform precision measuring on mechanical, hydraulic, electronic, or pneumatic components.

STS.HS.18.7.c Utilize data gained from instrumentation to develop troubleshooting options.

ADVANCED ELECTRONICS

COURSE DESCRIPTION

This capstone course focuses on circuitry diagnostics and the application and design of circuits using the principles of analog and digital electronics. Students will learn safe practices with electronics and the importance of electronics in industry and society.

Target Grades: 11-12.

STANDARDS AND INDICATORS:

STS.HS.1.1 Apply safety principles, practices, philosophy and guidelines to the work environment.

STS.HS.1.1.a	Complete applicable safety assessment with 100% accuracy.
STS.HS.1.1.b	Employ appropriate Personal Protective Equipment (PPE) while in the lab setting.
STS.HS.1.1.c	Employ eye protection in compliance with Neb. Rev. Statute 79-715.
STS.HS.1.1.d	Carry out the safe application of tools and machines.
STS.HS.1.1.e	Explain the main hazards that are possible in the lab setting.
STS.HS.1.1.f	Demonstrate proper handling and storing of materials.

STS.HS.1.2 Investigate career opportunities in the electronics industry.

STS.HS.1.2.a	Identify responsibilities and characteristics of professionals in industry.
STS.HS.1.2.b	Describe work behaviors needed to be employable.
STS.HS.1.2.c	Identify the training, education, certification, and licensing requirements for various careers in the electronics industry.
STS.HS.1.2.d	Identify high-wage, high-demand, and high-skill electronics careers.

ADVANCED ELECTRONICS (cont.)

STS.HS.1.3 Employ electronic terminology, symbols, laws, and equipment.

STS.HS.1.3.a Identify proper electronic terminology and symbols.

STS.HS.1.3.b Compute and manipulate the Laws of Electronics (i.e., Ohms, Watts, Kirchhoff's).

STS.HS.1.3.c Identify and operate all basic electronic equipment.

STS.HS.1.4 Construct electronic circuits.

STS.HS.1.4.a Interpret, design, and synthesize electronic circuits.

STS.HS.1.4.b Explain the characteristics of AC Electricity and its components.

STS.HS.1.4.c Explain basic solid state fundamentals.

STS.HS.1.4.d Explain logic gate circuits.

STS.HS.1.4.e Troubleshoot and analyze electronic circuits.

ADVANCED MANUFACTURING & FABRICATION – WOODS

COURSE DESCRIPTION

This expanded learning course allows students to go beyond the woods manufacturing program of study. Students will use the most advanced equipment, including CNC, to produce projects exceeding industry standards.

Target Grades: 11-12.

STANDARDS AND INDICATORS:

STS.HS.4.1 Apply safety principles, practices, philosophy, and guidelines to the work environment.

- STS.HS.4.1.a Complete applicable safety assessment with 100% accuracy.
- STS.HS.4.1.b Employ appropriate Personal Protective Equipment (PPE) while in the lab setting.
- STS.HS.4.1.c Employ eye protection in compliance with Neb. Rev. Statute 79–715.
- STS.HS.4.1.d Employ the safe application of tools and machines.
- STS.HS.4.1.e Explain the main hazards that are possible in the lab setting.
- STS.HS.4.1.f Demonstrate proper handling and storing of materials and chemicals.

STS.HS.4.2 Execute accurate measurements using precision wood measurement tools.

- STS.HS.4.2.a Identify types of precision measurement tools.
- STS.HS.4.2.b Categorize precision measurement tools by use.
- STS.HS.4.2.c Differentiate between measurement tools and layout tools.
- STS.HS.4.2.d Demonstrate the accurate use of measurement and layout tools to 1/64" precision.
- STS.HS.4.2.e Demonstrate the accurate use of measurement and layout tools to 0.5mm precision.

ADVANCED MANUFACTURING - WOODS (cont.)

STS.HS.4.3 Solve math functions and formulas to complete woodworking job or workplace tasks.

STS.HS.4.3.a	Identify whole numbers, decimals, fractions, and complex numbers.
STS.HS.4.3.b	Apply intermediate arithmetic operations.
STS.HS.4.3.c	Apply basic geometric operations.
STS.HS.4.3.d	Solve decimal or fraction conversions.
STS.HS.4.3.e	Solve metric or United States Customary System (USCS) conversions.

STS.HS.4.4 Identify career opportunities in the wood manufacturing industry.

STS.HS.4.4.a	Describe work behaviors needed to be employable.
STS.HS.4.4.b	Employ appropriate work behavior that meets or exceeds wood industry standards.
STS.HS.4.4.c	Explain the required education, certification, or licensure needed for a wood manufacturing career.
STS.HS.4.4.d	Analyze the value that may be added to the community by manufacturing professionals.
STS.HS.4.4.e	Explain the industry standard compensation for a wood manufacturing professional.

STS.HS.4.5 Apply manufacturing communications.

STS.HS.4.5.a	Define wood manufacturing terminology.
STS.HS.4.5.b	Generate a wood project proposal.
STS.HS.4.5.c	Estimate manufacturing timelines based on criteria.
STS.HS.4.5.d	Utilize business and interpersonal communication appropriate to the work environment.

ADVANCED MANUFACTURING - WOODS (cont.)

STS.HS.4.6 Assess the materials, tools, machines, and processes required to manufacture a wood product.

STS.HS.4.6.a	Identify the characteristics, properties, and origin of softwoods.
STS.HS.4.6.b	Identify the characteristics, properties, and origin of hardwoods.
STS.HS.4.6.c	Differentiate additive and subtractive manufacturing.
STS.HS.4.6.d	Identify fasteners by their industry standard applications.
STS.HS.4.6.e	Differentiate between various types of mechanical and chemical fasteners.
STS.HS.4.6.f	Estimate amount of materials and supplies needed for a product.
STS.HS.4.6.g	Determine feed rate and speed settings for a material and process.
STS.HS.4.6.h	Explain the operation and application of common wood industry finishes.
STS.HS.4.6.i	Assess potential environmental and health impacts of using specific materials or processes.
STS.HS.4.6.j	Determine the correct tools, machines, and processes needed to produce a specific wood product.

STS.HS.4.7 Manufacture a custom-level product that uses wood as its primary material.

STS.HS.4.7.a	Interpret plans, drawings, and specifications to process materials.
STS.HS.4.7.b	Coordinate the standard operation and application of tools and machines along the manufacturing process.
STS.HS.4.7.c	Plan and apply the type of materials, processes, and finishes required to manufacture a specific product.
STS.HS.4.7.d	Critique a finished product.
STS.HS.4.7.e	Appraise the manufacturing process for streamlining opportunities.

ADVANCED MANUFACTURING & FABRICATION – METALS

COURSE DESCRIPTION

This expanded learning course allows students to go beyond the metals manufacturing program of study. Students will use the most advanced equipment, including CNC, to produce projects exceeding industry standards.

Target Grades: 11-12.

STANDARDS AND INDICATORS:

STS.HS.2.1 Apply safety principles, practices, philosophy, and guidelines to the work environment.

STS.HS.2.1.a	Complete applicable safety assessment with 100% accuracy.
STS.HS.2.1.b	Employ appropriate Personal Protective Equipment (PPE) while in the lab setting.
STS.HS.2.1.c	Employ eye protection in compliance with Neb. Rev. Statute 79–715.
STS.HS.2.1.d	Employ the safe application of tools and machines.
STS.HS.2.1.e	Explain the main hazards that are possible in the lab setting.
STS.HS.2.1.f	Demonstrate proper handling and storing of materials and chemicals.

STS.HS.2.2 Execute accurate measurements using precision metal measurement tools.

STS.HS.2.2.a	Identify types of precision measurement tools.
STS.HS.2.2.b	Categorize precision measurement tools by use.
STS.HS.2.2.c	Differentiate between measurement tools and layout tools.
STS.HS.2.2.d	Demonstrate the accurate use of measurement and layout tools to 1/64" precision or 0.5mm precision.

ADVANCED MANUFACTURING - METALS (cont.)

STS.HS.2.3 Solve math functions and formulas to complete metals job or workplace tasks.

STS.HS.2.3.a	Identify whole numbers, decimals, fractions, and complex numbers.
STS.HS.2.3.b	Apply intermediate arithmetic operations.
STS.HS.2.3.c	Apply basic geometric operations.
STS.HS.2.3.d	Solve decimal or fraction conversions.
STS.HS.2.3.d	Solve metric or United States Customary System (USCS) conversions.

STS.HS.2.4 Identify career opportunities in the metal manufacturing industry.

STS.HS.2.4.a	Describe work behaviors needed to be employable.
STS.HS.2.4.b	Employ appropriate work behavior that meets or exceeds metal industry standards.
STS.HS.2.4.d	Explain the required education, certification, or licensure needed for a metal manufacturing career.
STS.HS.2.4.e	Analyze the value that may be added to the community by manufacturing professionals.
STS.HS.2.4.f	Explain the industry standard compensation for a metal manufacturing professional.

STS.HS.2.5 Apply manufacturing communications.

STS.HS.2.5.a	Define metal manufacturing terminology.
STS.HS.2.5.b	Generate a metal project proposal.
STS.HS.2.5.c	Estimate manufacturing timelines based on criteria.
STS.HS.2.5.d	Utilize business and interpersonal communication appropriate to the work environment.

ADVANCED MANUFACTURING - METALS (cont.)

STS.HS.2.6 Describe the materials, tools, machines, and processes required to manufacture a metal product.

STS.HS.2.6.a	Identify the various types of metals and their characteristics.
STS.HS.2.6.b	Differentiate additive and subtractive manufacturing.
STS.HS.2.6.c	Identify fasteners by their industry standard applications.
STS.HS.2.6.d	Differentiate between various types of mechanical and chemical fasteners.
STS.HS.2.6.e	Estimate amount of materials and supplies needed for a product.
STS.HS.2.6.f	Determine feed rate and speed settings for a material and process.
STS.HS.2.6.g	Explain the operation and application of common metal industry finishes.
STS.HS.2.6.h	Assess potential environmental and health impacts of using specific materials or processes.
STS.HS.2.6.i	Determine the correct tools, machines, and processes needed to produce a specific metal product.

STS.HS.2.7 Manufacture a custom-level product that uses metal as its primary material.

STS.HS.2.7.a	Interpret plans, drawings, and specifications to process materials.
STS.HS.2.7.b	Coordinate the standard operation and application of tools and machines along the manufacturing process.
STS.HS.2.7.c	Plan and apply the type of materials, processes, and finishes required to manufacture a specific product.
STS.HS.2.7.d	Critique a finished product.
STS.HS.2.7.e	Appraise the manufacturing process for streamlining opportunities.

ADVANCED MANUFACTURING & FABRICATION – PLASTICS

COURSE DESCRIPTION

This expanded learning course allows students to go beyond the plastics manufacturing program of study. Students will use the most advanced equipment, including CNC, to produce projects exceeding industry standards.

Target Grades: 11-12.

STANDARDS AND INDICATORS:

STS.HS.3.1 Apply safety principles, practices, philosophy, and guidelines to the work environment.

STS.HS.3.1.a	Complete applicable safety assessment with 100% accuracy.
STS.HS.3.1.b	Employ appropriate Personal Protective Equipment (PPE) while in the lab setting.
STS.HS.3.1.c	Employ eye protection in compliance with Neb. Rev. Statute 79–715.
STS.HS.3.1.d	Employ the safe application of tools and machines.
STS.HS.3.1.e	Explain the main hazards that are possible in the lab setting.
STS.HS.3.1.f	Demonstrate proper handling and storing of materials and chemicals.

STS.HS.3.2 Execute accurate measurements using precision plastic measurement tools.

STS.HS.3.2.a	Identify types of precision measurement tools.
STS.HS.3.2.b	Categorize precision measurement tools by use.
STS.HS.3.2.c	Differentiate between measurement tools and layout tools.
STS.HS.3.2.d	Demonstrate the accurate use of measurement and layout tools to 1/64" precision or 0.5mm precision.

ADVANCED MANUFACTURING - PLASTICS (cont.)

STS.HS.3.3 Solve math functions and formulas to complete plastics job or workplace tasks.

- STS.HS.3.3.a Identify whole numbers, decimals, fractions, and complex numbers.
- STS.HS.3.3.b Apply intermediate arithmetic operations.
- STS.HS.3.3.c Apply basic geometric operations.
- STS.HS.3.3.d Solve decimal or fraction conversions.
- STS.HS.3.3.e Solve metric or United States Customary System (USCS) conversions.

STS.HS.3.4 Identify career opportunities in the plastics manufacturing industry.

- STS.HS.3.4.a Describe work behaviors needed to be employable.
- STS.HS.3.4.b Employ appropriate work behavior that meets or exceeds plastics industry standards.
- STS.HS.3.4.c Explain the required education, certification, or licensure needed for a plastics manufacturing career.
- STS.HS.3.4.d Analyze the value that may be added to the community by manufacturing professionals.
- STS.HS.3.4.e Explain the industry standard compensation for a plastics manufacturing professional.

STS.HS.3.5 Apply manufacturing communications.

- STS.HS.3.5.a Define plastic manufacturing terminology.
- STS.HS.3.5.b Generate a plastic project proposal.
- STS.HS.3.5.c Estimate manufacturing timelines based on criteria.
- STS.HS.3.5.d Utilize business and interpersonal communication appropriate to the work environment.

ADVANCED MANUFACTURING - PLASTICS (cont.)

STS.HS.3.6 Describe the materials, tools, machines, and processes required to manufacture a plastic product.

STS.HS.3.6.a	Identify the various types of plastics and their characteristics.
STS.HS.3.6.b	Differentiate additive and subtractive manufacturing.
STS.HS.3.6.c	Identify fasteners by their industry standard applications.
STS.HS.3.6.d	Differentiate between various types of mechanical and chemical fasteners.
STS.HS.3.6.e	Estimate amount of materials and supplies needed for a product.
STS.HS.3.6.f	Determine feed rate and speed settings for a material and process.
STS.HS.3.6.g	Explain the operation and application of common plastic industry finishes.
STS.HS.3.6.h	Assess potential environmental and health impacts of using specific materials or processes.
STS.HS.3.6.i	Determine the correct tools, machines, and processes needed to produce a specific plastic product.

STS.HS.3.7 Manufacture a custom-level product that uses plastic as its primary material.

STS.HS.3.7.a	Interpret plans, drawings, and specifications to process materials.
STS.HS.3.7.b	Coordinate the standard operation and application of tools and machines along the manufacturing process.
STS.HS.3.7.c	Plan and apply the type of materials, processes, and finishes required to manufacture a specific product.
STS.HS.3.7.d	Critique a finished product.
STS.HS.3.7.e	Appraise the manufacturing process for streamlining opportunities.

INTRODUCTION TO SKILLS AND TECHNICAL SCIENCES

COURSE DESCRIPTION

This introductory course provides the skills and technical knowledge for a beginning student in areas of industry, safety, material, equipment, and process understanding. This entry level course helps students gain a foundation in all areas of Skilled and Technical Sciences including Architecture and Construction; Energy and Engineering; Manufacturing; and Transportation, Distribution, and Logistics.

Target Grades 9-12.

STANDARDS AND INDICATORS:

STS.HS.19.1 Apply safety principles, practices, philosophy, and guidelines to the work environment.

STS.HS.19.1.a Complete applicable safety assessment with 100% accuracy.

STS.HS.19.1.b Employ appropriate Personal Protective Equipment (PPE) while in the lab setting.

STS.HS.19.1.c Employ eye protection in compliance with Neb. Rev. Statute 79-715.

STS.HS.19.1.d Employ the safe application of tools and machines.

STS.HS.19.1.e Explain the main hazards that are possible in the lab setting.

STS.HS.19.1.f Demonstrate proper handling and storing of materials.

STS.HS.19.2 Identify career opportunities in Skilled and Technical Sciences areas.

STS.HS.19.2.a Identify responsibilities and characteristics of professionals in a skilled and technical sciences industry.

STS.HS.19.2.b Describe work behaviors needed to be employable in a skilled and technical sciences industry.

STS.HS.19.2.c Identify the training, education, certification, and licensing requirements for various careers in a skilled and technical sciences industry.

STS.HS.19.2.d Identify high wage, high demand, and high skill careers in skilled and technical sciences.

INTRODUCTION TO SKILLS AND TECHNICAL SCIENCES (cont.)

STS.HS.19.3 Apply appropriate academic and technical skills to produce a product.

STS.HS.19.3.a Employ project-related math operations and formulas.

STS.HS.19.3.b Employ effective verbal, written, and/or visual communication skills.

STS.HS.19.3.c Define course content vocabulary.

STS.HS.19.3.d Conduct the accurate use of measurement tools

STS.HS.19.4 Identify the materials, tools, machines, and equipment required to produce a product.

STS.HS.19.4.a Identify types of materials to be used for various products.

STS.HS.19.4.b Identify types of fasteners for various products.

STS.HS.19.4.c Identify types of adhesives for various products.

STS.HS.19.4.d Identify types of finishes for various products.

STS.HS.19.4.e Identify the correct tools, machines, and equipment appropriate for a specific operation or process.

STS.HS.19.5 Produce a product(s).

STS.HS.19.5.a Interpret working drawings of a product to be produced.

STS.HS.19.5.b Select the proper materials adhesives, fasteners and finishes for a product.

STS.HS.19.5.c Demonstrate the proper tool, machine, or equipment selection and usage for each corresponding operation needed to produce a product.

STS.HS.19.5.d Execute a plan of procedure.

WELDING 1

COURSE DESCRIPTION

This course introduces students to arc welding and cutting processes. Emphasis is placed on welding safety, basic welding procedures, and career opportunities in welding. Students will have an opportunity to learn and practice various welding positions. Production of a small product will be incorporated.

Target Grades 9-12.

STANDARDS AND INDICATORS:

STS.HS.36.1 Apply safety principles, practices, philosophy, and guidelines to the work environment.

STS.HS.36.1.a	Complete applicable safety assessment with 100% accuracy.
STS.HS.36.1.b	Employ appropriate Personal Protective Equipment (PPE) while in the lab setting.
STS.HS.36.1.c	Employ eye protection in compliance with Neb. Rev. Statute 79-715.
STS.HS.36.1.d	Employ the safe application of tools and machines.
STS.HS.36.1.e	Explain the main hazards that are possible in the lab setting.
STS.HS.36.1.f	Demonstrate proper handling and storing of materials.

STS.HS.36.2 Explain career opportunities in the welding industry.

STS.HS.36.2.a	Describe work behaviors needed to be employable.
STS.HS.36.2.b	Identify employment trends in the welding industry.
STS.HS.36.2.c	Identify the responsibilities and characteristics of professionals in the welding industry.
STS.HS.36.2.d	Identify the training, education, certification and licensing requirements for careers in the welding industry.

WELDING 1 (cont.)

STS.HS.36.3 Explain the use of welding communications.

STS.HS.36.3.a	Define welding terminology.
STS.HS.36.3.b	Measure metric and imperial measurements with an accuracy of a millimeter or 1/16 of an inch.
STS.HS.36.3.c	Explain mechanical drawings according to the American National Standards Institute (ANSI).
STS.HS.36.3.d	Explain welding symbols according to the AWS.
STS.HS.36.3.e	Explain information from a welding procedure sheet.

STS.HS.36.4 Determine the materials, tools, and equipment needed to weld.

STS.HS.36.4.a	Identify tools and their use in welding.
STS.HS.36.4.b	Identify welding equipment and proper set up procedures according to the manufacturer's recommendations.
STS.HS.36.4.c	Identify the material used in welding.
STS.HS.36.4.d	Identify the filler material used in welding.
STS.HS.36.4.e	Determine types of fasteners, adhesives, and finishes used for welding.

STS.HS.36.5 Perform metal cutting operations.

STS.HS.36.5.a	Perform an abrasive cutting procedure.
STS.HS.36.5.b	Perform mechanical cutting procedure.
STS.HS.36.5.c	Perform a hot (flame) source cutting operation.
STS.HS.36.5.d	Perform an arc cutting operation.

WELDING 1 (cont.)

STS.HS.36.6 Join material using any methods of welding procedure in the flat and horizontal positions.

STS.HS.36.6.a	Create a pad of surface welds with no welding defects according to AWS standards.
STS.HS.36.6.b	Create groove joints with no welding defects according to AWS standards.
STS.HS.36.6.c	Create fillet welds with no welding defects according to AWS standards.
STS.HS.36.6.d	Produce a product with the welding processes that are available.

WELDING 2

COURSE DESCRIPTION

This capstone course is a continuation of learning the knowledge and skills of the welding industry. Students will learn welding safety, communications, material and tool usage, and welding positions. Students will apply this knowledge and skill to produce a product.

Target Grades 10-12.

STANDARDS AND INDICATORS:

STS.HS.37.1 Apply safety principles, practices, philosophy, and guidelines to the work environment.

STS.HS.37.1.a Complete applicable safety assessment with 100% accuracy.

STS.HS.37.1.b Use appropriate Personal Protective Equipment (PPE) while in the lab setting.

STS.HS.37.1.c Use eye protection in compliance with Neb. Rev. Statute 79-715.

STS.HS.37.1.d Carry out the safe application of tools and machines.

STS.HS.37.1.e Explain the main hazards that are possible in the lab setting.

STS.HS.37.1.f Demonstrate proper handling and storing of materials.

STS.HS.37.2 Investigate career opportunities in the welding industry.

STS.HS.37.2.a Describe work behaviors needed to be employable.

STS.HS.37.2.b Identify employment trends in the welding industry.

STS.HS.37.2.c Identify the responsibilities and characteristics of professionals in the welding industry.

STS.HS.37.2.d Identify the training, education, certification and licensing requirements for careers in the welding industry.

WELDING 2 (cont.)

STS.HS.37.3 Demonstrate the use of welding communications.

STS.HS.37.3.a	Explain welding terminology.
STS.HS.37.3.b	Describe a quality weld according to the American Welding Society (AWS).
STS.HS.37.3.c	Measure metric and imperial measurements within an accuracy of a millimeter or 1/32 of an inch.
STS.HS.37.3.d	Explain mechanical drawings according to the American National Standards Institute (ANSI).
STS.HS.37.3.e	Explain welding symbols according to the AWS.
STS.HS.37.3.f	Solve mathematical functions used in welding.
STS.HS.37.3.g	Interpret information from a welding procedure sheet.

STS.HS.37.4 Identify the materials, tools, and equipment needed to weld.

STS.HS.37.4.a	Identify tools and their use in welding.
STS.HS.37.4.b	Identify welding equipment and proper set up procedures according to the manufacturers' recommendations.
STS.HS.37.4.c	Identify the material used in welding.
STS.HS.37.4.d	Identify the filler material used in welding.
STS.HS.37.4.e	Identify types of fasteners, adhesives, and finishes used for welding.

WELDING 2 (cont.)

STS.HS.37.5 Perform metal cutting operations.

STS.HS.37.5.a Perform an abrasive cutting procedure.

STS.HS.37.5.b Perform a mechanical cutting procedure.

STS.HS.37.5.c Perform a hot (flame) source cutting operation.

STS.HS.37.5.d Perform an arc cutting operation.

STS.HS.37.5.e Perform an automated cutting operation.

STS.HS.37.6 Perform welding procedures in the flat, horizontal, and vertical positions.

STS.HS.37.6.a Create a pad of surface welds with no welding defects according to the AWS.

STS.HS.37.6.b Create groove joints with no welding defects according to AWS standards.

STS.HS.37.6.c Create fillet welds with no welding defects according to AWS standards.

STS.HS.37.7 Produce a product with welding processes.

STS.HS.37.7.a Use a drawing with welding symbols according to AWS.

STS.HS.37.7.b Cut the materials according to the technical drawing.

STS.HS.37.7.c Weld the materials according to the technical drawing.

STS.HS.37.7.d Finish the materials according to the technical drawing.

WELDING 3

COURSE DESCRIPTION

This is a project-oriented extended learning course that is designed to prepare a student for postsecondary and/or entry into industry. An emphasis on safety and welding operations will be covered. This course will assist the student going into a welding career.

Target Grades 10-12.

STANDARDS AND INDICATORS:

STS.HS.38.1 Apply safety principles, practices, philosophy and guidelines to the work environment.

STS.HS.38.1.a Complete applicable safety assessment with 100% accuracy.

STS.HS.38.1.b Use appropriate Personal Protective Equipment (PPE) while in the lab setting.

STS.HS.38.1.c Use eye protection in compliance with Neb. Rev. Statute 79-715.

STS.HS.38.1.d Carry out the safe application of tools and machines.

STS.HS.38.1.e Explain the main hazards that are possible in the lab setting.

STS.HS.38.1.f Demonstrate proper handling and storing of materials.

STS.HS.38.2 Identify career opportunities in the welding industry.

STS.HS.38.2.a Describe work behaviors needed to be employable.

STS.HS.38.2.b Identify employment trends in the welding industry.

STS.HS.38.2.c Identify the responsibilities and characteristics of professionals in the welding industry.

STS.HS.38.2.d Identify the training, education, certification, and licensing requirements for careers in the welding industry.

WELDING 3 (cont.)

STS.HS.38.3 Demonstrate the use of welding communications.

STS.HS.38.3.a	Explain welding terminology.
STS.HS.38.3.b	Identify a quality weld according to the American Welding Society (AWS).
STS.HS.38.3.c	Measure metric and imperial measurements within an accuracy of a millimeter or 1/64 of an inch.
STS.HS.38.3.d	Explain mechanical drawings according to the American National Standards Institute (ANSI).
STS.HS.38.3.e	Explain welding symbols according to the AWS.
STS.HS.38.3.f	Solve mathematical functions used in welding.
STS.HS.38.3.g	Explain information from a welding procedure sheet.

STS.HS.38.4 Identify the materials, tools, fasteners, and equipment needed to weld.

STS.HS.38.4.a	Identify tools and their use in welding.
STS.HS.38.4.b	Identify welding equipment and proper set up procedures according to the manufacturer's recommendations.
STS.HS.38.4.c	Identify the material used in welding.
STS.HS.38.4.d	Identify the filler material used in welding.
STS.HS.38.4.e	Determine types of fasteners, adhesives, and finishes used for welding.
STS.HS.38.4.f	Identify automated or emerging technologies in welding.

WELDING 3 (cont.)

STS.HS.38.5 Perform metal cutting operations.

STS.HS.38.5.a Perform an abrasive cutting procedure.

STS.HS.38.5.b Perform a mechanical cutting procedure.

STS.HS.38.5.c Perform a hot (flame) source cutting operation.

STS.HS.38.5.d Perform an arc cutting operation.

STS.HS.38.5.e Perform an automated cutting operation.

STS.HS.38.6 Join material using any methods of welding procedure in the flat, horizontal, vertical, and overhead positions.

STS.HS.38.6.a Create a pad of surface welds with no welding defects according to the AWS.

STS.HS.38.6.b Create groove joints with no welding defects according to AWS standards.

STS.HS.38.6.c Create fillet welds with no welding defects according to AWS standards.

STS.HS.38.6.d Perform an AWS standard bend test.

STS.HS.38.7 Produce a product with welding processes that are available.

STS.HS.38.7.a Create a drawing with welding symbols according to AWS.

STS.HS.38.7.b Perform mathematical calculations to estimate the cost of materials for the product.

STS.HS.38.7.c Produce and finish the product to specifications.

INTRODUCTION TO TRANSPORTATION, DISTRIBUTION, AND LOGISTICS

COURSE DESCRIPTION

This course will introduce students to the basics of transportation, distribution, and logistics (TDL). Students will learn how the supply chain of products and materials operate to keep industry running and consumer products available.

Target Grades 9-11.

STANDARDS AND INDICATORS:

STS.HS.20.1 Apply safety principles, practices, philosophy and guidelines to the work environment.

- STS.HS.20.1.a Complete safety assessments with 100% accuracy.
- STS.HS.20.1.b Employ the requirements of safety glasses and other personal protective equipment (PPE).
- STS.HS.20.1.c Employ the safe use of tools, machines, and equipment in alignment with industry standards to maintain a safe workplace.
- STS.HS.20.1.d Describe the role of government agencies in providing a safe workplace.

STS.HS.20.2 Identify career opportunities in the transportation, distribution, and logistics (TDL) industry.

- STS.HS.20.2.a Identify the responsibilities and characteristics of professionals in the TDL industry.
- STS.HS.20.2.b Identify employment trends in the TDL industry.
- STS.HS.20.2.c Identify the training, education, certification, and licensing requirements for various careers in the TDL industry.

INTRODUCTION TO TRANSPORTATION, DISTRIBUTION, AND LOGISTICS (cont.)

STS.HS.20.3 Analyze the segments and functions of the TDL industry.

STS.HS.20.a	Describe the five modes of transportation used to distribute people and products.
STS.HS.20.b	Compare different cargo types and the modes of transportation typically used for each.
STS.HS.20.c	Identify the individual systems that combine to create the TDL industry.
STS.HS.20.d	Explain how the individual systems that combine to create the TDL industry function together.

STS.HS.20.4 Explain the purpose and components of transportation logistics.

STS.HS.20.4.a	Explain dispatch and the purpose of tracking products as they are transported throughout the supply chain.
STS.HS.20.4.b	Describe the components that impact transportation logistics (i.e., routing, scheduling, equipment, operator, etc.).
STS.HS.20.4.c	Explain the different types of shipping documentation and terms.
STS.HS.20.4.d	Describe strategic, tactical, and systems planning.

DISTRIBUTION AND LOGISTICS

COURSE DESCRIPTION

This intermediate course is a study of the acquisition, storage, use, packaging, transportation, and distribution of materials and products. It showcases all of the steps necessary to take raw materials and produce a product.

Target Grades 10-12.

STANDARDS AND INDICATORS:

STS.HS.12.1 Explain career opportunities in the transportation industry.

STS.HS.12.1.a	Identify the responsibilities and characteristics of professionals in the transportation industry.
STS.HS.12.1.b	Identify employment trends in the transportation industry.
STS.HS.12.1.c	Identify high-wage, high-demand, and high-skill careers in the transportation, distribution, and Logistics (TDL) industry.
STS.HS.12.1.d	Identify work behaviors needed to be employable.
STS.HS.12.1.e	Identify the training, education, certification, and licensing requirements for various careers in TDL.

STS.HS.12.2 Explain the segments and functions of the TDL industry.

STS.HS.12.2.a	Explain order processing, receiving, storage, retrieval, packaging, and shipping of a product in the global supply chain logistics life cycle.
STS.HS.12.2.b	Identify the role of product receiving in the global supply chain logistics life cycle.
STS.HS.12.2.c	Identify the role of product storage and retrieval in the global supply chain logistics life cycle.
STS.HS.12.2.d	Identify the role of order processing in the global supply chain logistics life cycle.
STS.HS.12.2.e	Explain inventory control principles.
STS.HS.12.2.f	Explain distribution and distributorships.

DISTRIBUTION AND LOGISTICS (cont.)

STS.HS.12.3 Explain the purpose and components of transportation logistics.

STS.HS.12.3.a	Explain dispatch and the purpose of tracking of products as they are transported throughout the supply chain.
STS.HS.12.3.b	Describe the components that impact transportation logistics (i.e. routing, scheduling, equipment, operator, etc.).
STS.HS.12.3.c	Explain the different types of shipping documentation and terms.
STS.HS.12.3.d	Describe strategic, tactical, and systems planning.

BUSINESS LOGISTICS

COURSE DESCRIPTION

This capstone course is an in-depth study of the logistics of a business operation as it relates to transportation and distribution. Students will learn about order processing, receiving, storage, retrieval, packaging, and shipping of materials and products.

Target Grades 11-12.

STANDARDS AND INDICATORS:

STS.HS.8.1 Identify career opportunities in the transportation, distribution, and logistics (TDL) industry.

- STS.HS.8.1.a Identify the most common TDL careers and related fields of employment.
- STS.HS.8.1.b Identify the traits and skills employers look for in their employees.
- STS.HS.8.1.c Identify the training, education, certification, and licensing requirements for various careers in the TDL industry.

STS.HS.8.2 Identify the segments and functions of the TDL industry.

- STS.HS.8.2.a Compare the different types of cargo with the different modes of transportation.
- STS.HS.8.2.b Explain order processing, receiving, storage, retrieval, packaging, and shipping of a product in the global supply chain logistics life cycle.

STS.HS.8.3 Explain the purpose and components of transportation logistics.

- STS.HS.8.3.a Explain dispatch.
- STS.HS.8.3.b Explain the purpose of tracking of products as they are transported throughout t he supply chain.
- STS.HS.8.3.c Identify the components that impact transportation logistics (i.e., routing, scheduling, equipment, operator, etc.).
- STS.HS.8.3.d Explain types of shipping documentation and terminology.
- STS.HS.8.3.e Explain strategic, tactical, and systems planning.

INTRODUCTION TO SKILLS AND TECHNICAL SCIENCES

COURSE DESCRIPTION

This introductory course provides the skills and technical knowledge for a beginning student in areas of industry, safety, material, equipment, and process understanding. This entry level course helps students gain a foundation in all areas of Skilled and Technical Sciences including Architecture and Construction; Energy and Engineering; Manufacturing; and Transportation, Distribution, and Logistics.

Target Grades 9-12.

STANDARDS AND INDICATORS:

STS.HS.19.1 Apply safety principles, practices, philosophy, and guidelines to the work environment.

STS.HS.19.1.a	Complete applicable safety assessment with 100% accuracy.
STS.HS.19.1.b	Employ appropriate Personal Protective Equipment (PPE) while in the lab setting.
STS.HS.19.1.c	Employ eye protection in compliance with Neb. Rev. Statute 79-715.
STS.HS.19.1.d	Employ the safe application of tools and machines.
STS.HS.19.1.e	Explain the main hazards that are possible in the lab setting.
STS.HS.19.1.f	Demonstrate proper handling and storing of materials.

STS.HS.19.2 Identify career opportunities in Skilled and Technical Sciences areas.

STS.HS.19.2.a	Identify responsibilities and characteristics of professionals in a skilled and technical sciences industry.
STS.HS.19.2.b	Describe work behaviors needed to be employable in a skilled and technical sciences industry.
STS.HS.19.2.c	Identify the training, education, certification, and licensing requirements for various careers in a skilled and technical sciences industry.
STS.HS.19.2.d	Identify high wage, high demand, and high skill careers in skilled and technical sciences.

INTRODUCTION TO SKILLS AND TECHNICAL SCIENCES (cont.)

STS.HS.19.3 Apply appropriate academic and technical skills to produce a product.

STS.HS.19.3.a Employ project-related math operations and formulas.

STS.HS.19.3.b Employ effective verbal, written, and/or visual communication skills.

STS.HS.19.3.c Define course content vocabulary.

STS.HS.19.3.d Conduct the accurate use of measurement tools

STS.HS.19.4 Identify the materials, tools, machines, and equipment required to produce a product.

STS.HS.19.4.a Identify types of materials to be used for various products.

STS.HS.19.4.b Identify types of fasteners for various products.

STS.HS.19.4.c Identify types of adhesives for various products.

STS.HS.19.4.d Identify types of finishes for various products.

STS.HS.19.4.e Identify the correct tools, machines, and equipment appropriate for a specific operation or process.

STS.HS.19.5 Produce a product(s).

STS.HS.19.5.a Interpret working drawings of a product to be produced.

STS.HS.19.5.b Select the proper materials adhesives, fasteners and finishes for a product.

STS.HS.19.5.c Demonstrate the proper tool, machine, or equipment selection and usage for each corresponding operation needed to produce a product.

STS.HS.19.5.d Execute a plan of procedure.

POWER EQUIPMENT

COURSE DESCRIPTION

This introductory course is designed to develop skills in the operation, service, maintenance, and repair of small gas engine and powered equipment. The material covered in this course will be an entryway to other transportation courses.

Target Grades 6-12.

STANDARDS AND INDICATORS:

STS.HS.28.1 Apply safety principles, practices, and guidelines to the work environment.

STS.HS.28.1.a	Complete applicable safety assessment with 100% accuracy.
STS.HS.28.1.b	Identify and explain the use of personal protective equipment.
STS.HS.28.1.c	Describe proper use of a fire extinguisher.
STS.HS.28.1.d	Demonstrate power equipment battery safety best-practices.
STS.HS.28.1.e	Apply the safe use of tools, machines, and equipment in alignment with industry standards to maintain a safe workplace.
STS.HS.28.1.f	Describe the role of government agencies in providing a safe workplace.
STS.HS.28.1g	Describe the safe and environmental disposal of fluids.

STS.HS.28.2 Identify career opportunities in the Power Equipment industry.

STS.HS.28.2.a	List the most common power equipment careers and related fields of employment.
STS.HS.28.2.b	List the traits & skills employers look for in their employees.
STS.HS.28.2.c	Explain how to find job openings in the power equipment field & identify employment trends.
STS.HS.28.2.d	Explain the specialized tasks completed by each type of technician.
STS.HS.28.2.e	Explain the types of repair facilities.
STS.HS.28.2.f	Summarize the different systems used to pay technicians.
STS.HS.28.2.g	Identify the training, education, certification, and licensing requirements for various careers in the power equipment industry.

POWER EQUIPMENT (cont.)

STS.HS.28.3 Identify fundamentals of power equipment measurement and math.

STS.HS.28.3.a Measure power equipment parts and measurements using both English and metric measuring systems.

STS.HS.28.3.b Identify and use basic measuring tools.

STS.HS.28.3.c Solve power equipment problems using basic math skills.

STS.HS.28.4 Explain fundamentals of Power Equipment Service Information.

STS.HS.28.4.a Describe the different types of service information.

STS.HS.28.4.b Explain the different kinds of information and Illustrations used in service information.

STS.HS.28.4.c Utilize print and/or online service information.

STS.HS.28.4.d Explain how to read and use shop work orders.

STS.HS.28.4.e Describe how to order parts for repair.

STS.HS.28.5 Explain fundamentals of fasteners, gaskets, seals, and sealants used in Power Equipment.

STS.HS.28.5.a Identify commonly used power equipment fasteners.

STS.HS.28.5.b Select and use fasteners properly.

STS.HS.28.5.c Remove, select, and install gaskets, seals, and sealants correctly.

POWER EQUIPMENT (cont.)

STS.HS.28.6 Explain fundamentals of power equipment principles of engine operation.

STS.HS.28.6.a Explain simple engine operation.

STS.HS.28.6.b Describe four-stroke engine operation and explain the purpose of each stroke.

STS.HS.28.6.c Describe two-stroke engine operation and explain the principles of two-cycle operation.

STS.HS.28.6.d List the advantages and disadvantages of two-stroke and four-stroke engines.

STS.HS.28.7 Explain fundamentals of Power Equipment engine components and systems.

STS.HS.28.7.a Describe the function of major moving components (e.g., piston, crankshaft, camshaft, valves).

STS.HS.28.7.b Describe the fundamentals of power equipment fuel supply and air induction.

STS.HS.28.7.c Describe the fundamentals of Power Equipment Ignition Systems.

STS.HS.28.7.d Describe the fundamentals of power equipment lubrication Systems.

STS.HS.28.7.e Describe the fundamentals of Power Equipment Cooling Systems.

STS.HS.28.8 Demonstrate the fundamentals of power equipment engine disassembly, inspection and reassembly.

STS.HS.28.8.a List the steps involved in disassembling an engine.

STS.HS.28.8.b Explain how to inspect various engine parts for damage and wear.

STS.HS.28.8.c Describe the procedure for removing an engine from an implement.

STS.HS.28.8.d Explain how to inspect engines for problems.

STS.HS.28.8.e Demonstrate power equipment engine assembly.

POWER EQUIPMENT (cont.)

STS.HS.28.9 Explain fundamentals of Power Equipment Preventative Maintenance & Troubleshooting.

STS.HS.28.9.a	Explain the steps to perform preventive maintenance on various engine systems.
STS.HS.28.9.b	Summarize the steps to change the oil in a four-cycle engine.
STS.HS.28.9.c	Describe the steps to prepare an engine for storage.
STS.HS.28.9.d	Describe systematic troubleshooting.
STS.HS.28.9.e	Explain the importance of manufacturers' service manuals to determine engine specifications and explain why this information is necessary when servicing a small engine.
STS.HS.28.9.f	Discuss the importance of a maintenance schedule and records.

TRANSPORTATION 1

COURSE DESCRIPTION

This intermediate course will provide students with basic knowledge and skills of the tools and systems needed to be a TDL technician. The student will create foundational knowledge and skills to prepare them for being a conscientious automotive owner or to further their skills to find a career in the TDL industry.

Target Grades 9-12.

STANDARDS AND INDICATORS:

STS.HS.33.1 Explain safety principles, practices, and guidelines to the work environment.

STS.HS.33.1.a Complete applicable safety assessment with 100% accuracy.

STS.HS.33.1.b Employ the use of personal protective equipment (PPE).

STS.HS.33.1.c Describe proper use of a fire extinguisher.

STS.HS.33.1.d Demonstrate automotive lift safety best–practices.

STS.HS.33.1.e Demonstrate automotive battery safety best-practices.

STS.HS.33.1.f Describe the role of government agencies in providing a safe workplace.

STS.HS.33.1.g Explain the safe and environmental disposal of fluids.

STS.HS.33.2 Identify career opportunities in the transportation industry.

STS.HS.33.2.a List the most common transportation careers and related fields of employment.

STS.HS.33.2.b List the traits and skills employers look for in their employees.

STS.HS.33.2.c Explain the specialized tasks completed by each type of technician.

STS.HS.33.2.d Identify the training, education, certification, and licensing requirements for various careers in the transportation industry.

TRANSPORTATION 1 (cont.)

STS.HS.33.3 Explain proper usage of hand tools, power tools, fasteners, and equipment.

STS.HS.33.3.a Identify common hand tools, power tools, and equipment needed for diagnosis and repair of the automobile or mobile equipment.

STS.HS.33.3.b Identify and use basic measuring tools.

STS.HS.33.3.c Identify proper fasteners, gaskets, seals, and sealants used in transportation.

STS.HS.33.4 Describe the systems and components in an automobile.

STS.HS.33.4.a Identify the major parts of a typical automotive engine.

STS.HS.33.4.b Explain the basic function of the major parts of an automotive engine.

STS.HS.33.5 Explain the fundamentals of vehicle maintenance and fluid service.

STS.HS.33.5.a Describe the steps to check a vehicle's fluid levels.

STS.HS.33.5.b Explain the importance of vehicle maintenance.

STS.HS.33.5.c Identify the process to locate and identify fluid leaks.

STS.HS.33.5.d Outline the process to complete an oil and filter change.

STS.HS.33.5.e Describe the process to perform a vehicle grease maintenance.

STS.HS.33.5.f Explain the process of how to inspect for general problems with air filters, hoses, belts, pulleys, and other components.

TRANSPORTATION 1 (cont.)

STS.HS.33.6 Explain the fundamentals of vehicle exterior maintenance.

STS.HS.33.6.a Describe the importance of keeping a vehicle's exterior clean.

STS.HS.33.6.b Identify the proper tools and materials needed to wash and wax a vehicle's exterior.

STS.HS.33.6.c Explain the importance of using the correct soaps and cleaning products.

STS.HS.33.6.d Describe the steps to washing and drying a vehicle.

STS.HS.33.7 Explain fundamentals of researching, purchasing, and owning a vehicle.

STS.HS.33.7.a Explain the costs of owning and operating a car.

STS.HS.33.7.b Identify models and submodels of vehicles.

STS.HS.33.7.c Describe how to search and locate vehicles for sale.

STS.HS.33.7.d Differentiate the benefits versus cost of buying new or used vehicles.

TRANSPORTATION 2

COURSE DESCRIPTION

This capstone course will expand on the basic concepts and systems needed by the TDL technician. It will focus on service and maintenance of automobiles and mobile equipment. Specific maintenance requirements with the various systems of the automobile and mobile equipment will be covered as well as replacement of needed parts. This course will help students that want to know how to keep a vehicle running in good order and for those that would like to continue on in the TDL field.

Target Grades 10-12.

STANDARDS AND INDICATORS:

STS.HS.34.1 Explain safety principles, practices, and guidelines to the work environment.

STS.HS.34.1.a	Complete applicable safety assessment with 100% accuracy.
STS.HS.34.1.b	Identify and explain the use of personal protective equipment.
STS.HS.34.1.c	Describe proper use of a fire extinguisher.
STS.HS.34.1.d	Demonstrate automotive lift safety best–practices.
STS.HS.34.1.e	Demonstrate automotive battery safety best-practices.
STS.HS.34.1.f	Apply the safe use of tools, machines, and equipment in alignment with industry standards to maintain a safe workplace.
STS.HS.34.1.g	Describe the role of government agencies in providing a safe workplace.
STS.HS.34.1.h	Explain the purpose for safe and environmental disposal of fluids.

STS.HS.34.2 Identify career opportunities in the transportation industry.

STS.HS.34.2.a	Identify the most common transportation careers and related fields of employment.
STS.HS.34.2.b	Identify the traits and skills employers look for in their employees.
STS.HS.34.2.c	Identify the training, education, certification, and licensing requirements for various careers in the transportation industry.

TRANSPORTATION 2 (cont.)

STS.HS.34.3 Identify correct tools, equipment and fasteners needed to diagnose and repair automobiles and mobile equipment.

STS.HS.34.3.a Identify common hand tools, power tools, and equipment needed for diagnosis and repair of the automobile or mobile equipment.

STS.HS.34.3 .b Describe the different types of service information platforms.

STS.HS.34.3.c Explain fundamentals of on–board diagnostics and scan tools.

STS.HS.34.3.d Identify proper fasteners, gaskets, seals, and sealants used in transportation.

STS.HS.34.4 Summarize the various systems used on automobiles and mobile equipment.

STS.HS.34.4.a Explain the fundamentals of the lubrication system.

STS.HS.34.4.b Explain the fundamentals of the fuel system.

STS.HS.34.4.c Explain the fundamentals of the cooling system.

STS.HS.34.4.d Explain the fundamentals of the brake system.

STS.HS.34.4.e Explain the fundamentals of the suspension system.

STS.HS.34.4.f Explain the fundamentals of the electrical system.

STS.HS.34.4.g Explain the fundamentals of the ignition system.

STS.HS.34.4.h Explain the fundamentals of the exhaust system.

COLLISION REPAIR

COURSE DESCRIPTION

This capstone course exposes students to the knowledge and skills needed to be a collision repair and refinishing technician. Safety, materials, tools and estimating will be included in the instruction. Working experience will also be included.

Target Grades 11-12.

STANDARDS AND INDICATORS:

STS.HS.9.1 Demonstrate safety principles, practices, and guidelines to the work environment.

STS.HS.9.1.a	Complete applicable safety assessment with 100% accuracy.
STS.HS.9.1.b	Identify and explain the use of personal protective equipment.
STS.HS.9.1.c	Describe proper use of a fire extinguisher.
STS.HS.9.1.d	Demonstrate automotive lift safety best-practices.
STS.HS.9.1.e	Demonstrate automotive battery safety best-practices.
STS.HS.9.1.f	Demonstrate the safe use of tools, machines, and equipment in alignment with industry standards to maintain a safe workplace.
STS.HS.9.1.g	Describe the role of government agencies in providing a safe workplace.

STS.HS.9.2 Explain proper usage of hand tools, power tools, fasteners, and equipment.

STS.HS.9.2.a	Identify common hand tools, power tools, and equipment needed for diagnosis and repair of the automobile or mobile equipment.
STS.HS.9.2.b	Identify and use basic measuring tools.
STS.HS.9.2.c	Identify proper fasteners, gaskets, seals, and sealants used in transportation.

COLLISION REPAIR (cont.)

STS.HS.9.3 Identify career opportunities in the transportation industry.

STS.HS.9.3.a List the most common transportation careers and related fields of employment.

STS.HS.9.3.b List the traits and skills employers look for in their employees.

STS.HS.9.3.c Explain the specialized tasks completed by a collision repair technician.

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STS.HS.9.3.d Identify the training, education, certification, and licensing requirements for various careers in the transportation industry.

STS.HS.9.4 Explain fundamentals of Collision Repair and Refinishing measurement and math.

STS.HS.9.4.a Employ both customary and metric measuring systems.

STS.HS.9.4.b Identify and use basic collision repair and refinishing measuring tools.

STS.HS.9.4.c Employ basic math skills used in collision repair and refinishing.

STS.HS.9.5 Identify fundamentals of Collision Repair Information.

STS.HS.9.5.a Describe the different types of service information.

STS.HS.9.5.b Explain the different kinds of information and Illustrations used in service information.

STS.HS.9.5.c Utilize print and online service information.

STS.HS.9.5.d Understand shop work orders.

STS.HS.9.5.e Describe how to order parts for repair.

COLLISION REPAIR (cont.)

STS.HS.9.6 Explain fundamentals of Nonstructural Repairs.

STS.HS.9.6.a	Describe steps for a nonstructural panel repair.
STS.HS.9.6.b	Explain steps for a bolted nonstructural panel replacement.
STS.HS.9.6.c	Identify the procedure to repair welded and bonded nonstructural panel replacement.
STS.HS.9.6.d	Recall steps and procedures for plastic repair.
STS.HS.9.6.e	Describe steps for glass repair.

STS.HS.9.7 Explain fundamentals of Structural Repairs.

STS.HS.9.7.a	Identify unibody/frame-straightening equipment.
STS.HS.9.7.b	Discuss the various types of measurements used for structural repairs.
STS.HS.9.7.c	Describe the steps for unibody straightening.
STS.HS.9.7.d	Identify the steps for full frame repair.
STS.HS.9.7.e	Summarize the process for various types of structural component replacement.

STS.HS.9.8 Explain fundamentals of Refinishing Technology used in Collision Repair.

STS.HS.9.8.a	Explain various refinishing materials used.
STS.HS.9.8.b	Describe steps for paint mixing and reducing.
STS.HS.9.8.c	Explain correct spray techniques.
STS.HS.9.8.d	Explain various techniques for surface preparation.
STS.HS.9.8.e	Identify steps for color matching.
STS.HS.9.8.f	Describe the process for paint application.
STS.HS.9.8.g	Explain the steps used in detailing.

STS.HS.9.9 Explain fundamentals of Estimating used in Collision Repair.

STS.HS.9.9.a	Describe the process of collision repair estimating.
STS.HS.9.9.b	Describe the steps involved in completing a repair estimate.
STS.HS.9.9.c	Explain the process for completing an estimate.

TRANSPORTATION 3

COURSE DESCRIPTION

This extended learning course focuses on the diagnosis, service, and repair of automobile and mobile equipment. This course will prepare students for postsecondary education and entry into the career.

Target Grades 11-12.

STANDARDS AND INDICATORS:

STS.HS.35.1 Apply safety principles, practices, and guidelines to the work environment.

STS.HS.35.1.a	Complete applicable safety assessment with 100% accuracy.
STS.HS.35.1.b	Identify and explain the use of personal protective equipment.
STS.HS.35.1.c	Describe proper use of a fire extinguisher.
STS.HS.35.1.d	Demonstrate automotive lift safety best–practices.
STS.HS.35.1.e	Demonstrate automotive battery safety best–practices.
STS.HS.35.1.f	Apply the safe use of tools, machines, and equipment in alignment with industry standards to maintain a safe workplace.
STS.HS.35.1.g	Describe the role of government agencies in providing a safe workplace.
STS.HS.35.1.h	Describe the safe and environmental disposal of fluids.

STS.HS.35.2 Identify career opportunities in the transportation industry.

STS.HS.35.2.a	List the most common transportation careers and related fields of employment.
STS.HS.35.2.b	List the traits and skills employers look for in their employees.
STS.HS.35.2.c	Explain how to find job openings in the transportation field.
STS.HS.35.2.d	Explain the specialized tasks completed by each type of technician.
STS.HS.35.2.e	Identify the training, education, certification, and licensing requirements for various careers in the transportation industry.

TRANSPORTATION 3 (cont.)

STS.HS.35.3 Identify fundamentals of transportation measurement and service information.

STS.HS.35.3.a	Measure with both customary and metric measuring systems.
STS.HS.35.3.b	Identify and use proper measuring tools for each task.
STS.HS.35.3.c	Describe the different types of service information.
STS.HS.35.3.d	Explain how to read shop work orders.

STS.HS.35.4 Identify correct tools, equipment and fasteners needed to diagnose and repair automobiles and mobile equipment.

STS.HS.35.4.a	Identify common hand tools, power tools, and equipment needed for diagnosis and repair of the automobile or mobile equipment.
STS.HS.35.4.b	Describe the different types of service information platforms.
STS.HS.35.4.c	Explain fundamentals of on–board diagnostics and scan tools.
STS.HS.35.4.d	Identify proper fasteners, gaskets, seals, and sealants used in transportation.

STS.HS.35.5 Explain fundamentals of vehicle systems and principles.

STS.HS.35.5.a	Explain the principles of electricity and magnetism.
STS.HS.35.5.b	Explain fundamentals of engine mechanical problem diagnosis.
STS.HS.35.5.c	Explain fundamentals of engine top end rebuilding.
STS.HS.35.5.d	Explain fundamentals of engine front end service.
STS.HS.35.5.e	Explain fundamentals of short block service.
STS.HS.35.5.f	Explain fundamentals of manual transmission, clutch, and automatic transmission technology.
STS.HS.35.5.g	Explain fundamentals of front and rear drive train technology.
STS.HS.35.5.h	Explain fundamentals of heating and air conditioning.
STS.HS.35.5.i	Explain fundamentals of diesel injection, turbochargers, and superchargers fundamentals.
STS.HS.35.5.j	Explain fundamentals of wheel alignment.
STS.HS.35.5.k	Explain fundamentals of restraint systems.

NEBRASKA CAREER AND TECHNICAL EDUCATION

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NEBRASKA DEPARTMENT OF EDUCATION

AGRICULTURE, FOOD, AND NATURAL RESOURCES

PROGRAM OF STUDY STANDARDS

AGRICULTURE, FOOD, AND NATURAL RESOURCES

NEBRASKA CAREER AND TECHNICAL EDUCATION STATE MODEL PROGRAMS OF STUDY

CAREER FIELD OVERVIEW

The Agriculture, Food, and Natural Resources Career Field area provides opportunities for students to deepen their understanding of topics such as animal science, plant and soil science, agribusiness, food products and processing, power, structural, and technical systems, leadership and personal development, biotechnology, and environmental and natural resources.

PROGRAMS OF STUDY

Programs of Study are the primary delivery model for career and technical education (CTE) in Nebraska. They include a sequence of courses which progresses in specificity and rigor and are updated regularly to align with Nebraska's workforce needs and economic development priorities. This document includes the programs of study and course-based standards for the Agriculture, Food, and Natural Resources career field. These state model programs of study were developed to:

- Assist secondary schools in creating meaningful sequences of courses that adequately prepare individuals for seamless transitions to postsecondary education and careers eliminating duplication of coursework;
- Assist students in identifying appropriate courses for high school and postsecondary education that lead to their chosen career;
- Encourage collaboration between secondary and postsecondary education through curricular alignment;
- Offer opportunities for high-quality workplace experiences aligned to students' career interests;
- Promote the advancement of early postsecondary opportunities (including dual-credit courses) for all students; and
- Support postsecondary education options for students to further prepare them for successful transitions to their future careers.

Nebraska's programs of study are organized around Nebraska's CTE Model, which provides a way for students to explore the diversity of career options available to them.

NEBRASKA CAREER AND TECHNICAL EDUCATION MODEL

1 CORE ACADEMICS AND CAREER READINESS

At the center of the NCE Model is the expectation for all students to develop a solid academic core. The next ring identifies specific career readiness standards and practices that prepare students for success in postsecondary education as well as entrepreneurship/employment.

2 CAREER FIELDS

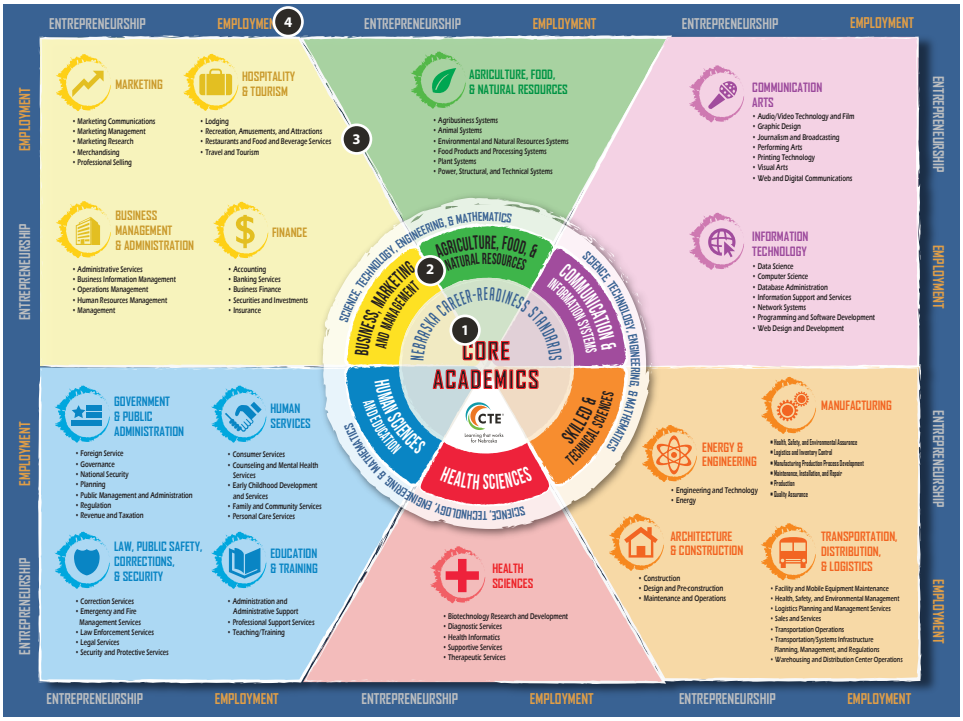
The six career fields represent broad sectors of the job market on which students may choose to focus.

3 CAREER CLUSTERS

Each career field is composed of career clusters radiating out from it. The clusters are more specific segments of the labor market. Each cluster is a grouping of careers that focus on similar subjects or similar skills. A basic understanding and exploration of each of the clusters will provide students with a solid foundation for career decision-making to conceptualize the entire world of work.

4 EMPLOYABILITY AND ENTREPRENEURSHIP

Career education provides the opportunity to gain the knowledge and skills for both employment and entrepreneurship. The reality for Nebraska and the United States is that entrepreneurship will help ensure economic growth and vitality. By infusing entrepreneurship competencies, career education is helping create the next generation of America's innovators and entrepreneurs.



The model is a visual map of "career fields" and "career clusters/pathways" and organizes the 16 National Career Clusters into six broad sectors of entrepreneurship and employment:

- Agriculture, Food and Natural Resources
- Business, Marketing and Management
- Communication and Information Systems
- Health Sciences
- Human Sciences and Education
- Skilled and Technical Sciences

These fields break down into more specific Career Clusters, Pathways and Occupational Specialties. The model provides a way for:

- Students to explore the diversity of career options available to them.
- Students to begin to prepare for their career with plans for secondary and post-secondary education.
- Schools to organize curriculum into Programs of Study that prepare students for opportunities in Nebraska's economy.

COURSE SEQUENCING

The courses within the State Model Program of Study are intended to be offered sequentially, to allow learners to build upon foundational knowledge and skills learned in introductory and intermediate courses and applied in more advanced capstone coursework. Non-duplicative sequences of courses ensure students transition to postsecondary education without duplication of classes and content. CTE enrollment data is collected at the course level. Students who participate and concentrate in CTE generally have more positive outcomes such as higher graduation rates along with postsecondary success.

Introductory Courses

Introductory courses set the foundation for a program of study by introducing students to broad foundational knowledge relative to an occupational area and career field.

Intermediate Courses

Intermediate courses build on the foundational knowledge of Introductory courses to further develop the academic, technical, and career readiness skills within a particular career field and occupational area.

Capstone Courses

Capstone courses are occupationally specific and further develop the necessary and required academic, technical, and career readiness skills needed for seamless transitions to postsecondary education and employment. Capstone courses often provide opportunities for students to earn postsecondary credit.

Levels of Participation

CTE Participant

A student who has earned one or more credits in any career and technical education program area.

CTE Concentrator

A secondary student who, in grades 9 through 12, has earned credit in at least two courses in a single career cluster program at the intermediate or capstone level.

State Model Programs of Study are coordinated, nonduplicative sequences of academic and technical content at the secondary and postsecondary levels that incorporate challenging State academic standards, address both academic and technical knowledge and skills, including Nebraska's Career Readiness Skills, are aligned with the needs of industries in Nebraska's economy, progress in specificity, have multiple entry and exit points that incorporate credentialing, and culminate in the attainment of a recognized postsecondary credential.

COURSE-BASED STANDARDS

Individual CTE courses, which make up the sequence of courses for Programs of Study, include content area standards and indicators to provide a framework for quality teaching and learning. While not required by state law, districts are encouraged to adopt these State Model Programs of Study and their related course-based standards. CTE State Model Programs of Study and course-based standards are revised on a five-year cycle to remain responsive to the rapid advances and needs of business and industry, help students explore a variety of postsecondary options and corresponding entrance requirements to help identify their next steps, and to align to changes in postsecondary programs.

Standards

At the highest level of generality, content area standards include a set of broad, overarching content-based statements that describe the basic cognitive, affective, or psychomotor expectations of students. They reflect long-term goals for learning.

Indicators

Under each standard are indicators, which further describe what a student must know and be able to do to meet the standard. Indicators are performance-based statements that provide educators with a clear understanding of the expected level of student learning and guidance. Indicators provide guidance for an assessment of student learning.

EXPANDED LEARNING OPPORTUNITIES

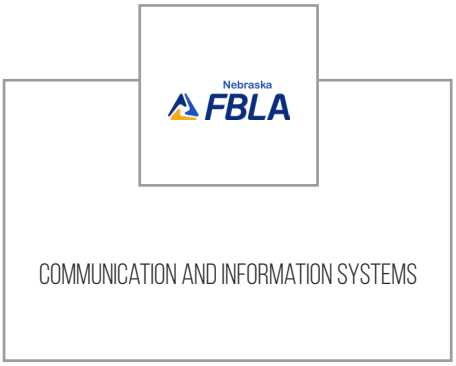
Expanded learning opportunities build on, support, and enhance learning within and outside of regular school programming. They are a critical component of Nebraska's educational landscape and should be intentionally supported to further develop students' college and career readiness. To signal aligned expanded learning opportunities, each Program of Study identifies additional areas where students may desire to personalize their program and take additional coursework or work-based learning that aligns with their interests. These expanded learning opportunities are not considered part of a Program of Study nor are they required, but rather a meaningful opportunity for students to continue to learn after completing the Program of Study sequence of courses within the context of their career interests. Along with aligned coursework, two prominent expanded learning opportunities include participating in Work-based Learning or a Career and Technical Student Organization.

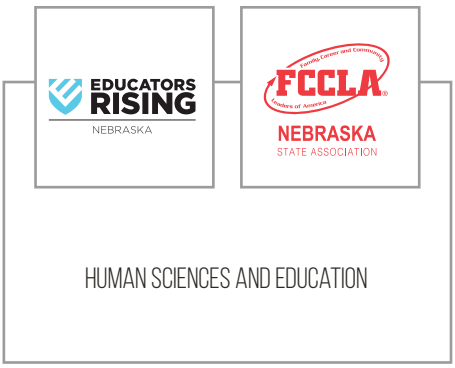
Work-Based Learning

Work-Based Learning (WBL) connects learners with employers to prepare them for success in an everchanging workplace. WBL is a planned program of meaningful experiences related to the career interests of learners that enables them to acquire knowledge and skills in a real or simulated work setting. It requires strong partnerships between schools, colleges, and local employers. WBL is learning through work, not simply learning about work. Expanding high-quality WBL opportunities for students is one of Nebraska's CTE strategic priorities and is a program quality accountability indicator. Nebraska CTE affirms WBL as a critical component of career development. Throughout the State Model Programs of Study, courses where WBL is embedded into the class is noted in the course title (e.g., "Introduction to Agriculture, Food, and Natural Resources with Work-Based Learning"). It is also signaled as an expanded learning opportunity across all programs of study.

Career And Technical Student Organizations

Career and Technical Student Organizations (CTSOs) are an extension of classroom instruction—applying classroom learning to real-world experiences. CTSOs provide opportunities for all students to develop career readiness skills through activities, competitions, and community service. Nebraska recognizes seven CTSOs aligned with the state's Programs of Study and career field areas. These include:





CAREER READINESS STANDARDS

Embedded into the State Model Programs of Study and courses are the Nebraska Career Readiness standards. These standards rest on important "practices and proficiencies" with long-standing importance in career education. These standards and related practices are not limited to formal CTE programs nor to the middle school or high school level. Rather, these standards and practices should be used over and over again with increasing complexity and relevance by students as they progress through their educational pathway. The standards themselves do not dictate curriculum, pedagogy or delivery of content. Schools and colleges may handle the teaching and assessing of these standards in many different ways.

THE CAREER READY INDIVIDUAL...

1. Applies appropriate academic and technical skills

2. Communicates effectively and appropriately

3. Contributes to employer and community success

4. Makes sense of problems and perseveres in solving them

5. Uses critical thinking

6. Demonstrates innovation and creativity

7. Models ethical leadership and effective management

8. Works productively in teams and demonstrates cultural competency

9. Utilizes technology

10. Manages personal career development

11. Attends to personal and financial well-being

AGRICULTURE, FOOD, AND NATURAL RESOURCES

PROGRAMS OF STUDY

AGRICULTURE, FOOD, AND NATURAL RESOURCES

Program of Study Name	Introductory Course	Intermediate Course	Capstone Course	Expanded Learning Opportunity
AGRICULTURAL POWER, STRUCTURE, & TECHNOLOGY	011000 - Introduction to AFNR, OR 018060 - CASE Introduction to AFNR	016004 - Welding, OR 016000 - Power, Structural, & Technology Systems Fundamentals, OR 018066 - CASE Agriculture Power & Technology	016005 - Metals & Fabrication, OR 011018 - Agricultural Technology, OR 016006 - Precision Agriculture, OR 016003 - Advanced Power, Structural, & Technology Systems	017000 - Agriculture, Food, and Natural Resources Leadership and Career Readiness, with Work-Based Learning 320702 - Agriculture, Food, And Natural Resources Work Based Learning Experience
AGRIBUSINESS	011000 - Introduction to AFNR, OR 018060 - CASE Introduction to AFNR	011009 - Agricultural Business, OR 018067 - CASE Agribusiness	011011 - Agricultural Sales, OR 011017 - Agricultural Communication, OR 011010 - Agricultural Economics, OR 012005 - Agricultural Entrepreneurship	017000 - Agriculture, Food, and Natural Resources Leadership and Career Readiness, with Work-Based Learning 320702 - Agriculture, Food, And Natural Resources Work Based Learning Experience
ANIMAL SCIENCE	011000 - Introduction to AFNR, OR 018060 - CASE Introduction to AFN	011004 - Animal Science, OR 018062 - CASE Animal Science	011006 - Small Animal Management, OR 011005 - Large Animal Management, OR 011015 - Veterinary Science, OR 012004 - Agricultural Biotechnology, OR 018063 - CASE Animal and Plant Biotechnology	017000 - Agriculture, Food, and Natural Resources Leadership and Career Readiness, with Work-Based Learning 320702 - Agriculture, Food, And Natural Resources Work Based Learning Experience
DIVERSIFIED AGRICULTURAL SCIENCE	011000 - Introduction to AFNR, OR 018060 - CASE Introduction to AFNR	011019 - Diversified Agriculture	011020 - Integrated Agricultural Science	017000 - Agriculture, Food, and Natural Resources Leadership and Career Readiness, with Work-Based Learning 320702 - Agriculture, Food, And Natural Resources Work Based Learning Experience

AGRICULTURE, FOOD, AND NATURAL RESOURCES

PROGRAMS OF STUDY

AGRICULTURE, FOOD, AND NATURAL RESOURCES

Program of Study Name	Introductory Course	Intermediate Course	Capstone Course	Expanded Learning Opportunity
ENVIRONMENTAL & NATURAL RESOURCES	011000 - Introduction to AFNR, OR 018060 - CASE Introduction to AFNR	013000 - Environmental & Natural Resources, OR 018064 - CASE Natural Resources and Ecology	013001 - Wildlife Management, OR 013002 - Environmental & Natural Resources Management	017000 - Agriculture, Food, and Natural Resources Leadership and Career Readiness, with Work-Based Learning 320702 - Agriculture, Food, And Natural Resources Work Based Learning Experience
FOOD PRODUCTS & PROCESSING	011000 - Introduction to AFNR, OR 018060 - CASE Introduction to AFNR	014000 - Food Science & Safety, OR 018065 - CASE Food Science & Safety	014001 - Food Products & Technology	017000 - Agriculture, Food, and Natural Resources Leadership and Career Readiness, with Work-Based Learning 320702 - Agriculture, Food, And Natural Resources Work Based Learning Experience
PLANT SCIENCE	011000 - Introduction to AFNR , OR 018060 - CASE Introduction to AFNR	011007 - Plant Science, OR 018061 - CASE Plant Science	011008 - Crop Management & Agronomy, OR 012001 - Nursery Management, OR 012006 - Landscape Design, OR 012002 - Floriculture, OR 012004 - Agricultural Biotechnology, OR 018063 - CASE Animal and Plant Biotechnology	017000 - Agriculture, Food, and Natural Resources Leadership and Career Readiness, with Work-Based Learning 320702 - Agriculture, Food, And Natural Resources Work Based Learning Experience

INTRODUCTION TO AGRICULTURE, FOOD, AND NATURAL RESOURCES

COURSE DESCRIPTION

The introductory course for the Agriculture, Food, and Natural Resources Career Cluster provides a knowledge base in the major components of the industry. Learners will be exposed to a broad range of agriculture, food, and natural resources careers, cluster foundation knowledge and skills, and introduction to leadership development and the National FFA Organization (FFA). Classroom and laboratory activities are supplemented through supervised agricultural experiences, career exploration activities, and FFA leadership programs & activities.

STANDARDS AND INDICATORS:

AFNR.HS.20.1 Apply leadership skills and knowledge through the study of the FFA Career and Technical Student Organization (CTSO).

AFNR.HS.20.1.a	Summarize the three-component model of a comprehensive Agricultural Education Program.
AFNR.HS.20.1.b	Recognize the mission, purpose, and key historical moments in the National FFA Organization.
AFNR.HS.20.1.c	Investigate opportunities available for a member of the FFA.
AFNR.HS.20.1.d	Examine and practice public speaking.
AFNR.HS.20.1.e	Apply the basic principles of Parliamentary Procedure.

AFNR.HS.20.2 Apply career readiness principles in an authentic workplace environment.

AFNR.HS.20.2.a	Summarize the five components of a Foundational Supervised Agricultural Experience (SAE).
AFNR.HS.20.2.b	Investigate the five options for an Immersion SAE
AFNR.HS.20.2.c	Articulate elements of career plans (e.g., academic, AFNR/CTE coursework, FFA/CTSO participation, immersion SAE) required in an AFNR workplace setting.

INTRODUCTION TO AGRICULTURE, FOOD, AND NATURAL RESOURCES (cont.)

AFNR.HS.20.3 Examine career options within agriculture, food, and natural resource systems and perform research based on personal interests.

AFNR.HS.20.3.a	Inventory personal work preferences and interests related to the AFNR Career Field.
AFNR.HS.20.3.b	Identify careers available in multiple AFNR Career Pathways.
AFNR.HS.20.3.c	Determine common qualities of a specific career area (e.g., educational requirements, work environment).
AFNR.HS.20.3.d	Identify necessary steps to prepare for a specific AFNR careers (e.g., coursework, post-secondary, needed skills).
AFNR.HS.20.3.e	Identify opportunities for work placed learning within your community.

AFNR.HS.20.4 Evaluate the role of water, air, soil, and habitat in the management of natural resource systems.

AFNR.HS.20.4.a	Summarize and classify the different natural resources (e.g., water, soil, renewable, non-renewable).
AFNR.HS.20.4.b	Summarize the components that comprise all ecosystems.
AFNR.HS.20.4.c	Compare and categorize biotic and abiotic factors in various habitats.
AFNR.HS.20.4.d	Identify the importance of water and air quality.
AFNR.HS.20.4.e	Identify the physical qualities of the soil that determine use for the environmental service system.
AFNR.HS.20.4.f	Describe the importance of water conservation.

INTRODUCTION TO AGRICULTURE, FOOD, AND NATURAL RESOURCES (cont.)

AFNR.HS.20.5 Differentiate key terms, components, and uses for animals in animal systems.

AFNR.HS.20.5.a	Identify and summarize key terminology used in animal systems (e.g., heifer vs. cow, bull vs. steer, calving, farrowing, bovine, equine).
AFNR.HS.20.5.b	Define the function of basic external and internal organs of animals.
AFNR.HS.20.5.c	Differentiate production animals from companion animals.
AFNR.HS.20.5.d	Classify the major components of production animal systems (e.g., feedlots, cow-calf operations, farrow, finish) and regional distribution.
AFNR.HS.20.5.e	Categorize uses for and products generated from production animals.
AFNR.HS.20.5.f	Classify and determine uses for companion animals.

AFNR.HS.20.6 Summarize knowledge of plant anatomy and the functions of plant structures and processes to activities associated with plant systems.

AFNR.HS.20.6.a	Classify major components of the plant industry.
AFNR.HS.20.6.b	Classify plants according to life cycles.
AFNR.HS.20.6.c	Identify the function of plant parts.
AFNR.HS.20.6.d	Identify basic processes and role of photosynthesis, respiration, and transpiration.
AFNR.HS.20.6.e	Differentiate between sexual and asexual propagation techniques.

AFNR.HS.20.7 Synthesize the historical, social, cultural, and potential applications of biotechnology.

AFNR.HS.20.7.a	Summarize biotechnology and the historical impact it has had on agriculture.
AFNR.HS.20.7.b	Identify current and future applications of biotechnology in agriculture, food, and natural resources.
AFNR.HS.20.7.c	Identify common methodologies used in biotechnology.
AFNR.HS.20.7.d	Identify basic cellular structures and genetic terminology.
AFNR.HS.20.7.e	Summarize the scientific and social implications of modern genetically modified organisms.

INTRODUCTION TO AGRICULTURE, FOOD, AND NATURAL RESOURCES (cont.)

AFNR.HS.20.8 Summarize knowledge of the food products & processing industry.

AFNR.HS.20.8.a Evaluate how different foods affect the human body and its physical and cellular processes.

AFNR.HS.20.8.b Identify food safety and sanitation procedures for handling and processing to assure food quality.

AFNR.HS.20.8.c Summarize food safety procedures when storing and distributing products to consumers.

AFNR.HS.20.8.d Explain the producer-to-consumer processes in the food industry.

AFNR.HS.20.9 Summarize management principles, skills, and practices in agribusiness.

AFNR.HS.20.9.a Define major sectors within the agribusiness industry.

AFNR.HS.20.9.b Identify standard production and agribusiness records and plans.

AFNR.HS.20.9.c Identify common agribusiness terminology and tools to track and analyze business decisions and transactions.

AFNR.HS.20.9.d Articulate the role of markets, trade, competition, and price in relation to business sales and market planning.

AFNR.HS.20.9.e Identify aspects needed to develop and implement an effective record keeping strategy for financial and human resources.

AFNR.HS.20.10 Create an agricultural project using knowledge of power, structural and technical systems (e.g. procedures, operations, safety, tools, and equipment).

AFNR.HS.20.10.a Identify and practice safe laboratory practices and procedures.

AFNR.HS.20.10.b Select and operate proper tools and equipment related to agricultural processes observing all safety precautions.

AFNR.HS.20.10.c Develop an agricultural project plan with the required project plan components (e.g., purpose, materials, budget, skills required, timeframe).

AFNR.HS.20.10.d Assess a project plan to completion.

WELDING

COURSE DESCRIPTION

This course provides an in-depth study of welding principles and applications in a classroom/agricultural laboratory/shop setting to help students understand and prepare for the opportunities in current welding and agricultural associated careers. Through hands on applications and comprehensive technical content students will develop foundational knowledge and skills for welding processes. Classroom and laboratory activities are supplemented through supervised agricultural experiences, and FFA leadership programs & activities.

STANDARDS AND INDICATORS:

AFNR.HS.9.1. Demonstrate professional standards/employability skills as required by welding professionals associated with the agricultural industry.

AFNR.HS.9.1.a	Identify career development and opportunities in the associated fields of the welding industry.
AFNR.HS.9.1.b	Apply information in career planning and employment situations related to agricultural welding.
AFNR.HS.9.1.c	Compare certifications, credentialing, and compliance within the industry.

AFNR.HS.9.2 Apply safety principles, practices, and guidelines to the work environment.

AFNR.HS.9.2.a	Demonstrate knowledge of safety principles for the laboratory environment and industry.
AFNR.HS.9.2.b	Identify personal and occupational health practices including safety and first-aid practices.
AFNR.HS.9.2.c	Demonstrate awareness of safety devices assembled and installed correctly on tools and devices.
AFNR.HS.9.2.d	Apply the requirements of eye safety protection and other Personal Protection Equipment.
AFNR.HS.9.2.e	Identify the injuries/illnesses possible in the industry and laboratory.

WELDING (cont.)

AFNR.HS.9.3 Perform precision measurements.

AFNR.HS.9.3.a Select and use proper measuring devices.

AFNR.HS.9.3.b Utilize math formulas to complete work and job tasks.

AFNR.HS.9.3.c Measure components to begin project preparations.

AFNR.HS.9.4 Demonstrate use of welding symbols, materials, and weldability.

AFNR.HS.9.4.a Develop and identify basic drawings, types, symbols, and list of materials.

AFNR.HS.9.4.b Demonstrate the ability to read and/or produce prints.

AFNR.HS.9.4.c Identify and explain the knowledge of materials, their properties, and methods to use them.

AFNR.HS.9.4.d Estimate materials and cost associated.

AFNR.HS.9.5 Demonstrate types of assembling processes.

AFNR.HS.9.5.a Demonstrate welding techniques used in an agricultural setting with the following processes: O-A, Arc, GMAW, and/or GTAW.

AFNR.HS.9.5.b Utilize appropriate procedures to the design and production of a manufactured agricultural part or component.

AFNR.HS.9.5.c Identify the proper finish for the selected materials.

POWER, STRUCTURAL, AND TECHNOLOGY SYSTEMS FUNDAMENTALS

COURSE DESCRIPTION

This course is designed to provide students with introductory level experiences in selected major areas of agricultural mechanics technology which may include woodworking, agricultural structures, electrical wiring, introductory arc welding, oxy/fuel cutting and welding processes, and power equipment operation and maintenance. Learning activities include information, skill development, and problem solving. Classroom and laboratory activities are supplemented through supervised agricultural experiences, and FFA leadership programs & activities.

STANDARDS AND INDICATORS:

AFNR.HS.26.1 Identify careers in the agricultural mechanics industry in the areas of agricultural construction, agricultural electrical systems, welding and metal fabrication, and agriculture power machinery.

AFNR.HS.26.1.a Identify career opportunities in Agricultural Mechanics in the local community.

AFNR.HS.26.1.b Identify professional organizations associated with agricultural mechanics skills and related occupations.

AFNR.HS.26.1.c Apply information in career planning and employment situations related to agricultural mechanics.

AFNR.HS.26.2 Model principles of a safe work environment, including safety practices.

AFNR.HS.26.2.a Identify potential hazards in the agricultural mechanics laboratory and/or work setting.

AFNR.HS.26.2.b Select safety equipment and procedures for various agriculture-related activities.

AFNR.HS.26.2.c Demonstrate safety procedures and behavior while working in the agriculture classroom, labs, and/or work sites.

AFNR.HS.26.2.d Identify personal protective equipment required for various activities conducted in the agricultural mechanics laboratory and industry.

AFNR.HS.26.2.e Safely operate all hand tools, power tools, and equipment in the agricultural mechanics laboratory.

POWER, STRUCTURAL, AND TECHNOLOGY SYSTEMS FUNDAMENTALS (cont.)

AFNR.HS.26.3 Demonstrate the safe use of common tools and materials used in woodworking and agricultural construction.

AFNR.HS.26.3.a Identify common woodworking tools used (e.g., hand tools, power tools, layout tools, measuring tools).

AFNR.HS.26.3.b Demonstrate the proper care and use of tools (e.g., hand tools, layout tools, measuring tools).

AFNR.HS.26.3.c Demonstrate appropriate techniques for restoring worn, damaged, or abused tools to good working condition.

AFNR.HS.26.4 Select appropriate types of lumber, fasteners, and finish materials used in woodworking and agricultural construction.

AFNR.HS.26.4.a Describe common woods including characteristics and uses.

AFNR.HS.26.4.b Classify common dimensions of wood materials.

AFNR.HS.26.4.c Select appropriate screws, nails, bolts, and other fasteners for various uses.

AFNR.HS.26.4.d Compare different types of wood glues and their recommended uses.

AFNR.HS.26.4.e Identify proper woodworking and agricultural construction preserving/finishing materials.

AFNR.HS.26.5 Demonstrate knowledge of electrical principles, tools, and materials necessary for planning and installation of electrical circuits for agricultural and residential applications.

AFNR.HS.26.5.a Describe the basic principles of electrical theory.

AFNR.HS.26.5.b Describe types of electrical circuits.

AFNR.HS.26.5.c Define electrical terms and relationship between them (e.g., watts, volts, amps and resistance).

AFNR.HS.26.5.d Explain the purpose of the National Electrical Code.

POWER, STRUCTURAL, AND TECHNOLOGY SYSTEMS FUNDAMENTALS (cont.)

AFNR.HS.26.5 Demonstrate knowledge of electrical principles, tools, and materials necessary for planning and installation of electrical circuits for agricultural and residential applications.

AFNR.HS.26.5.a Describe the basic principles of electrical theory.

AFNR.HS.26.5.b Describe types of electrical circuits.

AFNR.HS.26.5.c Define electrical terms and relationship between them (e.g., watts, volts, amps resistance).

AFNR.HS.26.5.d Explain the purpose of the National Electrical Code.

AFNR.HS.26.5.e Identify electrical symbols used in electrical schematics and floor plans of agricultural facilities.

AFNR.HS.26.5.f Use appropriate electrical symbols and follow National Electrical Code requirements for electrical schematics

AFNR.HS.26.5.g Demonstrate commonly used electrical tools in the agricultural industry.

AFNR.HS.26.5.h Identify types of electrical cable used in agricultural applications.

AFNR.HS.26.5.i Calculate load for specific circuit applications and describe potential hazards of overloads on a circuit.

AFNR.HS.26.5.j Select conductors for circuit applications based on given load, location, temperature, and distance parameters.

AFNR.HS.26.5.k Compare and contrast switches, receptacles, lighting outlet devices, grounding conductors, solderless connectors, and related materials for use in agricultural and residential electric circuits.

AFNR.HS.26.5.l Identify steps in installing branch circuit enclosures, conductors and devices.

POWER, STRUCTURAL, AND TECHNOLOGY SYSTEMS FUNDAMENTALS (cont.)

AFNR.HS.26.6 Apply the operating principles of a four stroke engine, including components of and proper maintenance procedures, in accordance with the manufacturer's recommendations.

AFNR.HS.26.6.a Explain how a small engine operates.

AFNR. HS.26.6.b Compare the similarities and differences between four-stroke-cycle engines and two-stroke-cycle engines.

AFNR.HS.26.6.c Interpret service and parts manuals for small engines and identify operating instructions and safety procedures for operating small engines.

AFNR.HS.26.6.d Identify tools commonly used for small engine service and repair.

AFNR.HS.26.6.e Create a maintenance calendar utilizing small engine owner's manuals.

AFNR.HS.26.6.f Perform basic service procedures according to manufacturer's recommendations.

AFNR.HS.26.6.g Compare proper maintenance procedures using service manuals from a variety of small engine manufacturers.

AFNR.HS.26.7 Demonstrate the safe and efficient operation of agricultural tractors and related equipment.

AFNR.HS.26.7.a Identify common types of machinery used in the agricultural industry.

AFNR.HS.26.7.b Describe the functions and purposes of common types of machinery used in the agriculture industry.

METALS AND FABRICATION

COURSE DESCRIPTION

This course provides an in-depth study of metals and fabrication with metal products. It also provides the opportunity to develop, design, and construct metal fabrication projects. Classroom and laboratory activities are supplemented through supervised agricultural experiences, and FFA leadership programs & activities.

STANDARDS AND INDICATORS:

AFNR.HS.23.1 Demonstrate professional standards/employability skills as required by the industry.

AFNR.HS.23.1.a	Identify career-development opportunities and opportunities in the associated fields of the welding industry.
AFNR.HS.23.1.b	Apply metal and fabrication concepts in career situations related to metals and fabrication .
AFNR.HS.23.1.c	Examine certifications, credentialing, and compliance within the industry.

AFNR.HS.23.2 Demonstrate safety principles, practices, and guidelines to the work environment.

AFNR.HS.23.2.a	Demonstrate knowledge of safety principles for the laboratory environment and industry.
AFNR.HS.23.2.b	Identify personal and occupational health practices including safety and first-aid practices.
AFNR.HS.23.2.c	Demonstrate awareness of safety devices assembled and installed correctly on tools and devices.
AFNR.HS.23.2.d	Apply the requirements of eye safety protection and other Personal Protection Equipment.
AFNR.HS.23.2.e	Identify potential injuries or illnesses from the industry and laboratory setting.

METALS AND FABRICATION (cont.)

AFNR.HS.23.3 Summarize the components of proper handling and storage of materials.

AFNR.HS.23.3.a Identify the proper storage methods of chemicals, hazardous materials, and metal products.

AFNR.HS.23.3.b Demonstrate proper orientation and operation of all equipment in the laboratory.

AFNR.HS.23.3.c Identify the composition and classification of the materials.

AFNR.HS.23.4 Summarize the scheduling process of a product.

AFNR.HS.23.4.a Identify the steps required and equipment needed to create the product.

AFNR.HS.23.4.b Define schedule requirements to create a product.

AFNR.HS.23.4.c Identify materials used in the fabrication process.

AFNR.HS.23.5 Create a project design, draw, construct, and preserve a metalworking project.

AFNR.HS.23.5.a Plan metalworking projects using simple drawing techniques.

AFNR.HS.23.5.b State the use and format of the project and calculate a bill of materials.

AFNR.HS.23.5.c Apply metalworking knowledge to plan a project using hand and power tools while demonstrating the safe use of these tools according to industry standards.

AFNR.HS.23.5.d Utilize the proper techniques of welding, cutting, and shaping metal for the construction of the project.

AFNR.HS.23.5.e Prepare metal projects for finishing by selecting and using appropriate materials for grinding, sanding, and polishing with appropriate materials and finishes.

AGRICULTURAL TECHNOLOGY

COURSE DESCRIPTION

Agricultural Technology is designed to introduce students to the technology utilized in the agricultural industry. Students will build a basis of knowledge of technology utilized in the various components of crop and livestock production. Classroom and laboratory activities are supplemented through supervised agricultural experiences, and FFA leadership programs & activities.

STANDARDS AND INDICATORS:

AFNR.HS.8.1 Assess agricultural technology and how it relates to modern agriculture.

AFNR.HS.8.1.a Identify a variety of agricultural technologies used in production agriculture (e.g., livestock, agronomy, agribusiness, horticulture).

AFNR.HS.8.1.b Compare historical technologies and how agriculture changed through different revolutions.

AFNR.HS.8.1.c Discuss how technologies relate and interact with modern agriculture.

AFNR.HS.8.2 Identify the components of the Global Positioning Systems (GPS).

AFNR.HS.8.2.a Describe the design of GPS.

AFNR.HS.8.2.b Identify factors influencing GPS accuracy and potential uses/applications.

AFNR.HS.8.2.c Utilize GPS to solve problems in the agricultural industry.

AFNR.HS.8.2.d Describe steps to install, maintain, and service instrumentation and equipment used for precision technologies.

AFNR.HS.8.2.e Identify various precision technologies in planning crop production (e.g., precision soil sampling techniques, variable rate applications, precision planting applications)

AFNR.HS.8.3 Demonstrate Geographic Information Systems (GIS) Software.

AFNR.HS.8.3.a Utilize GIS software to create, analyze, and edit production maps.

AFNR.HS.8.3.b Analyze the economic impact of using GIS and other geospatial technologies.

AFNR.HS.8.3.c Classify data for usage in GIS software.

AGRICULTURAL TECHNOLOGY (cont.)

AFNR.HS.8.4 Utilize legal description and mapping data.

AFNR.HS.8.4.a Analyze methods of describing and locating land.

AFNR.HS.8.4.b Differentiate types of legal description (e.g., Rectangular Government Survey, Metes and Bounds, Lot/Block Numbering on a Plat Map).

AFNR.HS.8.4.c Demonstrate the ability to locate land using GPS, GIS, and/or Legal Descriptions.

AFNR.HS.8.5 Compare and contrast current Unmanned Aerial vehicles and drone systems.

AFNR.HS.8.5.a Identify how UAV's are utilized in many different areas of agriculture.

AFNR.HS.8.5.b Identify the government rules and regulations associated with UAV's for making man agement decisions within the agriculture sector.

AFNR.HS.8.5.c Classify different types of drones and how they are used.

PRECISION AGRICULTURE

COURSE DESCRIPTION

This course is designed to build on the knowledge from previous courses so the student can learn principles and applications in precision agriculture such as GIS, GPS, data acquisition and management, and related components. Classroom and laboratory activities are supplemented through supervised agricultural experience, and FFA leadership programs & activities.

STANDARDS AND INDICATORS:

AFNR.HS.27.1 Identify precision agriculture technology.

AFNR.HS.27.1.a	Identify various precision agriculture equipment and their uses within the industry.
AFNR.HS.27.1.b	Identify historical and current modes of precision agriculture.
AFNR.HS.27.1.c	Identify Global Navigation Satellite Systems and components.

AFNR.HS.27.2 Identify the different hardware components of precision agriculture.

AFNR.HS.27.2.a	Define the electrical and hydraulic key components of equipment in precision agriculture.
AFNR.HS.27.2.b	Identify factors influencing GPS accuracy and potential uses/applications.
AFNR.HS.27.2.c	Apply GPS to solve problems in the agricultural industry.
AFNR.HS.27.2.d	Install, maintain, and service instrumentation and equipment used for precision technologies.
AFNR.HS.27.2.e	Identify various precision technologies in planning crop production activities (e.g., Precision soil sampling techniques, variable rate applications, precision planting applications.)

PRECISION AGRICULTURE (cont.)

AFNR.HS.27.3 Utilize precision agriculture software to help make management decisions.

AFNR.HS.27.3.a	Utilize various softwares to create, analyze, and edit production maps.
AFNR.HS.27.3.b	Synthesize the economic impact of using GIS and other geospatial technologies.
AFNR.HS.27.3.c	Classify data for usage in agricultural-based softwares.

AFNR.HS.27.4 Utilize precision technology in livestock production.

AFNR.HS.27.4.a	Analyze precision technology available in the livestock industry.
AFNR.HS27.4.b	Utilize data acquired from precision devices to assist in management decisions of the livestock.
AFNR.HS.27.4.c	Compare data from breed associations to numerical information acquired from local or area data.
AFNR. HS27.4.d	Summarize the technology behind Genomic Enhanced Expected Progeny Difference.

ADVANCED POWER, STRUCTURAL, AND TECHNOLOGY SYSTEMS

COURSE DESCRIPTION

This course is designed to build on previous courses so the student can apply principles and applications of physical science, design, and safety to a project-based learning environment. Learning activities include creating and following plans, project construction, and problem solving. Classroom and laboratory activities are supplemented through, supervised agricultural experiences, and FFA leadership programs & activities.

STANDARDS AND INDICATORS:

AFNR.HS.1.1 Utilize physical science and engineering principles to design and implement and improve safe and efficient mechanical systems in AFNR situations.

AFNR.HS.1.1.a	Compare and contrast applications of simple machines in AFNR-related mechanical systems.
AFNR.HS.1.1.b	Determine appropriate tools, machines, and equipment needed to construct and/or fabricate a project in AFNR.
AFNR.HS.1.1.c	Classify the types of safety hazards associated with different mechanical systems used in AFNR (e.g., caution, warning, danger).
AFNR.HS.1.1.d	Apply mathematical calculations to determine the mechanical advantage of simple machines in AFNR-related mechanical systems.
AFNR.HS.1.1.e	Calculate the maintenance and purchase cost of tools, machines, and equipment used in AFNR.
AFNR.HS.1.1.f	Apply the scientific method to devise strategies to improve the efficiency of operation of AFNR-related mechanical systems.
AFNR.HS.1.1.g	Devise processes to safely implement and evaluate the safe use of AFNR-related tools, machinery, and equipment.

ADVANCED POWER, STRUCTURAL, AND TECHNOLOGY SYSTEMS (cont.)

AFNR.HS.1.2 Evaluate structural requirements and specifications and estimate costs for structures within Agriculture Food and Natural Resources.

AFNR.HS.1.2.a Summarize information needed to complete a bill of materials and cost estimate for an AFNR structure.

AFNR.HS.1.2.b Summarize sources of industry construction and materials standards and their importance (e.g., American National Standards Institute, ANSI, Underwriters' Laboratories, UL).

AFNR.HS.1.2.c Assess local building code requirements for agricultural structures.

AFNR.HS.1.2.d Create a project cost estimate including materials, labor, and management for an AFNR structure.

AFNR.HS.1.2.e Design a building functionality and safety assessment on an agricultural structure using knowledge of industry standards and local code requirements.

AFNR.HS.1.3 Utilize architectural and mechanical plans to construct, maintain and/or repair AFNR structures (e.g., material selection, site preparation, and/or layout, plumbing, concrete/ masonry, brick/stone).

AFNR.HS.1.3.a Examine the criteria in selecting materials for constructing, maintaining, and/or repairing AFNR structures.

AFNR.HS.1.3.b Compare and contrast the characteristics of products used in constructing AFNR structures (e.g., copper, PVC, PEX, fencing).

AFNR.HS.1.3.c Summarize the characteristics of the components found in concrete.

AFNR.HS.1.3.d Assess samples of materials or products for quality and efficiency of workmanship.

AFNR.HS.1.3.e Complete a building-site-analysis checklist to select an ideal building site.

AFNR.HS.1.3.f Measure and calculate the cost of a project (e.g., fencing, metal/wood structures, concrete projects).

AFNR.HS.1.3.g Select materials for a project based upon an analysis of the project and the quality of the materials.

AFNR.HS.1.3.h Identify processes in the construction, maintenance, and/or repair of fencing (e.g., wood, static wire, electrical wire, and other fencing materials) and AFNR structures.

AFNR.HS.1.3.i Calculate costs to insulate a structure and estimate reduced BTU loss.

ADVANCED POWER, STRUCTURAL, AND TECHNOLOGY SYSTEMS (cont.)

AFNR.HS.1.4 Evaluate concepts of electrical drawings to design, install and troubleshoot electronic control systems in AFNR settings.

AFNR.HS.1.4.a	Examine electrical control system components used in AFNR systems (e.g., transistors, relays, HVAC, logic controllers).
AFNR.HS.1.4.b	Compare and contrast electrical sensors and controls used in AFNR power, structural, and technical systems.
AFNR.HS.1.4.c	Summarize the importance of AFNR power, structural, and technical control systems using programmable logic controllers (PLC) and/or other computer-based systems.
AFNR.HS.1.4.d	Interpret schematic drawings for electrical control systems used in AFNR systems.
AFNR.HS.1.4.e	Interpret maintenance schedules for electrical control systems used in AFNR power, structural, and technical systems.
AFNR.HS.1.4.f	Assess the functions of AFNR power, structural, and technical control systems using programmable logic controllers (PLC) in agricultural production and manufacturing.
AFNR.HS.1.4.g	Design schematic drawings for electrical control systems used in AFNR systems.
AFNR.HS.1.4.h	Troubleshoot electrical control system performance problems found in AFNR power, structural, and technical systems.
AFNR.HS.1.4.i	Develop AFNR power, structural, and technical control systems using program mable logic controllers (PLC) and/or other computer-based systems.

AGRICULTURE, FOOD, NATURAL RESOURCES LEADERSHIP, AND CAREER READINESS WITH WORK-BASED LEARNING

COURSE DESCRIPTION

This course will provide students with fundamental skills for success in agricultural careers and team environments. Students will investigate a variety of topics essential to career exploration and readiness in Agriculture, Food, and Natural Resources. In addition, students will develop skills in ethical leadership, communications, and teamwork. Classroom and laboratory Classroom and laboratory activities are supplemented through supervised agricultural experiences and FFA leadership programs and activities.

STANDARDS AND INDICATORS:

AFNR.HS.10.1 Evaluate career opportunities and means to achieve those opportunities in each of the AFNR career pathways.

AFNR.HS.10.1.a	Demonstrate personal responsibility in the workplace and community.
AFNR.HS.10.1.b	Demonstrate career readiness skills for career success.
AFNR.HS.10.1.c	Evaluate the steps and requirements to pursue a career opportunity in an AFNR career pathway.
AFNR.HS.10.1.d	Apply appropriate academic and technical skills to demonstrate career success.
AFNR.HS.10.1.e	Examine career opportunities that are matched to personal life skills and talents and career goals in an AFNR pathway of interest.

AFNR.HS.10.2 Develop employability skills for college and career readiness within AFNR.

AFNR.HS.10.2.a	Model personal responsibility and demonstrate safety in the workplace and community.
AFNR.HS.10.2.b	Synthesize information, knowledge, and experience to generate original ideas and challenge assumptions in the workplace and community.
AFNR.HS.10.2.c	Apply reason and logic to evaluate workplace and community situations from multiple perspectives.
AFNR.HS.10.2.d	Investigate, prioritize, and select solutions to solve problems in the workplace community.
AFNR.HS.10.2.e	Contribute to team-oriented projects and build consensus to accomplish results using cultural global competence in the workplace and community.
AFNR.HS.10.2.f	Identify and demonstrate personal financial management and planning.

AGRICULTURE, FOOD, NATURAL RESOURCES LEADERSHIP, AND CAREER READINESS WITH WORK-BASED LEARNING (cont.)

AFNR.HS.10.3 Model teamwork and leadership skills in work groups.

AFNR.HS.10.3.a Employ cooperative leadership skills to accomplish a team goal.

AFNR.HS.10.3.b Model proper management of teams and large groups.

AFNR.HS.10.3.c Contribute to team-oriented projects to accomplish results using cultural global competence in the workplace and community.

AFNR.HS.10.4 Model integrity, ethical leadership, and effective management in AFNR career areas.

AFNR.HS.10.4.a Model characteristics of ethical and effective leaders in the workplace and community.

AFNR.HS.10.4.b Implement personal management skills to function effectively and efficiently in the workplace.

AFNR.HS.10.4.c Demonstrate workplace characteristics that contribute to a positive morale and workplace environment.

AFNR.HS.10.4.d Demonstrate ethical decision-making in real-life situations in agriculture, food, and natural resources.

AFNR.HS.10.5 Communicate information relevant to agriculture clearly, effectively, and with reason.

AFNR.HS.10.5.a Demonstrate basic information research skills and techniques.

AFNR.HS.10.5.b Produce clear, reasoned, and coherently produced, verbal, or visual communication for formal or informal settings.

AFNR.HS.10.5.c Communicate using strategies that ensure clarity, logic, purpose, and professionalism in formal or informal settings.

AFNR.HS.10.5.d Utilize new technologies, tools, and applications to maximize productivity and minimize risk in the workplace and community.

INTRODUCTION TO AGRICULTURE, FOOD, AND NATURAL RESOURCES

COURSE DESCRIPTION

The introductory course for the Agriculture, Food, and Natural Resources Career Cluster provides a knowledge base in the major components of the industry. Learners will be exposed to a broad range of agriculture, food, and natural resources careers, cluster foundation knowledge and skills, and introduction to leadership development and the National FFA Organization (FFA). Classroom and laboratory activities are supplemented through supervised agricultural experiences, career exploration activities, and FFA leadership programs & activities.

STANDARDS AND INDICATORS:

AFNR.HS.20.1 Apply leadership skills and knowledge through the study of the FFA Career and Technical Student Organization (CTSO).

AFNR.HS.20.1.a	Summarize the three-component model of a comprehensive Agricultural Education Program.
AFNR.HS.20.1.b	Recognize the mission, purpose, and key historical moments in the National FFA Organization.
AFNR.HS.20.1.c	Investigate opportunities available for a member of FFA.
AFNR.HS.20.1.d	Examine and practice public speaking.
AFNR.HS.20.1.e	Apply the basics of Parliamentary Procedure.

AFNR.HS.20.2 Apply career readiness principles in an authentic workplace environment.

AFNR.HS.20.2.a	Summarize the five components of a Foundational Supervised Agricultural Experience (SAE).
AFNR.HS.20.2.b	Investigate the five options for an Immersion SAE.
AFNR.HS.20.2.c	Articulate elements of career plans (e.g., academic, AFNR/CTE coursework, FFA/CTSO participation, immersion SAE) required in an AFNR workplace setting.

INTRODUCTION TO AGRICULTURE, FOOD, AND NATURAL RESOURCES (cont.)

AFNR.HS.20.3 Examine career options within agriculture, food, and natural resource systems and perform research based on personal interests.

AFNR.HS.20.3.a	Inventory personal work preferences and interests related to the AFNR Career Field.
AFNR.HS.20.3.b	Identify careers available in multiple AFNR Career Pathways.
AFNR.HS.20.3.c	Determine common qualities of a specific career area (e.g., educational requirements, work environment).
AFNR.HS.20.3.d	Identify necessary steps to prepare for a specific AFNR careers (coursework, post-secondary, needed skills).
AFNR.HS.20.3.e	Identify opportunities for work placed learning within your community.

AFNR.HS.20.4 Evaluate the role of water, air, soil, and habitat in the management of natural resource systems.

AFNR.HS.20.4.a	Summarize and classify the different natural resources (e.g., water, soil, renewable, non-renewable).
AFNR.HS.20.4.b	Summarize the components that comprise all ecosystems.
AFNR.HS.20.4.c	Compare and categorize biotic and abiotic factors in various habitats.
AFNR.HS.20.4.d	Identify the importance of water and air quality.
AFNR.HS.20.4.e	Identify the physical qualities of the soil that determine use for the environmental service system.
AFNR.HS.20.4.f	Describe the importance of water conservation.

INTRODUCTION TO AGRICULTURE, FOOD, AND NATURAL RESOURCES (cont.)

AFNR.HS.20.5 Differentiate key terms, components, and uses for animals in animal systems.

AFNR.HS.20.5.a Identify and summarize key terminology used in animal systems (e.g., heifer vs. cow, bull vs. steer, calving, farrowing, bovine, equine).

AFNR.HS.20.5.b Define the function of basic external and internal organs of animals.

AFNR.HS.20.5.c Differentiate production animals from companion animals.

AFNR.HS.20.5.d Classify the major components of production animal systems (e.g., feedlots, cow-calf operations, farrow, finish) and regional distribution.

AFNR.HS.20.5.e Categorize uses for and products generated from production animals.

AFNR.HS.20.5.f Classify and determine uses for companion animals.

AFNR.HS.20.6 Summarize knowledge of plant anatomy and the functions of plant structures and processes to activities associated with plant systems.

AFNR.HS.20.6.a Classify major components of the plant industry.

AFNR.HS.20.6.b Classify plants according to life cycles.

AFNR.HS.20.6.c Identify the function of plant parts.

AFNR.HS.20.6.d Identify basic processes and role of photosynthesis, respiration, and transpiration.

AFNR.HS.20.6.e Differentiate between sexual and asexual propagation techniques.

AFNR.HS.20.7 Synthesize the historical, social, cultural, and potential applications of biotechnology.

AFNR.HS.20.7.a Summarize biotechnology and the historical impact it has had on agriculture.

AFNR.HS.20.7.b Identify current and future applications of biotechnology in agriculture, food, and natural resources.

AFNR.HS.20.7.c Identify common methodologies used in biotechnology.

AFNR.HS.20.7.d Identify basic cellular structures and genetic terminology.

AFNR.HS.20.7.e Summarize the scientific and social implications of modern genetically modified organisms.

INTRODUCTION TO AGRICULTURE, FOOD, AND NATURAL RESOURCES (cont.)

AFNR.HS.20.8 Summarize knowledge of the food products & processing industry.

AFNR.HS.20.8.a Evaluate how different foods affect the human body and its physical and cellular processes.

AFNR.HS.20.8.b Identify food safety and sanitation procedures for handling and processing to as sure food quality.

AFNR.HS.20.8.c Summarize food safety procedures when storing and distributing products to consumption.

AFNR.HS.20.8.d Explain the producer-to-consumer processes in the food industry.

AFNR.HS.20.9 Summarize management principles, skills, and practices in agribusiness.

AFNR.HS.20.9.a Define major sectors within the agribusiness industry.

AFNR.HS.20.9.b Identify standard production and agribusiness records and plans.

AFNR.HS.20.9.c Identify common agribusiness terminology and tools to track and analyze business decisions and transactions.

AFNR.HS.20.9.d Articulate the role of markets, trade, competition, and price in relation to business sales and market planning.

AFNR.HS.20.9.e Identify aspects needed to develop and implement an effective record keeping strategy for financial and human resources.

AFNR.HS.20.10 Synthesize the historical, social, cultural, and potential applications of biotechnology.

AFNR.HS.20.10.a Identify and practice safe laboratory practices and procedures.

AFNR.HS.20.10.b Select and operate proper tools and equipment related to agricultural processes observing all safety precautions.

AFNR.HS.20.10.c Develop an agricultural project plan with the required project plan components (e.g., purpose, materials, budget, skills required, timeframe).

AFNR.HS.20.10.d Assess a project plan to completion.

AGRICULTURAL BUSINESS

COURSE DESCRIPTION

This course covers skills necessary for entry into employment or furthering education in an agricultural business. The course includes the study of business planning, creating financial documents, analyzing financial information, developing business plans, and using sales and marketing principles. Classroom and laboratory activities are supplemented through supervised agricultural experiences and FFA leadership programs & activities.

STANDARDS AND INDICATORS:

AFNR.HS.3.1 Summarize the history of agricultural businesses in relation to current trends.

AFNR.HS.3.1.a Identify historical changes and current trends in ag businesses.

AFNR.HS.3.1.b Explain the importance and variety of current global agricultural markets.

AFNR.HS.3.1.c Summarize the role of the major sectors of ag businesses, which include supply and inputs, production, processing/manufacturing, transportation, and marketing.

AFNR.HS.3.2 Analyze agricultural business structures and principles of business management.

AFNR.HS.3.2.a Differentiate business structures commonly found in agricultural businesses such as cooperatives, corporations, limited liability corporations, and sole proprietorship.

AFNR.HS.3.2.b Summarize the principles of business structures.

AFNR.HS.3.2.c Identify government policies within agricultural business structures.

AFNR.HS.3.3 Design statements of purpose to guide agricultural business goals, objectives, and resource allocation.

AFNR.HS.3.3.a Identify the need for statements of purpose within agricultural businesses, such as mission statements, vision statements, and/or long and short-term goals.

AFNR.HS.3.3.b Classify multiple business objectives within a typical production cycle for an agricultural business.

AFNR.HS.3.3.c Identify aspects needed in creating statements of purpose for an agricultural business.

AFNR.HS.3.3.d Determine the appropriate utilization of available resources to meet a business's statement of purpose.

AGRICULTURAL BUSINESS (cont.)

AFNR.HS.3.4 Apply concepts of record keeping to accomplish objectives and manage an established budget within an agricultural business.

AFNR.HS.3.4.a Define the purpose of record-keeping within an agricultural business and identify examples of tools and methods of record-keeping.

AFNR.HS.3.4.b Compare and contrast the benefits and limitations of record-keeping systems and practices.

AFNR.HS.3.4.c Identify the components of records in an agricultural business (e.g., assets, liabilities, debits, credits, and equity.)

AFNR.HS.3.4.d Explain input and output combinations within agricultural business records.

AFNR.HS.3.4.e Identify aspects of a budget for an agricultural business.

AFNR.HS.3.5 Analyze financial information and reports to examine appropriate decision-making in an agricultural business.

AFNR.HS.3.5.a Calculate balance sheets, income statements, net worth statements, return-on-investment ratios, and inventory statements.

AFNR.HS.3.5.b Define and analyze cash flow statements and cash flow budgets.

AFNR.HS.3.5.c Utilize financial information (e.g., financial ratios, net worth, profitability) to evaluate the performance of agricultural businesses.

AFNR.HS.3.5.d Summarize sources of risk and methods of managing risk in agricultural businesses.

AFNR.HS.3.5e Explain common methods to acquire capital (e.g., lines of credit, loans, operating notes.)

AFNR.HS.3.6 Compare various marketing strategies for agricultural businesses.

AFNR.HS.3.6.a Analyze a marketing plan and key elements of marketing (e.g., product, place, price, and promotion).

AFNR.HS.3.6.b Classify traditional marketing strategies for agricultural commodities.

AFNR.HS.3.6.c Identify innovative, non-traditional marketing strategies for agricultural commodities.

AGRICULTURAL BUSINESS (cont.)

AFNR.HS.3.7 Investigate commodity markets and strategies to manage markets for agricultural commodities.

AFNR.HS.3.7.a Describe the history of commodity markets and their structure in today's society.

AFNR.HS.3.7.b Summarize trading in the futures markets utilizing speculation and hedging.

AFNR.HS.3.7.c Distinguish between cash markets for commodities and commodity marketing plans for producers (e.g., cash prices, basis, forward contracts, futures contracts).

AFNR.HS.3.7.d Identify patterns in ag commodity markets.

AFNR.HS.3.8 Evaluate necessary aspects of a business plan for an agricultural business.

AFNR.HS.3.8.a Identify the components of a business plan for an agricultural business.

AFNR.HS.3.8.b Determine the characteristics of successful business plans.

AFNR.HS.3.8.c Formulate a business plan for an agricultural business utilizing the key concepts of business planning.

AGRICULTURAL SALES

COURSE DESCRIPTION

This course covers the skills necessary to market agricultural products, including the development of effective communication skills. The course applies sales strategies and marketing principles to agricultural products and services. Classroom and laboratory activities are supplemented through supervised agricultural experiences and FFA leadership programs & activities.

STANDARDS AND INDICATORS:

AFNR.HS.7.1 Assess the psychology behind sales and professional selling.

- AFNR.HS.7.1.a Identify professional sales techniques.
- AFNR.HS.7.1.b Recognize the psychology of selling agricultural products and the relationship of those products to the general population.
- AFNR.HS.7.1.c Classify the key concepts of sales.

AFNR.HS.7.2 Summarize concepts of sales techniques used in agricultural businesses.

- AFNR.HS.7.2.a Recall the product life cycle for typical agricultural products.
- AFNR.HS.7.2.b Explain the concept of supply and demand, and its relationship to sales.
- AFNR.HS.7.2.c Categorize customer needs and wants.

AFNR.HS.7.3 Analyze the sales process.

- AFNR.HS.7.3.a Identify agricultural sales skills.
- AFNR.HS.7.3.b Identify the appropriate steps to selling an agricultural product.
- AFNR.HS.7.3.c Design a sales presentation.
- AFNR.HS.7.3.d Critique closing techniques within the sales process.

AGRICULTURAL SALES (cont.)

AFNR.HS.7.4 Explain the significance of customer relationships in the selling process.

AFNR.HS.7.4.a Describe the benefits of positive customer relationships and the aspects of customer satisfaction.

AFNR.HS.7.4.b Identify methods of building and maintaining positive customer relationships.

AFNR.HS.7.4.c Demonstrate solutions for handling customer resistance and/or negative reactions.

AFNR.HS.7.5 Critique various marketing strategies for agricultural businesses.

AFNR.HS.7.5.a Describe the role of trade and price in marketing agricultural commodities.

AFNR.HS.7.5.b Analyze a marketing plan and the key elements of marketing (e.g., product, place, price, and promotion).

AFNR.HS.7.5.c Compare traditional marketing strategies for agricultural products.

AFNR.HS.7.5.d Identify innovative, non-traditional marketing strategies for agricultural products.

AFNR.HS.7.6 Analyze the key concepts in a sales portfolio for agricultural communications.

AFNR.HS.7.6.a Define the creative strategy in developing a sales portfolio.

AFNR.HS.7.6.b Draw conclusions regarding successful agricultural sales portfolios and presentations.

AFNR.HS.7.6.c Distinguish available technology aspects found within a sales portfolio or utilized during sales communications.

AFNR.HS.7.6.d Develop a comprehensive marketing plan presentation utilizing a sales portfolio and a variety of communications strategies.

AGRICULTURAL COMMUNICATION

COURSE DESCRIPTION

This course focuses on identifying current issues affecting the agricultural industry and communicating about those issues effectively. This course concentrates onprint, digital, and broadcast media within the agricultural industry. Students will learn various types of communications methods such as speech writing, photography, presentations, marketing, and debate. By the end of the course, students will demonstrate competency of agricultural communications and methods of effective presentation within the agricultural sector. Classroom and laboratory activities are supplemented through supervised agricultural experiences, and FFA leadership programs & activities.

STANDARDS AND INDICATORS:

AFNR.HS.4.1 Compare and contrast effective communication techniques in agricultural issues and literacy topics.

AFNR.HS.4.1.a Identify trending issues in historical and modern United States agriculture.

AFNR.HS.4.1.b Classify and compare agricultural communication strategies of goals, target audience, key messages, and producer scenarios.

AFNR.HS.4.1.c Classify methods of communication (e.g., verbal, non-verbal, written, visual).

AFNR.HS.4.2 Demonstrate journalistic writing communication techniques.

AFNR.HS.4.2.a Identify and critique standard rules of grammar, spelling, punctuation, and formatting for news writing.

AFNR.HS.4.2.b Compare and contrast the different types of journalistic writing (e.g., feature story, news release, opinionated).

AFNR.HS.4.2.c Analyze the steps in developing and formatting an effective news story.

AFNR.HS.4.2.d Develop an agricultural news story using accepted strategies (e.g., inverted pyramid, interpretive journalism).

AGRICULTURAL COMMUNICATION (cont.)

AFNR.HS.4.3 Analyze the utilization of graphics as methods of marketing and communicating with clients/customers.

AFNR.HS.4.3.a Compare and contrast the elements of photography (e.g., line, shape, form, texture, pattern, color, space).

AFNR.HS.4.3.b Identify the key elements of magazine advertisement and understand how they are used to enhance an ad's effectiveness.

AFNR.HS.4.3.c Indicate aspects of an effective logo for an agricultural business.

AFNR.HS.4.3.d Utilize graphics as a part of an effective merchandising and advertising plan.

AFNR.HS.4.4 Apply concepts of broadcasting media to agricultural communications.

AFNR.HS.4.4.a Summarize effective communications practices applying to agriculture in the radio communications sector.

AFNR.HS.4.4.b Examine the changes in television communications and the influence it has on the agricultural sector.

AFNR.HS.4.4.c Identify and practice current trends in agricultural podcasting.

AFNR.HS.4.5 Summarize current trends in agricultural communications utilizing online media.

AFNR.HS.4.5.a Compare and contrast social media outlets and identify successful methods of communications utilizing each method.

AFNR.HS.4.5.b Explain key elements of design for online media platforms.

AFNR.HS.4.5.c Explore the methods used in online advertising and summarize processes in designing an online advertisement.

AGRICULTURAL COMMUNICATION (cont.)

AFNR.HS.4.6 Exhibit professional public speaking practices.

AFNR.HS.4.6.a	Define specific speaking techniques as deemed effective in the agricultural industry.
AFNR.HS.4.6.b	Use concepts of public speaking to demonstrate proper agricultural-based public speaking methods.
AFNR.HS.4.6.c	Display competency in agriculture literacy through various agricultural topics.
AFNR.HS.4.6.d	Develop logical arguments to exhibit understanding of agriculture in a debate setting.

AFNR.HS.4.7 Analyze and develop communication methods of a media plan.

AFNR.HS.4.7.a	Explain the steps in selecting a client or situation and effectively identifying their needs.
AFNR.HS.4.7.b	Identify the successful elements of a media plan.
AFNR.HS.4.7.c	Analyze media plans for effective communication methods.
AFNR.HS.4.7.d	Demonstrate concepts of an effective presentation to communicate key points of a media plan.

AGRICULTURAL ECONOMICS

COURSE DESCRIPTION

This course covers economic principles that drive agricultural businesses. The course studies both micro- and macroeconomic principles, production, distribution, pricing, and consumption of agricultural products and the allocation of agricultural resources. Classroom and laboratory activities are supplemented through supervised agricultural experiences and FFA leadership programs & activities.

STANDARDS AND INDICATORS:

AFNR.HS.5.1 Analyze the connection between economic principles and the overall economy at the local, state, national, and global levels.

AFNR.HS.5.1.a Describe agricultural economics and the foundational concepts of micro- and macroeconomics.

AFNR.HS.5.1.b Describe the differences and similarities between micro- and macroeconomics.

AFNR.HS.5.1.c Recognize the impact of governments on economic policies and Practices related to Agriculture, Food and Natural Resources (AFNR).

AFNR.HS.5.1.d Investigate the relationship between various cultural traditions and local, state, national, and global agricultural economies.

AFNR.HS.5.2 Analyze the relationship between micro- and macroeconomics.

AFNR.HS.5.2.a List the production functions within micro- and macroeconomic systems.

AFNR.HS.5.2.b Distinguish labor and capital inputs in agricultural economics.

AFNR.HS.5.2.c Analyze the impact of governmental agencies on agricultural economics through trade policies, production programs, and other opportunities such as low-interest loans, educational programs, and other types of support.

AFNR.HS.5.2.d Describe gross domestic product (GDP).

AGRICULTURAL ECONOMICS (cont.)

AFNR.HS.5.3 Evaluate economic systems and their impact on supply and demand, markets, and production cycles.

AFNR.HS.5.3.a Describe the traditional economy and its place in modern economies.

AFNR.HS.5.3.b Explain the command economy and its benefits and drawbacks within the agricultural economy.

AFNR.HS.5.3.c Define the market economy and its key features.

AFNR.HS.5.3.d Identify a mixed economy and its advantages and disadvantages.

AFNR.HS.5.4 Critique the process of price determination in a competitive market.

AFNR.HS.5.4.a State the influence of supply and demand concepts in marketing, trading, and price determination.

AFNR.HS.5.4.b Identify the importance of utility and price elasticity in agricultural production cycles.

AFNR.HS.5.4.c Relate the influence of supply and demand shifts to the production and pricing of agricultural commodities.

AFNR.HS.5.5 Interpret US agricultural trade policies and exchange rates.

AFNR.HS.5.5.a Identify agricultural trade and measure its growth, instability, and future trends.

AFNR.HS.5.5.b Describe trade restrictions and impact of trade agreements on US agriculture.

AFNR.HS.5.5.c Determine the impact of the exchange rates to determine the impact of agricultural trade on the GDP.

AGRICULTURAL ENTREPRENEURSHIP

COURSE DESCRIPTION

This course covers skills necessary for students to analyze and establish entrepreneurial businesses. The course includes the study of personal and business financial planning, obtaining capital and credit, repaying loans, analyzing financial information, decision-making, developing business plans, and applying sales and marketing principles. Classroom and laboratory activities are supplemented through supervised agricultural experiences and FFA leadership programs & activities.

STANDARDS AND INDICATORS:

AFNR.HS.6.1 Analyze principles of entrepreneurship and its role in the agricultural business sector.

AFNR.HS.6.1.a	Identify the key components of entrepreneurship (e.g., opportunity, resources, organization).
AFNR.HS.6.1.b	Compare the characteristics of entrepreneur in agribusinesses and a manager and/or employee.
AFNR.HS.6.1.c	Summarize techniques used to manage an agricultural business.
AFNR.HS.6.1.d	Explain concept of risk within a business and methods of risk management.

AFNR.HS.6.2 Apply key concepts of personal finance in relation to an entrepreneurial role.

AFNR.HS.6.2.a	Describe the information included in a credit report and the factors that influence a credit score.
AFNR.HS.6.2.b	Identify trends in spending habits using personal and business budgets and balance sheets.
AFNR.HS.6.2.c	Identify assets, liabilities, collateral, and inventory items that are used by entrepreneurs in agricultural businesses.
AFNR.HS.6.2.d	Evaluate options in personal and business finances to improve financial standing and security.

AGRICULTURAL ENTREPRENEURSHIP (cont.)

AFNR.HS.6.3 Summarize the benefits and risks of obtaining business financing as an entrepreneur.

AFNR.HS.6.3.a Compare types of financing available to an entrepreneur and methods of obtaining them from various lenders (e.g., private financers, government programs, grants.)

AFNR.HS.6.3.b Identify options to repay financing while operating as an entrepreneur.

AFNR.HS.6.3.c Calculate interest rates and tabulate the possible cost savings for a business utilizing different repayment schedules.

AFNR.HS.6.3.d Investigate the most logical financing and repayment options for an individual entrepreneur.

AFNR.HS.6.4 Differentiate between tax strategies and resources (such as government agencies and private programs) available to assist beginning and experienced entrepreneurs in agriculture businesses.

AFNR.HS.6.4.a Identify tax strategies available to business owners to decrease the tax burden.

AFNR.HS.6.4.b Identify programs and identify governmental regulations related to a specific AFNR-related business available to entrepreneurs through government agencies or private institutions.

AFNR.HS.6.4.c Identify government resources and organizations that will help navigate regulations in following guidelines (e.g., opening a farmers' market and following rules and regulations).

AFNR.HS.6.4.d Compare and contrast the advantages and disadvantages of selecting specific courses of action utilizing available resources.

AGRICULTURAL ENTREPRENEURSHIP (cont.)

AFNR.HS.6.5 Analyze break-even points in agricultural businesses.

AFNR.HS.6.5.a Utilize income statements to establish cash flow statements.

AFNR.HS.6.5.b Calculate break-even points for agricultural businesses (e.g., crop-based, livestock-based, service-based, diversified).

AFNR.HS.6.5.c Estimate the cost or cost-savings of purchasing, leasing, renting, and/or otherwise obtaining resources for an agricultural business based on break-even points.

AFNR.HS.6.6 Apply entrepreneurial business and marketing principles for agricultural products, services and businesses.

AFNR.HS.6.6.a Create a new product/business using entrepreneurial skills and financial planning documentation.

AFNR.HS.6.6.b Identify the key concepts of a successful launch for a traditional or non-traditional agricultural product/service or business.

AFNR.HS.6.6.c Identify marketing strategies used to capture consumer interest and the factors of selling agricultural products/services.

AFNR.HS.6.6.d Utilize technology for record-keeping and other financial transactions/plans for an agricultural business.

AGRICULTURE, FOOD, NATURAL RESOURCES LEADERSHIP, AND CAREER READINESS WITH WORK-BASED LEARNING

COURSE DESCRIPTION

This course will provide students with fundamental skills for success in agricultural careers and team environments. Students will investigate a variety of topics essential to career exploration and readiness in Agriculture, Food, and Natural Resources. In addition, students will develop skills in ethical leadership, communications, and teamwork. Classroom and laboratory activities are supplemented through supervised agricultural experiences and FFA leadership programs and activities.

STANDARDS AND INDICATORS:

AFNR.HS.10.1 Evaluate career opportunities and means to achieve those opportunities in each of the AFNR career pathways.

AFNR.HS.10.1.a	Demonstrate personal responsibility in the workplace and community.
AFNR.HS.10.1.b	Demonstrate career readiness skills for career success.
AFNR.HS.10.1.c	Evaluate the steps and requirements to pursue a career opportunity in an AFNR career pathway.
AFNR.HS.10.1.d	Apply appropriate academic and technical skills to demonstrate career success.
AFNR.HS.10.1.e	Examine career opportunities that are matched to personal life skills and talents and career goals in an AFNR pathway of interest.

AFNR.HS.10.2 Develop employability skills for college and career readiness within AFNR.

AFNR.HS.10.2.a	Model personal responsibility and demonstrate safety in the workplace and community.
AFNR.HS.10.2.b	Synthesize information, knowledge, and experience to generate original ideas and challenge assumptions in the workplace and community.
AFNR.HS.10.2.c	Apply reason and logic to evaluate workplace and community situations from multiple perspectives.
AFNR.HS.10.2.d	Investigate, prioritize, and select solutions to solve problems in the workplace community.
AFNR.HS.10.2.e	Contribute to team-oriented projects and build consensus to accomplish results using cultural global competence in the workplace and community.
AFNR.HS.10.2.f	Identify and demonstrate personal financial management and planning.

AGRICULTURE, FOOD, NATURAL RESOURCES LEADERSHIP, AND CAREER READINESS WITH WORK-BASED LEARNING (cont.)

AFNR.HS.10.3 Model teamwork and leadership skills in work groups.

AFNR.HS.10.3.a Employ cooperative leadership skills to accomplish a team goal.

AFNR.HS.10.3.b Model proper management of teams and large groups.

AFNR.HS.10.3.c Contribute to team-oriented projects to accomplish results using cultural global competence in the workplace and community.

AFNR.HS.10.4 Model integrity, ethical leadership, and effective management in AFNR career areas.

AFNR.HS.10.4.a Model characteristics of ethical and effective leaders in the workplace and community.

AFNR.HS.10.4.b Implement personal management skills to function effectively and efficiently in the workplace.

AFNR.HS.10.4.c Demonstrate workplace characteristics that contribute to a positive morale and workplace environment.

AFNR.HS.10.4.d Demonstrate ethical decision-making in real-life situations in agriculture, food, and natural resources.

AFNR.HS.10.5 Communicate information relevant to agriculture clearly, effectively, and with reason.

AFNR.HS.10.5.a Demonstrate basic information research skills and techniques.

AFNR.HS.10.5.b Produce clear, reasoned, and coherently produced, verbal, or visual communication for formal or informal settings.

AFNR.HS.10.5.c Communicate using strategies that ensure clarity, logic, purpose, and professionalism in formal or informal settings.

AFNR.HS.10.5.d Utilize new technologies, tools, and applications to maximize productivity and minimize risk in the workplace and community.

INTRODUCTION TO AGRICULTURE, FOOD, AND NATURAL RESOURCES

COURSE DESCRIPTION

The introductory course for the Agriculture, Food, and Natural Resources Career Cluster provides a knowledge base in the major components of the industry. Learners will be exposed to a broad range of agriculture, food, and natural resources careers, cluster foundation knowledge and skills, and introduction to leadership development and the National FFA Organization (FFA). Classroom and laboratory activities are supplemented through supervised agricultural experiences, career exploration activities, and FFA leadership programs & activities.

STANDARDS AND INDICATORS:

AFNR.HS.20.1 Apply leadership skills and knowledge through the study of the FFA Career and Technical Student Organization (CTSO).

AFNR.HS.20.1.a	Summarize the three-component model of a comprehensive Agricultural Education Program.
AFNR.HS.20.1.b	Recognize the mission, purpose, and key historical moments in the National FFA Organization.
AFNR.HS.20.1.c	Investigate opportunities available for a member of FFA.
AFNR.HS.20.1.d	Examine and practice public speaking.
AFNR.HS.20.1.e	Apply the basics of Parliamentary Procedure.

AFNR.HS.20.2 Apply career readiness principles in an authentic workplace environment.

AFNR.HS.20.2.a	Summarize the five components of a Foundational Supervised Agricultural Experience (SAE).
AFNR.HS.20.2.b	Investigate the five options for an Immersion SAE.
AFNR.HS.20.2.c	Articulate elements of career plans (e.g., academic, AFNR/CTE coursework, FFA/CTSO participation, immersion SAE) required in an AFNR workplace setting.

INTRODUCTION TO AGRICULTURE, FOOD, AND NATURAL RESOURCES (cont.)

AFNR.HS.20.3 Examine career options within agriculture, food, and natural resource systems and perform research based on personal interests.

AFNR.HS.20.3.a	Inventory personal work preferences and interests related to the AFNR Career Field.
AFNR.HS.20.3.b	Identify careers available in multiple AFNR Career Pathways.
AFNR.HS.20.3.c	Determine common qualities of a specific career area (e.g., educational requirements, work environment).
AFNR.HS.20.3.d	Identify necessary steps to prepare for a specific AFNR careers (coursework, post-secondary, needed skills).
AFNR.HS.20.3.e	Identify opportunities for work placed learning within your community.

AFNR.HS.20.4 Evaluate the role of water, air, soil, and habitat in the management of natural resource systems.

AFNR.HS.20.4.a	Summarize and classify the different natural resources (e.g., water, soil, renewable, non-renewable).
AFNR.HS.20.4.b	Summarize the components that comprise all ecosystems.
AFNR.HS.20.4.c	Compare and categorize biotic and abiotic factors in various habitats.
AFNR.HS.20.4.d	Identify the importance of water and air quality.
AFNR.HS.20.4.e	Identify the physical qualities of the soil that determine use for the environmental service system.
AFNR.HS.20.4.f	Describe the importance of water conservation.

INTRODUCTION TO AGRICULTURE, FOOD, AND NATURAL RESOURCES (cont.)

AFNR.HS.20.5 Differentiate key terms, components, and uses for animals in animal systems.

AFNR.HS.20.5.a	Identify and summarize key terminology used in animal systems (e.g., heifer vs. cow, bull vs. steer, calving, farrowing, bovine, equine).
AFNR.HS.20.5.b	Define the function of basic external and internal organs of animals.
AFNR.HS.20.5.c	Differentiate production animals from companion animals.
AFNR.HS.20.5.d	Classify the major components of production animal systems (e.g., feedlots, cow-calf operations, farrow, finish) and regional distribution.
AFNR.HS.20.5.e	Categorize uses for and products generated from production animals.
AFNR.HS.20.5.f	Classify and determine uses for companion animals.

AFNR.HS.20.6 Summarize knowledge of plant anatomy and the functions of plant structures and processes to activities associated with plant systems.

AFNR.HS.20.6.a	Classify major components of the plant industry.
AFNR.HS.20.6.b	Classify plants according to life cycles.
AFNR.HS.20.6.c	Identify the function of plant parts.
AFNR.HS.20.6.d	Identify basic processes and role of photosynthesis, respiration, and transpiration.
AFNR.HS.20.6.e	Differentiate between sexual and asexual propagation techniques.

AFNR.HS.20.7 Synthesize the historical, social, cultural, and potential applications of biotechnology.

AFNR.HS.20.7.a	Summarize biotechnology and the historical impact it has had on agriculture.
AFNR.HS.20.7.b	Identify current and future applications of biotechnology in agriculture, food, and natural resources.
AFNR.HS.20.7.c	Identify common methodologies used in biotechnology.
AFNR.HS.20.7.d	Identify basic cellular structures and genetic terminology.
AFNR.HS.20.7.e	Summarize the scientific and social implications of modern genetically modified organisms.

INTRODUCTION TO AGRICULTURE, FOOD, AND NATURAL RESOURCES (cont.)

AFNR.HS.20.8 Summarize knowledge of the food products & processing industry.

AFNR.HS.20.8.a Evaluate how different foods affect the human body and its physical and cellular processes.

AFNR.HS.20.8.b Identify food safety and sanitation procedures for handling and processing to as sure food quality.

AFNR.HS.20.8.c Summarize food safety procedures when storing and distributing products to consumption.

AFNR.HS.20.8.d Explain the producer-to-consumer processes in the food industry.

AFNR.HS.20.9 Summarize management principles, skills, and practices in agribusiness.

AFNR.HS.20.9.a Define major sectors within the agribusiness industry.

AFNR.HS.20.9.b Identify standard production and agribusiness records and plans.

AFNR.HS.20.9.c Identify common agribusiness terminology and tools to track and analyze business decisions and transactions.

AFNR.HS.20.9.d Articulate the role of markets, trade, competition, and price in relation to business sales and market planning.

AFNR.HS.20.9.e Identify aspects needed to develop and implement an effective record keeping strategy for financial and human resources.

AFNR.HS.20.10 Synthesize the historical, social, cultural, and potential applications of biotechnology.

AFNR.HS.20.10.a Identify and practice safe laboratory practices and procedures.

AFNR.HS.20.10.b Select and operate proper tools and equipment related to agricultural processes observing all safety precautions.

AFNR.HS.20.10.c Develop an agricultural project plan with the required project plan components (e.g., purpose, materials, budget, skills required, timeframe).

AFNR.HS.20.10.d Assess a project plan to completion.

ANIMAL SCIENCE

COURSE DESCRIPTION

This course focuses on the basic scientific principles and processes that are involved in animal physiology, breeding, nutrition, and care in preparation for an animal systems career. Topics include introduction to animal science, animal reproduction, animal nutrition, animal science issues, animal evaluation, and career opportunities. Classroom and laboratory activities are supplemented through supervised agricultural experiences and FFA leadership programs & activities.

STANDARDS AND INDICATORS:

AFNR.HS.11.1 Analyze historic and current trends impacting the animal system industry.

AFNR.HS.11.1.a	Identify and summarize the origin, significance, distribution, and domestication of different animal species.
AFNR.HS.11.1.b	Compare and contrast animal production methods for use in animal systems based upon their effectiveness and impacts.
AFNR.HS.11.1.c	Research and summarize major components of animal systems (e.g., livestock, companion animals).

AFNR.HS.11.2 Evaluate animals based on anatomical and physiological characteristics.

AFNR.HS.11.2.a	Classify animals according to taxonomic classification systems and use (e.g., companion, production).
AFNR.HS.11.2.b	Identify and summarize the properties, locations, functions, and types of animal cells, tissues, organs, and body systems.
AFNR.HS.11.2.c	Apply knowledge of anatomical and physiological characteristics of animals to select animals for specific purposes (e.g., meat animals, breeding animals, seedstock.

ANIMAL SCIENCE (cont.)

AFNR.HS.11.3 Critique best-practice protocols based upon animal behaviors for animal husbandry and welfare.

AFNR.HS.11.3.a Explain the implications of animal welfare and animal rights for animal systems.

AFNR.HS.11.3.b Summarize the challenges involved in working with animals and resources available to overcome them (e.g., tools, technology, equipment, facilities, animal behavior signals).

AFNR.HS.11.3.c Evaluate animal welfare procedures used to ensure safety and maintain low stress when moving and restraining animals.

AFNR.HS.11.4 Apply reproductive principles to animal selection, breeding, and production.

AFNR.HS.11.4.a Identify and categorize reproductive organs of major animal species.

AFNR.HS.11.4.b Identify and summarize inheritance and terms related to inheritance within animal breeding (e.g., dominant, co-dominant,recessive, homozygous, heterozygous).

AFNR.HS.11.4.c Compare and contrast various breeding systems (e.g., artificial insemination, embryo transfer, hand breeding).

AFNR.HS.11.4.d Assess and describe factors that lead to reproductive maturity.

AFNR.HS.11.4.e Evaluate and select animals for reproductive readiness.

AFNR.HS.11.5 Analyze the nutritional needs of animals.

AFNR.HS.11.5.a Identify and summarize essential nutrients required for animal health.

AFNR.HS.11.5.b Analyze each nutrient's role in growth and performance.

AFNR.HS.11.5.c Differentiate between nutritional needs of animal species based on a variety of factors (e.g., types of digestive systems, production goals, management system, growth stage, reproductive stage).

SMALL ANIMAL MANAGEMENT

COURSE DESCRIPTION

This course focuses on the management and care of small animals. Topics include animal welfare and handling, nutrition, reproduction, facility management, and small animal health care. Classroom and laboratory activities are supplemented through supervised agricultural experiences and FFA leadership programs & activities.

STANDARDS AND INDICATORS:

AFNR.HS.28.1 Analyze best-practice protocols based upon animal behaviors for animal husbandry and welfare.

AFNR.HS.28.1.a Describe and demonstrate management techniques that ensure animal welfare.

AFNR.HS.28.1.b Identify and categorize tools, technology, and equipment used in small animal management to ensure animal welfare (e.g., feeding, handling, grooming).

AFNR.HS.28.1.c Evaluate safety procedures and plans for working with animals by species using information based on animal behavior and responses.

AFNR.HS.28.2 Design and provide proper animal nutrition to achieve desired outcomes for performance, development, reproduction, and/or economic production.

AFNR.HS.28.2.a Analyze the nutritional needs of small animals in different growth stages and production systems.

AFNR.HS.28.2.b Examine and summarize the purpose of various components of animal food labels and feeding directions.

AFNR.HS.28.2.c Create a designated feeding and nutrition plan for small animals based on nutritional requirements.

SMALL ANIMAL MANAGEMENT (cont.)

AFNR.HS.28.3 Apply principles of animal reproduction to achieve desired outcomes for performance, development, and/or economic production.

AFNR.HS.28.3.a Identify and differentiate between the needs of breeding animals based on their growth stages (e.g., newborn, lactation, getstation).

AFNR.HS.28.3.b Demonstrate how to determine probability trait inheritance in animals.

AFNR.HS.28.3.c Select and evaluate breeding animals and determine the probability of a given trait in the offspring.

AFNR.HS.28.4 Evaluate environmental factors affecting performance and implement procedures for enhancing performance and animal health.

AFNR.HS.28.4.a Differentiate between the types of facilities needed to house and produce small animal species safely and efficiently.

AFNR.HS.28.4.b Identify and summarize the general requirements that must be met in facilities for animal housing and production.

AFNR.HS.28.4.c Design animal housing, equipment, and handling facilities focusing on animal requirements, economic efficiency, sustainability, safety, and ease of handling.

AFNR.HS.28.5 Apply principles of effective animal health care to the management of small animals.

AFNR.HS.28.5.a Identify and describe common illnesses and disorders of small animals based on symptoms and problems caused by wounds, diseases, parasites, and physiological disorders.

AFNR.HS.28.5.b Describe and demonstrate the proper use and function of specific tools and technology related to small animal health management.

AFNR.HS.28.5.c Research and analyze procedures at the local, state, and national levels to ensure biosecurity of the animal industry.

AFNR.HS.28.5.d Develop a biosecurity plan and procedures to prevent the spread of disease in small animals.

LARGE ANIMAL MANAGEMENT

COURSE DESCRIPTION

This course includes advanced scientific principles and communication skills that build on the knowledge and skills learned in Animal Science. Topics include production methods, animal welfare, nutrition, biosecurity, and housing. Classroom and laboratory activities are supplemented through supervised agricultural experiences and FFA leadership programs & activities.

STANDARDS AND INDICATORS:

AFNR.HS.22.1 Analyze animal production methods for use in animal systems based upon their effectiveness and impacts.

AFNR.HS.22.1.a Identify and categorize terms and methods related to animal production (e.g., sustainable, conventional, humanely raised, natural, organic).

AFNR.HS.22.1.b Identify marketing methods for animal products and services (e.g., conventional, niche markets, locally grown).

AFNR.HS.22.1.c Assess the impact of animal production methods on end-product qualities (e.g., price, sustainability, marketing, labeling, animal welfare).

AFNR.HS.22.2 Justify management techniques that ensure animal welfare.

AFNR.HS.22.2.a Distinguish between animal husbandry practices that promote animal welfare and those that do not.

AFNR.HS.22.2.b Devise, implement, and evaluate safety procedures and plans for working with animals by species using information based on animal behavior and responses.

AFNR.HS.22.2.c Design animal handling programs and procedures that assure the welfare of animals and prevent abuse or mistreatment.

LARGE ANIMAL MANAGEMENT (cont.)

AFNR.HS.22.3 Design feed rations to meet the nutritional needs of animals.

AFNR.HS.22.3.a Compare and contrast common types of feedstuffs for various species and the roles they play in the diets of those animals.

AFNR.HS.22.3.b Determine the relative nutritional value of feedstuffs by evaluating their general quality and condition.

AFNR.HS.22.3.c Differentiate between nutritional needs of animals in different growth stages and production systems (e.g., maintenance, gestation, natural, organic).

AFNR.HS.22.3.d Analyze balanced rations for animals based on the animal's growth stage (e.g., maintenance, newborn, gestation, lactation).

AFNR.HS.22.3.e Demonstrating the relationship between the nutrient requirements and the feedstuffs provided.

AFNR.HS.22.3.f Analyze the adequacy of feed rations using data from the analysis of feedstuffs, animal requirements, and performance.

AFNR.HS.22.4 Analyze biosecurity measures utilized to protect the welfare of animals on a local, state, national, and global level.

AFNR.HS.22.4.a Summarize the importance of biosecurity to the animal industry at multiple levels (e.g., local, state, national, global).

AFNR.HS.22.4.b Analyze procedures at the local, state, and national levels to ensure biosecurity of the animal industry.

AFNR.HS.22.4.c Evaluate a biosecurity plan for an animal production operation.

AFNR.HS.22.5 Design animal housing and equipment and handling facilities for the major systems of animal production.

AFNR.HS.22.5.a Differentiate between the types of housing facilities utilized to produce animal species safely and efficiently.

AFNR.HS.22.5.b Analyze designs for an animal facility and prescribe alternative layouts and adjustments for the safe, sustainable, and efficient use of the facility.

AFNR.HS.22.5.c Design an animal facility focusing on animal requirements, economic efficiency, sustainability, safety, and ease of handling.

VETERINARY SCIENCE

COURSE DESCRIPTION

This course introduces students to the basics of veterinary care. Topics covered include general animal care and welfare, animal health, laws and ethics relating to animal care, and workplace safety involving large, small, and exotic animals. Classroom and laboratory activities are supplemented through supervised agricultural experiences and FFA leadership programs & activities.

STANDARDS AND INDICATORS:

AFNR.HS.29.1 Assess animal production methods for use in animal systems based upon their effectiveness and impacts.

AFNR.HS.29.1.a Summarize the challenges involved in working with animals and identify resources available to overcome those challenges (e.g., tools, technology, equipment, facilities, animal behavior signals).

AFNR.HS.29.1.b Investigate animal husbandry practices and their impact on animal welfare.

AFNR.HS.29.1.c Compare the efficacy of different production methods and defend the use of selected methods using data and evidence.

AFNR.HS.29.2 Apply principles of comparative anatomy and physiology to uses within various animal systems.

AFNR.HS.29.2.a Compare and contrast animal cells, tissues, organs, body system types, and functions among species.

AFNR.HS.29.2.b Correlate the functions of animal cell structures to animal systems (e.g., growth, development, health, reproduction).

AFNR.HS.29.2.c Summarize the effect of anatomical and physiological disorders on animal health.

AFNR.HS.29.2.d Apply knowledge of anatomical and physiological characteristics of animals to make production, care, and management decisions.

VETERINARY SCIENCE (cont.)

AFNR.HS.29.3 Investigate methods of preventing and treating animal diseases, parasites, and other disorders to ensure animal welfare.

AFNR.HS.29.3.a Describe and demonstrate the proper use and function of specific tools and technology related to animal health management.

AFNR.HS.29.3.b Summarize the characteristics and symptoms of disorders that affect animals (e.g., wounds, common diseases, parasites, and physiological disorders) and example treatments.

AFNR.HS.29.3.c Explain the clinical significance of common veterinary methods and treatment (e.g., aseptic techniques, antibiotic use, wound management).

AFNR.HS.29.3.d Identify surgical and non-surgical veterinary treatments and procedures to meet specific animal health care objectives.

AFNR.HS.29.4 Analyze laws pertaining to animal systems.

AFNR.HS.29.4.a Summarize the structure of laws governing animal systems (e.g., animal production, harvesting, international trade policies).

AFNR.HS.29.4.b Analyze animal facilities to determine if government regulations and accepted safety standards have been met.

AFNR.HS.29.4.c Evaluate the impact of laws pertaining to animal agriculture (e.g., pros, cons, effect on individuals, effect on businesses) and assess the compliance of production practices with established regulations.

AFNR.HS.29.5 Analyze workplace safety laws and types of hazards and evaluate methods for handling and restraining large, small, and exotic animals.

AFNR.HS.29.5.a Identify commonly used veterinary terminology, convert commonly used weights and measures, and apply the terminology to routine veterinary practices.

AFNR.HS.29.5.b Analyze the health risk of different zoonotic diseases to humans and identify prevention methods.

AFNR.HS.29.5.c Evaluate preventative measures for controlling and limiting the spread of diseases, parasites, and disorders among animals.

AFNR.HS.29.5.d Evaluate various forms of handling and restraining large, small, and exotic animals.

AGRICULTURAL BIOTECHNOLOGY

COURSE DESCRIPTION

A course focusing on students examining the relationship between biotechnology and modern agriculture, food, and natural resource systems. Students identify purposes and methods of genetic modification of plants and animals and the impact of biotechnology on a global scale. Classroom and laboratory activities are supplemented through supervised agricultural experiences and FFA leadership programs & activities.

STANDARDS AND INDICATORS:

AFNR.HS.2.1 Assess factors that have influenced the evolution of biotechnology in agriculture.

AFNR.HS.2.1.a Summarize the evolution of biotechnology in agriculture.

AFNR.HS.2.1.b Summarize current work in biotechnology and the added value to agriculture and society.

AFNR.HS.2.1.c Compare and contrast the benefits and risks of biotechnology and conventional approaches to improving agriculture.

AFNR.HS.2.2 Evaluate the scope and implications of bioethics, law, and public perceptions of biotechnology in agriculture.

AFNR.HS.2.2.a Compare and contrast global regulatory systems for biotechnology in agriculture.

AFNR.HS.2.2.b Summarize the emergence, evolution, and implications of bioethics associated with biotechnology in agriculture.

AFNR.HS.2.2.c Describe the significance and impacts of legal issues related to biotechnology in agriculture.

AFNR.HS.2.2.d Investigate the impact of public perceptions on the application of biotechnology in different agriculture, food and natural resources (AFNR) systems.

AGRICULTURAL BIOTECHNOLOGY (cont.)

AFNR.HS.2.3 Apply appropriate laboratory skills to complete tasks in a biotechnology research and development environment (e.g., standard operating procedures, record keeping, aseptic technique, equipment maintenance).

AFNR.HS.2.3.a Maintain and interpret records documented in a laboratory to ensure data accuracy and integrity (e.g., avoid bias, record any conflicts of interest, avoid misinterpreted results).

AFNR.HS.2.3.b Categorize and identify laboratory equipment according to its purpose in scientific research.

AFNR.HS.2.3.c Apply standard operating procedures for the safe handling, management, and disposal of biological and chemical materials in a laboratory according to standard operating procedures.

AFNR.HS.2.3.d Identify the steps necessary to perform simple genetic modification.

AFNR.HS.2.4 Apply concepts of biotechnology to solve problems in Agriculture, Food, and Natural Resources (AFNR) systems (e.g., bioengineering, food processing, waste management, horticulture, forestry, livestock, crops).

AFNR.HS.2.4.a Identify biotechnology principles, techniques, and processes to create transgenic species through genetic engineering.

AFNR.HS.2.4.b Explain biotechnology principles, techniques, and processes to enhance the production of food through the use of microorganisms and enzymes.

AFNR.HS.2.4.c Apply biotechnology principles, techniques, and processes to protect the environment and maximize use of natural resources (e.g., biomass, bioprospecting, industrial biotechnology).

AFNR.HS.2.4.d Apply biotechnology principles, techniques, and processes to enhance plant and animal care and production (e.g., selective breeding, pharmaceuticals, biodiversity).

AFNR.HS.2.4.e Apply biotechnology principles, techniques and processes to produce biofuels (e.g., fermentation, transesterification, methanogenesis).

AFNR.HS.2.4.f Apply biotechnology principles, techniques, and processes to improve waste management (e.g., genetically modified organisms, bioremediation).

AGRICULTURE, FOOD, NATURAL RESOURCES LEADERSHIP, AND CAREER READINESS WITH WORK-BASED LEARNING

COURSE DESCRIPTION

This course will provide students with fundamental skills for success in agricultural careers and team environments. Students will investigate a variety of topics essential to career exploration and readiness in Agriculture, Food, and Natural Resources. In addition, students will develop skills in ethical leadership, communications, and teamwork.

STANDARDS AND INDICATORS:

AFNR.HS.10.1 Evaluate career opportunities and means to achieve those opportunities in each of the AFNR career pathways.

AFNR.HS.10.1.a	Demonstrate personal responsibility in the workplace and community.
AFNR.HS.10.1.b	Demonstrate career readiness skills for career success.
AFNR.HS.10.1.c	Evaluate the steps and requirements to pursue a career opportunity in an AFNR career pathway.
AFNR.HS.10.1.d	Apply appropriate academic and technical skills to demonstrate career success.
AFNR.HS.10.1.e	Examine career opportunities that are matched to personal life skills and talents and career goals in an AFNR pathway of interest.

AFNR.HS.10.2 Develop employability skills for college and career readiness within AFNR.

AFNR.HS.10.2.a	Model personal responsibility and demonstrate safety in the workplace and community.
AFNR.HS.10.2.b	Synthesize information, knowledge, and experience to generate original ideas and challenge assumptions in the workplace and community.
AFNR.HS.10.2.c	Apply reason and logic to evaluate workplace and community situations from multiple perspectives.
AFNR.HS.10.2.d	Investigate, prioritize, and select solutions to solve problems in the workplace community.
AFNR.HS.10.2.e	Contribute to team-oriented projects and build consensus to accomplish results using cultural global competence in the workplace and community.
AFNR.HS.10.2.f	Identify and demonstrate personal financial management and planning.

AGRICULTURE, FOOD, NATURAL RESOURCES LEADERSHIP, AND CAREER READINESS WITH WORK-BASED LEARNING (cont.)

AFNR.HS.10.3 Model teamwork and leadership skills in work groups.

AFNR.HS.10.3.a Employ cooperative leadership skills to accomplish a team goal.

AFNR.HS.10.3.b Model proper management of teams and large groups.

AFNR.HS.10.3.c Contribute to team-oriented projects to accomplish results using cultural global competence in the workplace and community.

AFNR.HS.10.4 Model integrity, ethical leadership, and effective management in AFNR career areas.

AFNR.HS.10.4.a Model characteristics of ethical and effective leaders in the workplace and community.

AFNR.HS.10.4.b Implement personal management skills to function effectively and efficiently in the workplace.

AFNR.HS.10.4.c Demonstrate workplace characteristics that contribute to a positive morale and workplace environment.

AFNR.HS.10.4.d Demonstrate ethical decision-making in real-life situations in agriculture, food, and natural resources.

AFNR.HS.10.5 Communicate information relevant to agriculture clearly, effectively, and with reason.

AFNR.HS.10.5.a Demonstrate basic information research skills and techniques.

AFNR.HS.10.5.b Produce clear, reasoned, and coherently produced, verbal, or visual communication for formal or informal settings.

AFNR.HS.10.5.c Communicate using strategies that ensure clarity, logic, purpose, and professionalism in formal or informal settings.

AFNR.HS.10.5.d Utilize new technologies, tools, and applications to maximize productivity and minimize risk in the workplace and community.

INTRODUCTION TO AGRICULTURE, FOOD, AND NATURAL RESOURCES

COURSE DESCRIPTION

The introductory course for the Agriculture, Food, and Natural Resources Career Cluster provides a knowledge base in the major components of the industry. Learners will be exposed to a broad range of agriculture, food, and natural resources careers, cluster foundation knowledge and skills, and introduction to leadership development and the National FFA Organization (FFA). Classroom and laboratory activities are supplemented through supervised agricultural experiences, career exploration activities, and FFA leadership programs & activities.

STANDARDS AND INDICATORS:

AFNR.HS.20.1 Apply leadership skills and knowledge through the study of the FFA Career and Technical Student Organization (CTSO).

AFNR.HS.20.1.a	Summarize the three-component model of a comprehensive Agricultural Education Program.
AFNR.HS.20.1.b	Recognize the mission, purpose, and key historical moments in the National FFA Organization.
AFNR.HS.20.1.c	Investigate opportunities available for a member of FFA.
AFNR.HS.20.1.d	Examine and practice public speaking.
AFNR.HS.20.1.e	Apply the basics of Parliamentary Procedure.

AFNR.HS.20.2 Apply career readiness principles in an authentic workplace environment.

AFNR.HS.20.2.a	Summarize the five components of a Foundational Supervised Agricultural Experience (SAE).
AFNR.HS.20.2.b	Investigate the five options for an Immersion SAE.
AFNR.HS.20.2.c	Articulate elements of career plans (e.g. academic, AFNR/CTE coursework, FFA/CTSO participation, immersion SAE) required in an AFNR workplace setting.

INTRODUCTION TO AGRICULTURE, FOOD, AND NATURAL RESOURCES (cont.)

AFNR.HS.20.3 Examine career options within agriculture, food, and natural resource systems and perform research based on personal interests.

AFNR.HS.20.3.a Inventory personal work preferences and interests related to the AFNR Career Field.

AFNR.HS.20.3.b Identify careers available in multiple AFNR Career Pathways.

AFNR.HS.20.3.c Determine common qualities of a specific career area (e.g., educational requirements, work environment).

AFNR.HS.20.3.d Identify necessary steps to prepare for a specific AFNR careers (coursework, post-secondary, needed skills).

AFNR.HS.20.3.e Identify opportunities for work placed learning within your community.

AFNR.HS.20.4 Evaluate the role of water, air, soil, and habitat in the management of natural resource systems.

AFNR.HS.20.4.a Summarize and classify the different natural resources (e.g., water, soil, renewable, non-renewable).

AFNR.HS.20.4.b Summarize the components that comprise all ecosystems.

AFNR.HS.20.4.c Compare and categorize biotic and abiotic factors in various habitats.

AFNR.HS.20.4.d Identify the importance of water and air quality.

AFNR.HS.20.4.e Identify the physical qualities of the soil that determine use for the environmental service system.

AFNR.HS.20.4.f Describe the importance of water conservation.

INTRODUCTION TO AGRICULTURE, FOOD, AND NATURAL RESOURCES (cont.)

AFNR.HS.20.5 Differentiate key terms, components, and uses for animals in animal systems.

AFNR.HS.20.5.a	Identify and summarize key terminology used in animal systems (e.g., heifer vs. cow, bull vs. steer, calving, farrowing, bovine, equine).
AFNR.HS.20.5.b	Define the function of basic external and internal organs of animals.
AFNR.HS.20.5.c	Differentiate production animals from companion animals.
AFNR.HS.20.5.d	Classify the major components of production animal systems (e.g., feedlots, cow-calf operations, farrow, finish) and regional distribution.
AFNR.HS.20.5.e	Categorize uses for and products generated from production animals.
AFNR.HS.20.5.f	Classify and determine uses for companion animals.

AFNR.HS.20.6 Summarize knowledge of plant anatomy and the functions of plant structures and processes to activities associated with plant systems.

AFNR.HS.20.6.a	Classify major components of the plant industry.
AFNR.HS.20.6.b	Classify plants according to life cycles.
AFNR.HS.20.6.c	Identify the function of plant parts.
AFNR.HS.20.6.d	Identify basic processes and role of photosynthesis, respiration, and transpiration.
AFNR.HS.20.6.e	Differentiate between sexual and asexual propagation techniques.

AFNR.HS.20.7 Synthesize the historical, social, cultural, and potential applications of biotechnology.

AFNR.HS.20.7.a	Summarize biotechnology and the historical impact it has had on agriculture.
AFNR.HS.20.7.b	Identify current and future applications of biotechnology in agriculture, food, and natural resources.
AFNR.HS.20.7.c	Identify common methodologies used in biotechnology.
AFNR.HS.20.7.d	Identify basic cellular structures and genetic terminology.
AFNR.HS.20.7.e	Summarize the scientific and social implications of modern genetically modified organisms.

INTRODUCTION TO AGRICULTURE, FOOD, AND NATURAL RESOURCES (cont.)

AFNR.HS.20.8 Summarize knowledge of the food products & processing industry.

- AFNR.HS.20.8.a Evaluate how different foods affect the human body and its physical and cellular processes.
- AFNR.HS.20.8.b Identify food safety and sanitation procedures for handling and processing to as sure food quality.
- AFNR.HS.20.8.c Summarize food safety procedures when storing and distributing products to consumption.
- AFNR.HS.20.8.d Explain the producer-to-consumer processes in the food industry.

AFNR.HS.20.9 Summarize management principles, skills, and practices in agribusiness.

- AFNR.HS.20.9.a Define major sectors within the agribusiness industry.
- AFNR.HS.20.9.b Identify standard production and agribusiness records and plans.
- AFNR.HS.20.9.c Identify common agribusiness terminology and tools to track and analyze business decisions and transactions.
- AFNR.HS.20.9.d Articulate the role of markets, trade, competition, and price in relation to business sales and market planning.
- AFNR.HS.20.9.e Identify aspects needed to develop and implement an effective record keeping strategy for financial and human resources.

AFNR.HS.20.10 Synthesize the historical, social, cultural, and potential applications of biotechnology.

- AFNR.HS.20.10.a Identify and practice safe laboratory practices and procedures.
- AFNR.HS.20.10.b Select and operate proper tools and equipment related to agricultural processes observing all safety precautions.
- AFNR.HS.20.10.c Develop an agricultural project plan with the required project plan components (e.g., purpose, materials, budget, skills required, timeframe).
- AFNR.HS.20.10.d Assess a project plan to completion.

DIVERSIFIED AGRICULTURE

COURSE DESCRIPTION

This course is the intermediate course in the Diversified Agriculture program of study in the Agriculture, Food, and Natural Resources (AFNR) career field. The course will further explore systems introduced in the Introduction to Agriculture, Food, and Natural Resources course, focusing on the interconnectivity of the systems. This course provides students with diverse knowledge and skillset to focus on issues from a diverse standpoint. Students will explore indicators integrated within the context of Animal, Plant, and Environmental and Natural Resources Pathways. Classroom and laboratory activities are supplemented through supervised agricultural experiences and FFA leadership programs and activities.

STANDARDS AND INDICATORS:

AFNR.HS.13.1 Analyze the interrelationships of natural resources and humans.

AFNR.HS.13.1.a	Describe the relationship between natural resources, ecosystems, and human activity.
AFNR.HS.13.1.b	Compare and contrast nonrenewable and renewable natural resources.
AFNR.HS.13.1.c	Explain how human activity affects the use and availability of natural resources (e.g., agriculture, industry, transportation).
AFNR.HS.13.1.d	Identify technologies used in harvesting, managing, improving, enhancing, and conserving natural resources.

AFNR.HS.13.2 Differentiate animal production methods for use in animal systems based upon their effectiveness and impacts.

AFNR.HS.13.2.a	Investigate fundamental biological processes in animals (e.g., digestion, reproduction, growth).
AFNR.HS.13.2.b	Apply principles of genetics to breeding and reproductive technology in animal systems (e.g., pure breeding, crossbreeding, grading) .
AFNR.HS.13.2.c	Analyze essential nutrient's role in animal growth and performance.
AFNR.HS.13.2.d	Explain the implications of animal welfare and animal rights for animal systems and distinguish between animal production practices (e.g., handling procedures, tools, facilities) that promote animal welfare and those that do not.

DIVERSIFIED AGRICULTURE (cont.)

AFNR.HS.13.3 Analyze the influence of environmental factors on plant growth and propagation.

AFNR.HS.13.3.a Summarize the sources and effects of plant-growing media, water, air, and light on plant growth.

AFNR.HS.13.3.b Analyze factors that affect photosynthesis, respiration, transpiration, translocation, and assimilation rates in plants.

AFNR.HS.13.3.c Identify the essential nutrients for plant growth and development and the correction of nutrient deficiencies.

AFNR.HS.13.3.d Characterize plant diseases, pests, disorders, and control measures.

AFNR.HS.13.3.e Demonstrate techniques used to propagate plants sexually and asexually (e.g., seeds, cuttings, grafting).

AFNR.HS.13.4 Investigate modern biotechnology applications, processes, scientific procedures, and ethical considerations.

AFNR.HS.13.4.a Compare and contrast common applications and methods of modern biotechnology (e.g., foods, fuels, pharmaceuticals, environmental).

AFNR.HS.13.4.b Investigate ethical considerations for the application of biotechnology within several fields (e.g., animal, plant, biofuels, natural resources).

AFNR.HS.13.4.c Design a communications plan to inform consumers about modern biotechnological applications.

AFNR.HS.13.5 Examine and explain the historical and current development of food products and processing.

AFNR.HS.13.5.a Examine consumer trends in food products and processing.

AFNR.HS.13.5.b Analyze strategies to create food products meeting and developing consumer trends.

AFNR.HS.13.5.c Assess industry standards in food products and processing.

DIVERSIFIED AGRICULTURE (cont.)

AFNR.HS.13.6 Utilize record keeping to accomplish business objectives in AFNR systems.

AFNR.HS.13.6.a Utilize financial reports to guide decision making. (e.g., break even, income statements, equity statements, budgets, cash flow, taxes).

AFNR.HS.13.6.b Apply risk management strategies.

AFNR.HS.13.6.c Analyze essential human resources within business enterprises.

AFNR.HS.13.7 Investigate and apply modern science and engineering principles for the use and maintenance of agricultural structures and equipment to improve performance.

AFNR.HS.13.7.a Determine structural requirements and specifications for agricultural structures.

AFNR.HS.13.7.b Develop maintenance plans for structures and equipment.

AFNR.HS.13.7.c Apply technology to improve efficiency in agricultural systems.

AFNR.HS.13.7.d Understand the operation and maintenance of agricultural equipment and power systems.

INTEGRATED AGRICULTURAL SCIENCE

COURSE DESCRIPTION

Integrated Ag Science is the capstone course in the Diversified Agriculture program of study in the Agriculture, Food, and Natural Resources (AFNR) career field. The course is designed to explore the interconnectedness of agriculture, within the broad goal of creating solutions to local and global issues within AFNR systems. Students will consider current and historical issues affecting or affected by AFNR, and utilize current knowledge and technology in addressing these issues. Classroom and laboratory activities are supplemented through supervised agricultural experiences and FFA leadership programs & activities.

STANDARDS AND INDICATORS:

AFNR.HS.19.1 Implement production and management plans in Agricultural, Food and Natural Resources (AFNR) systems (e.g., broiler houses, dairy farms, grain production, greenhouses, turf grass management, feed yards.)

AFNR.HS.19.1.a	Compare and contrast methods to assure needs the needs of living organisms (e.g., nutritional, health, environmental, biosecurity) are met efficiently and economically.
AFNR.HS.19.1.b	Identify pest control strategies associated with integrated pest management and the importance of determining economic threshold.
AFNR.HS.19.1.c	Design structural (e.g., housing, equipment, handling, processing, storage) facilities for the major systems of agriculture that are effective and efficient.
AFNR.HS.19.1.d	Implement appropriate equipment and power systems in the agricultural industry.
AFNR.HS.19.1.e	Analyze practices used to maintain a safe product through production, harvest, processing, storage, and shipment to ensure products are safe for consumption.
AFNR.HS.19.1.f	Compare methods used to reduce the effects of rural and/or urban production on the environment.
AFNR.HS.19.1.g	Summarize the types, purposes, and characteristics of effective planning, risk management, marketing, record keeping, and documentation practices for AFNR systems.
AFNR.HS.19.1.h	Interpret the economic impact of the agriculture industry to the local community, state, nation, and world.
AFNR.HS.19.1.i	Assess the alignment of modern technologies used in production systems (e.g., precision agriculture, biotechnology, veterinary, housing) with USDA sustainable practices criteria.

INTEGRATED AGRICULTURAL SCIENCE (cont.)

AFNR.HS.19.2 Develop reasoned solutions to agricultural issues, problems, and applications using data, science, research, and technology. (e.g., trade policy, climate change, sustainability in agriculture, rural infrastructure, Farm bill, food safety, farm financial stress, agricultural labor reform, world hunger)

AFNR.HS.19.2.a Assess a variety of agricultural situations and devise ways to improve efficiency and value to production, processes, and/or procedures.

AFNR.HS.19.2.b Investigate and determine the root cause of a problem.

AFNR.HS.19.2.c Create an implementation plan, considering prioritized solutions, to act on new ideas.

AFNR.HS.19.2.d Consider the economic, social, community, environmental, and personal impact of solutions.

AFNR.HS.19.3 Apply management skills to organize and guide decisions in the agricultural industry.

AFNR.HS.19.3.a Utilize industry standards to manage physical, financial, and human resources.

AFNR.HS.19.3.b Identify applicable local, state, federal, and international laws and regulations.

AFNR.HS.19.3.c Develop business goals and purpose-guiding resource allocation and operation.

AGRICULTURE, FOOD, NATURAL RESOURCES LEADERSHIP, AND CAREER READINESS WITH WORK-BASED LEARNING

COURSE DESCRIPTION

This course will provide students with fundamental skills for success in agricultural careers and team environments. Students will investigate a variety of topics essential to career exploration and readiness in Agriculture, Food, and Natural Resources. In addition, students will develop skills in ethical leadership, communications, and teamwork. Classroom and laboratory activities are supplemented through supervised agricultural experiences and FFA leadership programs & activities.

STANDARDS AND INDICATORS:

AFNR.HS.10.1 Evaluate career opportunities and means to achieve those opportunities in each of the AFNR career pathways.

AFNR.HS.10.1.a	Demonstrate personal responsibility in the workplace and community.
AFNR.HS.10.1.b	Demonstrate career readiness skills for career success.
AFNR.HS.10.1.c	Evaluate the steps and requirements to pursue a career opportunity in an AFNR career pathway.
AFNR.HS.10.1.d	Apply appropriate academic and technical skills to demonstrate career success.
AFNR.HS.10.1.e	Examine career opportunities that are matched to personal life skills and talents and career goals in an AFNR pathway of interest.

AFNR.HS.10.2 Develop employability skills for college and career readiness within AFNR.

AFNR.HS.10.2.a	Model personal responsibility and demonstrate safety in the workplace and community.
AFNR.HS.10.2.b	Synthesize information, knowledge, and experience to generate original ideas and challenge assumptions in the workplace and community.
AFNR.HS.10.2.c	Apply reason and logic to evaluate workplace and community situations from multiple perspectives.
AFNR.HS.10.2.d	Investigate, prioritize, and select solutions to solve problems in the workplace community.
AFNR.HS.10.2.e	Contribute to team-oriented projects and build consensus to accomplish results using cultural global competence in the workplace and community.
AFNR.HS.10.2.f	Identify and demonstrate personal financial management and planning.

AGRICULTURE, FOOD, NATURAL RESOURCES LEADERSHIP, AND CAREER READINESS WITH WORK-BASED LEARNING (cont.)

AFNR.HS.10.3 Model teamwork and leadership skills in work groups.

AFNR.HS.10.3.a Employ cooperative leadership skills to accomplish a team goal.

AFNR.HS.10.3.b Model proper management of teams and large groups.

AFNR.HS.10.3.c Contribute to team-oriented projects to accomplish results using cultural global competence in the workplace and community.

AFNR.HS.10.4 Model integrity, ethical leadership, and effective management in AFNR career areas.

AFNR.HS.10.4.a Model characteristics of ethical and effective leaders in the workplace and community.

AFNR.HS.10.4.b Implement personal management skills to function effectively and efficiently in the workplace.

AFNR.HS.10.4.c Demonstrate workplace characteristics that contribute to a positive morale and workplace environment.

AFNR.HS.10.4.d Demonstrate ethical decision-making in real-life situations in agriculture, food, and natural resources.

AFNR.HS.10.5 Communicate information relevant to agriculture clearly, effectively, and with reason.

AFNR.HS.10.5.a Demonstrate basic information research skills and techniques.

AFNR.HS.10.5.b Produce clear, reasoned, and coherently produced, verbal, or visual communication for formal or informal settings.

AFNR.HS.10.5.c Communicate using strategies that ensure clarity, logic, purpose, and professionalism in formal or informal settings.

AFNR.HS.10.5.d Utilize new technologies, tools, and applications to maximize productivity and minimize risk in the workplace and community.

INTRODUCTION TO AGRICULTURE, FOOD, AND NATURAL RESOURCES

COURSE DESCRIPTION

The introductory course for the Agriculture, Food, and Natural Resources Career Cluster provides a knowledge base in the major components of the industry. Learners will be exposed to a broad range of agriculture, food, and natural resources careers, cluster foundation knowledge and skills, and introduction to leadership development and the National FFA Organization (FFA). Classroom and laboratory activities are supplemented through supervised agricultural experiences, career exploration activities, and FFA leadership programs & activities.

STANDARDS AND INDICATORS:

AFNR.HS.20.1 Apply leadership skills and knowledge through the study of the FFA Career and Technical Student Organization (CTSO).

AFNR.HS.20.1.a	Summarize the three-component model of a comprehensive Agricultural Education Program.
AFNR.HS.20.1.b	Recognize the mission, purpose, and key historical moments in the National FFA Organization.
AFNR.HS.20.1.c	Investigate opportunities available for a member of FFA.
AFNR.HS.20.1.d	Examine and practice public speaking.
AFNR.HS.20.1.e	Apply the basics of Parliamentary Procedure.

AFNR.HS.20.2 Apply career readiness principles in an authentic workplace environment.

AFNR.HS.20.2.a	Summarize the five components of a Foundational Supervised Agricultural Experience (SAE).
AFNR.HS.20.2.b	Investigate the five options for an Immersion SAE.
AFNR.HS.20.2.c	Articulate elements of career plans (e.g., academic, AFNR/CTE coursework, FFA/CTSO participation, immersion SAE) required in an AFNR workplace setting.

INTRODUCTION TO AGRICULTURE, FOOD, AND NATURAL RESOURCES (cont.)

AFNR.HS.20.3 Examine career options within agriculture, food, and natural resource systems and perform research based on personal interests.

AFNR.HS.20.3.a	Inventory personal work preferences and interests related to the AFNR Career Field.
AFNR.HS.20.3.b	Identify careers available in multiple AFNR Career Pathways.
AFNR.HS.20.3.c	Determine common qualities of a specific career area (e.g., educational requirements, work environment).
AFNR.HS.20.3.d	Identify necessary steps to prepare for a specific AFNR careers (coursework, post-secondary, needed skills).
AFNR.HS.20.3.e	Identify opportunities for work placed learning within your community.

AFNR.HS.20.4 Evaluate the role of water, air, soil, and habitat in the management of natural resource systems.

AFNR.HS.20.4.a	Summarize and classify the different natural resources (e.g., water, soil, renewable, non-renewable).
AFNR.HS.20.4.b	Summarize the components that comprise all ecosystems.
AFNR.HS.20.4.c	Compare and categorize biotic and abiotic factors in various habitats.
AFNR.HS.20.4.d	Identify the importance of water and air quality.
AFNR.HS.20.4.e	Identify the physical qualities of the soil that determine use for the environmental service system.
AFNR.HS.20.4.f	Describe the importance of water conservation.

INTRODUCTION TO AGRICULTURE, FOOD, AND NATURAL RESOURCES (cont.)

AFNR.HS.20.5 Differentiate key terms, components, and uses for animals in animal systems.

AFNR.HS.20.5.a	Identify and summarize key terminology used in animal systems (e.g., heifer vs. cow, bull vs. steer, calving, farrowing, bovine, equine).
AFNR.HS.20.5.b	Define the function of basic external and internal organs of animals.
AFNR.HS.20.5.c	Differentiate production animals from companion animals.
AFNR.HS.20.5.d	Classify the major components of production animal systems (e.g., feedlots, cow-calf operations, farrow, finish) and regional distribution.
AFNR.HS.20.5.e	Categorize uses for and products generated from production animals.
AFNR.HS.20.5.f	Classify and determine uses for companion animals.

AFNR.HS.20.6 Summarize knowledge of plant anatomy and the functions of plant structures and processes to activities associated with plant systems.

AFNR.HS.20.6.a	Classify major components of the plant industry.
AFNR.HS.20.6.b	Classify plants according to life cycles.
AFNR.HS.20.6.c	Identify the function of plant parts.
AFNR.HS.20.6.d	Identify basic processes and role of photosynthesis, respiration, and transpiration.
AFNR.HS.20.6.e	Differentiate between sexual and asexual propagation techniques.

AFNR.HS.20.7 Synthesize the historical, social, cultural, and potential applications of biotechnology.

AFNR.HS.20.7.a	Summarize biotechnology and the historical impact it has had on agriculture.
AFNR.HS.20.7.b	Identify current and future applications of biotechnology in agriculture, food, and natural resources.
AFNR.HS.20.7.c	Identify common methodologies used in biotechnology.
AFNR.HS.20.7.d	Identify basic cellular structures and genetic terminology.
AFNR.HS.20.7.e	Summarize the scientific and social implications of modern genetically modified organisms.

INTRODUCTION TO AGRICULTURE, FOOD, AND NATURAL RESOURCES (cont.)

AFNR.HS.20.8 Summarize knowledge of the food products & processing industry.

AFNR.HS.20.8.a Evaluate how different foods affect the human body and its physical and cellular processes.

AFNR.HS.20.8.b Identify food safety and sanitation procedures for handling and processing to as sure food quality.

AFNR.HS.20.8.c Summarize food safety procedures when storing and distributing products to consumption.

AFNR.HS.20.8.d Explain the producer-to-consumer processes in the food industry.

AFNR.HS.20.9 Summarize management principles, skills, and practices in agribusiness.

AFNR.HS.20.9.a Define major sectors within the agribusiness industry.

AFNR.HS.20.9.b Identify standard production and agribusiness records and plans.

AFNR.HS.20.9.c Identify common agribusiness terminology and tools to track and analyze business decisions and transactions.

AFNR.HS.20.9.d Articulate the role of markets, trade, competition, and price in relation to business sales and market planning.

AFNR.HS.20.9.e Identify aspects needed to develop and implement an effective record keeping strategy for financial and human resources.

AFNR.HS.20.10 Synthesize the historical, social, cultural, and potential applications of biotechnology.

AFNR.HS.20.10.a Identify and practice safe laboratory practices and procedures.

AFNR.HS.20.10.b Select and operate proper tools and equipment related to agricultural processes observing all safety precautions.

AFNR.HS.20.10.c Develop an agricultural project plan with the required project plan components (e.g., purpose, materials, budget, skills required, timeframe).

AFNR.HS.20.10.d Assess a project plan to completion.

ENVIRONMENTAL AND NATURAL RESOURCES

COURSE DESCRIPTION

This course provides opportunities for students to increase awareness of the close ties amongst living organisms as well as natural and environmental concerns with the interrelationships of living organisms and the world around us. Students are exposed to careers related to natural resources systems. Students also examine Nebraska's natural resources and management techniques. Classroom and laboratory activities are supplemented through supervised agricultural experiences and FFA leadership programs & activities.

STANDARDS AND INDICATORS:

AFNR.HS.15.1 Identify scientifically-based solutions to the management of natural resources.

AFNR.HS.15.1.a	Describe the agriculture technology behind the management techniques (e.g., contour cropping) of Nebraska's natural resources.
AFNR.HS.15.1.b	Identify proper use of tools utilized in natural resource management (e.g., atmometer, soil pH).
AFNR.HS.15.1.c	Describe common species of wildlife found in Nebraska.
AFNR.HS.15.1.d	Classify common species of grasses, forbes, shrubs, and trees found in Nebraska ecosystems.
AFNR.HS.15.1.e	Describe the impact and importance of natural resources to the people of Nebraska.

AFNR.HS.15.2 Analyze the interrelationships between natural resources and humans in the foundation of modern agriculture.

AFNR.HS.15.2.a	Distinguish current production methods within a context of modern agriculture production.
AFNR.HS.15.2.b	Identify the current programs in place with a focus on the conservation and sustainability of natural resources (e.g., Wetlands Reserve Program, Conservation Stewardship Program, Conservation Reserve Program, Source Water Protection Program).
AFNR.HS.15.2.c	Describe the role of local, state, and national agencies/organizations in the management of our local resources.
AFNR.HS.15.2.d	Identity production methods that are best suited to specific environmental conditions.
AFNR.HS.15.2.e	Analyze use of modern technology in relation to agriculture production and natural resource management.

ENVIRONMENTAL AND NATURAL RESOURCES (cont.)

AFNR.HS.15.3 Summarize environmental aspects to be considered in ensuring sustainable production and processing of natural resources.

AFNR.HS.15.3.a Identify components that comprise ecosystems and the relationships within such ecosystems.

AFNR.HS.15.3.b Outline the methods used to measure air quality.

AFNR.HS.15.3.c Explain the water cycle (e.g., hydrologic) and its management.

AFNR.HS.15.3.d Describe the soil formation process, soil types, and how they affect land use.

AFNR.HS.15.3.e Determine the economic and environmental value of the forestry industry.

AFNR.HS.15.4 Evaluate responsible management procedures and techniques to protect, maintain, enhance, and improve natural resources.

AFNR.HS.15.4.a Identify current management policies that are put in place by the local, state, and national government.

AFNR.HS.15.4.b Compare and contrast alternative energy sources used within the agricultural industry.

AFNR.HS.15.4.c Identify non-native and invasive species in Nebraska.

AFNR.HS.15.4.d Calculate the financial and environmental cost of non-native species.

WILDLIFE MANAGEMENT

COURSE DESCRIPTION

This course provides students the opportunity to increase awareness of the principles of wildlife management and conservation. Students will closely examine ecological concepts, habitat management, wildlife species identification, and recreational opportunities that the environment and wildlife provide. Classroom and laboratory activities are supplemented through supervised agricultural experiences and FFA leadership programs & activities.

STANDARDS AND INDICATORS:

AFNR.HS.30.1 Evaluate conservation and management techniques of natural resources and wildlife.

AFNR.HS.30.1.a Identify and classify common species of fauna found in Nebraska (e.g., tracks, pelts, scat, photos, other identifiers).

AFNR.HS.30.1.b Evaluate wildlife habitats to identify conservation and preservation practices for natural resources and approved practices in wildlife management.

AFNR.HS.30.1.c Analyze and interpret environmental and climate data to develop a management plan and determine proper methods of wildlife habitat improvement.

AFNR.HS.30.1.d Apply management techniques to increase wildlife populations, specifically involving those species native to Nebraska.

AFNR.HS.30.2 Analyze the human activities that influence the administration and management of natural resource management.

AFNR.HS.30.2.a Identify current state and national laws regarding private vs. public lands, hunting, fishing, wildlife, and fauna preservation.

AFNR.HS.30.2.b Summarize the impact of agriculture on natural resources through production practices, land characteristics, wildlife habitats, and ecosystems of Nebraska.

AFNR.HS.30.2.c Interpret current Nebraska laws and regulations while providing examples of mitigation techniques and policies for natural resources.

AFNR.HS.30.2.d Summarize the impact, dependence, and influence of natural resources management on humans and the environment.

WILDLIFE MANAGEMENT (cont.)

AFNR.HS.30.3 Summarize the components necessary to ensure sustainable production and processing of wildlife and natural resources.

AFNR.HS.30.3.a Identify the components that comprise an ecosystem.

AFNR.HS.30.3.b Identify the role of food chains in maintaining biodiversity within ecosystems.

AFNR.HS.30.3.c Summarize components of food webs and food chains found in ecosystems.

AFNR.HS.30.4.d Assess the impact of management techniques on Nebraska wildlife.

AFNR.HS.30.4 Describe responsible management procedures and techniques to protect, maintain, enhance, and improve natural resources.

AFNR.HS.30.4.a Identify non-native and invasive species to Nebraska ecosystems.

AFNR.HS.30.4.b Compare efforts to keep non-native species out of a local area.

AFNR.HS.30.4.c Calculate the financial cost of non-native species.

AFNR.HS.30.4.d Compare the benefits of conservation programs that enhance natural resources.

AFNR.HS.30.5 Analyze the impact of natural resources to the economy.

AFNR.HS.30.5.a Explain the impact and importance of natural resources to Nebraska agriculture.

AFNR.HS.30.5.b Compare and contrast the specifics of differing recreational activities related to the harvesting and managing of Nebraska natural resources.

AFNR.HS.30.5.c Compare the importance of wildlife to the local economies and recreational activities.

ENVIRONMENTAL AND NATURAL RESOURCES MANAGEMENT

COURSE DESCRIPTION

This course provides an opportunity for students to increase awareness of the close ties amongst living organisms as well as natural and environmental concerns with the interrelationships of living organisms and the world around us. Students will closely examine agencies that regulate our natural resources, explore the relationship between agriculture and natural resources, and develop an understanding of sustainability and the importance of conservation. Classroom and laboratory activities are supplemented through supervised agricultural experiences and FFA leadership programs & activities.

STANDARDS AND INDICATORS:

AFNR.HS.14.1 Analyze the relationships that have been established between humans and natural resources, specifically addressing sustainability of modern agriculture and governmental involvement of improvement methods.

AFNR.HS.14.1.a Compare and contrast renewable and nonrenewable resources in regards to their impact on water, soil, fish, wildlife, and forestry.

AFNR.HS.14.1.b Identify actions taken at local, state, and national levels to protect water quality, soil health, air quality, wildlife, and plant species.

AFNR.HS.14.1.c Assess historical events of the United States' conservation programs and the human population's attitude and ecological outlook on the nation's natural resources.

AFNR.HS.14.1.d Compare and contrast modern tools, equipment, machinery, and technology used to accomplish environmental tasks.

AFNR.HS.14.1.e Apply cartographic skills to determine area, boundaries, and elevations in relation to natural resources and modern agriculture.

ENVIRONMENTAL AND NATURAL RESOURCES MANAGEMENT (cont.)

AFNR.HS.14.2 Analyze the interrelationships between natural resources and humans and their effect on social, scientific, and industrial uses of natural resources.

AFNR.HS.14.2.a Explain current aspects of modern agriculture and the impact to natural resources.

AFNR.HS.14.2.b Evaluate the current programs in place with conservation and sustainability of natural resources within Nebraska (e.g., Conservation Reserve Program, Environmental Quality Incentives Program, Depredation, Private Waters Programs, Small Watershed Rehabilitation Program, Conservation Innovation Grants).

AFNR.HS.14.2.c Assess the importance of Nebraska conservation and sustainability programs.

AFNR.HS.14.2.d Describe the implementation of conservation programs.

AFNR.HS.14.2.e Critique the effectiveness of production methods that are relevant to different environmental conditions, conservation, and sustainability of natural resources.

AFNR.HS.14.2.f Analyze the impact of modern technology in agriculture and natural resources and its overall effect on natural resources.

AFNR.HS.14.3 Explain factors that contribute to ensuring sustainable natural resources production of wind energy, water quality, soil health, and forestry/rangeland health.

AFNR.HS.14.3.a Identify components of ecological succession and the linkage between carbon, water, and hydrogen biological cycles.

AFNR.HS.14.3.b Describe the components of the earth's atmosphere and the importance of air quality in relation to global warming.

AFNR.HS.14.3.c Explain the allocation of water sources in relation to natural resource management.

AFNR.HS.14.3.d Explain components of soil formation, classification, and erosion to explain land use of Nebraska Farmland.

AFNR.HS.14.3.e Summarize fire management strategies, forestry products, and woodland management aspects of the forest industry.

ENVIRONMENTAL AND NATURAL RESOURCES MANAGEMENT (cont.)

AFNR.HS.14.4 Critique management procedures and techniques to protect, maintain, enhance, and improve natural resources.

AFNR.HS.14.4.a Analyze the effectiveness of specific environmental regulation policies (e.g., Clean Air Act, EISA, Clean Water Act, Superfund).

AFNR.HS.14.4.b Distinguish between alternative energy sources and determine the benefits/costs of such energy sources.

AFNR.HS.14.4.c Compare non-native and invasive species in Nebraska and their impact on the local and state-wide agricultural economy.

AFNR.HS.14.4.d Analyze the financial and environmental cost and issues related to the introduction of non-native species.

AGRICULTURE, FOOD, NATURAL RESOURCES LEADERSHIP, AND CAREER READINESS WITH WORK-BASED LEARNING

COURSE DESCRIPTION

This course will provide students with fundamental skills for success in agricultural careers and team environments. Students will investigate a variety of topics essential to career exploration and readiness in Agriculture, Food, and Natural Resources. In addition, students will develop skills in ethical leadership, communications, and teamwork. Classroom and laboratory activities are supplemented through supervised agricultural experiences and FFA leadership programs and activities.

STANDARDS AND INDICATORS:

AFNR.HS.10.1 Evaluate career opportunities and means to achieve those opportunities in each of the AFNR career pathways.

AFNR.HS.10.1.a	Demonstrate personal responsibility in the workplace and community.
AFNR.HS.10.1.b	Demonstrate career readiness skills for career success.
AFNR.HS.10.1.c	Evaluate the steps and requirements to pursue a career opportunity in an AFNR career pathway.
AFNR.HS.10.1.d	Apply appropriate academic and technical skills to demonstrate career success.
AFNR.HS.10.1.e	Examine career opportunities that are matched to personal life skills and talents and career goals in an AFNR pathway of interest.

AFNR.HS.10.2 Develop employability skills for college and career readiness within AFNR.

AFNR.HS.10.2.a	Model personal responsibility and demonstrate safety in the workplace and community.
AFNR.HS.10.2.b	Synthesize information, knowledge, and experience to generate original ideas and challenge assumptions in the workplace and community.
AFNR.HS.10.2.c	Apply reason and logic to evaluate workplace and community situations from multiple perspectives.
AFNR.HS.10.2.d	Investigate, prioritize, and select solutions to solve problems in the workplace community.
AFNR.HS.10.2.e	Contribute to team-oriented projects and build consensus to accomplish results using cultural global competence in the workplace and community.
AFNR.HS.10.2.f	Identify and demonstrate personal financial management and planning.

AGRICULTURE, FOOD, NATURAL RESOURCES LEADERSHIP, AND CAREER READINESS WITH WORK-BASED LEARNING (cont.)

AFNR.HS.10.3 Model teamwork and leadership skills in work groups.

AFNR.HS.10.3.a Employ cooperative leadership skills to accomplish a team goal.

AFNR.HS.10.3.b Model proper management of teams and large groups.

AFNR.HS.10.3.c Contribute to team-oriented projects to accomplish results using cultural global competence in the workplace and community.

AFNR.HS.10.4 Model integrity, ethical leadership, and effective management in AFNR career areas.

AFNR.HS.10.4.a Model characteristics of ethical and effective leaders in the workplace and community.

AFNR.HS.10.4.b Implement personal management skills to function effectively and efficiently in the workplace.

AFNR.HS.10.4.c Demonstrate workplace characteristics that contribute to a positive morale and workplace environment.

AFNR.HS.10.4.d Demonstrate ethical decision-making in real-life situations in agriculture, food, and natural resources.

AFNR.HS.10.5 Communicate information relevant to agriculture clearly, effectively, and with reason.

AFNR.HS.10.5.a Demonstrate basic information research skills and techniques.

AFNR.HS.10.5.b Produce clear, reasoned, and coherently produced, verbal, or visual communication for formal or informal settings.

AFNR.HS.10.5.c Communicate using strategies that ensure clarity, logic, purpose, and professionalism in formal or informal settings.

AFNR.HS.10.5.d Utilize new technologies, tools, and applications to maximize productivity and minimize risk in the workplace and community.

INTRODUCTION TO AGRICULTURE, FOOD, AND NATURAL RESOURCES

COURSE DESCRIPTION

The introductory course for the Agriculture, Food, and Natural Resources Career Cluster provides a knowledge base in the major components of the industry. Learners will be exposed to a broad range of agriculture, food, and natural resources careers, cluster foundation knowledge and skills, and introduction to leadership development and the National FFA Organization (FFA). Classroom and laboratory activities are supplemented through supervised agricultural experiences, career exploration activities, and FFA leadership programs & activities.

STANDARDS AND INDICATORS:

AFNR.HS.20.1 Apply leadership skills and knowledge through the study of the FFA Career and Technical Student Organization (CTSO).

AFNR.HS.20.1.a	Summarize the three-component model of a comprehensive Agricultural Education Program.
AFNR.HS.20.1.b	Recognize the mission, purpose, and key historical moments in the National FFA Organization.
AFNR.HS.20.1.c	Investigate opportunities available for a member of FFA.
AFNR.HS.20.1.d	Examine and practice public speaking.
AFNR.HS.20.1.e	Apply the basics of Parliamentary Procedure.

AFNR.HS.20.2 Apply career readiness principles in an authentic workplace environment.

AFNR.HS.20.2.a	Summarize the five components of a Foundational Supervised Agricultural Experience (SAE).
AFNR.HS.20.2.b	Investigate the five options for an Immersion SAE.
AFNR.HS.20.2.c	Articulate elements of career plans (e.g., academic, AFNR/CTE coursework, FFA/CTSO participation, immersion SAE) required in an AFNR workplace setting.

INTRODUCTION TO AGRICULTURE, FOOD, AND NATURAL RESOURCES (cont.)

AFNR.HS.20.3 Examine career options within agriculture, food, and natural resource systems and perform research based on personal interests.

AFNR.HS.20.3.a	Inventory personal work preferences and interests related to the AFNR Career Field.
AFNR.HS.20.3.b	Identify careers available in multiple AFNR Career Pathways.
AFNR.HS.20.3.c	Determine common qualities of a specific career area (e.g., educational requirements, work environment).
AFNR.HS.20.3.d	Identify necessary steps to prepare for a specific AFNR careers (coursework, post-secondary, needed skills).
AFNR.HS.20.3.e	Identify opportunities for work placed learning within your community.

AFNR.HS.20.4 Evaluate the role of water, air, soil, and habitat in the management of natural resource systems.

AFNR.HS.20.4.a	Summarize and classify the different natural resources (e.g., water, soil, renewable, non-renewable).
AFNR.HS.20.4.b	Summarize the components that comprise all ecosystems.
AFNR.HS.20.4.c	Compare and categorize biotic and abiotic factors in various habitats.
AFNR.HS.20.4.d	Identify the importance of water and air quality.
AFNR.HS.20.4.e	Identify the physical qualities of the soil that determine use for the environmental service system.
AFNR.HS.20.4.f	Describe the importance of water conservation.

INTRODUCTION TO AGRICULTURE, FOOD, AND NATURAL RESOURCES (cont.)

AFNR.HS.20.5 Differentiate key terms, components, and uses for animals in animal systems.

- AFNR.HS.20.5.a Identify and summarize key terminology used in animal systems (e.g., heifer vs. cow, bull vs. steer, calving, farrowing, bovine, equine).
- AFNR.HS.20.5.b Define the function of basic external and internal organs of animals.
- AFNR.HS.20.5.c Differentiate production animals from companion animals.
- AFNR.HS.20.5.d Classify the major components of production animal systems (e.g., feedlots, cow-calf operations, farrow, finish) and regional distribution.
- AFNR.HS.20.5.e Categorize uses for and products generated from production animals.
- AFNR.HS.20.5.f Classify and determine uses for companion animals.

AFNR.HS.20.6 Summarize knowledge of plant anatomy and the functions of plant structures and processes to activities associated with plant systems.

- AFNR.HS.20.6.a Classify major components of the plant industry.
- AFNR.HS.20.6.b Classify plants according to life cycles.
- AFNR.HS.20.6.c Identify the function of plant parts.
- AFNR.HS.20.6.d Identify basic processes and role of photosynthesis, respiration, and transpiration.
- AFNR.HS.20.6.e Differentiate between sexual and asexual propagation techniques.

AFNR.HS.20.7 Synthesize the historical, social, cultural, and potential applications of biotechnology.

- AFNR.HS.20.7.a Summarize biotechnology and the historical impact it has had on agriculture.
- AFNR.HS.20.7.b Identify current and future applications of biotechnology in agriculture, food, and natural resources.
- AFNR.HS.20.7.c Identify common methodologies used in biotechnology.
- AFNR.HS.20.7.d Identify basic cellular structures and genetic terminology.
- AFNR.HS.20.7.e Summarize the scientific and social implications of modern genetically modified organisms.

INTRODUCTION TO AGRICULTURE, FOOD, AND NATURAL RESOURCES (cont.)

AFNR.HS.20.8 Summarize knowledge of the food products & processing industry.

- AFNR.HS.20.8.a Evaluate how different foods affect the human body and its physical and cellular processes.
- AFNR.HS.20.8.b Identify food safety and sanitation procedures for handling and processing to as sure food quality.
- AFNR.HS.20.8.c Summarize food safety procedures when storing and distributing products to consumption.
- AFNR.HS.20.8.d Explain the producer-to-consumer processes in the food industry.

AFNR.HS.20.9 Summarize management principles, skills, and practices in agribusiness.

- AFNR.HS.20.9.a Define major sectors within the agribusiness industry.
- AFNR.HS.20.9.b Identify standard production and agribusiness records and plans.
- AFNR.HS.20.9.c Identify common agribusiness terminology and tools to track and analyze business decisions and transactions.
- AFNR.HS.20.9.d Articulate the role of markets, trade, competition, and price in relation to business sales and market planning.
- AFNR.HS.20.9.e Identify aspects needed to develop and implement an effective record keeping strategy for financial and human resources.

AFNR.HS.20.10 Synthesize the historical, social, cultural, and potential applications of biotechnology.

- AFNR.HS.20.10.a Identify and practice safe laboratory practices and procedures.
- AFNR.HS.20.10.b Select and operate proper tools and equipment related to agricultural processes observing all safety precautions.
- AFNR.HS.20.10.c Develop an agricultural project plan with the required project plan components (e.g. purpose, materials, budget, skills required, timeframe).
- AFNR.HS.20.10.d Assess a project plan to completion.

FOOD SCIENCE AND SAFETY

COURSE DESCRIPTION

This course focuses on the importance of a safe, sanitary, and reliable food supply for human consumption, with a focus on food production and processing. Topics include an introduction to the food science industry and the identification of pathogenic foodborne illnesses and methods to prevent and control those illnesses. Students will explore food safety regulations and requirements in a variety of settings. Classroom and laboratory activities are supplemented through supervised agricultural experiences and FFA leadership programs & activities.

STANDARDS AND INDICATORS:

AFNR.HS.18.1 Investigate trends within the Food Science industry.

- AFNR.HS.18.1.a Identify food science career professions.
- AFNR.HS.18.1.b Evaluate career opportunities matched to personal life skills, talents, career goals, and local industry trends within the food science industry.
- AFNR.HS.18.1.c Develop an educational plan to successfully pursue a career in the food science industry.
- AFNR.HS.18.1.d Compare and contrast food production companies and the products they produce.

AFNR.HS.18.2 Assess the basic principles of proper nutrition, including the identification and evaluation of the six essential nutrients needed for good health.

- AFNR.HS.18.2.a Classify nutrients as either macro or micro.
- AFNR.HS.18.2.b Identify the dietary roles of the six macronutrients.
- AFNR.HS.18.2.c Develop dietary plans based on nutritional needs.

AFNR.HS.18.3 Evaluate the chemistry of food.

- AFNR.HS.18.3.a Differentiate between simple and complex carbohydrates and their uses in food processing.
- AFNR.HS.18.3.b Describe the functions of amino acids and proteins in food processing.
- AFNR.HS.18.3.c Describe the uses of lipids in food processing.
- AFNR.HS.18.3.d Identify the role of water in food processing.

FOOD SCIENCE AND SAFETY (cont.)

AFNR.HS.18.4 Evaluate the implications of microorganisms in food products on food processing and storage.

AFNR.HS.18.4.a	Distinguish between beneficial and harmful microorganisms and their roles in the creation or spoilage of food products.
AFNR.HS.18.4.b	Identify the process of creating foods utilizing the fermentation process.
AFNR.HS.18.4.c	Analyze conditions and factors that affect the growth of microorganisms within processing and storage facilities.
AFNR.HS.18.4.d	Determine the differences between multicellular parasites, bacteria, yeasts, molds, and viruses.
AFNR.HS.18.4.e	Determine appropriate ways to control and prevent microbial growth in food products.
AFNR.HS.18.4.f	Investigate microorganisms that cause food-borne illness in humans and how to control or eliminate them.

AFNR.HS.18.5 Assess the physics of food production.

AFNR.HS.18.5.a	Describe the influence of water on food products.
AFNR.HS.18.5.b	Identify a food's viscosity/fluidity.
AFNR.HS.18.5.c	Classify foods based on their water activity.
AFNR.HS.18.5.d	Explain the difference between smoke point, flash point, and fire point when dealing with oils in processing foods.
AFNR.HS.18.5.e	Explain the science behind emulsions and their role in food processing.

AFNR.HS.18.6 Evaluate principles and applications of food safety and sanitation.

AFNR.HS.18.6.a	Identify steps in the proper implementation of Hazard Analysis and Critical Control Points (HACCP) and Preventative Controls for Human Food.
AFNR.HS.18.6.b	Differentiate between Sanitation Standard Operating Procedures (SSOPs) and Good Manufacturing Practices (GMPs) and identify the purposes of each.
AFNR.HS.18.6.c	Evaluate procedures and inspection standards for sanitation in the food processing industry.
AFNR.HS.18.6.d	Analyze state and federal laws and regulations governing food inspection standards.

FOOD PRODUCTS AND TECHNOLOGY

COURSE DESCRIPTION

This course is an in-depth study of the development of food products from a variety of agricultural industries. Students will study the nutritional value of foods along with applying scientific processes such as microbiology and chemistry to the development of food products and analyze and select appropriate storage, distribution, and consumption methods for foods. Classroom and laboratory activities are supplemented through supervised agricultural experiences and FFA leadership programs & activities.

STANDARDS AND INDICATORS:

AFNR.HS.17.1 Apply principles of science to food processing to provide a safe, wholesome, and nutritious food supply for consumers.

AFNR.HS.17.1.a	Identify steps to design a research project in food science using the scientific method.
AFNR.HS.17.1.b	Explain how the chemical and physical properties of foods influence nutritional value and eating quality.
AFNR.HS.17.1.c	Compare and contrast the nutritive value of food and food groups.
AFNR.HS.17.1.d	Distinguish the common food constituents (e.g., proteins, carbohydrates, fats, vitamins, minerals, and water).
AFNR.HS.17.1.e	Compare and contrast food constituents and their relative value to consumers (e.g., product taste, appearance, nutrition).
AFNR.HS.17.1.f	Describe the purpose of common food additives.

AFNR.HS.17.2 Summarize harvesting, selection, and inspection techniques to obtain quality food products for processing.

AFNR.HS.17.2.a	Discuss factors that affect quality and yield grades of food products.
AFNR.HS.17.2.b	Summarize quality control inspections procedures for raw food products for processing.
AFNR.HS.17.2.c	Analyze accepted animal treatment and harvesting techniques.
AFNR.HS.17.2.d	Explain desirable and undesirable characteristics of both pre-mortem and post-mortem animals in relation to the production of food products.
AFNR.HS.17.2.e	Evaluate, grade, and classify food products.

FOOD PRODUCTS AND TECHNOLOGY (cont.)

AFNR.HS.17.3 Synthesize the steps in processing and preserving food and food products for sale and distribution.

AFNR.HS.17.3.a Analyze processing techniques to turn raw materials into consumer-ready products.

AFNR.HS.17.3.b Evaluate foods prepared for the fresh-food market based on factors such as shelf life, shrinkage, appearance, and weight.

AFNR.HS.17.3.c Identify steps in food preservation processing, using various methods and techniques.

AFNR.HS.17.3.d Evaluate ready-to-use food products.

AFNR.HS.17.3.e Analyze foods stored in varying conditions for quality, shelf life, and intended use.

AFNR.HS.17.4 Determine and apply steps in the process of preparing food and food products for sale and distribution.

AFNR.HS.17.4.a Identify the links between microbiology, chemistry, and physics in the development of a new food product.

AFNR.HS.17.4.b Explain the required components of a food label.

AFNR.HS.17.4.c Prepare and label foods according to the established standards of regulatory agencies.

AFNR.HS.17.4.d Formulate and package food products using weights and measures.

AFNR.HS.17.4.e Prepare appropriate labels for food products, including principle and information labels.

AGRICULTURE, FOOD, NATURAL RESOURCES LEADERSHIP AND CAREER READINESS WITH WORK-BASED LEARNING

COURSE DESCRIPTION

This course will provide students with fundamental skills for success in agricultural careers and team environments. Students will investigate a variety of topics essential to career exploration and readiness in Agriculture, Food, and Natural Resources. In addition, students will develop skills in ethical leadership, communications, and teamwork. Classroom and laboratory activities are supplemented through supervised agricultural experiences and FFA leadership programs & activities.

STANDARDS AND INDICATORS:

AFNR.HS.10.1 Evaluate career opportunities and means to achieve those opportunities in each of the AFNR career pathways.

AFNR.HS.10.1.a	Demonstrate personal responsibility in the workplace and community.
AFNR.HS.10.1.b	Demonstrate career readiness skills for career success.
AFNR.HS.10.1.c	Evaluate the steps and requirements to pursue a career opportunity in an AFNR career pathway.
AFNR.HS.10.1.d	Apply appropriate academic and technical skills to demonstrate career success.
AFNR.HS.10.1.e	Examine career opportunities that are matched to personal life skills and talents and career goals in an AFNR pathway of interest.

AFNR.HS.10.2 Develop employability skills for college and career readiness within AFNR.

AFNR.HS.10.2.a	Model personal responsibility and demonstrate safety in the workplace and community.
AFNR.HS.10.2.b	Synthesize information, knowledge, and experience to generate original ideas and challenge assumptions in the workplace and community.
AFNR.HS.10.2.c	Apply reason and logic to evaluate workplace and community situations from | multiple perspectives.
AFNR.HS.10.2.d	Investigate, prioritize, and select solutions to solve problems in the workplace community.
AFNR.HS.10.2.e	Contribute to team-oriented projects and build consensus to accomplish results using cultural global competence in the workplace and community.
AFNR.HS.10.2.f	Identify and demonstrate personal financial management and planning.

AGRICULTURE, FOOD, NATURAL RESOURCES LEADERSHIP AND CAREER READINESS WITH WORK-BASED LEARNING (cont.)

AFNR.HS.10.3 Model teamwork and leadership skills in work groups.

AFNR.HS.10.3.a Employ cooperative leadership skills to accomplish a team goal.

AFNR.HS.10.3.b Model proper management of teams and large groups.

AFNR.HS.10.3.c Contribute to team-oriented projects to accomplish results using cultural global competence in the workplace and community.

AFNR.HS.10.4 Model integrity, ethical leadership, and effective management in AFNR career areas.

AFNR.HS.10.4.a Model characteristics of ethical and effective leaders in the workplace and community.

AFNR.HS.10.4.b Implement personal management skills to function effectively and efficiently in the workplace.

AFNR.HS.10.4.c Demonstrate workplace characteristics that contribute to a positive morale and workplace environment.

AFNR.HS.10.4.d Demonstrate ethical decision-making in real-life situations in agriculture, food, and natural resources.

AFNR.HS.10.5 Communicate information relevant to agriculture clearly, effectively, and with reason.

AFNR.HS.10.5.a Demonstrate basic information research skills and techniques.

AFNR.HS.10.5.b Produce clear, reasoned, and coherently produced, verbal, or visual communication for formal or informal settings.

AFNR.HS.10.5.c Communicate using strategies that ensure clarity, logic, purpose, and professionalism in formal or informal settings.

AFNR.HS.10.5.d Utilize new technologies, tools, and applications to maximize productivity and minimize risk in the workplace and community.

INTRODUCTION TO AGRICULTURE, FOOD, AND NATURAL RESOURCES

COURSE DESCRIPTION

The introductory course for the Agriculture, Food, and Natural Resources Career Cluster provides a knowledge base in the major components of the industry. Learners will be exposed to a broad range of agriculture, food, and natural resources careers, cluster foundation knowledge and skills, and introduction to leadership development and the National FFA Organization (FFA). Classroom and laboratory activities are supplemented through supervised agricultural experiences, career exploration activities, and FFA leadership programs & activities.

STANDARDS AND INDICATORS:

AFNR.HS.20.1 Apply leadership skills and knowledge through the study of the FFA Career and Technical Student Organization (CTSO).

AFNR.HS.20.1.a	Summarize the three-component model of a comprehensive Agricultural Education Program.
AFNR.HS.20.1.b	Recognize the mission, purpose, and key historical moments in the National FFA Organization.
AFNR.HS.20.1.c	Investigate opportunities available for a member of FFA.
AFNR.HS.20.1.d	Examine and practice public speaking.
AFNR.HS.20.1.e	Apply the basics of Parliamentary Procedure.

AFNR.HS.20.2 Apply career readiness principles in an authentic workplace environment.

AFNR.HS.20.2.a	Summarize the five components of a Foundational Supervised Agricultural Experience (SAE).
AFNR.HS.20.2.b	Investigate the five options for an Immersion SAE.
AFNR.HS.20.2.c	Articulate elements of career plans (e.g., academic, AFNR/CTE coursework, FFA/CTSO participation, immersion SAE) required in an AFNR workplace setting.

INTRODUCTION TO AGRICULTURE, FOOD, AND NATURAL RESOURCES (cont.)

AFNR.HS.20.3 Examine career options within agriculture, food, and natural resource systems and perform research based on personal interests.

AFNR.HS.20.3.a Inventory personal work preferences and interests related to the AFNR Career Field.

AFNR.HS.20.3.b Identify careers available in multiple AFNR Career Pathways.

AFNR.HS.20.3.c Determine common qualities of a specific career area (e.g., educational requirements, work environment).

AFNR.HS.20.3.d Identify necessary steps to prepare for a specific AFNR careers (coursework, post-secondary, needed skills).

AFNR.HS.20.3.e Identify opportunities for work placed learning within your community.

AFNR.HS.20.4 Evaluate the role of water, air, soil, and habitat in the management of natural resource systems.

AFNR.HS.20.4.a Summarize and classify the different natural resources (e.g., water, soil, renewable, non-renewable).

AFNR.HS.20.4.b Summarize the components that comprise all ecosystems.

AFNR.HS.20.4.c Compare and categorize biotic and abiotic factors in various habitats.

AFNR.HS.20.4.d Identify the importance of water and air quality.

AFNR.HS.20.4.e Identify the physical qualities of the soil that determine use for the environmental service system.

AFNR.HS.20.4.f Describe the importance of water conservation.

INTRODUCTION TO AGRICULTURE, FOOD, AND NATURAL RESOURCES (cont.)

AFNR.HS.20.5 Differentiate key terms, components, and uses for animals in animal systems.

AFNR.HS.20.5.a	Identify and summarize key terminology used in animal systems (e.g., heifer vs. cow, bull vs. steer, calving, farrowing, bovine, equine).
AFNR.HS.20.5.b	Define the function of basic external and internal organs of animals.
AFNR.HS.20.5.c	Differentiate production animals from companion animals.
AFNR.HS.20.5.d	Classify the major components of production animal systems (e.g.,feedlots, cow-calf operations, farrow, finish) and regional distribution.
AFNR.HS.20.5.e	Categorize uses for and products generated from production animals.
AFNR.HS.20.5.f	Classify and determine uses for companion animals.

AFNR.HS.20.6 Summarize knowledge of plant anatomy and the functions of plant structures and processes to activities associated with plant systems.

AFNR.HS.20.6.a	Classify major components of the plant industry.
AFNR.HS.20.6.b	Classify plants according to life cycles.
AFNR.HS.20.6.c	Identify the function of plant parts.
AFNR.HS.20.6.d	Identify basic processes and role of photosynthesis, respiration, and transpiration.
AFNR.HS.20.6.e	Differentiate between sexual and asexual propagation techniques.

AFNR.HS.20.7 Synthesize the historical, social, cultural, and potential applications of biotechnology.

AFNR.HS.20.7.a	Summarize biotechnology and the historical impact it has had on agriculture.
AFNR.HS.20.7.b	Identify current and future applications of biotechnology in agriculture, food, and natural resources.
AFNR.HS.20.7.c	Identify common methodologies used in biotechnology.
AFNR.HS.20.7.d	Identify basic cellular structures and genetic terminology.
AFNR.HS.20.7.e	Summarize the scientific and social implications of modern genetically modified organisms.

INTRODUCTION TO AGRICULTURE, FOOD, AND NATURAL RESOURCES (cont.)

AFNR.HS.20.8 Summarize knowledge of the food products & processing industry.

AFNR.HS.20.8.a Evaluate how different foods affect the human body and its physical and cellular processes.

AFNR.HS.20.8.b Identify food safety and sanitation procedures for handling and processing to as sure food quality.

AFNR.HS.20.8.c Summarize food safety procedures when storing and distributing products to consumption.

AFNR.HS.20.8.d Explain the producer-to-consumer processes in the food industry.

AFNR.HS.20.9 Summarize management principles, skills, and practices in agribusiness.

AFNR.HS.20.9.a Define major sectors within the agribusiness industry.

AFNR.HS.20.9.b Identify standard production and agribusiness records and plans.

AFNR.HS.20.9.c Identify common agribusiness terminology and tools to track and analyze business decisions and transactions.

AFNR.HS.20.9.d Articulate the role of markets, trade, competition, and price in relation to business sales and market planning.

AFNR.HS.20.9.e Identify aspects needed to develop and implement an effective record keeping strategy for financial and human resources.

AFNR.HS.20.10 Synthesize the historical, social, cultural, and potential applications of biotechnology.

AFNR.HS.20.10.a Identify and practice safe laboratory practices and procedures.

AFNR.HS.20.10.b Select and operate proper tools and equipment related to agricultural processes observing all safety precautions.

AFNR.HS.20.10.c Develop an agricultural project plan with the required project plan components (e.g. purpose, materials, budget, skills required, timeframe).

AFNR.HS.20.10.d Assess a project plan to completion.

PLANT SCIENCE

COURSE DESCRIPTION

This course examines the scientific concepts related to plant systems. Students will examine plant classification, anatomy, physiology, and asexual and sexual propagation. In addition, students will develop an understanding of plant nutrition and growth and production methods. Classroom and laboratory activities are supplemented through supervised agricultural experiences, and FFA leadership programs & activities.

STANDARDS AND INDICATORS:

AFNR.HS.25.1 Synthesize the principles of taxonomic systems to classify plants.

AFNR.HS.25.1.a	Classify plants according to the hierarchical classification system, life cycles, plant use, and as monocotyledons or dicotyledons.
AFNR.HS.25.1.b	Describe how classification is used globally in plant identification.
AFNR.HS.25.1.c	Demonstrate the hierarchical classification of an agronomic plant and an ornamental plant.
AFNR.HS.25.1.d	Describe the importance of scientific nomenclature when identifying plants and give an example of a scientific name in association with its common name.

AFNR.HS.25.2 Summarize principles of plant anatomy to plant production and management.

AFNR.HS.25.2.a	Compare and contrast morphological characteristics of different plant types (e.g., woody and herbaceous plants).
AFNR.HS.25.2.b	Identify role of seed and fruit structures in plant culture and use.
AFNR.HS.25.2.c	Compare the functions, types, and parts of plant roots and stems.
AFNR.HS.25.2.d	Identify and describe the morphological characteristics and functions of different types of leaves.
AFNR.HS.25.2.e	Identify role of flower structures to plant breeding, production, and use.
AFNR.HS.25.2.f	Describe the structures and functions of plant cells and cell organelles.

PLANT SCIENCE (cont.)

AFNR.HS.25.3 Evaluate knowledge of photosynthesis and respiration to make decisions on plant production and management.

AFNR.HS.25.3.a Identify the processes of photosynthesis and its significance to plant life.

AFNR.HS.25.3.b Summarize the stages of cellular respiration and the resulting products and byproducts.

AFNR.HS.25.3.c Explain the pathway of water and nutrients entering and within plants.

AFNR.HS.25.3.d Describe the role of plant structures in primary plant growth (e.g., apical meristem).

AFNR.HS.25.3.e Identify and categorize the five groups of naturally occurring plant hormones and synthetic growth regulators.

AFNR.HS.25.3.f Compare and contrast the effects of transpiration and translocation on plants within different plant species.

AFNR.HS.25.4 Analyze sexual and asexual plant propagation techniques to successfully grow and propagate plants.

AFNR.HS.25.4.a Determine the purpose of and types of reproduction methods within the production of specific plants.

AFNR.HS.25.4.b Contrast types of pollination and/or fertilization of flowering plants.

AFNR.HS.25.4.c Demonstrate various planting techniques for providing favorable conditions for seed germination.

AFNR.HS.25.4.d Summarize optimal conditions for asexual propagation and demonstrate different techniques used to propagate plants.

AFNR.HS.25.4.e Describe environmental conditions and types of growing media conducive to optimal plant growth and development.

AFNR.HS.25.4.f Identify structures and technologies used for controlled atmosphere plant production.

PLANT SCIENCE (cont.)

AFNR.HS.25.5 Summarize management of plant development through the selection, planting, and growing of seeds and plants based on global demand, economic importance, and growing conditions.

AFNR.HS.25.5.a Summarize the benefits of preparing growing media prior to planting.

AFNR.HS.25.5.b Summarize the stages of plant growth and benefits of controlling plant growth.

AFNR.HS.25.5.c Summarize the uses of different growing methods for plant production (e.g., vertical farming, soil grown, container gardening, hydroponics, and aquaponics).

AFNR.HS.25.6 Summarize harvest, transporting, and storage of crops according to current industry standards.

AFNR.HS.25.6.a Identify harvesting methods and equipment, incorporating safety measures.

AFNR.HS.25.6.b Identify plant preparation methods for storing and shipping plants and plant products.

AFNR.HS.25.6.c Assess the stage of growth to determine crop maturity or marketability and demonstrate proper harvesting techniques.

CROP MANAGEMENT & AGRONOMY

COURSE DESCRIPTION

This course investigates advanced crop management production and management topics. Students develop an understanding of nutrition and fertilization methods, resource management, pest management, technology use, marketing, and sustainable systems. Classroom and laboratory activities are supplemented through supervised agricultural experiences, and FFA leadership programs & activities.

STANDARDS AND INDICATORS:

AFNR.HS.12.1 Summarize principles of taxonomic systems to classify plants.

AFNR.HS.12.1.a	Compare, contrast, and classify plants in a variety of areas (e.g., taxonomy, life cycle, plant use, structure).
AFNR.HS.12.1.b	Describe how classification is used globally in plant identification.
AFNR.HS.12.1.c	Describe the importance of scientific nomenclature when identifying plants and give an example of a scientific name in association with its common name.

AFNR.HS.12.2 Evaluate soil nutrients and soil management for healthy plant growth.

AFNR.HS.12.2.a	Identify the essential nutrients and their functions necessary for plant growth and development.
AFNR.HS.12.2.b	Analyze the effects and recognize environmental causes of nutrient deficiencies and toxicities.
AFNR.HS.12.2.c	Describe the influence of pH on the availability of nutrients in plant health.
AFNR.HS.12.2.d	Identify fertilizer sources of essential nutrients; explain and calculate fertilizer formulations and describe different methods of fertilizer application.
AFNR.HS.12.2.e	Summarize production methods focused on soil management (e.g., crop rotation, companion planting, cover crops).
AFNR.HS.12.2.f	Summarize the impact of environmental factors on nutrient availability.

CROP MANAGEMENT& AGRONOMY (cont.)

AFNR.HS.12.3 Develop pest control measures to minimize the impact on agronomic and horticultural crops.

AFNR.HS.12.3.a Identify and categorize abiotic and biotic plant pests, diseases, and disorders.

AFNR.HS.12.3.b Identify and assess local major weeds, insect pests, and infectious and noninfectious plant diseases.

AFNR.HS.12.3.c Examine the life cycle of major plant pests and diseases.

AFNR.HS.12.3.d Predict pest and disease problems based on environmental conditions and life cycles.

AFNR.HS.12.3.e Identify and summarize pest control strategies associated with integrated pest management and the importance of determining economic threshold.

AFNR.HS.12.3.f Distinguish between risks and benefits associated with the materials and methods used in plant pest management.

AFNR.HS.12.4 Summarize concepts of plant development through the selection, planting, and growing of seeds and plants, based on global demand, economic importance, and growing conditions.

AFNR.HS.12.4.a Summarize the purity of plant production material (virus index, invasive species, seed banks).

AFNR.HS.12.4.b Analyze how mechanical planting equipment performs soil preparation and seed placement.

AFNR.HS.12.4.c Determine desired seeding rate and/or numbers of vegetative materials needed for specified plant population or desired quantity of finished plants.

AFNR.HS.12.4.d Observe environmental conditions during the germination, growth, and development of a crop.

AFNR.HS.12.4.e Demonstrate proper techniques to control and manage plant growth through mechanical, cultural, or chemical means.

AFNR.HS.12.4.f Compare and contrast the technologies used in plant production.

CROP MANAGEMENT & AGRONOMY (cont.)

AFNR.HS.12.5 Summarize the processes in harvesting, transporting, and storing crops according to current industry standards.

AFNR.HS.12.5.a Identify and analyze processes used by mechanical harvesting methods, including ensuring safety measures.

AFNR.HS.12.5.b Evaluate crop yield and loss data and make recommendations to reduce crop loss.

AFNR.HS.12.5.c Demonstrate techniques for grading, handling. and packaging plants and plant products for distribution.

AFNR.HS.12.5.d Analyze practices used to maintain a safe product through harvest, processing, storage, and shipment (e.g., Food Safety Modernization Act, Good Agricultural Practices).

AFNR.HS.12.6 Evaluate principles and practices of sustainable cropping systems to plant production to recommend the ideal system for their local community.

AFNR.HS.12.6.a Identify the current topics in crop production and the role those topics play in management and production of agronomic crops.

AFNR.HS.12.6.b Assess the importance of long-term impacts on sustainable agriculture systems in relation to global food security.

AFNR.HS.12.6.c Analyze the alignment of modern technologies used in production systems (e.g., precision agriculture, gene editing technologies).

AFNR.HS.12.6.d Describe sustainable agricultural practices and how they relate to conventional agricultural practices.

AFNR.HS.12.6.e Compare and contrast differing research conclusions related to environmental factors on sustainable systems.

NURSERY MANAGEMENT

COURSE DESCRIPTION

This course examines the knowledge and skills needed to identify, produce, and manage horticultural plants. Topics include plant identification and production, nursery management, and development of schedules and estimates. Classroom and laboratory activities are supplemented through supervised agricultural experiences and FFA leadership programs & activities.

STANDARDS AND INDICATORS:

AFNR.HS.24.1 Synthesize the principles of taxonomic systems to classify plants.

AFNR.HS.24.1.a	Classify plants in a variety of areas (e.g., taxonomy, life cycle, plant use, structure).
AFNR.HS.24.1.b	Describe how classification is used globally in plant identification.
AFNR.HS.24.1.c	Identify landscape plants, using cultivars or varieties in a scientific name and the corresponding common name.
AFNR.HS.24.1.d	Categorize plants by their purpose (e.g., floral plants, landscape plants, house plants).

AFNR.HS.24.2 Apply methods of plant propagation for plant reproduction.

AFNR.HS.24.2.a	Demonstrate sowing techniques and provide favorable conditions for seed germination.
AFNR.HS.24.2.b	Explain the methods of asexual propagation and identify which species and varieties are best suited to each method.
AFNR.HS.24.2.c	Develop a schedule for propagation to meet seasonal production demands.

NURSERY MANAGEMENT (cont.)

AFNR.HS.24.3 Explain the influence of environmental factors, nutrients, and soil on plant growth through the plant management plans.

AFNR.HS.24.3.a Identify environmental factors involved in ornamental plant production including soils, water, pests, and human actions.

AFNR.HS.24.3.b Describe the desired characteristics of an ideal growing medium.

AFNR.HS.24.3.c Explain the techniques of soil sampling and relate this process to testing the growing medium and interpreting the results to recommend fertilizer applications and pH treatment.

AFNR.HS.24.3.d Evaluate how heat, humidity, and light affect the heating, cooling, and ventilation systems of a greenhouse.

AFNR.HS.24.3.e Develop a water management plan for field production, nursery, or a controlled environment.

AFNR.HS.24.3.f Analyze the deficiency symptoms of the major plant nutrients and investigate the economic impacts of those deficiencies.

AFNR.HS.24.4 Differentiate between field production, nursery, and greenhouse or controlled environment production and the plants produced in each.

AFNR.HS.24.4.a Describe in the correct order the steps utilized in integrated pest management (IPM) in relation to horticultural crops and landscapes.

AFNR.HS.24.4.b Identify common plant pests (insects and diseases) for horticultural crops and describe the damage inflicted to the plants.

AFNR.HS.24.4.c Explain the types of pest control methods and classification of herbicides and discuss the appropriate uses and safety measures for each type.

AFNR.HS.24.4.d Determine best management practices (BMP) for soil amendments, fertilizers, and pesticides.

AFNR.HS.24.4.e Plan for common greenhouse and nursery production materials needed based on spacing and crop requirements.

AFNR.HS.24.4.f Compare and contrast the different types of technologies and equipment used for production.

NURSERY MANAGEMENT (cont.)

AFNR.HS.24.5 Analyze how nursery plants are grown and managed.

AFNR.HS.24.5.a	Identify the various types of root production methods and compare the quality of the resulting plants.
AFNR.HS.24.5.b	Describe the differences between bare root, containerized, balled, and burlapped plants.
AFNR.HS.24.5.c	Use ANSI Standards to evaluate whether plants in various categories (evergreen, shrub) meet the standard.
AFNR.HS.24.5.d	Describe how the timing of transplanting affects plant quality.
AFNR.HS.24.5.e	Analyze production and delivery schedules for specific plant types and the associated labor required.
AFNR.HS.24.4.f	Interpret the reasons, methods, and timing for pruning woody and herbaceous plants for optimal plant growth.

LANDSCAPE DESIGN

COURSE DESCRIPTION

This course examines the knowledge and skills needed to identify, produce, and manage horticultural plants, understand and apply landscape design concepts, and manage turfgrass and landscape plants. Topics include plant identification, identifying and applying design principles, creating designs using scales and other hand-drawing tools and/or design software, and processes and products used in designing, constructing, and managing landscapes. Classroom and laboratory activities are supplemented through supervised agricultural experiences and FFA leadership programs & activities.

STANDARDS AND INDICATORS:

AFNR.HS.21.1 Investigate the importance of plant identification in choosing and using landscape plants.

AFNR.HS.21.1.a	Identify the importance of scientific nomenclature when identifying and selecting landscape plants, using cultivars or varieties in a scientific name and the corresponding common name.
AFNR.HS.21.1.b	Identify plants by their purpose (e.g., floral plants, landscape plants, house plants).
AFNR.HS.21.1.c.	Distinguish between various types of turfgrasses and compare how they are used in different landscape situations.
AFNR.HS.21.1.d	Develop knowledge of landscape characteristics and environmental requirements for landscape plants.
AFNR.HS.21.1.e	Describe the differences between annual, perennial, woody and herbaceous plants and how they are used in landscape design.

LANDSCAPE DESIGN (cont.)

AFNR.HS.21.2 Summarize methods of propagation and production for landscape needs.

AFNR.HS.21.2.a Explain the methods of asexual propagation and their importance in producing landscape plants.

AFNR.HS.21.2.b. Identify which species and of landscape plant varieties are best propagated asexually.

AFNR.HS.21.2.c Describe methods of producing turfgrass, including seed, asexual propagation, plugs, and sod.

AFNR.HS.21.2.d Develop a schedule for propagation and production to meet seasonal landscape needs.

AFNR.HS.21.2.e Describe how plants that do not meet ANSI Standards for Nursery Stock influence immediate and long-term landscape management processes.

AFNR.HS.21.3 Implement a landscape management plan that addresses the influence of environmental factors, nutrients, and soil on plant growth.

AFNR.HS.21.3.a Summarize the environmental factors involved in managing landscapes including soils, water, pests and human actions.

AFNR.HS.21.3.b Explain the techniques of soil sampling and relate this process to testing the soil and interpreting the results to recommend fertilizer applications and pH treatment.

AFNR.HS.21.3.c Develop a water management plan for a landscape that includes turfgrass, woody, and herbaceous plants.

AFNR.HS.21.3.d Analyze the deficiency symptoms of the major plant nutrients and investigate the economic impacts of those deficiencies.

LANDSCAPE DESIGN (cont.)

AFNR.HS.21.4 Develop a landscape plan to include hardscapes and plants.

AFNR.HS.21.4.a	Assess client needs to communicate effectively with clients throughout the design process.
AFNR.HS.21.4.b	Differentiate between design styles by interpreting the use of design principles (e.g., order, unity and rhythm) in a landscape plan.
AFNR.HS.21.4.c	Evaluate the use of design elements (e.g., scale, proportion, balance) in a landscape plan.
AFNR.HS.21.4.d	Analyze environmental conditions and human factors that will influence design decisions.
AFNR.HS.21.4.e	Determine if an irrigation system is needed and choose the appropriate type and components for optimal coverage.
AFNR.HS.21.4.f	Demonstrate how various plant types (e.g., conifers, deciduous shrubs) are combined as part of the landscape system for function, management, and aesthetics.
AFNR.HS.21.4.g	Determine plant materials and hardscape elements appropriate for the site and client, applying principles of sustainability.

AFNR.HS.21.5 Describe the seasonal differences for managing a landscape for a year.

AFNR.HS.21.5.a	Describe, in the correct order, the steps utilized in Integrated Pest Management (IPM).
AFNR.HS.21.5.b	Identify common plant pests (insects and diseases).
AFNR.HS.21.5.c	Describe the damage inflicted to the plants.
AFNR.HS.21.5.d	Explain the types of pest control methods and classification of herbicides and discuss the appropriate uses and safety measures for each type.
AFNR.HS.21.4.e	Compare situations where different soil amendments, fertilizers, and pesticides are used to determine best management practices (BMP).
AFNR.HS.21.4.f	Analyze how an irrigation plan provides optimal coverage for all plant types, including turfgrass.
AFNR.HS.21.4.g	Interpret the reasons, methods, and timing for pruning woody and herbaceous plants for optimal plant growth in landscapes.

LANDSCAPE DESIGN (cont.)

AFNR.HS.21.6 Recommend materials and methods appropriate for landscape needs.

AFNR.HS.21.6.a	Demonstrate knowledge of drawing tools and/or software to calculate area and volume with necessary conversions to figure accurate quantities of materials.
AFNR.HS.21.6.b	Use common calculations to compare prices for landscape plants and hardscape materials and their installation to recommend the most cost-effective approach.
AFNR.HS.21.6.c	Investigate equipment types and availability to recommend the appropriate equipment for installation and management.
AFNR.HS.21.6.d	Describe the process needed to construct and manage a landscape and create a cost analysis for the project.

FLORICULTURE

COURSE DESCRIPTION

This course will provide students with the necessary knowledge to apply design principles in the floral industry. Topics include history of the floral industry, processing techniques and tools, trends, and flower and foliage identification important in the design of quality floral arrangements. Classroom and laboratory activities are supplemented through supervised agricultural experiences, and FFA leadership programs & activities.

STANDARDS AND INDICATORS:

AFNR.HS.16.1 Synthesize the history of floriculture.

AFNR.HS.16.1.a	Explain the evolution of floriculture throughout history and describe how history has influenced today's floriculture.
AFNR.HS.16.1.b	Compare and contrast the three levels of the floriculture industry (grower, wholesaler, and retailer).
AFNR.HS.16.1.c	Analyze today's world floral production and marketing methods and trends.

AFNR.HS.16.2 Summarize key aspects of floral botany and processing.

AFNR.HS.16.2.a	Identify male and female parts of the flower and their functions.
AFNR.HS.16.2.b	Evaluate the function of the plant stem and its post-harvest physiology.
AFNR.HS.16.2.c	Recognize the inflorescence types and leaf form and their purpose.
AFNR.HS.16.2.d	Distinguish the roles of plant processes as they relate to cut plant materials.
AFNR.HS.16.2.e	Identify harvesting techniques and procedures used to cut quality materials and design a procedure for proper processing and storage.

AFNR.HS.16.3 Summarize the proper function and use of floral materials and tools.

AFNR.HS.16.3.a	Identify the common tools used in various methods of floral arranging and demonstrate correct and safe use of floral tools.
AFNR.HS.16.3.b	Identify common wire and ribbon sizes for various applications.
AFNR.HS.16.3.c	Explain special considerations (occasion and season) for selection of proper materials (e.g., ribbon, containers).

FLORICULTURE (cont.)

AFNR.HS.16.4 Classify common floriculture plants.

AFNR.HS.16.4.a Identify the major plants used in the floriculture industry by common and scientific names.

AFNR.HS.16.4.b Categorize major plants based on their use in floriculture (cut flower and/or foliage plants, potted flowering and/or foliage plants).

AFNR.HS.16.4.c Differentiate the uses of plants in a design: line, form, filler, foliage.

AFNR.HS.16.5 Synthesize principles of floral design.

AFNR.HS.16.5.a Identify the importance of floral design principles (e.g., color, design, line, texture, balance, focal point).

AFNR.HS.16.5.b Evaluate an arrangement based on design principles.

AFNR.HS.16.5.c Analyze current design trends that exist in the floral industry.

AFNR.HS.16.5.d Create a floral arrangement using design principles and materials to meet a specific occasion and budget.

AFNR.HS.16.5.e Delineate between wholesale and retail pricing of raw materials.

AGRICULTURAL BIOTECHNOLOGY

COURSE DESCRIPTION

This course focuses on students examining the relationship between biotechnology and modern agriculture, food, and natural resource systems. Students identify purposes and methods of genetic modification of plants and animals and the impact of biotechnology on a global scale. Classroom and laboratory activities are supplemented through supervised agricultural experiences and FFA leadership programs & activities.

STANDARDS AND INDICATORS:

AFNR.HS.2.1 Assess factors that have influenced the evolution of biotechnology in agriculture.

AFNR.HS.2.1.a Summarize the evolution of biotechnology in agriculture.

AFNR.HS.2.1.b Summarize current work in biotechnology and the added value to agriculture and society.

AFNR.HS.2.1.c Compare and contrast the benefits and risks of biotechnology and conventional approaches to improving agriculture.

AFNR.HS.2.2 Evaluate the scope and implications of bioethics, law, and public perceptions of biotechnology in agriculture.

AFNR.HS.2.2.a Compare and contrast global regulatory systems for biotechnology in agriculture.

AFNR.HS.2.2.b Summarize the emergence, evolution, and implications of bioethics associated with biotechnology in agriculture.

AFNR.HS.2.2.c Describe the significance and impacts of legal issues related to biotechnology in agriculture.

AFNR.HS.2.2.d Investigate the impact of public perceptions on the application of biotechnology in different agriculture, food and natural resources (AFNR) systems.

AGRICULTURAL BIOTECHNOLOGY (cont.)

AFNR.HS.2.3 Apply appropriate laboratory skills to complete tasks in a biotechnology research and development environment (e.g., standard operating procedures, record keeping, aseptic technique, equipment maintenance).

AFNR.HS.2.3.a Maintain and interpret records documented in a laboratory to ensure data accuracy and integrity (e.g., avoid bias, record any conflicts of interest, avoid misinterpreted results).

AFNR.HS.2.3.b Categorize and identify laboratory equipment according to its purpose in scientific research.

AFNR.HS.2.3.c Apply standard operating procedures for the safe handling, management, and disposal of biological and chemical materials in a laboratory according to standard operating procedures.

AFNR.HS.2.3.d Identify the steps necessary to perform simple genetic modification.

AFNR.HS.2.4 Apply concepts of biotechnology to solve problems in Agriculture, Food, and Natural Resources (AFNR) systems (e.g., bioengineering, food processing, waste management, horticulture, forestry, livestock, crops).

AFNR.HS.2.4.a Identify biotechnology principles, techniques, and processes to create transgenic species through genetic engineering.

AFNR.HS.2.4.b Explain biotechnology principles, techniques, and processes to enhance the production of food through the use of microorganisms and enzymes.

AFNR.HS.2.4.c Apply biotechnology principles, techniques, and processes to protect the environment and maximize use of natural resources (e.g., biomass, bioprospecting, industrial biotechnology).

AFNR.HS.2.4.d Apply biotechnology principles, techniques, and processes to enhance plant and animal care and production (e.g., selective breeding, pharmaceuticals, biodiversity).

AFNR.HS.2.4.e Apply biotechnology principles, techniques and processes to produce biofuels (e.g., fermentation, transesterification, methanogenesis).

AFNR.HS.2.4.f Apply biotechnology principles, techniques, and processes to improve waste management (e.g., genetically modified organisms, bioremediation).

AGRICULTURE, FOOD, NATURAL RESOURCES LEADERSHIP, CAREER READINESS WITH WORK-BASED LEARNING

COURSE DESCRIPTION

This course will provide students with fundamental skills for success in agricultural careers and team environments. Students will investigate a variety of topics essential to career exploration and readiness in Agriculture, Food, and Natural Resources. In addition, students will develop skills in ethical leadership, communications, and teamwork. Classroom and laboratory activities are supplemented through supervised agricultural experiences and FFA leadership programs & activities.

STANDARDS AND INDICATORS:

AFNR.HS.10.1 Evaluate career opportunities and means to achieve those opportunities in each of the AFNR career pathways.

AFNR.HS.10.1.a	Demonstrate personal responsibility in the workplace and community.
AFNR.HS.10.1.b	Demonstrate career readiness skills for career success.
AFNR.HS.10.1.c	Evaluate the steps and requirements to pursue a career opportunity in an AFNR career pathway.
AFNR.HS.10.1.d	Apply appropriate academic and technical skills to demonstrate career success.
AFNR.HS.10.1.e	Examine career opportunities that are matched to personal life skills and talents and career goals in an AFNR pathway of interest.

AFNR.HS.10.2 Develop employability skills for college and career readiness within AFNR.

AFNR.HS.10.2.a	Model personal responsibility and demonstrate safety in the workplace and community.
AFNR.HS.10.2.b	Synthesize information, knowledge, and experience to generate original ideas and challenge assumptions in the workplace and community.
AFNR.HS.10.2.c	Apply reason and logic to evaluate workplace and community situations from multiple perspectives.
AFNR.HS.10.2.d	Investigate, prioritize, and select solutions to solve problems in the workplace community.
AFNR.HS.10.2.e	Contribute to team-oriented projects and build consensus to accomplish results using cultural global competence in the workplace and community.
AFNR.HS.10.2.f	Identify and demonstrate personal financial management and planning.

AGRICULTURE, FOOD, NATURAL RESOURCES LEADERSHIP, CAREER READINESS WITH WORK-BASED LEARNING (cont.)

AFNR.HS.10.3 Model teamwork and leadership skills in work groups.

AFNR.HS.10.3.a Employ cooperative leadership skills to accomplish a team goal.

AFNR.HS.10.3.b Model proper management of teams and large groups.

AFNR.HS.10.3.c Contribute to team-oriented projects to accomplish results using cultural global competence in the workplace and community.

AFNR.HS.10.4 Model integrity, ethical leadership, and effective management in AFNR career areas.

AFNR.HS.10.4.a Model characteristics of ethical and effective leaders in the workplace and community.

AFNR.HS.10.4.b Implement personal management skills to function effectively and efficiently in the workplace.

AFNR.HS.10.4.c Demonstrate workplace characteristics that contribute to a positive morale and workplace environment.

AFNR.HS.10.4.d Demonstrate ethical decision-making in real-life situations in agriculture, food, and natural resources.

AFNR.HS.10.5 Communicate information relevant to agriculture clearly, effectively, and with reason.

AFNR.HS.10.5.a Demonstrate basic information research skills and techniques.

AFNR.HS.10.5.b Produce clear, reasoned, and coherently produced, verbal, or visual communication for formal or informal settings.

AFNR.HS.10.5.c Communicate using strategies that ensure clarity, logic, purpose, and professionalism in formal or informal settings.

AFNR.HS.10.5.d Utilize new technologies, tools, and applications to maximize productivity and minimize risk in the workplace and community.

NEBRASKA CAREER AND TECHNICAL EDUCATION

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BUSINESS, MARKETING, AND MANAGEMENT

PROGRAM OF STUDY STANDARDS

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MARKETING

FINANCE

NEBRASKA CAREER AND TECHNICAL EDUCATION STATE MODEL PROGRAMS OF STUDY

CAREER FIELD OVERVIEW

The Business, Marketing, and Management Career Field Area provides opportunities for students to deepen their understanding of topics in areas such as financial literacy, business technologies, communication, business and consumer law, entrepreneurship, accounting, economics, personal finance, financial services marketing, retailing, fashion marketing/merchandising, international marketing, sports and entertainment marketing, global business, and hospitality and tourism.

PROGRAMS OF STUDY

Programs of Study are the primary delivery model for Career and Technical Education (CTE) in Nebraska. They include a sequence of courses which progresses in specificity and rigor and are updated regularly to align with Nebraska's workforce needs and economic development priorities. This document includes the programs of study and course-based standards for the Business, Marketing, and Management career field. These state model programs of study were developed to:

- Assist secondary schools in creating meaningful sequences of courses that adequately prepare individuals for seamless transitions to postsecondary education and careers eliminating duplication of coursework;
- Assist students in identifying appropriate courses for high school and postsecondary education that lead to their chosen career;
- Encourage collaboration between secondary and postsecondary education through curricular alignment;
- Offer opportunities for high-quality workplace experiences aligned to students' career interests;
- Promote the advancement of early postsecondary opportunities (including dual-credit courses) for all students; and
- Support postsecondary education options for students to further prepare them for successful transitions to their future careers.

Nebraska's programs of study are organized around Nebraska's CTE Model, which provides a way for students to explore the diversity of career options available to them.

NEBRASKA CAREER AND TECHNICAL EDUCATION MODEL

1 CORE ACADEMICS AND CAREER READINESS

At the center of the NCE Model is the expectation for all students to develop a solid academic core. The next ring identifies specific career readiness standards and practices that prepare students for success in postsecondary education as well as entrepreneurship/employment.

2 CAREER FIELDS

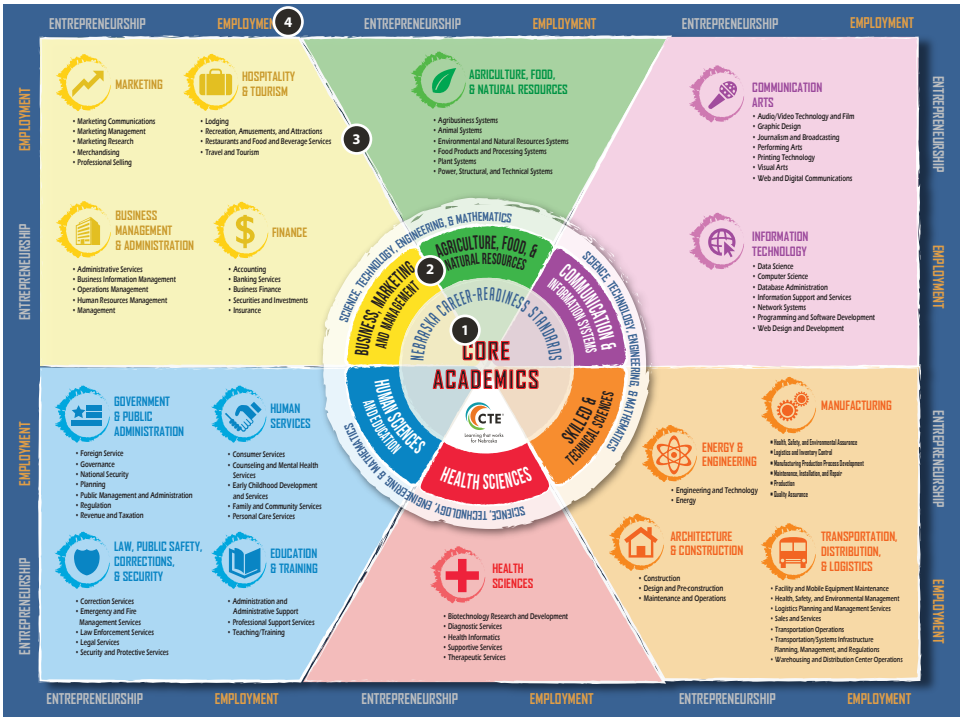
The six career fields represent broad sectors of the job market on which students may choose to focus.

3 CAREER CLUSTERS

Each career field is composed of career clusters radiating out from it. The clusters are more specific segments of the labor market. Each cluster is a grouping of careers that focus on similar subjects or similar skills. A basic understanding and exploration of each of the clusters will provide students with a solid foundation for career decision-making to conceptualize the entire world of work.

4 EMPLOYABILITY AND ENTREPRENEURSHIP

Career education provides the opportunity to gain the knowledge and skills for both employment and entrepreneurship. The reality for Nebraska and the United States is that entrepreneurship will help ensure economic growth and vitality. By infusing entrepreneurship competencies, career education is helping create the next generation of America's innovators and entrepreneurs.



The model is a visual map of "career fields" and "career clusters/pathways" and organizes the 16 National Career Clusters into six broad sectors of entrepreneurship and employment:

- Agriculture, Food and Natural Resources
- Business, Marketing and Management
- Communication and Information Systems
- Health Sciences
- Human Sciences and Education
- Skilled and Technical Sciences

These fields break down into more specific Career Clusters, Pathways and Occupational Specialties. The model provides a way for:

- Students to explore the diversity of career options available to them.
- Students to begin to prepare for their career with plans for secondary and post-secondary education.
- Schools to organize curriculum into Programs of Study that prepare students for opportunities in Nebraska's economy.

COURSE SEQUENCING

The courses within the State Model Program of Study are intended to be offered sequentially, to allow learners to build upon foundational knowledge and skills learned in introductory and intermediate courses and applied in more advanced capstone coursework. Non-duplicative sequences of courses ensure students transition to postsecondary education without duplication of classes and content. CTE enrollment data is collected at the course level. Students who participate and concentrate in CTE generally have more positive outcomes such as higher graduation rates along with postsecondary success.

Introductory Courses

Introductory courses set the foundation for a program of study by introducing students to broad foundational knowledge relative to an occupational area and career field.

Intermediate Courses

Intermediate courses build on the foundational knowledge of Introductory courses to further develop the academic, technical, and career readiness skills within a particular career field and occupational area.

Capstone Courses

Capstone courses are occupationally specific and further develop the necessary and required academic, technical, and career readiness skills needed for seamless transitions to postsecondary education and employment. Capstone courses often provide opportunities for students to earn postsecondary credit.

Levels of Participation

CTE Participant

A student who has earned one or more credits in any career and technical education program area.

CTE Concentrator

A secondary student who, in grades 9 through 12, has earned credit in at least two courses in a single career cluster program at the intermediate or capstone level.

State Model Programs of Study are coordinated, nonduplicative sequences of academic and technical content at the secondary and postsecondary levels that incorporate challenging State academic standards, address both academic and technical knowledge and skills, including Nebraska's Career Readiness Skills, are aligned with the needs of industries in Nebraska's economy, progress in specificity, have multiple entry and exit points that incorporate credentialing, and culminate in the attainment of a recognized postsecondary credential.

COURSE-BASED STANDARDS

Individual CTE courses, which make up the sequence of courses for Programs of Study, include content area standards and indicators to provide a framework for quality teaching and learning. While not required by state law, districts are encouraged to adopt these State Model Programs of Study and their related course-based standards. CTE State Model Programs of Study and course-based standards are revised on a five-year cycle to remain responsive to the rapid advances and needs of business and industry, help students explore a variety of postsecondary options and corresponding entrance requirements to help identify their next steps, and to align to changes in postsecondary programs.

Standards

At the highest level of generality, content area standards include a set of broad, overarching content-based statements that describe the basic cognitive, affective, or psychomotor expectations of students. They reflect long-term goals for learning.

Indicators

Under each standard are indicators, which further describe what a student must know and be able to do to meet the standard. Indicators are performance-based statements that provide educators with a clear understanding of the expected level of student learning and guidance. Indicators provide guidance for an assessment of student learning.

EXPANDED LEARNING OPPORTUNITIES

Expanded learning opportunities build on, support, and enhance learning within and outside of regular school programming. They are a critical component of Nebraska's educational landscape and should be intentionally supported to further develop students' college and career readiness. To signal aligned expanded learning opportunities, each Program of Study identifies additional areas where students may desire to personalize their program and take additional coursework or work-based learning that aligns with their interests. These expanded learning opportunities are not considered part of a Program of Study nor are they required, but rather a meaningful opportunity for students to continue to learn after completing the Program of Study sequence of courses within the context of their career interests. Along with aligned coursework, two prominent expanded learning opportunities include participating in Work-Based Learning or a Career and Technical Student Organization.

Work-Based Learning

Work-Based Learning (WBL) connects learners with employers to prepare them for success in an ever-changing workplace. WBL is a planned program of meaningful experiences related to the career interests of learners that enables them to acquire knowledge and skills in a real or simulated work setting. It requires strong partnerships between schools, colleges, and local employers. WBL is learning through work, not simply learning about work. Expanding high-quality WBL opportunities for students is one of Nebraska's CTE strategic priorities and is a program quality accountability indicator. Nebraska CTE affirms WBL as a critical component of career development. Throughout the State Model Programs of Study, courses where WBL is embedded into the class is noted in the course title (e.g., "Business Management Work-Based Learning Experience"). It is also signaled as an expanded learning opportunity across all programs of study.

Career And Technical Student Organizations

Career and Technical Student Organizations (CTSOs) are an extension of classroom instruction—applying classroom learning to real-world experiences. CTSOs provide opportunities for all students to develop career readiness skills through activities, competitions, and community service. Nebraska recognizes seven CTSOs aligned with the state's Programs of Study and career field areas. These include:

CAREER READINESS STANDARDS

Embedded into the State Model Programs of Study and courses are the Nebraska Career Readiness standards. These standards rest on important "practices and proficiencies" with long-standing importance in career education. These standards and related practices are not limited to formal CTE programs nor to the middle school or high school level. Rather, these standards and practices should be used over and over again with increasing complexity and relevance by students as they progress through their educational pathway. The standards themselves do not dictate curriculum, pedagogy or delivery of content. Schools and colleges may handle the teaching and assessing of these standards in many different ways.

THE CAREER READY INDIVIDUAL...

1. Applies appropriate academic and technical skills

2. Communicates effectively and appropriately

3. Contributes to employer and community success

4. Makes sense of problems and perseveres in solving them

5. Uses critical thinking

6. Demonstrates innovation and creativity

7. Models ethical leadership and effective management

8. Works productively in teams and demonstrates cultural competency

9. Utilizes technology

10. Manages personal career development

11. Attends to personal and financial well-being

BUSINESS MANAGEMENT
& ADMINISTRATION CLUSTER

Program of Study Name	Introductory Course	Intermediate Course	Capstone Course	Expanded Learning Opportunity
ACCOUNTING **(Pages 11–28)**	032300 - Introduction to Business, OR 032400 - College Introduction to Business, OR 033000 - Personal Finance, OR 033002 - Wealth Building Fundamentals	030501 - Accounting 1, AND 030502 - Accounting 2	030503 - Accounting 3, AND 030504 - Accounting 4, OR 030302 - College Principles of Accounting	320705 - Business Management Work-Based Learning Experience
ENTREPRENEURSHIP **(Pages 29–39)**	032300 - Introduction to Business, OR 032400 - College Introduction to Business, OR 038100 - Marketing	030501 - Accounting 1, OR 038101 - Marketing Management	032370 - Entrepreneurship, OR 032600 - College Introduction to Entrepreneurship	320705 - Business Management Work-Based Learning Experience
MANAGEMENT **(Pages 40–49)**	032300 - Introduction to Business, OR 032400 - College Introduction to Business	038101 - Marketing Management, OR 030900 - Business Law	032802 - Management & Leadership	320705 - Business Management Work-Based Learning Experience

FINANCE CLUSTER

Program of Study Name	Introductory Course	Intermediate Course	Capstone Course	Expanded Learning Opportunity
FINANCE **(Pages 50–63)**	032300 - Introduction to Business, OR 032400 - College Introduction to Business, OR 033000 - Personal Finance, OR 033002 - Wealth Building Fundamentals	030501 - Accounting 1	038501 - AP Microeconomics, OR 038503 - College Microeconomics, OR 038500 - AP Macroeconomics, OR 038502 - College Macroeconomics, OR 111700 - Statistics/ Probability, OR 031800 - Economics, OR 151000 - High School Economics	320708 - Finance Work-Based Learning Experience

MARKETING CLUSTER

Program of Study Name	Introductory Course	Intermediate Course	Capstone Course	Expanded Learning Opportunity
MARKETING **(Pages 64–69)**	038100 - Marketing	038101 - Marketing Management	038200 - Advanced Marketing, OR 038201 - College Principles of Marketing	320716 - Marketing Work-Based Learning Experience

HOSPITALITY & TOURISM CLUSTER

Program of Study Name	Introductory Course	Intermediate Course	Capstone Course	Expanded Learning Opportunity
CULINARY ARTS & EVENT PLANNING **(Pages 70–81)**	090107 - Fundamentals of Nutrition & Culinary Essentials (HSE)	370021 - Culinary Skills 1, OR 370030 - ProStart 1	370022 - Culinary Skills 2, OR 370031 - ProStart 2, OR 370023 - Baking & Pastry, OR 038303 - Event Management with Work-Based Learning Experience	320711- Hospitality & Tourism Work-Based Learning Experience, OR 032370 - Entrepreneurship, OR 032600 - College Introduction to Entrepreneurship, OR
HOSPITALITY & EVENT PLANNING **(Pages 82–92)**	038301 - Introduction to Hospitality & Event Planning	038101- Marketing Management, OR 038302 - Travel & Tourism	032370 - Entrepreneurship, OR 038303 - Event Management with Work-Based Learning Experience	320711 - Hospitality & Tourism Work-Based Learning Experience

INTRODUCTION TO BUSINESS

COURSE DESCRIPTION

This course is designed to introduce students to the Business, Marketing, and Management Career Field, which focuses on formation and structure, economics, management, marketing, financial management, and operations. Career opportunities and technology will also be used and discussed.

STANDARDS AND INDICATORS:

BMM.HS.16.1 Analyze the formation and structure of a business.

- BMM.HS.16.1.a Explain the role of business in society.
- BMM.HS.16.1.b Explain types of business ownership.
- BMM.HS.16.1.c Describe the two basic types of business profit structures (i.e. profit and not for profit).
- BMM.HS.16.1.d Examine the opportunities and risks of entrepreneurship.

BMM.HS.16.2 Differentiate economic systems in order to recognize the environments in which businesses function.

- BMM.HS.16.2.a Compare and contrast economic goods and services.
- BMM.HS.16.2.b Analyze economic indicators and how they affect the business cycle.
- BMM.HS.16.2.c Explain the principles of supply and demand and pricing.
- BMM.HS.16.2.d Compare and contrast the basic features of economic systems.
- BMM.HS.16.2.e Identify factors that impact a business' profit and risk.

INTRODUCTION TO BUSINESS (cont.)

BMM.HS.16.3 Interpret business profitability, sustainability, and the necessary dependencies upon leadership, management, staff, and community.

BMM.HS.16.3.a Analyze the management functions within the business environment (e.g. planning, organizing, leading, controlling).

BMM.HS.16.3.b Differentiate between leading and managing.

BMM.HS.16.3.c Identify the structural and economic impact of human resource management within a business.

BMM.HS.16.3.d Evaluate how organizational culture impacts business and retaining quality employees.

BMM.HS.16.3.e Identify and apply the use of software, tools, and techniques that impact business productivity.

BMM.HS.16.3.f Assess the ethical dilemmas that arise between business decisions and social responsibility.

BMM.HS.16.4 Identify the fundamental strategies of marketing and its role within an organization.

BMM.HS.16.4.a Describe marketing and its relevance in a global economy.

BMM.HS.16.4.b Analyze and explain the elements of the marketing mix and their impact on business.

BMM.HS.16.5 Demonstrate finance management and decision making through the use of accounting principles in business.

BMM.HS.16.5.a Explain and provide examples of accounting concepts and financial records used by businesses.

BMM.HS.16.5.b Explain the role of finance in business and how it affects decision-making.

INTRODUCTION TO BUSINESS (cont.)

BMM.HS.16.6 Evaluate and describe the functions of business operations.

BMM.HS.16.6.a Identify and analyze the key business processes and functions needed to bring products and services to market.

BMM.HS.16.6.b Explain the business implications of proprietary information, technology, and forms of security on profitability and sustainability.

BMM.HS.16.7 Evaluate and explore careers in the areas of business, marketing, and management.

BMM.HS.16.7.a Identify careers and organizations within a business career field.

BMM.HS.16.7.b Compare and contrast personal interests, aptitudes, information, and skills necessary for each career pathway.

BMM.HS.16.7.c Research and discuss specific verbal and nonverbal techniques for effective business communication to include cultural respect and meaning.

BMM.HS.16.7.d Conduct a job market search and devise a career plan that reflects business career interests, pathways, and postsecondary options.

PERSONAL FINANCE

COURSE DESCRIPTION

The goal of Personal Finance is to help students become financially responsible, conscientious members of society. To reach that end, this course develops student understanding and decision-making skills in such areas as income, money management, budgeting, financial goal attainment, the wise use of credit, insurance, and investments.

STANDARDS AND INDICATORS:

BMM.HS.22.1 Develop and evaluate a plan to earn an income and manage finances to achieve personal goals.

BMM.HS.22.1.a Identify various forms of income and analyze the career clusters to explore how career choice, level of education, geographical location, type of industry, skill level, and work ethic affect income and personal goal attainment.

BMM.HS.22.1.b Analyze the impact of sociological, economic, and technological changes on the future job outlook and potential to earn income.

BMM.HS.22.1.c Interpret a pay stub to calculate gross and net pay.

BMM.HS.22.1.d Evaluate the impact of taxes on personal financial planning.

BMM.HS.22.1.e Describe information needed and required forms relevant to the completion of state and federal income tax forms (e.g., W-4, W-2, 1040).

BMM.HS.22.1.f Develop and evaluate a personal budget based on income, employee benefits and incentives, savings and investment goals, and retirement contributions and analyze the life cycle of net worth.

BMM.HS.22.2 Examine budgeting, savings, and investment strategies based on individual preferences and circumstances to achieve financial goals.

BMM.HS.22.2.a Compare and contrast saving and investing strategies that consider risk, return, and building wealth.

BMM.HS.22.2.b Determine factors that influence decisions to save.

BMM.HS.22.2.c Create short- and long-term financial goals for a personal budget.

PERSONAL FINANCE (cont.)

BMM.HS.22.2.d Analyze the power of compound interest and the importance of starting early in implementing a plan of saving.

BMM.HS.22.2.e Examine the concept of time, value of money, and rates of return that impact monetary decisions.

BMM.HS.22.2.f Investigate opportunities to participate in employer-sponsored retirement plans (e.g., IRA, 401K, Roth IRA).

BMM.HS.22.3 Compare and evaluate the products and services financial institutions provide.

BMM.HS.22.3.a Describe and explain the use of different forms of financial exchange (e.g., cash, credit, debit, electronic funds transfer, and other emerging payment forms, etc.) from a local, national, and global consumer perspective.

BMM.HS.22.3.b Explain legal and ethical responsibilities associated with financial exchanges.

BMM.HS.22.3.c Identify the structure and functions of the Federal Reserve System and how it facilitates the functions of money.

BMM.HS.22.3.d Distinguish between the various types of financial institutions and the basic products and services provided and evaluate each for related costs and fees.

BMM.HS.22.3.e Compare and contrast types of checking and savings accounts and the forms of financial exchange.

BMM.HS.22.3.f Analyze privacy and security issues associated with financial exchanges (e.g. cash transfers, electronic payments, mobile payments, online and traditional banking, etc.)

BMM.HS.22.4 Analyze factors that affect the choice of credit, the cost of credit, maintaining credit, and the legal aspects of using credit for personal goals

BMM.HS.22.4.a Identify the C's of creditworthiness (e.g., collateral, character, capacity, conditions).

BMM.HS.22.4.b Evaluate the opportunity cost for each financial decision involving credit (e.g., credit cards, auto loans, college loans).

BMM.HS.22.4.c Compare and contrast the various aspects of a decision to use credit (e.g., APR, grace period, incentive buying, methods of calculating interest, and fees).

PERSONAL FINANCE (cont.)

BMM.HS.22.4.d Research the rights and responsibilities of consumers according to credit legislation (e.g., truth-in-lending, fair credit reporting, equal credit opportunity, fair debt collection).

BMM.HS.22.4.e Explain the importance of credit ratings and credit scores and the effect on an individual's credit report, cost of credit, and future use of credit.

BMM.HS.22.4.f Investigate methods to resolve credit discrepancies and minimize the danger and ramifications of identity theft.

BMM.HS.22.5 Apply a decision-making model to maximize consumer satisfaction when buying goods and services.

BMM.HS.22.5.a Identify and use reliable consumer resources to collect information for making buying decisions about durable and nondurable goods.

BMM.HS.22.5.b Identify consumer rights laws and explain how they protect consumer rights.

BMM.HS.22.5.c Develop comparison shopping practices and apply them to purchasing decisions.

BMM.HS.22.5.d Compare the costs and benefits of purchasing, leasing, and renting (e.g., vehicle, tools, furniture, and housing).

BMM.HS.22.5.e Research the types and use of consumer assistance services and advocacy groups provided to address consumer rights and responsibilities (e.g., government, the Better Business Bureau, and manufacturers).

BMM.HS.22.5.f Describe the role of supply and demand on the availability and price of goods and services in the regional, national, and international marketplace.

BMM.HS.22.5.g Examine the impact of advertising and marketing on consumer demand and decision making in the regional, national, and international marketplace.

BMM.HS.22.6 Analyze choices available to consumers for protection against risk and financial loss.

BMM.HS.22.6.a Define and utilize the terms, concepts, and practices instrumental to varied forms of insurance (e.g. deductible, premium, peril, risk, etc.).

BMM.HS.22.6.b Compare risk management strategies (e.g., retention, avoidance, reduction, transfer).

PERSONAL FINANCE (cont.)

BMM.HS.22.6.c	Explain how one's mindset, habits, behaviors, and choices affect the cost of insurance and identify ways consumers can reduce this cost (e.g. smokers are charged more for health insurance and quitting smoking could reduce that cost).
BMM.HS.22.6.d	Compare and contrast types of insurance associated with different risks (e.g., auto mobile, personal and professional liability, home, renters, health, life, long-term care, disability).
BMM.HS.22.6.e	Develop a plan for insurance coverage taking into account coverage, premium costs, willingness to take risks, income, age, and socioeconomic status.
BMM.HS.22.6.f	Explain how retirement planning and estate planning are risk-management strategies.

BMM.HS.22.7 Analyze choices and resources available for financing postsecondary education.

BMM.HS.22.7.a	Describe the multiple pathways to postsecondary education and career preparedness and analyze the costs and benefits associated with each choice.
BMM.HS.22.7.b	Identify the purpose of the Free Application for Federal Student Aid (FAFSA) to determine eligibility for grants, scholarships, and loans and the essential information.
BMM.HS.22.7.c	Evaluate the costs and benefits of postsecondary education funding and any repayment requirements (e.g. NEST 529 college saving plan, scholarships, grants, federal and private loans, work-study, etc.).
BMM.HS.22.7.d	Explore the options for borrowers struggling to make payments and the consequences of failure to repay student loans.
BMM.HS.22.7.e	Correlate salary potential to the education requirements of different careers by identifying strategies to reduce student loan debt.

WEALTH BUILDING FUNDAMENTALS

COURSE DESCRIPTION

This course is designed to provide knowledge of personal financial management. Students learn to manage their resources to make sound personal financial decisions, interpret data to develop short- and long-term budgetary plans, and develop product knowledge related to financial planning. Students will develop a financial plan that includes savings, investing, credit management, risk management, and retirement.

STANDARDS AND INDICATORS:

BMM.HS.24.1 Identify and develop essential financial and personal attributes that contribute to a successful income-producing career.

BMM.HS.24.1.a Distinguish between various forms of income and explain how it can be obtained and accumulated.

BMM.HS.24.1.b Connect factors that affect income as part of the career decision-making process and potential outcomes.

BMM.HS.24.2 Compare strategies used to maintain, monitor, control, and accurately plan the use of financial resources.

BMM.HS.24.2.a Prioritize financial needs and goals to determine strategic financial strategy decisions.

BMM.HS.24.2.b Create a plan for financial management based upon personal goals.

BMM.HS.24.3 Evaluate strategies used to establish, build, maintain, monitor, control, and use credit for personal and financial goals.

BMM.HS.24.3.a Estimate and evaluate the opportunity cost for each financial decision involving credit.

BMM.HS.24.3.b Identify applicable strategies to establish and maintain a good credit rating for beneficial credit use at all stages of life and financial capacity.

BMM.HS.24.3.c Summarize the loan application process and explain how each part is used to determine the creditworthiness of the applicant.

BMM.HS.24.3.d Evaluate credit laws and regulations.

WEALTH BUILDING FUNDAMENTALS (cont.)

BMM.HS.24.4 Apply a decision-making model to maximize consumer satisfaction when buying goods and services.

BMM.HS.24.4.a Distinguish between income and wealth.

BMM.HS.24.4.b Evaluate the need for saving and investing to ensure financial well-being and wealth building.

BMM.HS.24.4.c Evaluate saving and investment options and criteria.

BMM.HS.24.5 Compare and contrast the economic advantages and disadvantages of real estate as an investment tool.

BMM.HS.24.5.a Identify the advantages and disadvantages of buying versus renting a home.

BMM.HS.24.5.b Identify potential barriers to purchasing real estate and describe how to mitigate or avoid them.

BMM.HS.24.5.c Explain the risks and rewards of investing in income-producing real estate (e.g., residential, agricultural, commercial).

BMM.HS.24.6 Assess risks in life and how to protect against the consequences of risk.

BMM.HS.24.6.a Identify common types of risks and basic risk management strategies.

BMM.HS.24.6.b Evaluate insurance as a risk management strategy.

BMM.HS.24.7 Investigate appropriate technology solutions to interpret, analyze, and utilize emerging trends in business finance

BMM.HS.24.7.a Apply technology or software tools as they relate to financial activities.

BMM.HS.24.7.b Understand the use of information technology in business and industry.

BMM.HS.24.7.c Analyze financial data to make decisions.

BMM.HS.24.7.d Predict potential barriers to the availability of financial technology and how to overcome them.

ACCOUNTING 1

COURSE DESCRIPTION

This one-semester course covers a service business organized as a sole proprietorship which will include accounting principles involved in the preparation and maintenance of financial records concerned with business management and operations. It is a comprehensive introduction to basic accounting including recording, summarizing, and reporting and accounting systems and controls. Students are exposed to careers in the accounting field and are given the opportunity to perform accounting applications using technology.

STANDARDS AND INDICATORS:

BMM.HS.1.1 Explain the purpose of and demonstrate the steps of the accounting cycle using generally accepted accounting principles (GAAP).

BMM.HS.1.1.a	Define accounting and related concepts to explain the purpose of the accounting system and its relationship to business.
BMM.HS.1.1.b	Analyze business transactions using a journal and describe the effect on the accounting equation.
BMM.HS.1.1.c	Apply the concepts of debits and credits through the use of T-accounts, normal account balances, and the chart of accounts.
BMM.HS.1.1.d	Evaluate changes in a fiscal period using financial statements and worksheets.
BMM.HS.1.1.e	Analyze and record transactions including adjusting, closing, and correcting entries.
BMM.HS.1.1.f	Post to the ledger and compare the relationship between journals, ledgers, and financial statements.

BMM.HS.1.2 Demonstrate the importance of cash control procedures and ethics in business.

BMM.HS.1.2.a	Define and apply cash control procedures by using documents to verify balances.
BMM.HS.1.2.b	Apply appropriate techniques to account for investments and withdrawals by owners.
BMM.HS.1.2.c	Explain a need for a code of ethics in accounting and the ethical responsibilities required of accountants.
BMM.HS.1.2.d	Demonstrate ethical decision-making skills through business scenarios.

ACCOUNTING 1 (cont.)

BMM.HS.1.3 Prepare, interpret, and analyze financial statements for a sole proprietorship.

BMM.HS.1.3.a Evaluate the impact of data used in the development of financial statements.

BMM.HS.1.3.b Prepare an income statement and balance sheet.

BMM.HS.1.3.c Assess financial statements to summarize business performance.

BMM.HS.1.4 Investigate career opportunities, career readiness skills, and technology in the field of accounting.

BMM.HS.1.4.a Research the educational requirements, certifications, and skills needed to be successful in an accounting-related career.

BMM.HS.1.4.b Describe various careers and opportunities related to accounting.

BMM.HS.1.4.c Demonstrate both verbal and nonverbal communication skills related to the workplace.

BMM.HS.1.4.d Apply analytical, critical thinking, and leadership skills to the workplace.

BMM.HS.1.4.e Demonstrate the ability to work as a team by setting goals and accomplishing individual and team tasks on time.

BMM.HS.1.4.f Understand the use of information technology in the accounting industry

ACCOUNTING 2

COURSE DESCRIPTION

This one-semester course will develop accounting skills that build upon those acquired in Accounting I. Students will continue to apply concepts of double-entry accounting systems related to a merchandising business organized as a corporation. Additional accounting skills will be developed, including preparing and journalizing payroll records, calculating, recording, and adjusting entries, and interpreting financial information. Students are given the opportunity to explore career-related skills and perform accounting applications using technology. Accounting 1 is a prerequisite to this course.

STANDARDS AND INDICATORS:

BMM.HS.2.1 Explain the purpose and demonstrate the steps of the accounting cycle for a corporation using generally accepted accounting principles (GAAP)

BMM.HS.2.1.a	Define accounting and related concepts to explain the purpose of the accounting system and its relationship to business.
BMM.HS.2.1.b	Analyze business transactions using special journals and describe the effect on the accounting equation.
BMM.HS.2.1.c	Prepare a worksheet and financial statements to evaluate changes in a fiscal period.
BMM.HS.2.1.d	Analyze and record transactions including adjusting, closing, and correcting entries.
BMM.HS.2.1.e	Prepare posts to the ledger and compare the relationship between journals, ledgers, and financial statements.
BMM.HS.2.1.f	Compare the different forms of business ownership and the advantages and disadvantages of each form.

BMM.HS.2.2 Prepare and maintain payroll records and business-tax-related records.

BMM.HS.2.2.a	Prepare and maintain payroll records and tax forms.
BMM.HS.2.2.b	Calculate various forms of earning (e.g., hourly, salary, commission).
BMM.HS.2.2.c	Calculate employee and employer tax deductions (e.g., Social Security, Medicare, state income tax, federal income tax, unemployment).
BMM.HS.2.2.d	Differentiate between taxation at the personal and business levels.

ACCOUNTING 2 (cont.)

BMM.HS.2.3 Prepare, interpret, and analyze financial statements for a corporation.

BMM.HS.2.3.a	Prepare an income statement, statement of stockholders' equity, and balance sheet.
BMM.HS.2.3.b	Prepare and understand specialized financial statements for controlling and subsidiary accounts.
BMM.HS.2.3.c	Analyze the effect of the capital stock, retained earnings, and dividend accounts for a corporation.
BMM.HS.2.3.d	Evaluate the impact of data and assess financial statements including ratios to summarize business performance.

BMM.HS.2.4 Demonstrate the skills and competencies needed to be successful and ethical in an accounting-related career.

BMM.HS.2.4.a	Demonstrate both verbal and nonverbal communication skills related to the workplace.
BMM.HS.2.4.b	Apply analytical, critical thinking, and leadership skills to the workplace.
BMM.HS.2.4.c	Demonstrate the ability to work in a team by setting goals and accomplishing individual and team tasks on time.
BMM.HS.2.4.d	Explain a need for a code of ethics in accounting and the ethical responsibilities required of accountants.
BMM.HS.2.4.e	Demonstrate ethical decision-making skills through business scenarios.
BMM.HS.2.4.f	Understand the use of information technology in the accounting industry.

ACCOUNTING 3

COURSE DESCRIPTION

This is a one-semester course that includes accounting for a merchandising business, adjustments in inventory control systems, and other general accounting adjustments. Accounting 1 and Accounting 2 are prerequisites to this course.

STANDARDS AND INDICATORS:

BMM.HS.3.1 Explain the purpose of and demonstrate the steps of the accounting cycle of a merchandising business using generally accepted accounting principles (GAAP). This may be completed with a departmentalized business.

- BMM.HS.3.1.a Define and identify accounting terms, concepts, and practices related to financial reporting for a merchandising business.
- BMM.HS.3.1.b Demonstrate journaling and post business transactions related to cash receipts, cash payments, sales, and purchases.
- BMM.HS.3.1.c Calculate and record employee and employer payroll taxes.
- BMM.HS.3.1.d Prepare and analyze financial statements for a merchandising business.
- BMM.HS.3.1.e Complete end-of-period work for a merchandising business.
- BMM.HS.3.1.f Perform ratio analysis of financial statements.

BMM.HS.3.2 Apply accounting principles to plan, count, and cost inventory.

- BMM.HS.3.2.a Describe the differences between the periodic and perpetual inventory systems and record business transactions using both methods.
- BMM.HS.3.2.b Define and calculate cost of goods sold and ending inventory using the LIFO, FIFO, and weighted average inventory costing methods.
- BMM.HS.3.2.c Calculate inventory turnover ratio.

ACCOUNTING 3(cont.)

BMM.HS.3.3 Plan, record, and apply general accounting adjustments.

BMM.HS.3.3.a	Define and identify accounting terms, concepts, and practices related to the adjusting entry process.
BMM.HS.3.3.b	Calculate and record adjustments for estimated uncollectible accounts using appropriate methods.
BMM.HS.3.3.c	Journalize the purchase and disposal of plant assets.
BMM.HS.3.3.d	Calculate and record depreciation using various methods.
BMM.HS.3.3.e	Demonstrate journaling transactions and adjustments for notes payable, prepaid expenses, and accrued expenses..
BMM.HS.3.3.f	Demonstrate journaling transactions and adjustments for notes receivable, unearned revenue, and accrued revenue.

BMM.HS.3.4 Explain and demonstrate the skills and competencies needed to be successful and ethical in an accounting-related career.

BMM.HS.3.4.a	Research various careers and opportunities related to accounting.
BMM.HS.3.4.b	Demonstrate both verbal and nonverbal communication skills related to the workplace.
BMM.HS.3.4.c	Apply analytical, critical thinking, and leadership skills to the workplace.
BMM.HS.3.4.d	Demonstrate the ability to work in a team by setting goals and accomplishing individual and team tasks on time.
BMM.HS.3.4.e	Demonstrate ethical decision-making skills through business scenarios.
BMM.HS.3.4.f	Assess the use of information technology in the accounting industry.

ACCOUNTING 4

COURSE DESCRIPTION

This is a one-semester course that evaluates financial planning and decision-making for corporate and managerial accounting and other types of business. Accounting 1, Accounting 2, and Accounting 3 are prerequisites to this course.

STANDARDS AND INDICATORS:

BMM.HS.4.1 Apply accounting concepts and demonstrate the steps of the accounting cycle for a corporation using generally accepted accounting principles (GAAP).

BMM.HS.4.1.a	Define and identify accounting terms, concepts, and practices related to corporate accounting including acquiring additional capital and financial analysis.
BMM.HS.4.1.b	Interpret transactions related to a corporation and its stocks and dividends and how to journalize.
BMM.HS.4.1.c	Calculate and journalize transactions related to acquiring additional capital (e.g., stock, treasury stock, and bonds payable).
BMM.HS.4.1.d	Prepare, analyze, and interpret corporate financial statements.
BMM.HS.4.1.e	Complete end-of-period procedures for a corporation.
BMM.HS.4.1.f	Perform ratio analysis of financial statements.

BMM.HS.4.2 Apply management accounting concepts.

BMM.HS.4.2.a	Define and identify accounting terms, concepts, and practices related to budgetary planning and control, cost-volume-profit analysis, present-value analysis, and financial statement analysis.
BMM.HS.4.2.b	Prepare a budget, budgeted income statement, and performance report.
BMM.HS.4.2.c	Determine break-even point.
BMM.HS.4.2.d	Perform calculations related to cost-volume-profit and present-value analysis.
BMM.HS.4.2.e	Analyze the long-term financial strength of a business through ratio analysis of financial statements.

ACCOUNTING 4 (cont.)

BMM.HS.4.3 Identify accounting principles for other types of businesses.

BMM.HS.4.3.a	Define and identify accounting terms, concepts, and practices related to cost accounting and financial reporting for a manufacturing business.
BMM.HS.4.3.b	Define and identify accounting terms, concepts, and practices related to accounting for a partnership and not-for-profit organizations.
BMM.HS.4.3.c	Differentiate between the types, purposes, and characteristics of not-for-profit organizations (e.g., governmental, religious, charitable, educational).

BMM.HS.4.4 Assess the financial strength of a business.

BMM.HS.4.4.a	Define and identify accounting terms, concepts, and practices related to financial statements and analysis
BMM.HS.4.4.b	Explain how financial statements are used to analyze a business.
BMM.HS.4.4.c	Perform a horizontal and vertical analysis of financial statements.
BMM.HS.4.4.d	Compute the financial ratios to evaluate a business (e.g., profitability, liquidity, solvency, financial condition, and operating results).

BMM.HS.4.5 Apply accounting practices related to a statement of cash flows.

BMM.HS.4.5.a	Define and identify accounting terms, concepts, and practices related to a statement of cash flow.
BMM.HS.4.5.b	Distinguish among operating, investing, and financing cash flows..
BMM.HS.4.5.c	Differentiate between the indirect and direct method of the Statement of Cash Flows.
BMM.HS.4.5.d	Prepare the statement of cash flows by the indirect method.
BMM.HS.4.5.e	Use the cash flow to evaluate business performance.

ACCOUNTING 4 (cont.)

BMM.HS.4.6 Explain and demonstrate the career readiness skills and competencies needed to be successful and ethical in an accounting-related career

BMM.HS.4.6.a	Demonstrate both verbal and nonverbal communication skills related to the workplace.
BMM.HS.4.6.b	Apply analytical, critical thinking, and leadership skills to the workplace.
BMM.HS.4.6.c	Demonstrate the ability to work in a team by setting goals and accomplishing individual and team tasks on time.
BMM.HS.4.6.d	Demonstrate ethical decision-making skills through business scenarios.
BMM.HS.4.6.e	Understand the use of information technology in the accounting industry.

INTRODUCTION TO BUSINESS

COURSE DESCRIPTION

This course is designed to introduce students to the Business, Marketing, and Management Career Field, which focuses on formation and structure, economics, management, marketing, financial management, and operations. Career opportunities and technology will also be used and discussed.

STANDARDS AND INDICATORS:

BMM.HS.16.1 Analyze the formation and structure of a business.

BMM.HS.16.1.a	Explain the role of business in society.
BMM.HS.16.1.b	Explain types of business ownership.
BMM.HS.16.1.c	Describe the two basic types of business profit structures (i.e. profit and not for profit).
BMM.HS.16.1.d	Examine the opportunities and risks of entrepreneurship.

BMM.HS.16.2 Differentiate economic systems in order to recognize the environments in which businesses function.

BMM.HS.16.2.a	Compare and contrast economic goods and services.
BMM.HS.16.2.b	Analyze economic indicators and how they affect the business cycle.
BMM.HS.16.2.c	Explain the principles of supply and demand and pricing.
BMM.HS.16.2.d	Compare and contrast the basic features of economic systems.
BMM.HS.16.2.e	Identify factors that impact a business' profit and risk.

INTRODUCTION TO BUSINESS (cont.)

BMM.HS.16.3 Interpret business profitability, sustainability, and the necessary dependencies upon leadership, management, staff, and community.

BMM.HS.16.3.a Analyze the management functions within the business environment (e.g. planning, organizing, leading, controlling).

BMM.HS.16.3.b Differentiate between leading and managing.

BMM.HS.16.3.c Identify the structural and economic impact of human resource management within a business.

BMM.HS.16.3.d Evaluate how organizational culture impacts business and retaining quality employees.

BMM.HS.16.3.e Identify and apply the use of software, tools, and techniques that impact business productivity.

BMM.HS.16.3.f Assess the ethical dilemmas that arise between business decisions and social responsibility.

BMM.HS.16.4 Identify the fundamental strategies of marketing and its role within an organization.

BMM.HS.16.4.a Describe marketing and its relevance in a global economy.

BMM.HS.16.4.b Analyze and explain the elements of the marketing mix and their impact on business.

BMM.HS.16.5 Demonstrate finance management and decision making through the use of accounting principles in business.

BMM.HS.16.5.a Explain and provide examples of accounting concepts and financial records used by businesses.

BMM.HS.16.5.b Explain the role of finance in business and how it affects decision-making.

INTRODUCTION TO BUSINESS (cont.)

BMM.HS.16.6 Evaluate and describe the functions of business operations.

BMM.HS.16.6.a Identify and analyze the key business processes and functions needed to bring products and services to market.

BMM.HS.16.6.b Explain the business implications of proprietary information, technology, and forms of security on profitability and sustainability.

BMM.HS.16.7 Evaluate and explore careers in the areas of business, marketing, and management.

BMM.HS.16.7.a Identify careers and organizations within a business career field.

BMM.HS.16.7.b Compare and contrast personal interests, aptitudes, information, and skills necessary for each career pathway.

BMM.HS.16.7.c Research and discuss specific verbal and nonverbal techniques for effective business communication to include cultural respect and meaning.

BMM.HS.16.7.d Conduct a job market search and devise a career plan that reflects business career interests, pathways, and postsecondary options.

MARKETING

COURSE DESCRIPTION

This course develops basic student understanding and skills in the functions of marketing. Emphasis is placed on the impact of marketing activities on the individual, business, and society. Topics include market analysis, marketing information management, target customer identification, the development of marketing-mix strategies, and an in-depth look at the selling process.

STANDARDS AND INDICATORS:

BMM.HS.19.1 Recognize the customer-oriented nature of marketing and analyze the impact of marketing activities on the individual, business, and society.

- BMM.HS.19.1.a Describe marketing functions and related activities.
- BMM.HS.19.1.b Distinguish between economic goods and services.
- BMM.HS.19.1.c Explain the principles of supply and demand.
- BMM.HS.19.1.d Determine economic utilities created by business activities.
- BMM.HS.19.1.e Explain the concept of competition.
- BMM.HS.19.1.f Identify employment opportunities in marketing.

BMM.HS.19.2 Identify marketing-information management strategies to understand its nature and scope.

- BMM.HS.19.2.a Identify the need for marketing data used to monitor marketing decision making.
- BMM.HS.19.2.b Explain the role of ethics in marketing information management.
- BMM.HS.19.2.c Discuss the nature of data mining (NF:148) (CS)
- BMM.HS.19.2.d Describe the use of technology in the marketing-information management function (IM:183) (SP)
- BMM.HS.19.2.e Describe the regulation of marketing-information management (IM:419) (SP)

MARKETING (cont.)

BMM.HS.19.3 Apply the concepts and marketing strategies utilized to determine and target a select market.

- BMM.HS.19.3.a Analyze and describe the importance of each of the components of the marketing mix.
- BMM.HS.19.3.b Explain factors that influence customer/client/business buying behavior.
- BMM.HS.19.3.c Analyze customer's rational and emotional buying motives and decisions.
- BMM.HS.19.3.d Select target market appropriate for product/business to obtain the best return on marketing investment (ROMI).
- BMM.HS.19.3.e Explain the concept of market and market identification.
- BMM.HS.19.3.f Identify strategies utilized in the elements of market segmentation.

BMM.HS.19.4 Identify the concepts and actions needed to determine client needs and wants and respond through planned, personalized communication that influences purchase decisions and enhances future business opportunities.

- BMM.HS.19.4.a Explain the nature and scope of the selling function.
- BMM.HS.19.4.b Explain the role of customer service as a component of selling relationships for building a clientele.
- BMM.HS.19.4.c Utilize sales processes and techniques to determine and satisfy customer needs.
- BMM.HS.19.4.d Acquire product knowledge to communicate product benefits and to ensure appropriateness of product for the customer.
- BMM.HS.19.4.e Explain legal and ethical considerations in selling.

ACCOUNTING 1

COURSE DESCRIPTION

This one-semester course covers a service business organized as a sole proprietorship which will include accounting principles involved in the preparation and maintenance of financial records concerned with business management and operations. It is a comprehensive introduction to basic accounting including recording, summarizing, and reporting and accounting systems and controls. Students are exposed to careers in the accounting field and are given the opportunity to perform accounting applications using technology.

STANDARDS AND INDICATORS:

BMM.HS.1.1 Explain the purpose of and demonstrate the steps of the accounting cycle using generally accepted accounting principles (GAAP).

BMM.HS.1.1.a	Define accounting and related concepts to explain the purpose of the accounting system and its relationship to business.
BMM.HS.1.1.b	Analyze business transactions using a journal and describe the effect on the accounting equation.
BMM.HS.1.1.c	Apply the concepts of debits and credits through the use of T-accounts, normal account balances, and the chart of accounts.
BMM.HS.1.1.d	Evaluate changes in a fiscal period using financial statements and worksheets.
BMM.HS.1.1.e	Analyze and record transactions including adjusting, closing, and correcting entries.
BMM.HS.1.1.f	Post to the ledger and compare the relationship between journals, ledgers, and financial statements.

BMM.HS.1.2 Demonstrate the importance of cash control procedures and ethics in business.

BMM.HS.1.2.a	Define and apply cash control procedures by using documents to verify balances.
BMM.HS.1.2.b	Apply appropriate techniques to account for investments and withdrawals by owners.
BMM.HS.1.2.c	Explain a need for a code of ethics in accounting and the ethical responsibilities required of accountants.
BMM.HS.1.2.d	Demonstrate ethical decision-making skills through business scenarios.

ACCOUNTING 1 (cont.)

BMM.HS.1.3 Prepare, interpret, and analyze financial statements for a sole proprietorship.

BMM.HS.1.3.a Evaluate the impact of data used in the development of financial statements.

BMM.HS.1.3.b Prepare an income statement and balance sheet.

BMM.HS.1.3.c Assess financial statements to summarize business performance.

BMM.HS.1.4 Investigate career opportunities, career readiness skills, and technology in the field of accounting.

BMM.HS.1.4.a Research the educational requirements, certifications, and skills needed to be successful in an accounting-related career.

BMM.HS.1.4.b Describe various careers and opportunities related to accounting.

BMM.HS.1.4.c Demonstrate both verbal and nonverbal communication skills related to the workplace.

BMM.HS.1.4.d Apply analytical, critical thinking, and leadership skills to the workplace.

BMM.HS.1.4.e Demonstrate the ability to work as a team by setting goals and accomplishing individual and team tasks on time.

BMM.HS.1.4.f Understand the use of information technology in the accounting industry

MARKETING MANAGEMENT

Course Description

Marketing Management furthers student understanding and skills of the marketing functions and strategies including pricing, product/service management, channel management, promotion, and marketing-information management.

Standards and Indicators:

BMM.HS.20.1 Analyze the concepts and strategies utilized in determining and adjusting prices to maximize return and meet customers' perceptions of value.

- BMM.HS.20.1.a Explain the nature and scope of the pricing function.
- BMM.HS.20.1.b Explain factors affecting pricing decisions.
- BMM.HS.20.1.c Describe the ethical and legal considerations for pricing.
- BMM.HS.20.1.d Explain the use of technology in the pricing function.

BMM.HS.20.2 AIdentify and assess the concepts and processes needed to obtain, develop, maintain, and/or improve a product or service mix in response to market opportunities and to build the brand for the organization.

- BMM.HS.20.2.a Identify product/service management concepts to understand its nature and scope.
- BMM.HS.20.2.b Generate product ideas to contribute to ongoing business success.
- BMM.HS.20.2.c Apply quality assurances to enhance product/service offerings (i.e. customer service, warranties, guarantees, etc).
- BMM.HS.20.2.d Employ product-mix strategies to meet customer expectations.
- BMM.HS.20.2.e Determine ways to position a company to acquire a desired business image.
- BMM.HS.20.2.f Determine ways to position products/services to acquire desired business image.

MARKETING MANAGEMENT (cont.)

BMM.HS.20.3 Assess channel management strategies and its role in marketing.

- BMM.HS.20.3.a Explain the nature and scope of channel management.
- BMM.HS.20.3.b Explain the nature of channels of distribution.
- BMM.HS.20.3.c Describe the use of technology in the channel management function.
- BMM.HS.20.3.d Describe the ethical and legal considerations for channel management.

BMM.HS.20.4 Investigate the nature and scope of promotion.

- BMM.HS.20.4.a Explain the role of promotion as a marketing function.
- BMM.HS.20.4.b Examine the types of promotion (i.e., institutional, product).
- BMM.HS.20.4.c Identify the elements of the promotional mix.
- BMM.HS.20.4.d Demonstrate an understanding of promotional channels used to communicate with targeted audiences.
- BMM.HS.20.4.e Identify and describe the types of advertising media.

BMM.HS.20.5 Identify marketing-information management strategies and analyze the role of marketing research in decision-making.

- BMM.HS.20.5.a Describe the need for marketing data.
- BMM.HS.20.5.b Describe options businesses use to obtain marketing research data (i.e., primary and secondary research).
- BMM.HS.20.5.c Describe data-collection methods (e.g., observations, mail, diaries, telephone, Internet, discussion groups, interviews, scanners, tracking tools).
- BMM.HS.20.5.d Analyze data monitored for marketing decision making.
- BMM.HS.20.5.e Describe the regulations and ethical implications of marketing-information management.

ENTREPRENEURSHIP

COURSE DESCRIPTION

Entrepreneurship is a course with emphasis on the evaluation of the business skills and commitment necessary to successfully operate an entrepreneurial venture and review the challenges and rewards of entrepreneurship. The role of entrepreneurial businesses in the United States and the impact on the national and global economy will be explored.

STANDARDS AND INDICATORS:

BMM.HS.13.1 Identify characteristics and skills of entrepreneurs.

BMM.HS.13.1.a	Analyze personal strengths, skills, and talents necessary to be an entrepreneur.
BMM.HS.13.1.b	Identify responsible behavior, attitude, and leadership ability.
BMM.HS.13.1.c	Demonstrate problem-solving skills.
BMM.HS.13.1.d	Describe the history and development of successful and non-successful entrepreneurial ventures.
BMM.HS.13.1.e	Explore career opportunities in entrepreneurship.

BMM.HS.13.2 Evaluate business ownership as related to entrepreneurship.

BMM.HS.13.2.a	Identify and compare advantages and disadvantages of various forms of business ownership.
BMM.HS.13.2.b	Explain the legal and ethical issues affecting businesses.
BMM.HS.13.2.c	Analyze the advantages and disadvantages of methods of entering an entrepreneurial venture.

ENTREPRENEURSHIP (cont.)

BMM.HS.13.3 Analyze the management, financial, marketing, and legal skills necessary to successfully operate and grow an entrepreneurial venture.

BMM.HS.13.3.a	Describe the importance of strategic management to a small entrepreneurial business.
BMM.HS.13.3.b	Develop vision, mission, goals, objectives, and policies for an entrepreneurial venture.
BMM.HS.13.3.c	Explain the importance of effective financial management in developing, growing, and sustaining an entrepreneurial venture.
BMM.HS.13.3.d	Develop a marketing plan and strategies to position the product and/or service in the target market.
BMM.HS.13.3.e	Identify the legal documents and financial records for business operations.
BMM.HS.13.3.f	Evaluate the venture idea utilizing the components of a business plan.

BMM.HS.13.4 Analyze the role of entrepreneurship in the global economy.

BMM.HS.13.4.a	Identify entrepreneurial venture opportunities in international trade.
BMM.HS.13.4.b	Analyze global issues and trends for entrepreneurial ventures.
BMM.HS.13.4.c	Determine the impact of cultural and social requirements on international trade.

INTRODUCTION TO BUSINESS

COURSE DESCRIPTION

This course is designed to introduce students to the Business, Marketing, and Management Career Field, which focuses on formation and structure, economics, management, marketing, financial management, and operations. Career opportunities and technology will also be used and discussed.

STANDARDS AND INDICATORS:

BMM.HS.16.1 Analyze the formation and structure of a business.

- BMM.HS.16.1.a Explain the role of business in society.
- BMM.HS.16.1.b Explain types of business ownership.
- BMM.HS.16.1.c Describe the two basic types of business profit structures (i.e. profit and not for profit).
- BMM.HS.16.1.d Examine the opportunities and risks of entrepreneurship.

BMM.HS.16.2 Differentiate economic systems in order to recognize the environments in which businesses function.

- BMM.HS.16.2.a Compare and contrast economic goods and services.
- BMM.HS.16.2.b Analyze economic indicators and how they affect the business cycle.
- BMM.HS.16.2.c Explain the principles of supply and demand and pricing.
- BMM.HS.16.2.d Compare and contrast the basic features of economic systems.
- BMM.HS.16.2.e Identify factors that impact a business' profit and risk.

INTRODUCTION TO BUSINESS (cont.)

BMM.HS.16.3 Interpret business profitability, sustainability, and the necessary dependencies upon leadership, management, staff, and community.

- BMM.HS.16.3.a Analyze the management functions within the business environment (e.g. planning, organizing, leading, controlling).
- BMM.HS.16.3.b Differentiate between leading and managing.
- BMM.HS.16.3.c Identify the structural and economic impact of human resource management within a business.
- BMM.HS.16.3.d Evaluate how organizational culture impacts business and retaining quality employees.
- BMM.HS.16.3.e Identify and apply the use of software, tools, and techniques that impact business productivity.
- BMM.HS.16.3.f Assess the ethical dilemmas that arise between business decisions and social responsibility.

BMM.HS.16.4 Identify the fundamental strategies of marketing and its role within an organization.

- BMM.HS.16.4.a Describe marketing and its relevance in a global economy.
- BMM.HS.16.4.b Analyze and explain the elements of the marketing mix and their impact on business.

BMM.HS.16.5 Demonstrate finance management and decision making through the use of accounting principles in business.

- BMM.HS.16.5.a Explain and provide examples of accounting concepts and financial records used by businesses.
- BMM.HS.16.5.b Explain the role of finance in business and how it affects decision-making.

INTRODUCTION TO BUSINESS (cont.)

BMM.HS.16.6 Evaluate and describe the functions of business operations.

BMM.HS.16.6.a Identify and analyze the key business processes and functions needed to bring products and services to market.

BMM.HS.16.6.b Explain the business implications of proprietary information, technology, and forms of security on profitability and sustainability.

BMM.HS.16.7 Evaluate and explore careers in the areas of business, marketing, and management.

BMM.HS.16.7.a Identify careers and organizations within a business career field.

BMM.HS.16.7.b Compare and contrast personal interests, aptitudes, information, and skills necessary for each career pathway.

BMM.HS.16.7.c Research and discuss specific verbal and nonverbal techniques for effective business communication to include cultural respect and meaning.

BMM.HS.16.7.d Conduct a job market search and devise a career plan that reflects business career interests, pathways, and postsecondary options.

MARKETING MANAGEMENT

Course Description

Marketing Management furthers student understanding and skills of the marketing functions and strategies including pricing, product/service management, channel management, promotion, and marketing-information management.

Standards and Indicators:

BMM.HS.20.1 Analyze the concepts and strategies utilized in determining and adjusting prices to maximize return and meet customers' perceptions of value.

- BMM.HS.20.1.a Explain the nature and scope of the pricing function.
- BMM.HS.20.1.b Explain factors affecting pricing decisions.
- BMM.HS.20.1.c Describe the ethical and legal considerations for pricing.
- BMM.HS.20.1.d Explain the use of technology in the pricing function.

BMM.HS.20.2 AIdentify and assess the concepts and processes needed to obtain, develop, maintain, and/or improve a product or service mix in response to market opportunities and to build the brand for the organization.

- BMM.HS.20.2.a Identify product/service management concepts to understand its nature and scope.
- BMM.HS.20.2.b Generate product ideas to contribute to ongoing business success.
- BMM.HS.20.2.c Apply quality assurances to enhance product/service offerings (i.e. customer service, warranties, guarantees, etc).
- BMM.HS.20.2.d Employ product-mix strategies to meet customer expectations.
- BMM.HS.20.2.e Determine ways to position a company to acquire a desired business image.
- BMM.HS.20.2.f Determine ways to position products/services to acquire desired business image.

MARKETING MANAGEMENT (cont.)

BMM.HS.20.3 Assess channel management strategies and its role in marketing.

- BMM.HS.20.3.a Explain the nature and scope of channel management.
- BMM.HS.20.3.b Explain the nature of channels of distribution.
- BMM.HS.20.3.c Describe the use of technology in the channel management function.
- BMM.HS.20.3.d Describe the ethical and legal considerations for channel management.

BMM.HS.20.4 Investigate the nature and scope of promotion.

- BMM.HS.20.4.a Explain the role of promotion as a marketing function.
- BMM.HS.20.4.b Examine the types of promotion (i.e., institutional, product).
- BMM.HS.20.4.c Identify the elements of the promotional mix.
- BMM.HS.20.4.d Demonstrate an understanding of promotional channels used to communicate with targeted audiences.
- BMM.HS.20.4.e Identify and describe the types of advertising media.

BMM.HS.20.5 Identify marketing-information management strategies and analyze the role of marketing research in decision-making.

- BMM.HS.20.5.a Describe the need for marketing data.
- BMM.HS.20.5.b Describe options businesses use to obtain marketing research data (i.e., primary and secondary research).
- BMM.HS.20.5.c Describe data-collection methods (e.g., observations, mail, diaries, telephone, Internet, discussion groups, interviews, scanners, tracking tools).
- BMM.HS.20.5.d Analyze data monitored for marketing decision making.
- BMM.HS.20.5.e Describe the regulations and ethical implications of marketing-information management.

BUSINESS LAW

COURSE DESCRIPTION

In this course, students develop an understanding of laws and regulations that impact business. Topics included are contracts, employment law, sources of law, and the United States judicial system and legal procedures.

STANDARDS AND INDICATORS:

BMM.HS.9.1 Analyze the relationship between ethics and the law and describe sources of the law, structure of the court system, and classifications of laws.

BMM.HS.9.1.a	Describe the structure of federal and state court systems.
BMM.HS.9.1.b	Differentiate between procedural and substantive law.
BMM.HS.9.1.c	Compare and contrast civil and criminal law and their respective trial processes.
BMM.HS.9.1.d	Explain the advantages and disadvantages of negotiation, arbitration, mediation, and litigation.
BMM.HS.9.1.e	Distinguish between a tort and crime including burden of proof, penalties, and remedies.
BMM.HS.9.1.f	Describe the role of values in constructing an ethical code and a legal system.

BMM.HS.9.2 Identify the legal environment of businesses, domestic and international.

BMM.HS.9.2.a	Describe the major types of business organizations, including sole proprietorships, partnerships, corporations, and limited liability companies.
BMM.HS.9.2.b	Identify legislation and entities that regulate employment rights, working conditions and benefits, and equal opportunity in the workplace.
BMM.HS.9.2.c	Demonstrate knowledge of agency law, fiduciary duty, and responsibilities.
BMM.HS.9.2.d	Explain the relationship between national and international law.

BUSINESS LAW (cont.)

BMM.HS.9.3 Analyze the elements, concepts, and principles of contract law.

BMM.HS.9.3.a	Explain the contractual relationship and identify the elements of a legally binding contract (offer, acceptance, mutual assent, consideration, capacity).
BMM.HS.9.3.b	Identify the classifications of contracts (valid, void, voidable, unenforceable, express, implied, bilateral, unilateral, oral, and written).
BMM.HS.9.3.c	Describe breach of contract and remedies available (e.g., monetary, specific performance, liquidation) when a contract is breached.
BMM.HS.9.3.d	Identify types of contracts that must be in writing under the statute of frauds.
BMM.HS.9.3.e	Compare ways a contract can be discharged or terminated.

BMM.HS.9.4 Analyze the protections afforded consumers through consumer laws.

BMM.HS.9.4.a	Describe consumer protection and product liability laws and warranties.
BMM.HS.9.4.b	Define common, unfair, and deceptive practices.
BMM.HS.9.4.c	Identify and state the purpose of legislation that regulates consumer credit.
BMM.HS.9.4.d	Explain the legal rules that apply to personal property, real property, and intellectual property.
BMM.HS.9.4.e	Explain both the landlord and tenants rights and responsibilities.

BMM.HS.9.5 Analyze the role and importance of employment law related to the conduct of business.

BMM.HS.9.5.a	Explain the nature of the employee-employer relationship.
BMM.HS.9.5.b	Describe an employer's right to free speech in the workplace.
BMM.HS.9.5.c	Describe the elements needed in a social media policy.
BMM.HS.9.5.d	Explain the powers and operation of the Equal Employment Opportunity Commission (EEOC).

MANAGEMENT AND LEADERSHIP

Course Description

This course emphasizes the basic concepts of management and leadership within a business or organization. It addresses characteristics, organization, and operation of business as major sectors of the economy. Students will investigate management issues involved in planning, organizing, leading, and controlling an organization.

Standards and Indicators:

BMM.HS.18.1 Assess the importance of business management and the role of managers as it relates to the success of business.

- BMM.HS.18.1.a Define management and the manager's role.
- BMM.HS.18.1.b Analyze management theories and their application within a business environment.
- BMM.HS.18.1.c Compare and contrast the basic forms of business ownership.
- BMM.HS.18.1.d Analyze the organizational structure of a business.
- BMM.HS.18.1.e Explain the relationship between and among management levels.
- BMM.HS.18.1.f Explore employment opportunities in business management and administration.

BMM.HS.18.2 Analyze management functions and their implementation and integration within the business environment.

- BMM.HS.18.2.a Describe the major types of business organizations, including sole proprietorships, partnerships, corporations, and limited liability companies.
- BMM.HS.18.2.b Identify legislation and entities that regulate employment rights, working conditions and benefits, and equal opportunity in the workplace.
- BMM.HS.18.2.c Demonstrate knowledge of agency law, fiduciary duty, and responsibilities.
- BMM.HS.18.2.d Explain the relationship between national and international law.
- BMM.HS.18.2.e Analyze management's role when implementing change including planning and unforeseen issues
- BMM.HS.18.2.f Discuss the importance of the controlling function in the business environment.
- BMM.HS.18.2.g Determine alternative actions when goals are not being met.

MANAGEMENT AND LEADERSHIP (cont.)

BMM.HS.18.3 Describe human resource functions and their importance to an organization's successful operation.

- BMM.HS.18.3.a Analyze the role of ethics in human resource management.
- BMM.HS.18.3.b Explain the hiring process.
- BMM.HS.18.3.c Identify the impact of orientation, training, and performance appraisals on employees and the organization.
- BMM.HS.18.3.d Examine compensation, promotion, benefits, and incentives of employees.
- BMM.HS.18.3.e Discuss and identify the legal implications and processes relating to separation, termination, and transition.
- BMM.HS.18.3.f Evaluate alternative options to employment (e.g., outsourcing, freelancers, contract labor).

BMM.HS.18.4 Analyze financial data influenced by internal and external factors in order to make short and long term decisions.

- BMM.HS.18.4.a Interpret the data shown on financial statements (e.g., income statement, balance sheet, cash flow statement, statement of net worth).
- BMM.HS.18.4.b Explain ways to minimize and manage risk.
- BMM.HS.18.4.c Assess the short-term and long-term financial needs of an organization.

BMM.HS.18.5 Investigate the strategic role of a manager and the contributions made to the success of a business.

- BMM.HS.18.5.a Describe the process and systems implemented to monitor, plan, and control the daily operational activities.
- BMM.HS.18.5.b Identify internal/external factors that influence management decisions.
- BMM.HS.18.5.c Explain the strategic planning process within an organization.
- BMM.HS.18.5.d Understand the role and function of innovation management.

MANAGEMENT AND LEADERSHIP (cont.)

BMM.HS.18.6 Develop personal management skills (emotional intelligence) to function effectively and efficiently in a business environment.

- BMM.HS.18.6.a Analyze how managers at various levels manage their time differently.
- BMM.HS.18.6.b Identify how an effective stress reduction plan affects the efficiency of business.
- BMM.HS.18.6.c Demonstrate effective communication skills (e.g., reading, listening, writing, technology, verbal, nonverbal).
- BMM.HS.18.6.d Examine internal and external business interactions and networking to build positive relationships.

BMM.HS.18.7 Explain the concept of leadership.

- BMM.HS.18.7.a Identify and discuss characteristics of effective and ineffective leaders.
- BMM.HS.18.7.b Differentiate between leading and managing.
- BMM.HS.18.7.c Differentiate between power, authority, and leadership.
- BMM.HS.18.7.d Identify various leadership styles.
- BMM.HS.18.7.e Explain the importance of motivation in leadership.

BMM.HS.18.8 Employ leadership skills to achieve workplace objectives.

- BMM.HS.18.8.a Determine personal leadership style and the appropriate style for varying situations.
- BMM.HS.18.8.b Identify ways in which a leader demonstrates social responsibility and ethics (e.g., initiative, honesty, integrity, cultural sensitivity, empathy).
- BMM.HS.18.8.c Demonstrate conflict resolution and negotiation skills.
- BMM.HS.18.8.d Examine team building techniques to accomplish goals (e.g., consensus building, negotiation, motivation to encourage teamwork).

INTRODUCTION TO BUSINESS

COURSE DESCRIPTION

This course is designed to introduce students to the Business, Marketing, and Management Career Field, which focuses on formation and structure, economics, management, marketing, financial management, and operations. Career opportunities and technology will also be used and discussed.

STANDARDS AND INDICATORS:

BMM.HS.16.1 Analyze the formation and structure of a business.

- BMM.HS.16.1.a Explain the role of business in society.
- BMM.HS.16.1.b Explain types of business ownership.
- BMM.HS.16.1.c Describe the two basic types of business profit structures (i.e. profit and not for profit).
- BMM.HS.16.1.d Examine the opportunities and risks of entrepreneurship.

BMM.HS.16.2 Differentiate economic systems in order to recognize the environments in which businesses function.

- BMM.HS.16.2.a Compare and contrast economic goods and services.
- BMM.HS.16.2.b Analyze economic indicators and how they affect the business cycle.
- BMM.HS.16.2.c Explain the principles of supply and demand and pricing.
- BMM.HS.16.2.d Compare and contrast the basic features of economic systems.
- BMM.HS.16.2.e Identify factors that impact a business' profit and risk.

INTRODUCTION TO BUSINESS (cont.)

BMM.HS.16.3 Interpret business profitability, sustainability, and the necessary dependencies upon leadership, management, staff, and community.

BMM.HS.16.3.a Analyze the management functions within the business environment (e.g. planning, organizing, leading, controlling).

BMM.HS.16.3.b Differentiate between leading and managing.

BMM.HS.16.3.c Identify the structural and economic impact of human resource management within a business.

BMM.HS.16.3.d Evaluate how organizational culture impacts business and retaining quality employees.

BMM.HS.16.3.e Identify and apply the use of software, tools, and techniques that impact business productivity.

BMM.HS.16.3.f Assess the ethical dilemmas that arise between business decisions and social responsibility.

BMM.HS.16.4 Identify the fundamental strategies of marketing and its role within an organization.

BMM.HS.16.4.a Describe marketing and its relevance in a global economy.

BMM.HS.16.4.b Analyze and explain the elements of the marketing mix and their impact on business.

BMM.HS.16.5 Demonstrate finance management and decision making through the use of accounting principles in business.

BMM.HS.16.5.a Explain and provide examples of accounting concepts and financial records used by businesses.

BMM.HS.16.5.b Explain the role of finance in business and how it affects decision-making.

INTRODUCTION TO BUSINESS (cont.)

BMM.HS.16.6 Evaluate and describe the functions of business operations.

BMM.HS.16.6.a Identify and analyze the key business processes and functions needed to bring products and services to market.

BMM.HS.16.6.b Explain the business implications of proprietary information, technology, and forms of security on profitability and sustainability.

BMM.HS.16.7 Evaluate and explore careers in the areas of business, marketing, and management.

BMM.HS.16.7.a Identify careers and organizations within a business career field.

BMM.HS.16.7.b Compare and contrast personal interests, aptitudes, information, and skills necessary for each career pathway.

BMM.HS.16.7.c Research and discuss specific verbal and nonverbal techniques for effective business communication to include cultural respect and meaning.

BMM.HS.16.7.d Conduct a job market search and devise a career plan that reflects business career interests, pathways, and postsecondary options.

PERSONAL FINANCE

COURSE DESCRIPTION

The goal of Personal Finance is to help students become financially responsible, conscientious members of society. To reach that end, this course develops student understanding and decision-making skills in such areas as income, money management, budgeting, financial goal attainment, the wise use of credit, insurance, and investments.

STANDARDS AND INDICATORS:

BMM.HS.22.1 Develop and evaluate a plan to earn an income and manage finances to achieve personal goals.

BMM.HS.22.1.a	Identify various forms of income and analyze the career clusters to explore how career choice, level of education, geographical location, type of industry, skill level, and work ethic affect income and personal goal attainment.
BMM.HS.22.1.b	Analyze the impact of sociological, economic, and technological changes on the future job outlook and potential to earn income.
BMM.HS.22.1.c	Interpret a pay stub to calculate gross and net pay.
BMM.HS.22.1.d	Evaluate the impact of taxes on personal financial planning.
BMM.HS.22.1.e	Describe information needed and required forms relevant to the completion of state and federal income tax forms (e.g., W-4, W-2, 1040).
BMM.HS.22.1.f	Develop and evaluate a personal budget based on income, employee benefits and incentives, savings and investment goals, and retirement contributions and analyze the life cycle of net worth.

BMM.HS.22.2 Examine budgeting, savings, and investment strategies based on individual preferences and circumstances to achieve financial goals.

BMM.HS.22.2.a	Compare and contrast saving and investing strategies that consider risk, return, and building wealth.
BMM.HS.22.2.b	Determine factors that influence decisions to save.
BMM.HS.22.2.c	Create short- and long-term financial goals for a personal budget.

PERSONAL FINANCE (cont.)

BMM.HS.22.2.d Analyze the power of compound interest and the importance of starting early in implementing a plan of saving.

BMM.HS.22.2.e Examine the concept of time, value of money, and rates of return that impact monetary decisions.

BMM.HS.22.2.f Investigate opportunities to participate in employer-sponsored retirement plans (e.g., IRA, 401K, Roth IRA).

BMM.HS.22.3 Compare and evaluate the products and services financial institutions provide.

BMM.HS.22.3.a Describe and explain the use of different forms of financial exchange (e.g., cash, credit, debit, electronic funds transfer, and other emerging payment forms, etc.) from a local, national, and global consumer perspective.

BMM.HS.22.3.b Explain legal and ethical responsibilities associated with financial exchanges.

BMM.HS.22.3.c Identify the structure and functions of the Federal Reserve System and how it facilitates the functions of money.

BMM.HS.22.3.d Distinguish between the various types of financial institutions and the basic products and services provided and evaluate each for related costs and fees.

BMM.HS.22.3.e Compare and contrast types of checking and savings accounts and the forms of financial exchange.

BMM.HS.22.3.f Analyze privacy and security issues associated with financial exchanges (e.g. cash transfers, electronic payments, mobile payments, online and traditional banking, etc.)

BMM.HS.22.4 Analyze factors that affect the choice of credit, the cost of credit, maintaining credit, and the legal aspects of using credit for personal goals

BMM.HS.22.4.a Identify the C's of creditworthiness (e.g., collateral, character, capacity, conditions).

BMM.HS.22.4.b Evaluate the opportunity cost for each financial decision involving credit (e.g., credit cards, auto loans, college loans).

PERSONAL FINANCE (cont.)

BMM.HS.22.4.d Research the rights and responsibilities of consumers according to credit legislation (e.g., truth-in-lending, fair credit reporting, equal credit opportunity, fair debt collection).

BMM.HS.22.4.e Explain the importance of credit ratings and credit scores and the effect on an individual's credit report, cost of credit, and future use of credit.

BMM.HS.22.4.f Investigate methods to resolve credit discrepancies and minimize the danger and ramifications of identity theft.

BMM.HS.22.5 Apply a decision-making model to maximize consumer satisfaction when buying goods and services.

BMM.HS.22.5.a Identify and use reliable consumer resources to collect information for making buying decisions about durable and nondurable goods.

BMM.HS.22.5.b Identify consumer rights laws and explain how they protect consumer rights.

BMM.HS.22.5.c Develop comparison shopping practices and apply them to purchasing decisions.

BMM.HS.22.5.d Compare the costs and benefits of purchasing, leasing, and renting (e.g., vehicle, tools, furniture, and housing).

BMM.HS.22.5.e Research the types and use of consumer assistance services and advocacy groups provided to address consumer rights and responsibilities (e.g., government, the Better Business Bureau, and manufacturers).

BMM.HS.22.5.f Describe the role of supply and demand on the availability and price of goods and services in the regional, national, and international marketplace.

BMM.HS.22.5.g Examine the impact of advertising and marketing on consumer demand and decision making in the regional, national, and international marketplace.

BMM.HS.22.6 Analyze choices available to consumers for protection against risk and financial loss.

BMM.HS.22.6.a Define and utilize the terms, concepts, and practices instrumental to varied forms of insurance (e.g. deductible, premium, peril, risk, etc.).

BMM.HS.22.6.b Compare risk management strategies (e.g., retention, avoidance, reduction, transfer).

PERSONAL FINANCE (cont.)

BMM.HS.22.6.c	Explain how one's mindset, habits, behaviors, and choices affect the cost of insurance and identify ways consumers can reduce this cost (e.g. smokers are charged more for health insurance and quitting smoking could reduce that cost).
BMM.HS.22.6.d	Compare and contrast types of insurance associated with different risks (e.g., auto mobile, personal and professional liability, home, renters, health, life, long-term care, disability).
BMM.HS.22.6.e	Develop a plan for insurance coverage taking into account coverage, premium costs, willingness to take risks, income, age, and socioeconomic status.
BMM.HS.22.6.f	Explain how retirement planning and estate planning are risk-management strategies.

BMM.HS.22.7 Analyze choices and resources available for financing postsecondary education.

BMM.HS.22.7.a	Describe the multiple pathways to postsecondary education and career preparedness and analyze the costs and benefits associated with each choice.
BMM.HS.22.7.b	Identify the purpose of the Free Application for Federal Student Aid (FAFSA) to determine eligibility for grants, scholarships, and loans and the essential information.
BMM.HS.22.7.c	Evaluate the costs and benefits of postsecondary education funding and any repayment requirements (e.g. NEST 529 college saving plan, scholarships, grants, federal and private loans, work-study, etc.).
BMM.HS.22.7.d	Explore the options for borrowers struggling to make payments and the consequences of failure to repay student loans.
BMM.HS.22.7.e	Correlate salary potential to the education requirements of different careers by identifying strategies to reduce student loan debt.

WEALTH BUILDING FUNDAMENTALS

COURSE DESCRIPTION

This course is designed to provide knowledge of personal financial management. Students learn to manage their resources to make sound personal financial decisions, interpret data to develop short- and long-term budgetary plans, and develop product knowledge related to financial planning. Students will develop a financial plan that includes savings, investing, credit management, risk management, and retirement.

STANDARDS AND INDICATORS:

BMM.HS.24.1 Identify and develop essential financial and personal attributes that contribute to a successful income-producing career.

BMM.HS.24.1.a Distinguish between various forms of income and explain how it can be obtained and accumulated.

BMM.HS.24.1.b Connect factors that affect income as part of the career decision-making process and potential outcomes.

BMM.HS.24.2 Compare strategies used to maintain, monitor, control, and accurately plan the use of financial resources.

BMM.HS.24.2.a Prioritize financial needs and goals to determine strategic financial strategy decisions.

BMM.HS.24.2.b Create a plan for financial management based upon personal goals.

BMM.HS.24.3 Evaluate strategies used to establish, build, maintain, monitor, control, and use credit for personal and financial goals.

BMM.HS.24.3.a Estimate and evaluate the opportunity cost for each financial decision involving credit.

BMM.HS.24.3.b Identify applicable strategies to establish and maintain a good credit rating for beneficial credit use at all stages of life and financial capacity.

BMM.HS.24.3.c Summarize the loan application process and explain how each part is used to determine the creditworthiness of the applicant.

BMM.HS.24.3.d Evaluate credit laws and regulations.

WEALTH BUILDING FUNDAMENTALS (cont.)

BMM.HS.24.4 Apply a decision-making model to maximize consumer satisfaction when buying goods and services.

- BMM.HS.24.4.a Distinguish between income and wealth.
- BMM.HS.24.4.b Evaluate the need for saving and investing to ensure financial well-being and wealth building.
- BMM.HS.24.4.c Evaluate saving and investment options and criteria.

BMM.HS.24.5 Compare and contrast the economic advantages and disadvantages of real estate as an investment tool.

- BMM.HS.24.5.a Identify the advantages and disadvantages of buying versus renting a home.
- BMM.HS.24.5.b Identify potential barriers to purchasing real estate and describe how to mitigate or avoid them.
- BMM.HS.24.5.c Explain the risks and rewards of investing in income-producing real estate (e.g., residential, agricultural, commercial).

BMM.HS.24.6 Assess risks in life and how to protect against the consequences of risk.

- BMM.HS.24.6.a Identify common types of risks and basic risk management strategies.
- BMM.HS.24.6.b Evaluate insurance as a risk management strategy.

BMM.HS.24.7 Investigate appropriate technology solutions to interpret, analyze, and utilize emerging trends in business finance

- BMM.HS.24.7.a Apply technology or software tools as they relate to financial activities.
- BMM.HS.24.7.b Understand the use of information technology in business and industry.
- BMM.HS.24.7.c Analyze financial data to make decisions.
- BMM.HS.24.7.d Predict potential barriers to the availability of financial technology and how to overcome them.

ACCOUNTING 1

COURSE DESCRIPTION

This one-semester course covers a service business organized as a sole proprietorship which will include accounting principles involved in the preparation and maintenance of financial records concerned with business management and operations. It is a comprehensive introduction to basic accounting including recording, summarizing, and reporting and accounting systems and controls. Students are exposed to careers in the accounting field and are given the opportunity to perform accounting applications using technology.

STANDARDS AND INDICATORS:

BMM.HS.1.1 Explain the purpose of and demonstrate the steps of the accounting cycle using generally accepted accounting principles (GAAP).

BMM.HS.1.1.a	Define accounting and related concepts to explain the purpose of the accounting system and its relationship to business.
BMM.HS.1.1.b	Analyze business transactions using a journal and describe the effect on the accounting equation.
BMM.HS.1.1.c	Apply the concepts of debits and credits through the use of T-accounts, normal account balances, and the chart of accounts.
BMM.HS.1.1.d	Evaluate changes in a fiscal period using financial statements and worksheets.
BMM.HS.1.1.e	Analyze and record transactions including adjusting, closing, and correcting entries.
BMM.HS.1.1.f	Post to the ledger and compare the relationship between journals, ledgers, and financial statements.

BMM.HS.1.2 Demonstrate the importance of cash control procedures and ethics in business.

BMM.HS.1.2.a	Define and apply cash control procedures by using documents to verify balances.
BMM.HS.1.2.b	Apply appropriate techniques to account for investments and withdrawals by owners.
BMM.HS.1.2.c	Explain a need for a code of ethics in accounting and the ethical responsibilities required of accountants.
BMM.HS.1.2.d	Demonstrate ethical decision-making skills through business scenarios.

ACCOUNTING 1 (cont.)

BMM.HS.1.3 Prepare, interpret, and analyze financial statements for a sole proprietorship.

BMM.HS.1.3.a Evaluate the impact of data used in the development of financial statements.

BMM.HS.1.3.b Prepare an income statement and balance sheet.

BMM.HS.1.3.c Assess financial statements to summarize business performance.

BMM.HS.1.4 Investigate career opportunities, career readiness skills, and technology in the field of accounting.

BMM.HS.1.4.a Research the educational requirements, certifications, and skills needed to be successful in an accounting-related career.

BMM.HS.1.4.b Describe various careers and opportunities related to accounting.

BMM.HS.1.4.c Demonstrate both verbal and nonverbal communication skills related to the workplace.

BMM.HS.1.4.d Apply analytical, critical thinking, and leadership skills to the workplace.

BMM.HS.1.4.e Demonstrate the ability to work as a team by setting goals and accomplishing individual and team tasks on time.

BMM.HS.1.4.f Understand the use of information technology in the accounting industry

ECONOMICS

COURSE DESCRIPTION

Economics is a course designed to help students understand decision-making. This economic reasoning process involves the consideration of costs and benefits with the ultimate goal of making decisions that will enable individuals and societies to be as well-off as possible. The course will use economic principles applied to current events and issues. Emphasis includes decision-making, allocation of scarce resources, incentives, economic institutions, markets and prices, economic systems, market structures, productivity, role of government, global economic concepts, and economic indicators.

STANDARDS AND INDICATORS:

BMM.HS.12.1 Apply economic reasoning skills to make informed decisions and become effective participants in the economy at all levels.

BMM.HS.12.1.a	Evaluate decisions by systematically considering alternatives and consequences through the use of cost benefit analysis.
BMM.HS.12.1.b	Analyze how incentives influence choices that may result in policies with a range of costs and benefits for different groups.
BMM.HS.12.1.c	Assess the incentives for investing in personal education, skills, and talents.
BMM.HS.12.1.d	Examine data about current economic conditions and how these conditions can influence decisions.

BMM.HS.12.2 Explain the role of markets in determining prices and allocating scarce goods and services.

BMM.HS.12.2.a	Understand the role of competition, markets, and prices.
BMM.HS.12.2.b	Illustrate how markets determine changing equilibrium prices through supply and demand analysis.
BMM.HS.12.2.c	Hypothesize how competition between sellers could result in lower prices, higher-quality products, and better customer service.
BMM.HS.12.2.d	Investigate possible causes and consequences of shortages and surpluses.

ECONOMICS (cont.)

BMM.HS.12.3 Explain how economic institutions such as clearly defined property rights, open markets, and the rule of law impact different individuals and various groups.

BMM.HS.12.3.a Summarize and assess the functions of economic institutions (e.g., property rights, open markets, and the rule of law) and their effects on markets and entrepreneurship.

BMM.HS.12.3.b Explain how the U.S. government defines, enforces, and puts limitations on the economic institutions (e.g., property rights, open markets, and the rule of law) and compare this to other countries.

BMM.HS.12.3.c Calculate and describe the impact of economic indicators (e.g., GDP, unemployment, inflation) including common uses and possible measurement error(s).

BMM.HS.12.3.d Describe the functions, roles, and limitations of the Federal Reserve System and its influence through monetary policy.

BMM.HS.12.3.e Explain how banks and a sound monetary system are critical to a functioning economy.

BMM.HS.12.4 Demonstrate personal and business financial management by developing plans to support short- and long-term goals.

BMM.HS.12.4.a Identify and critique the tools, strategies, and systems used to establish, build, maintain, monitor, and control the use of financial resources.

BMM.HS.12.4.b Demonstrate an understanding of decisions related to checking accounts, loans, down payments, insurance, taxes, and compound interest.

BMM.HS.12.4.c Develop a plan to support short- and long-term goals including budgeting, career planning, banking, debt management, effects of taxes on income, and retirement planning.

BMM.HS.12.4.d Evaluate savings, investment, and risk management strategies to achieve short- and long-term goals.

ECONOMICS (cont.)

BMM.HS.12.5 Analyze the roles and responsibilities of government from different economic perspectives.

BMM.HS.12.5.a Examine how governments utilize taxation to provide goods and services to society.

BMM.HS.12.5.b Analyze how the government can use taxation and spending policies to influence behavior and alter market outcomes.

BMM.HS.12.5.c Critique government policies and regulations in areas of market failure.

BMM.HS.12.5.d Evaluate the effects of fiscal policy on economic outcomes including budget deficits/surpluses, national debt, and economic systems.

BMM.HS.12.5.e Compare the impact a government's fiscal policy has on different types of economic systems (e.g,. command/communism, mixed, socialism, market, and traditional economic systems).

BMM.HS.12.5.f Evaluate how the government uses economic indicators (e.g., unemployment rate, inflation, and real GDP) to influence their fiscal policy decisions and describe the possible outcomes.

BMM.HS.12.5.g Evaluate and critique the costs and benefits of current events and public policy alternatives and assess who enjoys the benefits and who bears (takes on) the costs.

BMM.HS.12.6 Determine how international trade affects individuals, organizations, the domestic economy, and other nations.

BMM.HS.12.6.a Explore comparative advantage among different countries.

BMM.HS.12.6.b Calculate exchange rates and explain the impact of the strength of the dollar on economic decisions.

BMM.HS.12.6.c Explain how current globalization trends and policies affect economic growth, labor markets, rights of citizens, the environment, and resource and income distribution in different nations.

BMM.HS.12.6.d Compare and contrast examples of specific goods and services that countries trade globally.

BMM.HS.12.6.e Analyze the impact on prices and quantities of various trade policies, both domestically and internationally.

MARKETING

COURSE DESCRIPTION

This course develops basic student understanding and skills in the functions of marketing. Emphasis is placed on the impact of marketing activities on the individual, business, and society. Topics include market analysis, marketing information management, target customer identification, the development of marketing-mix strategies, and an in-depth look at the selling process.

STANDARDS AND INDICATORS:

BMM.HS.19.1 Recognize the customer-oriented nature of marketing and analyze the impact of marketing activities on the individual, business, and society.

- BMM.HS.19.1.a Describe marketing functions and related activities.
- BMM.HS.19.1.b Distinguish between economic goods and services.
- BMM.HS.19.1.c Explain the principles of supply and demand.
- BMM.HS.19.1.d Determine economic utilities created by business activities.
- BMM.HS.19.1.e Explain the concept of competition.
- BMM.HS.19.1.f Identify employment opportunities in marketing.

BMM.HS.19.2 Identify marketing-information management strategies to understand its nature and scope.

- BMM.HS.19.2.a Identify the need for marketing data used to monitor marketing decision making.
- BMM.HS.19.2.b Explain the role of ethics in marketing information management.
- BMM.HS.19.2.c Discuss the nature of data mining.
- BMM.HS.19.2.d Describe the use of technology in the marketing-information management function.
- BMM.HS.19.2.e Describe the regulation of marketing-information management.

MARKETING (cont.)

BMM.HS.19.3 Apply the concepts and marketing strategies utilized to determine and target a select market.

BMM.HS.19.3.a	Analyze and describe the importance of each of the components of the marketing mix.
BMM.HS.19.3.b	Explain factors that influence customer/client/business buying behavior.
BMM.HS.19.3.c	Analyze customer's rational and emotional buying motives and decisions.
BMM.HS.19.3.d	Select target market appropriate for product/business to obtain the best return on marketing investment (ROMI).
BMM.HS.19.3.e	Explain the concept of market and market identification.
BMM.HS.19.3.f	Identify strategies utilized in the elements of market segmentation.

BMM.HS.19.4 Identify the concepts and actions needed to determine client needs and wants and respond through planned, personalized communication that influences purchase decisions and enhances future business opportunities.

BMM.HS.19.4.a	Explain the nature and scope of the selling function.
BMM.HS.19.4.b	Explain the role of customer service as a component of selling relationships for building a clientele.
BMM.HS.19.4.c	Utilize sales processes and techniques to determine and satisfy customer needs.
BMM.HS.19.4.d	Acquire product knowledge to communicate product benefits and to ensure appropriateness of product for the customer.
BMM.HS.19.4.e	Explain legal and ethical considerations in selling.

MARKETING MANAGEMENT

Course Description

Marketing Management furthers student understanding and skills of the marketing functions and strategies including pricing, product/service management, channel management, promotion, and marketing-information management.

Standards and Indicators:

BMM.HS.20.1 Analyze the concepts and strategies utilized in determining and adjusting prices to maximize return and meet customers' perceptions of value.

- BMM.HS.20.1.a Explain the nature and scope of the pricing function.
- BMM.HS.20.1.b Explain factors affecting pricing decisions.
- BMM.HS.20.1.c Describe the ethical and legal considerations for pricing.
- BMM.HS.20.1.d Explain the use of technology in the pricing function.

BMM.HS.20.2 Identify and assess the concepts and processes needed to obtain, develop, maintain, and/or improve a product or service mix in response to market opportunities and to build the brand for the organization.

- BMM.HS.20.2.a Identify product/service management concepts to understand its nature and scope.
- BMM.HS.20.2.b Generate product ideas to contribute to ongoing business success.
- BMM.HS.20.2.c Apply quality assurances to enhance product/service offerings (i.e. customer service, warranties, guarantees, etc).
- BMM.HS.20.2.d Employ product-mix strategies to meet customer expectations.
- BMM.HS.20.2.e Determine ways to position a company to acquire a desired business image.
- BMM.HS.20.2.f Determine ways to position products/services to acquire desired business image.

MARKETING MANAGEMENT (cont.)

BMM.HS.20.3 Assess channel management strategies and its role in marketing.

- BMM.HS.20.3.a Explain the nature and scope of channel management.
- BMM.HS.20.3.b Explain the nature of channels of distribution.
- BMM.HS.20.3.c Describe the use of technology in the channel management function.
- BMM.HS.20.3.d Describe the ethical and legal considerations for channel management.

BMM.HS.20.4 Investigate the nature and scope of promotion.

- BMM.HS.20.4.a Explain the role of promotion as a marketing function.
- BMM.HS.20.4.b Examine the types of promotion (i.e., institutional, product).
- BMM.HS.20.4.c Identify the elements of the promotional mix.
- BMM.HS.20.4.d Demonstrate an understanding of promotional channels used to communicate with targeted audiences.
- BMM.HS.20.4.e Identify and describe the types of advertising media.

BMM.HS.20.5 Identify marketing-information management strategies and analyze the role of marketing research in decision-making.

- BMM.HS.20.5.a Describe the need for marketing data.
- BMM.HS.20.5.b Describe options businesses use to obtain marketing research data (i.e., primary and secondary research).
- BMM.HS.20.5.c Describe data-collection methods (e.g., observations, mail, diaries, telephone, Internet, discussion groups, interviews, scanners, tracking tools).
- BMM.HS.20.5.d Analyze data monitored for marketing decision making.
- BMM.HS.20.5.e Describe the regulations and ethical implications of marketing-information management.

ADVANCED MARKETING

Course Description

This course is an expansion and application of previous marketing studies with an emphasis on learning to develop responsive marketing strategies that meet customer needs. Students will focus on organization and society where they will develop a marketing plan. Topics include market research, product development, promotion, channel management, and pricing.

Standards and Indicators:

BMM.HS.5.1 Analyze marketing, the marketing concept, and marketing management.

BMM.HS.5.1.a	Define the role of marketing in organizations.
BMM.HS.5.1.b	Describe how marketers create value for a product or service.
BMM.HS.5.1.c	Analyze the environment in which firms operate to develop effective marketing strategies and decisions.
BMM.HS.5.1.d	Select strategies to obtain the best return on marketing investment (ROMI).
BMM.HS.5.1.e	Evaluate marketing mix strategies in response to market opportunities and customer expectations.

BMM.HS.5.2 Analyze methods of information gathering and investigate research techniques.

BMM.HS.5.2.a	Describe the nature of marketing research.
BMM.HS.5.2.b	Investigate qualitative and quantitative research sources.
BMM.HS.5.2.c	Select and apply methods of data collection (e.g., observations, surveys, discussion forums, scanners).
BMM.HS.5.2.d	Interpret marketing information and/or data mining to test hypotheses and/or resolve issues.

ADVANCED MARKETING (cont.)

BMM.HS.5.3 Identify market segments and positioning strategies.

BMM.HS.5.3.a Identify market segmentation strategies (e.g., demographics, geographics, psychographics, and behaviors).

BMM.HS.5.3.b Analyze the elements of the marketing mix, their interrelationships, how they are used in the marketing process, and their role in positioning.

BMM.HS.5.3.c Recommend the positioning strategy that communicates the firm's or the product's value proposition.

BMM.HS.5.3.d Describe the impact of consumer differences (e.g., life stages, benefits sought, usage rate, brand loyalty, and socio-economic characteristics) on buying decisions.

BMM.HS.5.4 Evaluate marketing mix strategies.

BMM.HS.5.4.a Develop marketing mix strategies that focus on meeting customer needs and wants.

BMM.HS.5.4.b Assess current product and service strategies to determine growth strategy (e.g., market penetration, market development, product development, diversification).

BMM.HS.5.4.c Identify factors that drive channel management design (e.g., Internet, Social Media, competitive advantage).

BMM.HS.5.4.d Distinguish concepts and strategies utilized in determining and adjusting prices to maximize return and meet customers' perception of value.

BMM.HS.5.4.e Research, analyze, and recommend promotional goals and strategies as they relate to profitability and/or effectiveness in reaching the target market.

BMM.HS.5.5 Demonstrate the importance of an effective marketing plan.

BMM.HS.5.5.a Apply project management competencies in working with a viable business in the creation of a marketing plan.

BMM.HS.5.5.b Analyze current marketing strategies utilized by business.

BMM.HS.5.5.c Initiate a marketing plan by identifying target market, conducting market analysis, and reviewing SWOT analysis.

BMM.HS.5.5.d Develop marketing strategies to position and/or reposition business effectively.

BMM.HS.5.5.e Access cost effectiveness of recommended marketing strategies.

BMM.HS.5.5.f Monitor and evaluate performance of marketing plan.

FUNDAMENTALS OF NUTRITION AND CULINARY ESSENTIALS (HSE)

COURSE DESCRIPTION

This introductory course provides students with foundational knowledge and skills in food preparation and nutrition planning. Topics covered include career exploration, global food systems, six essential nutrients, dietary recommendations, kitchen and food safety and sanitation, food preparation skills, and meal planning concepts.

STANDARDS AND INDICATORS:

HSE.HS.21.1 Apply skills to meet career goals within the food, nutrition, and culinary industries.

HSE.HS.21.1.a	Demonstrate working as a member of a diverse team.
HSE.HS.21.1.b	Demonstrate professional practices required in the workplace.
HSE.HS.21.1.c	Summarize roles, responsibilities, education, training, and credentialing requirements for careers within the food, nutrition, and culinary industries.
HSE.HS.21.1.d	Compare and contrast personal strengths, talents, interests, and passions to the skills and traits required of the workplace.

HSE.HS.21.2 Analyze U.S. and global food systems and their impact on personal health.

HSE.HS.21.2.a	Compare and contrast definitions of health and wellness.
HSE.HS.21.2.b	Analyze farm to table for a variety of food products grown locally and globally.
HSE.HS.21.2.c	Identify issues surrounding global production of food and how sustainability and conservation practices are connected.

HSE.HS.21.3 Analyze the six essential nutrients and their purposes in the body.

HSE.HS.21.3.a	Identify key bodily functions of the six essential nutrients and the components of each.
HSE.HS.21.3.b	Summarize the digestion, absorption, and metabolic processes associated with the use of nutrients in the digestive system.
HSE.HS.21.3.c	Identify the nutrient density of a variety of foods for each of the nutrients.
HSE.HS.21.3.d	Interpret the impact and effects of over or underconsumption of each nutrient.
HSE.HS.21.3.e	Explain the concept of calories and energy density of foods.
HSE.HS.21.3.f	Apply nutrition mathematical concepts to calculate energy from nutrients and the energy composition of a food item.

FUNDAMENTALS OF NUTRITION AND CULINARY ESSENTIALS (cont.)

HSE.HS.21.4 Integrate current dietary recommendations and guidelines to plan and analyze a healthy diet.

HSE.HS.21.4.a Recognize reliable sources of nutrition information (e.g., Dietary Reference Intakes, Dietary Guidelines, MyPlate model, food labels, etc.).

HSE.HS.21.4.b Compare and contrast personal eating habits to current recommendations for a healthy diet.

HSE.HS.21.4.c Apply current dietary recommendations and guidelines to meal planning.

HSE.HS.21.4.d Identify package labeling components.

HSE.HS.21.4.e Analyze the Nutrition Facts label to determine nutrient contributions of a variety of foods.

HSE.HS.21.5 Demonstrate effective food and kitchen safety and sanitation procedures.

HSE.HS.21.5.a Identify microorganisms which are related to food spoilage and foodborne illnesses.

HSE.HS.21.5.b Apply proper personal hygiene, health habits, and industry-standard apparel.

HSE.HS.21.5.c Sequence the requirements for proper receiving and storage of prepared foods and identify signs of food spoilage and contamination (e.g., FIFO - first in first out).

HSE.HS.21.5.d Identify the critical control points and the Temperature Danger Zone during all food handling processes as a method for minimizing the risk of foodborne illness (HACCP system).

HSE.HS.21.5.e Demonstrate kitchen safety practices to prevent accidents (i.e., slips, burns, fires, shock, cuts, equipment accidents, poisoning, etc.).

HSE.HS.21.5.f Implement a safety and sanitation inspection and identify modifications necessary for compliance with standards.

FUNDAMENTALS OF NUTRITION AND CULINARY ESSENTIALS (cont.)

HSE.HS.21.6 Demonstrate foundational food preparation techniques.

HSE.HS.21.6.a Demonstrate foundational culinary techniques (measuring, knife skills, folding, creaming) and correct use of kitchen equipment.

HSE.HS.21.6.b Demonstrate mise en place.

HSE.HS.21.6.c Demonstrate proper scaling techniques to convert recipes to yield smaller and larger quantities.

HSE.HS.21.6.d Apply the fundamentals of time, temperature, and cooking methods (dry, moist, combination) to cooking, cooling, reheating, and holding a variety of foods.

HSE.HS.21.6.e Demonstrate the preparation techniques for common essential nutrient-dense food sources (fruits, vegetables, proteins, carbohydrates, dairy products).

HSE.HS.21.6.f Label and store fresh and finished food products appropriately to reduce spoilage.

HSE.HS.21.7 Create a meal plan based on the dietary recommendations for individuals and families across the lifespan.

HSE.HS.21.7.a Identify food purchasing strategies used by consumers (e.g., store layout, comparison shopping, etc.).

HSE.HS.21.7.b Develop a market order and time management plan.

HSE.HS.21.7.c Identify the categories of a menu (e.g., appetizers, sandwiches, entrees, etc).

HSE.HS.21.7.d Apply recommended portion sizes to food preparation and serving.

HSE.HS.21.7.e Recognize and make dietary modifications for special dietary needs.

CULINARY SKILLS 1 (HSE)

COURSE DESCRIPTION

This intermediate course focuses on culinary skills development building on concepts from the introductory course. Topics covered include planning, preparing, and marketing a variety of menu items following industry standards. Technical skills will be developed through the use of professional tools and equipment.

STANDARDS AND INDICATORS:

BMM.HS.10.1 Apply efficiency in food and kitchen safety and sanitation procedures.

BMM.HS.10.1.a	Demonstrate best practices for purchasing, receiving, inventorying, and storage in the restaurant and food service industry.
BMM.HS.10.1.b	Describe the proper storage and use of cleaners and sanitizers and develop a cleaning schedule.
BMM.HS.10.1.c	Describe appropriate measures for the control of insects, rodents, and pests.
BMM.HS.10.1.d	Identify appropriate types, uses, and location of fire extinguishers & equipment in the food service area.
BMM.HS.10.1.e	Describe the role of regulatory agencies governing sanitation and food safety.

BMM.HS.10.2 Apply math concepts to food preparation, recipe, and menu development.

BMM.HS.10.2.a	Perform basic math functions using the baker's percentage and fraction factor.
BMM.HS.10.2.b	Calculate the cost of recipes.
BMM.HS.10.2.c	Demonstrate measurements using weight and volume.
BMM.HS.10.2.d	Convert recipes to yield smaller and larger quantities based on operational needs.

CULINARY SKILLS 1 (cont.)

BMM.HS.10.3 Apply menu planning principles based on standardized recipes to meet customer needs.

BMM.HS.10.3.a Apply menu planning principles to develop and modify menus.

BMM.HS.10.3.b Apply principles of measurement, portion control, conversions, food cost analysis and control, menu terminology, and menu pricing to menu planning.

BMM.HS.10.3.c Create professional menu item descriptions for a food product.

BMM.HS.10.3.d Develop a standardized recipe listing the ingredients and procedures in the order of which they are used.

BMM.HS.10.3.e Utilize weight and measurement tools in food preparation and portion control.

BMM.HS.10.4 Demonstrate fundamental procedures within the restaurant and food service industry.

BMM.HS.10.4.a Summarize the components of industry-standard kitchen facilities, planning, and layout principles.

BMM.HS.10.4.b Demonstrate proper planning and time management to the overall operation of the restaurant facility.

BMM.HS.10.4.c Identify front of the house and back of the house principles to facility operations and management.

BMM.HS.10.4.d Identify regulations for inspecting and grading ingredients.

BMM.HS.10.4.e Prepare requisitions for food, equipment, and supplies to meet production requirements.

CULINARY SKILLS 1 (cont.)

BMM.HS.10.5 Demonstrate technical food preparation techniques.

BMM.HS.10.5.a Identify and describe the function of common ingredients used in cooking and baking (including but not limited to: fats, flours, sugars, eggs, dairy, grains, legumes, fruits, vegetables, meats, seafood, etc.).

BMM.HS.10.5.b Identify the characteristics of herbs and spices and incorporate them to enhance flavor.

BMM.HS.10.5.c Prepare salads, vinaigrettes, emulsions, and other common dips.

BMM.HS.10.5.d Prepare sandwiches, pizza, stocks, soups and sauces.

BMM.HS.10.5.e Prepare dessert sauces, baked goods, and pastries.

BMM.HS.10.5.f Demonstrate professional plating, garnishing, and food presentation techniques.

BMM.HS.10.6 Examine effective management principles within the restaurant and food service industry.

BMM.HS.10.6.a Identify the components of a restaurant and food service management plan.

BMM.HS.10.6.b Explain the purpose and components of a marketing plan.

BMM.HS.10.6.c Identify the areas of risk management and legal liability within the food service industry.

BMM.HS.10.6.d Explain principles of customer service in the restaurant and food service industry, with an emphasis on community focused customer service.

BMM.HS.10.6.e Describe the opportunities for entrepreneurship in the restaurant and food service industries.

CULINARY SKILLS 2 (HSE)

COURSE DESCRIPTION

This capstone course focuses on the application of culinary skills building on concepts from the introductory and intermediate courses. Topics covered include restaurant marketing, menu management, cost control, breakfast cookery, fruits and vegetables, potatoes/grains/pastas, meat/poultry/seafood, plating/garnishing, and global cuisines. Developing a restaurant business management plan and implementing food service management principles are also covered.

STANDARDS AND INDICATORS:

BMM.HS.11.1 Demonstrate food and kitchen safety and sanitation procedures.

- BMM.HS.11.1.a Recognize sanitary and safety design and construction features of food production equipment and facilities (e.g., NSF, UL, OSHA, ADA, etc.).
- BMM.HS.11.1.b Explain Material Safety Data Sheets (MSDS) and the requirements for handling hazardous materials.
- BMM.HS.11.1.c Outline a safety management program and emergency policies.

BMM.HS.11.2 Apply math concepts to food preparation, recipe, and menu development.

- BMM.HS.11.2.a Calculate the cost of recipes to maximize profitability.
- BMM.HS.11.2.b Convert recipes between the English and metric system.
- BMM.HS.11.2.c Convert recipes to yield smaller and larger quantities to maximize resources.

BMM.HS.11.3 Demonstrate technical food preparation techniques.

- BMM.HS.11.3.a Prepare breakfast foods (e.g., pancakes, crêpes, waffles, French toast, breakfast meats, etc.).
- BMM.HS.11.3.b Prepare fruits and vegetables.
- BMM.HS.11.3.c Prepare potatoes, grains, legumes, and pastas.
- BMM.HS.11.3.d Prepare meats, poultry, and seafood.
- BMM.HS.11.3.e Prepare various global cuisines.

CULINARY SKILLS 2 (cont.)

BMM.HS.11.4 Implement food service management principles.

BMM.HS.11.4.a	Develop a business management and marketing plan for food service operations.
BMM.HS.11.4.b	Calculate profitability and target margins of a food product and/or entire menu.
BMM.HS.11.4.c	Interpret impact of costs incurred by a food service business.
BMM.HS.11.4.d	Develop a budget.
BMM.HS.11.4.e	Analyze a profit-and-loss report/income statement verifying invoices sent and received.
BMM.HS.11.4.f	Record performance of menu items to analyze sales and determine menu revisions.

BAKING AND PASTRY (HSE)

Course Description

This capstone course focuses on developing the skills used to plan, prepare, and market pastries and baked goods building on concepts from the introductory and intermediate courses. Topics covered include understanding the function of ingredients, scaling recipes, measurement systems, and baking and pastry management principles, including entrepreneurship.

Standards and Indicators:

BMM.HS.6.1 Demonstrate foundational food preparation skills used in the baking and pastry industry.

BMM.HS.6.1.a Identify and describe the function of common ingredients used in baking (including but not limited to: leavening agents, flours, sugars, fats, eggs, dairy, gluten alternatives, thickening agents, dough conditioners, and coloring and flavoring agents).

BMM.HS.6.1.b Identify and describe physical, chemical, and biological leaveners.

BMM.HS.6.1.c Describe proper gluten development in relationship to product outcomes.

BMM.HS.6.1.d Identify specific ingredients and/or substitutions appropriate to method and desired product outcome.

BMM.HS.6.1.e Demonstrate foundational baking and pastry techniques (measuring, mixing, folding, creaming, whisking, kneading, proofing, shaping, portioning etc.).

BMM.HS.6.2 Demonstrate the preparation of various doughs, batters, and pastries.

BMM.HS.6.2.a Explain the strengthening or weakening effect of ingredients in the production of doughs and batters.

BMM.HS.6.2.b Compare and contrast yeast and laminate dough types and quick breads (muffin and biscuit dough types) and related methods and processes.

BMM.HS.6.2.c Prepare yeast and laminate dough types and quick breads (muffin and biscuit dough types).

BMM.HS.6.2.d Prepare Pâte à Choux and products derived from it.

BMM.HS.6.2.e Prepare pies, including various dough types and related methods and processes and fruit pie filling methods.

BAKING AND PASTRY (cont.)

BMM.HS.6.3 Demonstrate the ability to prepare various cakes, cookies, and other baked goods.

BMM.HS.6.3.a Demonstrate creaming and two-stage methods as they relate to cakes, cookies, brownies, and short pastry dough.

BMM.HS.6.3.b Demonstrate egg foaming methods as it relates to sponge, chiffon, souffles, génoise, angel food, meringues, and mousse.

BMM.HS.6.3.c Demonstrate the use of alternative foams (aquafaba, dolgona).

BMM.HS.6.3.d Prepare various types of frosting, icing, and glaze.

BMM.HS.6.3.e Prepare various custard types.

BMM.HS.6.3.f Demonstrate various cake decorating techniques including: royal icing, rolled fondant, gum paste, airbrush designs and/or edible images.

BMM.HS.6.4 Implement baking and pastry industry management principles.

BMM.HS.6.4.a Develop a budget, business management and marketing plan for baking and pastry operations.

BMM.HS.6.4.b Calculate profitability and target margins of a baked good or pastry product.

BMM.HS.6.4.c Interpret impact of costs incurred by a baking and pastry business.

BMM.HS.6.4.d Analyze a profit-and-loss report/income statement verifying invoices sent and received.

BMM.HS.6.4.e Describe the opportunities for entrepreneurship in the baking and pastry industry.

EVENT MANAGEMENT WITH WORK-BASED LEARNING (HSE)

Course Description

This course focuses on the evolving hospitality industry building on concepts from the introductory and intermediate courses. Topics covered include many facets of event planning such as: career opportunities, step-by-step planning, food/beverage operations, and marketing strategies. Through this capstone course, knowledge and skills will be applied within a structured work-based learning experience. The focus of the experience will be to plan and carry out events that may take place as part of class projects or within a business setting.

Standards and Indicators:

BMM.HS.14.1 Describe the foundational knowledge pertaining to event planning and management.

BMM.HS.14.1.a	Determine why events and meetings take place (e.g., celebrations, fundraising, milestones, etc).
BMM.HS.14.1.b	Compare and contrast where events and meetings take place (e.g., resorts, hotels, backyards, fairgrounds, educational institutions, etc).
BMM.HS.14.1.c	Identify different types of events and meetings (e.g., special/social and educational/business).
BMM.HS.14.1.d	Describe legal issues affecting the event management industry.
BMM.HS.14.1.e	Summarize the use of technology as a means of planning, facilitating, and promoting an event (e.g., event-specific software, mobile apps, registration, live streaming, etc).

BMM.HS.14.2 Evaluate career development and employability skills required for event management.

BMM.HS.14.2.a	Summarize career opportunities and growth potential in event planning and management (e.g., corporate or private event planner, independent contractor, vendor, hotel staff, etc).
BMM.HS.14.2.b	Identify education and training requirements for careers in event and entertainment management.
BMM.HS.14.2.c	Demonstrate skills needed in the workplace (e.g., effective communication, successful problem solving, effective customer service skills, etc.).
BMM.HS.14.2.d	Investigate current trends in the event and entertainment industry.

EVENT MANAGEMENT WITH WORK-BASED LEARNING (cont.)

BMM.HS.14.3 Analyze the overall design of event planning and management.

- BMM.HS.14.3.a Determine the vision, goals, and objectives of an event.
- BMM.HS.14.3.b Appraise client needs, wants, and expectations.
- BMM.HS.14.3.c Analyze the factors that determine a budget/financial strategy for an event.
- BMM.HS.14.3.d Determine event logistics (e.g., food and beverage, accommodations, site selection, staffing, theme, safety/security, etc.).
- BMM.HS.14.3.e Identify key components of an event timeline/itinerary.

BMM.HS.14.4 Analyze food and beverage operations in event management.

- BMM.HS.14.4.a Examine food and beverage operations in various contexts.
- BMM.HS.14.4.b Describe the equipment and supplies used in food and beverage operations.
- BMM.HS.14.4.c Explain the importance of proper sanitation in food and beverage operations.
- BMM.HS.14.4.d Compare costs, pricing, market demands, and marketing strategies to manage profitability in food and beverage operations.

BMM.HS.14.5 Analyze effective marketing strategies for the event.

- BMM.HS.14.5.a Describe the importance of each of the 4 P's of the marketing mix for an event.
- BMM.HS.14.5.b Identify promotional strategies for attracting targeted audiences (e.g., advertising, public relations, personal selling, etc.).
- BMM.HS.14.5.c Analyze strategies used to determine and adjust prices in order to maximize return and maintain value.
- BMM.HS.14.5.d Implement channel activities to minimize costs and to determine distribution strategies.

BMM.HS.14.6 Apply event management skills in a work environment.

- BMM.HS.14.6.a Implement continual appraisal of performance and identify strengths and weaknesses
- BMM.HS.14.6.b Evaluate the work-based learning experience.
- BMM.HS.14.6.c Apply emotional intelligence to foster self-understanding and enhance relationships.
- BMM.HS.14.6.d Apply event management concepts and principles to plan and carry out an event.

INTRODUCTION TO HOSPITALITY AND EVENT PLANNING

Course Description

This introductory course is focused on exploring the hospitality and event planning industry. Topics covered include safety and security, sustainable practices, customer service, management techniques and emerging trends in the hospitality and event planning industry.

Standards and Indicators:

BMM.HS.17.1 Analyze the major aspects of the hospitality and event planning industry and the industry's role in local, state, national, and global economies.

BMM.HS.17.1.a Define and compare core elements of the hospitality and event planning industry (e.g. lodging, travel, and tourism; event planning; theme parks, attractions, and exhibitions).

BMM.HS.17.1.b Determine the relationship of amusements and recreation to travel and tourism.

BMM.HS.17.1.c Analyze trends and their impact on hospitality and event planning practices (e.g., economy, green movement, sports, etc.).

BMM.HS.17.1.d Analyze the impact and contributions of various segments of the industry on economies, cultures, and the environment.

BMM.HS.17.1.e Compare and contrast the relationship between industry trends and economic trends.

BMM.HS.17.2 Analyze career opportunities within the hospitality and event planning industry.

BMM.HS.17.2.a Explain the roles and functions of individuals engaged in hospitality and event planning careers.

BMM.HS.17.2.b Identify opportunities for employment in hospitality and event planning.

BMM.HS.17.2.c Describe the working conditions of various careers in the hospitality and event planning industry.

BMM.HS.17.2.d Summarize education and training requirements for careers in hospitality and event planning.

BMM.HS.17.2.e Compare the relationship between the hospitality and event planning industry.

INTRODUCTION TO HOSPITALITY AND EVENT PLANNING (cont.)

BMM.HS.17.3 Analyze safety and security practices in hospitality and event planning.

BMM.HS.17.3.a Explain the importance of safety and security related to the hospitality and event planning industries.

BMM.HS.17.3.b Summarize evacuation plans and emergency procedures.

BMM.HS.17.3.c Describe personal safety to avoid injury or accidents.

BMM.HS.17.3.d Explain the impact of laws and regulations that affect accommodations and practices (e.g., Americans with Disabilities Act, wage and hour laws, tenant status, accommodation of minors, etc.).

BMM.HS.17.4 Apply concepts of quality service to ensure customer satisfaction.

BMM.HS.17.4.a Summarize industry standards for service that meet cultural and geographic expectations of guests or customers.

BMM.HS.17.4.b Describe how employee dispositions can impact customer satisfaction.

BMM.HS.17.4.c Compare the effects of customer relations on success of the hospitality and event planning industries.

BMM.HS.17.4.d Identify the needs, desires, and interests of guests in order to exceed their expectations by implementing total quality management practices (TQM).

BMM.HS.17.4.e Recognize common guest complaints and the service solutions for preventing or resolving them.

INTRODUCTION TO HOSPITALITY AND EVENT PLANNING (cont.)

BMM.HS.17.5 Analyze effective management principles within the hospitality and event planning industry.

BMM.HS.17.5.a Explain the relationship between facilities management and profit and loss, including the costs of resource consumption, breakage, theft, supplies use, and decisions for repairs or replacement.

BMM.HS.17.5.b Explain procedures for handling cash and noncash transactions (e.g., balancing cash, credit cards, personal checks, identifying counterfeit currency, etc.).

BMM.HS.17.5.c Explain the role of individual departments as they impact the business as a whole.

BMM.HS.17.5.d Describe the relationship between facility and equipment management and profit and loss (e.g., costs of resource consumption, breakage, theft, decisions for repairs or replacement, etc.).

BMM.HS.17.5.e Summarize procedures for maintaining inventories, requisitioning equipment and tools, and storing and restocking supplies.

BMM.HS.17.6 Plan and carry out an event.

BMM.HS.17.6.a Describe various types of event planning and managing services within the industry (e.g., fundraiser, sporting event, special occasion/celebration, concert, etc.).

BMM.HS.17.6.b Describe the importance of establishing business relationships with a variety of locations, food suppliers, and other vendors.

BMM.HS.17.6.c Demonstrate the essential procedures for promoting, publicizing, and evaluating an event.

BMM.HS.17.6.d Develop schedules, registration tools, event materials, and programs.

BMM.HS.17.6.e Demonstrate procedures for setting up facilities, equipment, and supplies.

BMM.HS.17.6.f Outline the process for planning events based on specific themes, budgets, agendas, space and security needs.

MARKETING MANAGEMENT

Course Description

Marketing Management furthers student understanding and skills of the marketing functions and strategies including pricing, product/service management, channel management, promotion, and marketing-information management.

Standards and Indicators:

BMM.HS.20.1 Analyze the concepts and strategies utilized in determining and adjusting prices to maximize return and meet customers' perceptions of value.

- BMM.HS.20.1.a Explain the nature and scope of the pricing function.
- BMM.HS.20.1.b Explain factors affecting pricing decisions.
- BMM.HS.20.1.c Describe the ethical and legal considerations for pricing.
- BMM.HS.20.1.d Explain the use of technology in the pricing function.

BMM.HS.20.2 Identify and assess the concepts and processes needed to obtain, develop, maintain, and/or improve a product or service mix in response to market opportunities and to build the brand for the organization.

- BMM.HS.20.2.a Identify product/service management concepts to understand its nature and scope.
- BMM.HS.20.2.b Generate product ideas to contribute to ongoing business success.
- BMM.HS.20.2.c Apply quality assurances to enhance product/service offerings (i.e. customer service, warranties, guarantees, etc).
- BMM.HS.20.2.d Employ product-mix strategies to meet customer expectations.
- BMM.HS.20.2.e Determine ways to position a company to acquire a desired business image.
- BMM.HS.20.2.f Determine ways to position products/services to acquire desired business image.

MARKETING MANAGEMENT (cont.)

BMM.HS.20.3 Assess channel management strategies and its role in marketing.

BMM.HS.20.3.a Explain the nature and scope of channel management.

BMM.HS.20.3.b Explain the nature of channels of distribution.

BMM.HS.20.3.c Describe the use of technology in the channel management function.

BMM.HS.20.3.d Describe the ethical and legal considerations for channel management.

BMM.HS.20.4 Investigate the nature and scope of promotion.

BMM.HS.20.4.a Explain the role of promotion as a marketing function.

BMM.HS.20.4.b Examine the types of promotion (i.e., institutional, product).

BMM.HS.20.4.c Identify the elements of the promotional mix.

BMM.HS.20.4.d Demonstrate an understanding of promotional channels used to communicate with targeted audiences.

BMM.HS.20.4.e Identify and describe the types of advertising media.

BMM.HS.20.5 Identify marketing-information management strategies and analyze the role of marketing research in decision-making.

BMM.HS.20.5.a Describe the need for marketing data.

BMM.HS.20.5.b Describe options businesses use to obtain marketing research data (i.e., primary and secondary research).

BMM.HS.20.5.c Describe data-collection methods (e.g., observations, mail, diaries, telephone, Internet, discussion groups, interviews, scanners, tracking tools).

BMM.HS.20.5.d Analyze data monitored for marketing decision making.

BMM.HS.20.5.e Describe the regulations and ethical implications of marketing-information management.

TRAVEL AND TOURISM

Course Description

This intermediate course focuses on marketing and management principles within the travel and tourism industry building on concepts from the introductory course. Topics in this course include a history, the key sectors, specific travel logistics, marketing strategies, and current trends in the travel and tourism industry.

Standards and Indicators:

BMM.HS.23.1 Analyze the history and development of the travel and tourism industry.

BMM.HS.23.1.a	Apply the terms, concepts, and practices within the travel and tourism industry.
BMM.HS.23.1.b	Describe the evolution of travel and tourism.
BMM.HS.23.1.c	Differentiate how reasons for travel have changed over time.
BMM.HS.23.1.d	Discuss the different kinds of consumers and what satisfies their travel needs.

BMM.HS.23.2 Analyze the key sectors of the travel and tourism industry.

BMM.HS.23.2.a	Describe geographical locations, time zones, and seasonal influences that impact travel and tourism.
BMM.HS.23.2.b	Explore factors influencing destination decisions.
BMM.HS.23.2.c	Analyze the success of the top tourism destinations in the world.
BMM.HS.23.2.d	Explain the role of Destination Management Organizations (DMOs) including Convention and Visitors Bureaus (CVBs) in the travel and tourism industry.

TRAVEL AND TOURISM (cont.)

BMM.HS.23.3 Analyze different modes of transportation, types of tour operators, lodging providers, and travel facilitators.

- BMM.HS.23.3.a Compare and contrast different modes of transportation.
- BMM.HS.23.3.b Describe the pricing structure of various kinds of tours and tour packages.
- BMM.HS.23.3.c Differentiate among the types of lodging accommodations and guest amenities.
- BMM.HS.23.3.d Describe the decision-making process when designing a travel experience.
- BMM.HS.23.3.e Explain the role of travel facilitators in the travel experience.

BMM.HS.23.4 Evaluate marketing and sales information for travel and tourism management.

- BMM.HS.23.4.a Utilize information from market segmentation (e.g., demographics, geographics, psychographics, etc.) to guide product and service decisions.
- BMM.HS.23.4.b Analyze each of the 4 P's of the marketing mix and how they impact decisions in the travel and tourism industry.
- BMM.HS.23.4.c Assess joint marketing efforts in the travel and tourism industry.
- BMM.HS.23.4.d Identify the features and benefits of travel and tourism products and services.
- BMM.HS.23.4.e Examine types of marketing promotions in travel and tourism.

BMM.HS.23.5 Evaluate the current trends in the travel and tourism industry.

- BMM.HS.23.5.a Investigate current trends in travel and tourism.
- BMM.HS.23.5.b Analyze the social, cultural, economic, and environmental impacts of the travel and tourism industry.
- BMM.HS.23.5.c Analyze the impact of technological developments in the travel and tourism industry.
- BMM.HS.23.5.d Examine career opportunities available in travel and tourism.

ENTREPRENEURSHIP

COURSE DESCRIPTION

Entrepreneurship is a course with emphasis on the evaluation of the business skills and commitment necessary to successfully operate an entrepreneurial venture and review the challenges and rewards of entrepreneurship. The role of entrepreneurial businesses in the United States and the impact on the national and global economy will be explored.

STANDARDS AND INDICATORS:

BMM.HS.13.1 Identify characteristics and skills of entrepreneurs.

BMM.HS.13.1.a	Analyze personal strengths, skills, and talents necessary to be an entrepreneur.
BMM.HS.13.1.b	Identify responsible behavior, attitude, and leadership ability.
BMM.HS.13.1.c	Demonstrate problem-solving skills.
BMM.HS.13.1.d	Describe the history and development of successful and non-successful entrepreneurial ventures.
BMM.HS.13.1.e	Explore career opportunities in entrepreneurship.

BMM.HS.13.2 Evaluate business ownership as related to entrepreneurship.

BMM.HS.13.2.a	Identify and compare advantages and disadvantages of various forms of business ownership.
BMM.HS.13.2.b	Explain the legal and ethical issues affecting businesses.
BMM.HS.13.2.c	Analyze the advantages and disadvantages of methods of entering an entrepreneurial venture.

ENTREPRENEURSHIP (cont.)

BMM.HS.13.3 Analyze the management, financial, marketing, and legal skills necessary to successfully operate and grow an entrepreneurial venture.

BMM.HS.13.3.a	Describe the importance of strategic management to a small entrepreneurial business.
BMM.HS.13.3.b	Develop vision, mission, goals, objectives, and policies for an entrepreneurial venture.
BMM.HS.13.3.c	Explain the importance of effective financial management in developing, growing, and sustaining an entrepreneurial venture.
BMM.HS.13.3.d	Develop a marketing plan and strategies to position the product and/or service in the target market.
BMM.HS.13.3.e	Identify the legal documents and financial records for business operations.
BMM.HS.13.3.f	Evaluate the venture idea utilizing the components of a business plan.

BMM.HS.13.4 Analyze the role of entrepreneurship in the global economy.

BMM.HS.13.4.a	Identify entrepreneurial venture opportunities in international trade.
BMM.HS.13.4.b	Analyze global issues and trends for entrepreneurial ventures.
BMM.HS.13.4.c	Determine the impact of cultural and social requirements on international trade.

EVENT MANAGEMENT WITH WORK-BASED LEARNING

Course Description

This course focuses on the evolving hospitality industry building on concepts from the introductory and intermediate courses. Topics covered include many facets of event planning such as: career opportunities, step-by-step planning, food/beverage operations, and marketing strategies. Through this capstone course, knowledge and skills will be applied within a structured work-based learning experience. The focus of the experience will be to plan and carry out events that may take place as part of class projects or within a business setting.

Standards and Indicators:

BMM.HS.14.1 Describe the foundational knowledge pertaining to event planning and management.

BMM.HS.14.1.a	Determine why events and meetings take place (e.g., celebrations, fundraising, milestones, etc).
BMM.HS.14.1.b	Compare and contrast where events and meetings take place (e.g., resorts, hotels, backyards, fairgrounds, educational institutions, etc).
BMM.HS.14.1.c	Identify different types of events and meetings (e.g., special/social and educational/business).
BMM.HS.14.1.d	Describe legal issues affecting the event management industry.
BMM.HS.14.1.e	Summarize the use of technology as a means of planning, facilitating, and promoting an event (e.g., event-specific software, mobile apps, registration, live streaming, etc).

BMM.HS.14.2 Evaluate career development and employability skills required for event management.

BMM.HS.14.2.a	Summarize career opportunities and growth potential in event planning and man agement (e.g., corporate or private event planner, independent contractor, vendor, hotel staff, etc).
BMM.HS.14.2.b	Identify education and training requirements for careers in event and entertainment management.
BMM.HS.14.2.c	Demonstrate skills needed in the workplace (e.g., effective communication, successful problem solving, effective customer service skills, etc.).
BMM.HS.14.2.d	Investigate current trends in the event and entertainment industry.

EVENT MANAGEMENT WITH WORK-BASED LEARNING (cont.)

BMM.HS.14.3 Analyze the overall design of event planning and management.

- BMM.HS.14.3.a Determine the vision, goals, and objectives of an event.
- BMM.HS.14.3.b Appraise client needs, wants, and expectations.
- BMM.HS.14.3.c Analyze the factors that determine a budget/financial strategy for an event.
- BMM.HS.14.3.d Determine event logistics (e.g., food and beverage, accommodations, site selection, staffing, theme, safety/security, etc.).
- BMM.HS.14.3.e Identify key components of an event timeline/itinerary.

BMM.HS.14.4 Analyze food and beverage operations in event management.

- BMM.HS.14.4.a Examine food and beverage operations in various contexts.
- BMM.HS.14.4.b Describe the equipment and supplies used in food and beverage operations.
- BMM.HS.14.4.c Explain the importance of proper sanitation in food and beverage operations.
- BMM.HS.14.4.d Compare costs, pricing, market demands, and marketing strategies to manage profitability in food and beverage operations.

BMM.HS.14.5 Analyze effective marketing strategies for the event.

- BMM.HS.14.5.a Describe the importance of each of the 4 P's of the marketing mix for an event.
- BMM.HS.14.5.b Identify promotional strategies for attracting targeted audiences (e.g., advertising, public relations, personal selling, etc.).
- BMM.HS.14.5.c Analyze strategies used to determine and adjust prices in order to maximize return and maintain value.
- BMM.HS.14.5.d Implement channel activities to minimize costs and to determine distribution strategies.

BMM.HS.14.6 Apply event management skills in a work environment.

- BMM.HS.14.6.a Implement continual appraisal of performance and identify strengths and weaknesses
- BMM.HS.14.6.b Evaluate the work-based learning experience.
- BMM.HS.14.6.c Apply emotional intelligence to foster self-understanding and enhance relationships.
- BMM.HS.14.6.d Apply event management concepts and principles to plan and carry out an event.

NEBRASKA CAREER AND TECHNICAL EDUCATION

CTE®
Learning that works for Nebraska

NEBRASKA DEPARTMENT OF EDUCATION

COMMUNICATION AND INFORMATION SYSTEMS

PROGRAM OF STUDY STANDARDS

COMMUNICATION ARTS

INFORMATION TECHNOLOGY

NEBRASKA CAREER AND TECHNICAL EDUCATION STATE MODEL PROGRAMS OF STUDY

CAREER FIELD OVERVIEW

The Communication and Information Systems Career Field Area provides opportunities for students to deepen their understanding of topics in areas such as computer science, information technology, e-commerce, advertising, public relations, commercial photography, journalism, graphic design, broadcasting, scriptwriting, radio/TV production, business technology applications, web design, interactive media, and networking.

PROGRAMS OF STUDY

Programs of Study are the primary delivery model for Career and Technical Education (CTE) in Nebraska. They include a sequence of courses which progresses in specificity and rigor and are updated regularly to align with Nebraska's workforce needs and economic development priorities. This document includes the programs of study and course-based standards for the Communication and Information Systems career field. These state model programs of study were developed to:

- Assist secondary schools in creating meaningful sequences of courses that adequately prepare individuals for seamless transitions to postsecondary education and careers eliminating duplication of coursework;
- Assist students in identifying appropriate courses for high school and postsecondary education that lead to their chosen career;
- Encourage collaboration between secondary and postsecondary education through curricular alignment;
- Offer opportunities for high-quality workplace experiences aligned to students' career interests;
- Promote the advancement of early postsecondary opportunities (including dual-credit courses) for all students; and
- Support postsecondary education options for students to further prepare them for successful transitions to their future careers.

Nebraska's programs of study are organized around Nebraska's CTE Model, which provides a way for students to explore the diversity of career options available to them.

NEBRASKA CAREER AND TECHNICAL EDUCATION MODEL

1 CORE ACADEMICS AND CAREER READINESS

At the center of the NCE Model is the expectation for all students to develop a solid academic core. The next ring identifies specific career readiness standards and practices that prepare students for success in postsecondary education as well as entrepreneurship/employment.

2 CAREER FIELDS

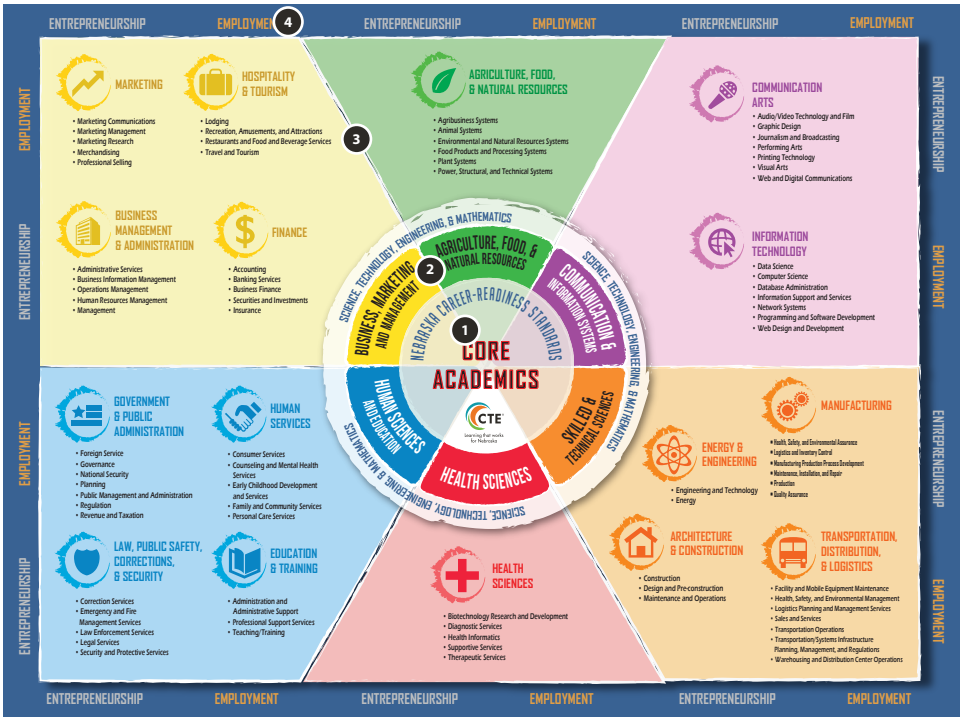
The six career fields represent broad sectors of the job market on which students may choose to focus.

3 CAREER CLUSTERS

Each career field is composed of career clusters radiating out from it. The clusters are more specific segments of the labor market. Each cluster is a grouping of careers that focus on similar subjects or similar skills. A basic understanding and exploration of each of the clusters will provide students with a solid foundation for career decision-making to conceptualize the entire world of work.

4 EMPLOYABILITY AND ENTREPRENEURSHIP

Career education provides the opportunity to gain the knowledge and skills for both employment and entrepreneurship. The reality for Nebraska and the United States is that entrepreneurship will help ensure economic growth and vitality. By infusing entrepreneurship competencies, career education is helping create the next generation of America's innovators and entrepreneurs.



The model is a visual map of "career fields" and "career clusters/pathways" and organizes the 16 National Career Clusters into six broad sectors of entrepreneurship and employment:

- Agriculture, Food and Natural Resources
- Business, Marketing and Management
- Communication and Information Systems
- Health Sciences
- Human Sciences and Education
- Skilled and Technical Sciences

These fields break down into more specific Career Clusters, Pathways and Occupational Specialties. The model provides a way for:

- Students to explore the diversity of career options available to them.
- Students to begin to prepare for their career with plans for secondary and post-secondary education.
- Schools to organize curriculum into Programs of Study that prepare students for opportunities in Nebraska's economy.

COURSE SEQUENCING

The courses within the State Model Program of Study are intended to be offered sequentially, to allow learners to build upon foundational knowledge and skills learned in introductory and intermediate courses and applied in more advanced capstone coursework. Non-duplicative sequences of courses ensure students transition to postsecondary education without duplication of classes and content. CTE enrollment data is collected at the course level. Students who participate and concentrate in CTE generally have more positive outcomes such as higher graduation rates along with postsecondary success.

Introductory Courses

Introductory courses set the foundation for a program of study by introducing students to broad foundational knowledge relative to an occupational area and career field.

Intermediate Courses

Intermediate courses build on the foundational knowledge of Introductory courses to further develop the academic, technical, and career readiness skills within a particular career field and occupational area.

Capstone Courses

Capstone courses are occupationally specific and further develop the necessary and required academic, technical, and career readiness skills needed for seamless transitions to postsecondary education and employment. Capstone courses often provide opportunities for students to earn postsecondary credit.

Levels of Participation

CTE Participant

A student who has earned one or more credits in any career and technical education program area.

CTE Concentrator

A secondary student who, in grades 9 through 12, has earned credit in at least two courses in a single career cluster program at the intermediate or capstone level.

State Model Programs of Study are coordinated, nonduplicative sequences of academic and technical content at the secondary and postsecondary levels that incorporate challenging State academic standards, address both academic and technical knowledge and skills, including Nebraska's Career Readiness Skills, are aligned with the needs of industries in Nebraska's economy, progress in specificity, have multiple entry and exit points that incorporate credentialing, and culminate in the attainment of a recognized postsecondary credential.

COURSE-BASED STANDARDS

Individual CTE courses, which make up the sequence of courses for Programs of Study, include content area standards and indicators to provide a framework for quality teaching and learning. While not required by state law, districts are encouraged to adopt these State Model Programs of Study and their related course-based standards. CTE State Model Programs of Study and course-based standards are revised on a five-year cycle to remain responsive to the rapid advances and needs of business and industry, help students explore a variety of postsecondary options and corresponding entrance requirements to help identify their next steps, and to align to changes in postsecondary programs.

Standards

At the highest level of generality, content area standards include a set of broad, overarching content-based statements that describe the basic cognitive, affective, or psychomotor expectations of students. They reflect long-term goals for learning.

Indicators

Under each standard are indicators, which further describe what a student must know and be able to do to meet the standard. Indicators are performance-based statements that provide educators with a clear understanding of the expected level of student learning and guidance. Indicators provide guidance for an assessment of student learning.

EXPANDED LEARNING OPPORTUNITIES

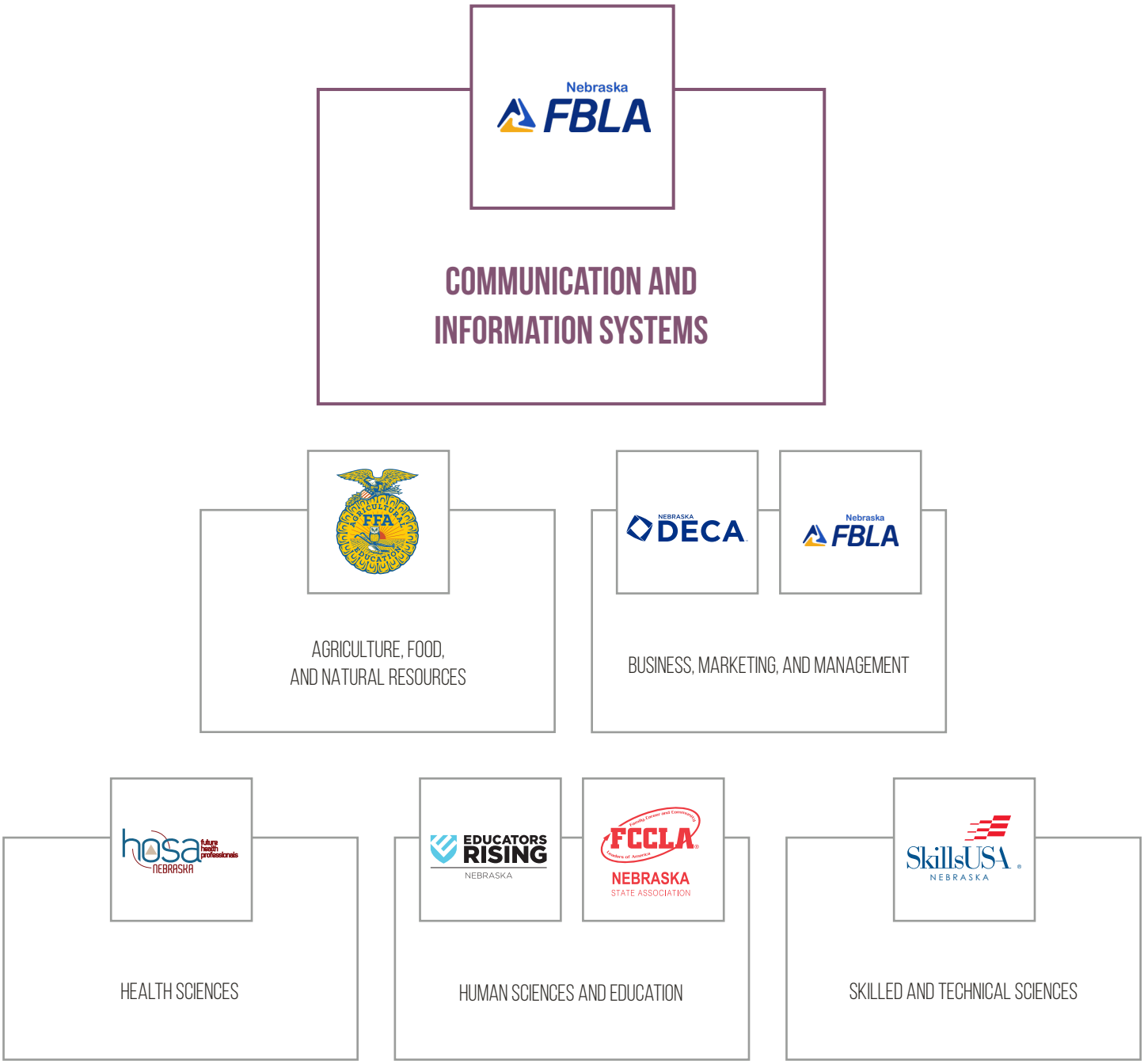
Expanded learning opportunities build on, support, and enhance learning within and outside of regular school programming. They are a critical component of Nebraska's educational landscape and should be intentionally supported to further develop students' college and career readiness. To signal aligned expanded learning opportunities, each Program of Study identifies additional areas where students may desire to personalize their program and take additional coursework or work-based learning that aligns with their interests. These expanded learning opportunities are not considered part of a Program of Study nor are they required, but rather a meaningful opportunity for students to continue to learn after completing the Program of Study sequence of courses within the context of their career interests. Along with aligned coursework, two prominent expanded learning opportunities include participating in Work-Based Learning or a Career and Technical Student Organization.

Work-Based Learning

Work-Based Learning (WBL) connects learners with employers to prepare them for success in an ever-changing workplace. WBL is a planned program of meaningful experiences related to the career interests of learners that enables them to acquire knowledge and skills in a real or simulated work setting. It requires strong partnerships between schools, colleges, and local employers. WBL is learning through work, not simply learning about work. Expanding high-quality WBL opportunities for students is one of Nebraska's CTE strategic priorities and is a program quality accountability indicator. Nebraska CTE affirms WBL as a critical component of career development. Throughout the State Model Programs of Study, courses where WBL is embedded into the class is noted in the course title (e.g., "Information Technology Work-Based Learning Experience"). It is also signaled as an expanded learning opportunity across all programs of study.

Career And Technical Student Organizations

Career and Technical Student Organizations (CTSOs) are an extension of classroom instruction—applying classroom learning to real-world experiences. CTSOs provide opportunities for all students to develop career readiness skills through activities, competitions, and community service. Nebraska recognizes seven CTSOs aligned with the state's Programs of Study and career field areas. These include:



CAREER READINESS STANDARDS

Embedded into the State Model Programs of Study and courses are the Nebraska Career Readiness standards. These standards rest on important "practices and proficiencies" with long-standing importance in career education. These standards and related practices are not limited to formal CTE programs nor to the middle school or high school level. Rather, these standards and practices should be used over and over again with increasing complexity and relevance by students as they progress through their educational pathway. The standards themselves do not dictate curriculum, pedagogy or delivery of content. Schools and colleges may handle the teaching and assessing of these standards in many different ways.

THE CAREER READY INDIVIDUAL...

1. Applies appropriate academic and technical skills

2. Communicates effectively and appropriately

3. Contributes to employer and community success

4. Makes sense of problems and perseveres in solving them

5. Uses critical thinking

6. Demonstrates innovation and creativity

7. Models ethical leadership and effective management

8. Works productively in teams and demonstrates cultural competency

9. Utilizes technology

10. Manages personal career development

11. Attends to personal and financial well-being

COMMUNICATION AND INFORMATION SYSTEMS

PROGRAMS OF STUDY

COMMUNICATION ARTS CLUSTER

Program of Study Name	Introductory Course	Intermediate Course	Capstone Course	Expanded Learning Opportunity
BROADCAST JOURNALISM (Page10–24)	270602 - Digital Media	270609 - Video Production	270610 - Media Production, OR 270604 - Foundations of Web Design	320704 - Communication Arts Work-Based Learning Experience
DIGITAL DESIGN (Page 25–38)	270602 - Digital Media	270611 - Digital Design	270613 - Advanced Digital Design, OR 270604 - Foundations of Web Design	320704 - Communication Arts Work-Based Learning Experience

INFORMATION TECHNOLOGY CLUSTER

Program of Study Name	Introductory Course	Intermediate Course	Capstone Course	Expanded Learning Opportunity
BUSINESS TECHNOLOGY (Page 39–53)	270501 - IT Applications 1, AND 270502 - IT Applications 2	270611 - Digital Design	270604 - Foundations of Web Design, OR 030600 - Business Communication (BMM)	320713 - Information Technology Work-Based Learning Experience, OR 320704 - Communication Arts Work-Based Learning Experience
CISCO NETWORKING	270505 - CISCO I: Introduction to Networks	270506 - CISCO II: Routing & Switching Essentials	270507 - CISCO III: Scaling Networks	320713 - Information Technology Work-Based Learning Experience
COMPUTER SCIENCE (Page 54–69)	270704 - Foundations of Computing, OR 270504 - IT Fundamentals	270703 - Computer Science Principles (1 year), OR 270702 - AP Computer Science Principles, OR 270708 - PLTW Computer Science Principles	270701 - Computer Science A (1 year), OR 270712 - IB Comp Science, OR 270700 - AP Computer Science A, OR 270705 - Software Development, OR 270709 - PLTW Computer Science A	320713 - Information Technology Work-Based Learning Experience

INFORMATION TECHNOLOGY CLUSTER **(CONTINUED)**

Program of Study Name	Introductory Course	Intermediate Course	Capstone Course	Expanded Learning Opportunity
DATA ANALYTICS AND MANAGEMENT (Page 70–78)	270502 - IT Applications 2	270414 - Data Literacy & Visualization	270413 - Introduction to Data Science	320713 - Information Technology Work-Based Learning Experience
IT OPERATIONS MANAGEMENT (Page 79–92)	270504 - IT Fundamentals, OR 270502 - IT Applications 2	270707 - Cybersecurity, OR 270711 - PLTW Cybersecurity	270601 - Networking	320713 - Information Technology Work-Based Learning Experience
WEB DEVELOPMENT (Page 93–105)	270504 - IT Fundamentals, OR 270502 - IT Applications 2	270706 - Web Design & Development	270604 - Foundations of Web Design	320713 - Information Technology Work-Based Learning Experience, OR 320704 - Communication Arts Work-Based Learning Experience

DIGITAL MEDIA

COURSE DESCRIPTION

Students will learn and apply copyright laws while using industry standard digital tools to create, design, and produce digital media including sound, video, motion graphics, and print design following rules of composition and basic design principles.

STANDARDS AND INDICATORS:

CIS.HS.7.1 Evaluate and comply with copyright laws.

CIS.HS.7.1.a	Define terms such as infringement and fair use, royalty free and copyright free, and public domain.
CIS.HS.7.1.b	Locate sources of royalty-free music, images, graphics, and video.
CIS.HS.7.1c	Define copyright as it applies to their own creative work.
CIS.HS.7.1.d	Select audio, video, still images, and art that are royalty free and/or abide by the licensing agreement under Creative Commons usage.
CIS.HS.7.1.e	Analyze the different types of copyright licenses and their uses. (e.g., Creative Commons, Public Domain…)

CIS.HS.7.2 Demonstrate composition techniques.

CIS.HS.7.2.a	Demonstrate rules of composition (e.g., rule of thirds, point-of-view, framing).
CIS.HS.7.2.b	Demonstrate a variety of photographic/video shots using a digital camera or video camera (e.g., establishing, close up, mid-shot, wide, over the shoulder).
CIS.HS.7.2.c	Demonstrate elements of typographic design in print media (e.g., font selection, size, leading, tracking and kerning, measure, whitespace, hierarchy, and scale).
CIS.HS.7.2.d	Demonstrate basic design principles such as consistency, dominance, palette, eye line, readability, alignment, and color theory.

DIGITAL MEDIA (cont.)

CIS.HS.7.3 Create and edit digital photographic images.

CIS.HS.7.3.a	Select appropriate hardware and software.
CIS.HS.7.3.b	Capture still photographic images.
CIS.HS.7.3.c	Edit still photos (e.g., cropping, color correction, layers, and levels).
CIS.HS.7.3.d	Export photos in a usable format.
CIS.HS.7.3.e	Name and store native and exported files in a manageable file structure (i.e., Drive, Cloud, and external hard drives).
CIS.HS.7.3.f	Navigate, organize, and customize the application workspace.

CIS.HS.7.4 Create and edit digital audio.

CIS.HS.7.4.a	Select appropriate hardware and software.
CIS.HS.7.4.b	Capture an audio recording.
CIS.HS.7.4.c	Edit digital audio (e.g., trim, delete, and add effects).
CIS.HS.7.4.d	Export audio in a usable format.
CIS.HS.7.4.e	Name and store native and exported files in a manageable file structure (i.e., Drive, Cloud, and external hard drives).
CIS.HS.7.4.f	Navigate, organize, and customize the application workspace.

DIGITAL MEDIA (cont.)

CIS.HS.7.5 Create and edit digital video.

CIS.HS.7.5.a	Select appropriate hardware and software.
CIS.HS.7.5.b	Capture video footage.
CIS.HS.7.5.c	Edit digital video (e.g., trim, delete, and add effects).
CIS.HS.7.5.d	Export video in a usable format.
CIS.HS.7.5.e	Name and store native and exported files in a manageable file structure (i.e., Drive, Cloud, and external hard drives).
CIS.HS.7.5.f	Navigate, organize, and customize the application workspace.

CIS.HS.7.6 Create and edit motion graphics objects for animation.

CIS.HS.7.6.a	Select appropriate hardware and software
CIS.HS.7.6.b	Add motion to objects.
CIS.HS.7.6.c	Edit motion graphics (e.g., trim, delete, add effects, etc.).
CIS.HS.7.6.d	Export motion graphics in a usable format.
CIS.HS.7.6.e	Name and store native and exported files in a manageable file structure (i.e., Drive, Cloud, and external hard drives).
CIS.HS.7.6.f	Navigate, organize, and customize the application workspace.

DIGITAL MEDIA (cont.)

CIS.HS.7.7 Create and edit digital print design.

CIS.HS.7.7.a	Select appropriate hardware and software.
CIS.HS.7.7.b	Apply elements of typographic design in print media (e.g., font selection, size, leading, tracking and kerning, measure, whitespace, hierarchy, and scale).
CIS.HS.7.7.c	Apply basic design principles such as consistency, dominance, palette, eye line, readability, and alignment.
CIS.HS.7.7.d	Name and store native and exported files in a manageable file structure (i.e., Drive, Cloud, and external hard drives).
CIS.HS.7.7.e	Navigate, organize, and customize the application workspace.

VIDEO PRODUCTION

COURSE DESCRIPTION

Students will expand upon the basics of video production to create projects that will involve a sequence requiring pre-production, production, and post production. The emphasis of video production is to tell stories through interviewing, scripting, and a more professional application of lighting, filming, recording, and editing.

STANDARDS AND INDICATORS:

CIS.HS.17.1 Use video equipment to create media production projects.

CIS.HS.17.1.a	Identify and use various types of cameras (e.g., DSLR's, camcorders, drones, etc) to best capture the scene.
CIS.HS.17.1.b	Identify and use various types of camera features (e.g., white balance, iso, fps).
CIS.HS.17.1.c	Demonstrate the functions and uses of camera mounting devices (e.g., monopods, tripods, steadicam, gimbals, etc.).
CIS.HS.17.1.d	Demonstrate different shot compositions (e.g., establishing shot, medium shot, close up, long shot, etc.).
CIS.HS.17.1.e	Demonstrate compositional techniques with a camera (e.g., rule of thirds, framing, balance, background/foreground, headroom, lead room, etc.).
CIS.HS.17.1.f	Demonstrate proper use, maintenance, and care of all equipment and tools.

CIS.HS.17.2 Use audio equipment to create media production projects.

CIS.HS.17.2.a	Identify and use various types of microphones (e.g., lavaliere, directional, omnidirectional, shotgun, podcast, etc) to best capture voice, natural sound, ambient sound, background music, and secondary sounds for mood and effect.
CIS.HS.17.2.b	Explain the function of industry standard audio equipment and accessories (e.g., microphones, XLR, 2 Ring (TRS) vs. 3 Ring (TRRS) for headphones, mixing board, cabling, etc.).
CIS.HS.17.2.c	Identify and then troubleshoot sources of interference and poor sound quality.
CIS.HS.17.2.d	Demonstrate proper use, maintenance, and care of all equipment and tools.

VIDEO PRODUCTION (cont.)

CIS.HS.17.3 Use lighting to create media production projects.

CIS.HS.17.3.a Utilize various light sources for effect (e.g., natural light, back light, reflectors, portable lights, box lights, lamps etc.).

CIS.HS.17.3.b Explain and demonstrate the use of lighting techniques in creating composition, visual continuity, and mood.

CIS.HS.17.3.c Demonstrate proper use, maintenance, and care of all equipment and tools.

CIS.HS.17.4 Complete pre-production tasks.

CIS.HS.17.4.a Propose a project to include purpose, target audience, delivery method, selection of cast and crew, best equipment for the job, logistics, and schedule.

CIS.HS.17.4.b Scout and secure locations for the best lighting, sound, availability, and proper setting for the purpose of the project.

CIS.HS.17.4.c Create a properly formatted storyboard and shot list for each scene (sketch subjects, draw background, motion/movement, shot numbers, etc.).

CIS.HS.17.5 Develop all parts of the storytelling process.

CIS.HS.17.5.a Write questions for interviews.

CIS.HS.17.5.b Write a voice over script.

CIS.HS.17.5.c Research information as part of the story.

VIDEO PRODUCTION (cont.)

CIS.HS.17.6 Perform production tasks.

CIS.HS.17.6.a	Perform the duties of director to create vision as laid forth in pre-production (e.g., disseminate commands and information to cast and crew and execute creative vision).
CIS.HS.17.6.b	Perform the duties of various production roles (i.e., camera operator, sound operator, grip, gaffer, on-air talent, etc.).
CIS.HS.17.6.c	Employ basic lighting techniques for the project (i.e., three-point, natural, artificial, reflectors, etc.).
CIS.HS.17.6.d	Employ appropriate audio recording method for the project.
CIS.HS.17.6.e	Reflect, revise, and refine pre-production decisions as needed.
CIS.HS.17.6.f	Apply different shot compositions when filming (e.g., establishing shot, medium shot, close up, long shot, etc.).

CIS.HS.17.7 Perform post-production tasks.

CIS.HS.17.7.a	Import and organize media to create an efficient workflow (i.e., assemble, review, share, etc.).
CIS.HS.17.7.b	Demonstrate how to perform editing techniques using chosen software (e.g., cuts, trims, color correction, cropping, audio leveling, key framing, chroma key, transitions, compositing, continuity, and fades).
CIS.HS.17.7.c	Determine effect use and placement of titles, text, fonts, colors, graphics, and lower thirds.
CIS.HS.17.7.d	Implement legal and appropriate audio into a project.
CIS.HS.17.7.e	Evaluate video for proper timing and pacing techniques appropriate to the project.
CIS.HS.17.7.f	Differentiate between still image, audio, and digital video extensions and how they function in the project.
CIS.HS.17.7.g	Create, compress, and convert digital video files, still images, and audio files in various formats (e.g., MPEG, WMV, MOV, MP3, MP4, VLC, JPEG, AIFF, AVCHD, etc.).

VIDEO PRODUCTION (cont.)

CIS.HS.17. 8 Describe working in the media production industry.

CIS.HS.17.8.a Describe best practices employed in the design industry.

CIS.HS.17.8.b Examine careers in the media production field.

CIS.HS.17.8.c Identify job market trends in the media production field.

CIS.HS.17.8.d Identify the benefits of industry certification and higher education in the field.

CIS.HS.17.9 Evaluate and comply with copyright laws.

CIS.HS.17.9.a Determine the type of copyright, permissions, and licensing required to use specific content.

CIS.HS.17.9.b Analyze the different types of copyright licenses and their uses. (e.g., Creative Commons, Public Domain).

CIS.HS.17.9.c Identify legal and ethical considerations for using third-party content, such as copyright, permissions, and licensing.

CIS.HS.17.9.d Understand copyright as it applies to one's own creative work.

MEDIA PRODUCTION

COURSE DESCRIPTION

Students will expand their skills in the creation of media productions such as a news broadcast, video story package, live streaming, radio show, podcast, PSAs, digital signage, short films, documentaries, and other media projects. These skills will prepare students for entry-level positions in the media production field.

STANDARDS AND INDICATORS:

CIS.HS.14.1 Analyze working in the media production field.

CIS.HS.14.1.a Analyze careers in the media production field.

CIS.HS.14.1.b Analyze job market trends in the media production field.

CIS.HS.14.1.c Analyze the benefits of industry certification and higher education in the field.

CIS.HS.14.1.d Investigate careers in media production.

CIS.HS.14.2 Identify and describe the roles and responsibilities for the cast and crew.

CIS.HS.14.2.a Describe the hierarchy of the production leadership crew (e.g., Executive Producer, Producer, or Director).

CIS.HS.14.2.b Identify the roles and duties of the production crew (i.e., actor, on-camera reporter, writer, announcer, play-by-play announcer, color commentary announcer, camera operator, sound board, etc.)

MEDIA PRODUCTION (cont.)

CIS.HS.14.3 Simulate working in the media production field through the creation of client-based media projects.

CIS.HS.14.3.a Compare and contrast the various roles involved in media production.

CIS.HS.14.3.b Interpret the client's purpose, audience, and audience needs for preparing media to ensure the content is relevant.

CIS.HS.14.3.c Prepare a production schedule (e.g., creating and using a work plan, establishing milestones and deliverables).

CIS.HS.14.3.d Describe the importance of branding as it applies to client-based media production projects.

CIS.HS.14.3.e Communicate in person and through written communication with peers and clients about production plans and processes.

CIS.HS.14.3.f Distribute a final product to the target audience using appropriate outlets.

CIS.HS.14.3.g Evaluate effectiveness, analytics, and feedback from the media production.

CIS.HS.14.4 Research, report, and synthesize information from interviews as part of the storytelling process.

CIS.HS.14.4.a Identify the components of a compelling video story.

CIS.HS.14.4.b Write open-ended questions for interviews.

CIS.HS.14.4.c Conduct interviews with subjects.

CIS.HS.14.4.d Incorporate information from research and interviews to write a voice over script appropriate to the project.

MEDIA PRODUCTION (cont.)

CIS.HS.14.5 Demonstrate technical skills for broadcast, video, Internet, audio, and/or mobile production.

CIS.HS.14.5.a Demonstrate proficiency using equipment and software during recording and post-production applications.

CIS.HS.14.5.b Research and evaluate trends in new equipment, software, and techniques.

CIS.HS.14.6 Evaluate and comply with copyright laws.

CIS.HS.14.6.a Determine the type of copyright, permissions, and licensing required to use specific content.

CIS.HS.14.6.b Analyze the different types of copyright licenses and their uses. (e.g., Creative Commons, Public Domain).

CIS.HS.14.6.c Identify legal and ethical considerations for using third-party content, such as copyright, permissions, and licensing.

CIS.HS.14.6.d Apply copyright as it pertains to one's own creative work.

CIS.HS.14.7 Create a digital portfolio which demonstrates competency in the Media Production field.

CIS.HS.14.7.a Examine professional digital portfolios as models.

CIS.HS.14.7.b Evaluate all elements of the portfolio for compliance with copyright.

CIS.HS.14.7.c Curate works for the portfolio that demonstrates media production skills.

CIS.HS.14.7.d Design portfolio so that it demonstrates principles of good design.

CIS.HS.14.7.e Choose language to ensure copyright protections of the student work.

CIS.HS.14.7.f Explain the importance of branding as it applies to their portfolio of creative work.

FOUNDATIONS OF WEB DESIGN

COURSE DESCRIPTION

Students will demonstrate knowledge of web and mobile app design to create an effective website or app that captures and keeps visitors' interests. Students will demonstrate project management skills, while also enhancing creativity, problem solving, and critical thinking. Students will explore career opportunities in an information technology career field.

STANDARDS AND INDICATORS:

CIS.HS.9.1 Explain and apply appropriate web design language and terminology.

- CIS.HS.9.1.a Describe the principles and goals of website design.
- CIS.HS.9.1.b Describe the principles and goals of responsive design.
- CIS.HS.9.1.c Describe binary code.
- CIS.HS.9.1.d Define common industry terminology.

CIS.HS.9.2 Plan a website and/or app for a specific purpose.

- CIS.HS.9.2.a Develop a storyboard, mock-up, and wireframes for a website and/or app.
- CIS.HS.9.2.b Explain the design process in regards to audience, layout, time, and budget.
- CIS.HS.9.2.c Identify the target market audience's needs.
- CIS.HS.9.2.d Evaluate clients' needs based on current trends.
- CIS.HS.9.2.e Plan for responsive design.

FOUNDATIONS OF WEB DESIGN (cont.)

CIS.HS.9.3 Analyze elements and principles of design to communicate ideas consistent with project goals.

CIS.HS.9.3.a	Apply appropriate font and font family concepts.
CIS.HS.9.3.b	Demonstrate knowledge of design decisions in regards to shapes, lines, colors.
CIS.HS.9.3.c	Demonstrate knowledge of design decisions in regards to white space, margins, and layout of graphic and text.
CIS.HS.9.3.d	Incorporate text layout techniques such as kerning, leading, and alignment.
CIS.HS.9.3.e	Incorporate audio, visual, and graphic elements.
CIS.HS.9.3.f	Develop a focused concept, clear methods of conveyance, and unified theme that solves the given problem.
CIS.HS.9.3.g	Identify accessibility and standard compliance measures in order to communicate with a broad audience.
CIS.HS.9.3.h	Explain design decisions in regards to themes.
CIS.HS.9.3.i	Evaluate the impact of design decisions on the theme of a design.
CIS.HS.9.3.j	Explain design and project goals using a storyboard, mock-up, and wireframes.

CIS.HS.9.4 Analyze legal and ethical responsibilities.

CIS.HS.9.4.a	Apply copyright laws as appropriate in website and app creation.
CIS.HS.9.4.b	Discuss security issues that are related to the utilization of the computer and/or Internet.
CIS.HS.9.4.c	Describe situations where web pages and/or apps may be used unethically.
CIS.HS.9.4.d	Describe licensing agreements.
CIS.HS.9 4.e	Discuss the importance of creative commons.

FOUNDATIONS OF WEB DESIGN (cont.)

CIS.HS.9.5 Create and test websites and/or apps designed for cross browser and mobile compatibility.

CIS.HS.9.5.a Utilize standards-compliant elements in code that delivers essential content and functionality if older browsers are not capable of displaying content.

CIS.HS.9.5.b Create websites and/or apps that utilize responsive design to allow for a variety of screen sizes and geometries to view the content in a meaningful and logical fashion.

CIS.HS.9.5.c Test an application on devices of varying geometries and operating system versions to ensure maximum compatibility.

CIS.HS.9.6 Implement quality assurance processes to deliver effective digital communication.

CIS.HS.9.6.a Evaluate the website and/or app functionality.

CIS.HS.9.6.b Test a website and/or app in a variety of environments.

CIS.HS.9.6.c Evaluate site effectiveness through user search and accessibility to meet all audience needs.

CIS.HS.9.6.d Investigate web hosts.

CIS.HS.9.6.e Troubleshoot and maintain a website and/or app.

CIS.HS.9.6.f Evaluate cross-browser compatibility.

CIS.HS.9.6.g Identify the process of securing a domain name.

FOUNDATIONS OF WEB DESIGN (cont.)

CIS.HS.9.7 Critique a website and/or app in accordance with web design principles.

CIS.HS.9.7.a Assess download time.

CIS.HS.9.7.b Assess readability of the website and/or app.

CIS.HS.9.7.c Assess ease of navigation for both website and/or app.

CIS.HS.9.7.d Assess the design theme of a website and/or app.

CIS.HS.9.7.e Assess consistency of the theme across the entire website and/or app.

CIS.HS.9.7.f Assess the functionality of links.

CIS.HS.9.8 Identify opportunities in an information technology career field including but not limited to entrepreneurial opportunities, responsibilities, education, and certification.

CIS.HS.9.8.a Identify information technologies used in various industries.

CIS.HS.9.8.b Discuss the impact of technology on all career fields.

CIS.HS.9.8.c Identify common tasks in career fields.

CIS.HS.9.8.d Discuss career opportunities in information technology career fields.

CIS.HS.9.8.e Describe the impact of technological change and the importance of lifelong learning in this career field.

DIGITAL MEDIA

COURSE DESCRIPTION

Students will learn and apply copyright laws while using industry standard digital tools to create, design, and produce digital media including sound, video, motion graphics, and print design following rules of composition and basic design principles.

STANDARDS AND INDICATORS:

CIS.HS.7.1 Evaluate and comply with copyright laws.

CIS.HS.7.1.a	Define terms such as infringement and fair use, royalty free and copyright free, and public domain.
CIS.HS.7.1.b	Locate sources of royalty-free music, images, graphics, and video.
CIS.HS.7.1.c	Define copyright as it applies to their own creative work.
CIS.HS.7.1.d	Select audio, video, still images, and art that are royalty free and/or abide by the licensing agreement under Creative Commons usage.
CIS.HS.7.1.e	Analyze the different types of copyright licenses and their uses. (e.g., Creative Commons, Public Domain…)

CIS.HS.7.2 Demonstrate composition techniques.

CIS.HS.7.2.a	Demonstrate rules of composition (e.g., rule of thirds, point-of-view, framing).
CIS.HS.7.2.b	Demonstrate a variety of photographic/video shots using a digital camera or video camera (e.g., establishing, close up, mid-shot, wide, over the shoulder).
CIS.HS.7.2.c	Demonstrate elements of typographic design in print media (e.g., font selection, size, leading, tracking and kerning, measure, whitespace, hierarchy, and scale).
CIS.HS.7.2.d	Demonstrate basic design principles such as consistency, dominance, palette, eye line, readability, alignment, and color theory.

DIGITAL MEDIA (cont.)

CIS.HS.7.3 Create and edit digital photographic images.

CIS.HS.7.3.a	Select appropriate hardware and software.
CIS.HS.7.3.b	Capture still photographic images.
CIS.HS.7.3.c	Edit still photos (e.g., cropping, color correction, layers, and levels).
CIS.HS.7.3.d	Export photos in a usable format.
CIS.HS.7.3.e	Name and store native and exported files in a manageable file structure (i.e., Drive, Cloud, and external hard drives).
CIS.HS.7.3.f	Navigate, organize, and customize the application workspace.

CIS.HS.7.4 Create and edit digital audio.

CIS.HS.7.4.a	Select appropriate hardware and software.
CIS.HS.7.4.b	Capture an audio recording.
CIS.HS.7.4.c	Edit digital audio (e.g., trim, delete, and add effects).
CIS.HS.7.4.d	Export audio in a usable format.
CIS.HS.7.4.e	Name and store native and exported files in a manageable file structure (i.e., Drive, Cloud, and external hard drives).
CIS.HS.7.4.f	Navigate, organize, and customize the application workspace.

DIGITAL MEDIA (cont.)

CIS.HS.7.5 Create and edit digital video.

CIS.HS.7.5.a	Select appropriate hardware and software.
CIS.HS.7.5.b	Capture video footage.
CIS.HS.7.5.c	Edit digital video (e.g., trim, delete, and add effects).
CIS.HS.7.5.d	Export video in a usable format.
CIS.HS.7.5.e	Name and store native and exported files in a manageable file structure (i.e., Drive, Cloud, and external hard drives).
CIS.HS.7.5.f	Navigate, organize, and customize the application workspace.

CIS.HS.7.6 Create and edit motion graphics objects for animation.

CIS.HS.7.6.a	Select appropriate hardware and software
CIS.HS.7.6.b	Add motion to objects.
CIS.HS.7.6.c	Edit motion graphics (e.g., trim, delete, add effects, etc.).
CIS.HS.7.6.d	Export motion graphics in a usable format.
CIS.HS.7.6.e	Name and store native and exported files in a manageable file structure (i.e., Drive, Cloud, and external hard drives).
CIS.HS.7.6.f	Navigate, organize, and customize the application workspace.

DIGITAL MEDIA (cont.)

CIS.HS.7.7 Create and edit digital print design.

CIS.HS.7.7.a	Select appropriate hardware and software.
CIS.HS.7.7.b	Apply elements of typographic design in print media (e.g., font selection, size, leading, tracking and kerning, measure, whitespace, hierarchy, and scale).
CIS.HS.7.7.c	Apply basic design principles such as consistency, dominance, palette, eye line, readability, and alignment.
CIS.HS.7.7.d	Name and store native and exported files in a manageable file structure (i.e., Drive, Cloud, and external hard drives).
CIS.HS.7.7.e	Navigate, organize, and customize the application workspace.

DIGITAL DESIGN

COURSE DESCRIPTION

Students will focus on developing skills to plan, design, and create digital design projects using elements of composition, digital photography, and digital print design.

STANDARDS AND INDICATORS:

CIS.HS.6.1 Utilize composition techniques.

CIS.HS.6.1.a	Demonstrate rules of composition (e.g., rule of thirds, point-of-view, framing).
CIS.HS.6.1.b	Demonstrate a variety of photographic shots using a digital camera.
CIS.HS.6.1.c	Demonstrate elements of typographic design in print media (e.g., font selection, size, leading, tracking and kerning, measure, whitespace, hierarchy and scale).
CIS.HS.6.1.d	Demonstrate basic design principles such as consistency, dominance, palette, eye line, readability, alignment, and color theory.
CIS.HS.6.1.e	Differentiate between bitmap, raster, and vector images.

CIS.HS.6.2 Create and edit digital photographic images.

CIS.HS.6.2.a	Select appropriate hardware and software.
CIS.HS.6.2.b	Capture still photographic images.
CIS.HS.6.2.c	Edit still photos (e.g., cropping, color correction, layers, and levels).
CIS.HS.6.2.d	Apply multiple camera modes.
CIS.HS.6.2.e	Apply light and color principles to projects.
CIS.HS.6.2.f	Apply image stabilization.
CIS.HS.6.2.g	Apply exposure, shutter speed, and aperture.
CIS.HS.6.2.h	Export photos in a usable format.
CIS.HS.6.2.i	Name and store native and exported files in a manageable file structure (i.e.: Drive, Cloud, or external hard drive).

DIGITAL DESIGN (cont.)

CIS.HS.6.3 Create and edit digital print design.

CIS.HS.6.3.a	Select appropriate hardware and software.
CIS.HS.6.3.b	Apply elements of typographic design in print media (e.g., font selection, size, leading, tracking and kerning, measure, whitespace, hierarchy and scale).
CIS.HS.6.3.c	Apply basic design principles such as consistency, dominance, palette, eye line, readability, and alignment.
CIS.HS.6.3.d	Demonstrate knowledge of page layout (e.g.,negative space, alignment, symmetrical, and asymmetrical).
CIS.HS.6.3.e	Use layers to manage design elements and modify layer visibility using opacity and masks.
CIS.HS.6.3.f	Make, manage, and manipulate selections.
CIS.HS.6.3.g	Name and store native and exported files in a manageable file structure (ie: Drive, Cloud, or external hard drive).
CIS.HS.6.3.h	Explain the difference between modes of a print document: CMYK, RGB, grayscale, bitmap.

CIS.HS.6.4 Create and edit motion graphics objects for animation.

CIS.HS.6.4.a	Select appropriate hardware and software.
CIS.HS.6.4.b	Add motion to objects as a project or to enhance a project.
CIS.HS.6.4.c	Edit motion graphics (e.g., trim, delete, add effects, etc.).
CIS.HS.6.4.d	Export a motion graphic in a usable format.
CIS.HS.6.4.e	Name and store native and exported files in a manageable file structure i.e., Drive, Cloud, or external hard drive).

DIGITAL DESIGN (cont.)

CIS.HS.6.5 Describe working in the digital design field.

CIS.HS.6.5.a	Identify the purpose, audience, and audience needs for preparing images.
CIS.HS.6.5.b	Determine whether content is relevant to the purpose, audience, and audience needs.
CIS.HS.6.5.c	Demonstrate knowledge of basic design principles and understand best practices employed in the digital design field.
CIS.HS.6.5.d	Examine careers in the digital design field.
CIS.HS.6.5.e	Identify job market trends in the digital design field.
CIS.HS.6.5.f	Identify the benefits of industry certification and higher education in the field.

CIS.HS.6.6 Evaluate and comply with copyright laws.

CIS.HS.6.6.a	Determine the type of copyright, permissions, and licensing required to use specific content.
CIS.HS.6.6.b	Analyze the different types of copyright licenses and their uses. (e.g., Creative Commons, or Public Domain).
CIS.HS.6.6.c	Identify legal and ethical considerations for using third-party content, such as copyright, permissions, and licensing.
CIS.HS.6.6.d	Understand copyright as it applies to their own creative work.

ADVANCED DIGITAL DESIGN

COURSE DESCRIPTION

Students will focus on utilizing advanced skills to plan, design, and create a design portfolio to showcase elements of composition, digital photography, or digital print design. These skills will prepare students for entry-level positions in the digital design field.

STANDARDS AND INDICATORS:

CIS.HS.1.1 Design client-based or personal projects utilizing composition techniques.

CIS.HS.1.1.a	Compose photographic, digital print design, or animation projects utilizing design and composition rules.
CIS.HS.1.1.b	Select appropriate hardware and software based on the final product needed by client.
CIS.HS.1.1.c	Demonstrate rules of composition.
CIS.HS.1.1.d	Construct a project and justify chosen design principles.
CIS.HS.1.1.e	Name and store native and exported files in a manageable file structure (i.e., Drive, Cloud, external hard drive).

CIS.HS.1.2 Design graphics and text that clearly express the personal perspective of intended audiences.

CIS.HS.1.2.a	Identify purpose, audience, and audience needs for preparing images. Determine whether content is relevant to the purpose, audience, and audience needs.
CIS.HS.1.2.b	Prepare a production schedule (e.g., creating and using a work plan, establishing milestones and deliverables).
CIS.HS.1.2.c	Assess and utilize design principles and best practices employed in the design field.

ADVANCED DIGITAL DESIGN (cont.)

CIS.HS.1.3 Simulate working in the digital design field through creation of client-based design projects.

CIS.HS.1.3.a Describe the client's purpose and audience when preparing projects to ensure the content is relevant to the client's needs.

CIS.HS.1.3.b Prepare a production schedule (e.g., creating and using a work plan, establishing milestones and deliverables).

CIS.HS.1.3.c Assess and utilize design principles and best practices employed in the design field.

CIS.HS.1.3.d Describe the importance of branding as it applies to client-based design projects.

CIS.HS.1.3.e Communicate effectively in person and through written communication with peers and clients about design plans and processes.

CIS.HS.1.4 Analyze working in the digital design field.

CIS.HS.1.4.a Analyze careers in the digital design field.

CIS.HS.1.4.b Analyze job market trends in the digital design field.

CIS.HS.1.4.c Analyze the benefits of industry certification and higher education in the field.

CIS.HS.1.4.d Investigate careers in digital design through pursuit of a job shadowing or internship experience.

ADVANCED DIGITAL DESIGN (cont.)

CIS.HS.1.5 Evaluate and comply with copyright laws.

CIS.HS.1.5.a	Determine the type of copyright, permissions, and licensing required to use specific content.
CIS.HS.1.5.b	Analyze the different types of copyright licenses and their uses. (e.g., Creative Commons, Public Domain).
CIS.HS.1.5.c	Identify legal and ethical considerations for using third-party content, such as copyright, permissions, and licensing.
CIS.HS.1.5.d	Apply copyright as it pertains to their own creative work.

CIS.HS.1.6 Create a digital portfolio which demonstrates competency in the digital design field.

CIS.HS.1.6.a	Examine professional digital portfolios as models.
CIS.HS.1.6.b	Evaluate all elements of the portfolio for compliance with copyright.
CIS.HS.1.6.c	Curate works for the portfolio that demonstrate mastery of design.
CIS.HS.1.6.d	Design portfolio itself so that it demonstrates mastery of design.
CIS.HS.1.6.e	Choose language to ensure copyright protections of the student work.
CIS.HS.1.6.f	Describe the importance of branding as it applies to their portfolio of creative work.

FOUNDATIONS OF WEB DESIGN

COURSE DESCRIPTION

Students will demonstrate knowledge of web and mobile app design to create an effective website or app that captures and keeps visitors' interests. Students will demonstrate project management skills, while also enhancing creativity, problem solving, and critical thinking. Students will explore career opportunities in an information technology career field.

STANDARDS AND INDICATORS:

CIS.HS.9.1 Explain and apply appropriate web design language and terminology.

- CIS.HS.9.1.a Describe the principles and goals of website design.
- CIS.HS.9.1.b Describe the principles and goals of responsive design.
- CIS.HS.9.1.c Describe binary code.
- CIS.HS.9.1.d Define common industry terminology.

CIS.HS.9.2 Plan a website and/or app for a specific purpose.

- CIS.HS.9.2.a Develop a storyboard, mock-up, and wireframes for a website and/or app.
- CIS.HS.9.2.b Explain the design process in regards to audience, layout, time, and budget.
- CIS.HS.9.2.c Identify the target market audience's needs.
- CIS.HS.9.2.d Evaluate clients' needs based on current trends.
- CIS.HS.9.2.e Plan for responsive design.

FOUNDATIONS OF WEB DESIGN (cont.)

CIS.HS.9.3 Analyze elements and principles of design to communicate ideas consistent with project goals.

CIS.HS.9.3.a	Apply appropriate font and font family concepts.
CIS.HS.9.3.b	Demonstrate knowledge of design decisions in regards to shapes, lines, colors.
CIS.HS.9.3.c	Demonstrate knowledge of design decisions in regards to white space, margins, and layout of graphic and text.
CIS.HS.9.3.d	Incorporate text layout techniques such as kerning, leading, and alignment.
CIS.HS.9.3.e	Incorporate audio, visual, and graphic elements.
CIS.HS.9.3.f	Develop a focused concept, clear methods of conveyance, and unified theme that solves the given problem.
CIS.HS.9.3.g	Identify accessibility and standard compliance measures in order to communicate with a broad audience.
CIS.HS.9.3.h	Explain design decisions in regards to themes.
CIS.HS.9.3.i	Evaluate the impact of design decisions on the theme of a design.
CIS.HS.9.3.j	Explain design and project goals using a storyboard, mock-up, and wireframes.

CIS.HS.9.4 Analyze legal and ethical responsibilities.

CIS.HS.9.4.a	Apply copyright laws as appropriate in website and app creation.
CIS.HS.9.4.b	Discuss security issues that are related to the utilization of the computer and/or Internet.
CIS.HS.9.4.c	Describe situations where web pages and/or apps may be used unethically.
CIS.HS.9.4.d	Describe licensing agreements.
CIS.HS.9.4.e	Discuss the importance of creative commons.

FOUNDATIONS OF WEB DESIGN (cont.)

CIS.HS.9.5 Create and test websites and/or apps designed for cross browser and mobile compatibility.

CIS.HS.9.5.a Utilize standards-compliant elements in code that delivers essential content and functionality if older browsers are not capable of displaying content.

CIS.HS.9.5.b Create websites and/or apps that utilize responsive design to allow for a variety of screen sizes and geometries to view the content in a meaningful and logical fashion.

CIS.HS.9.5.c Test an application on devices of varying geometries and operating system versions to ensure maximum compatibility.

CIS.HS.9.6 Implement quality assurance processes to deliver effective digital communication.

CIS.HS.9.6.a Evaluate the website and/or app functionality.

CIS.HS.9.6.b Test a website and/or app in a variety of environments.

CIS.HS.9.6.c Evaluate site effectiveness through user search and accessibility to meet all audience needs.

CIS.HS.9.6.d Investigate web hosts.

CIS.HS.9.6.e Troubleshoot and maintain a website and/or app.

CIS.HS.9.6.f Evaluate cross-browser compatibility.

CIS.HS.9.6.g Identify the process of securing a domain name.

FOUNDATIONS OF WEB DESIGN (cont.)

CIS.HS.9.7 Critique a website and/or app in accordance with web design principles.

- CIS.HS.9.7.a Assess download time.
- CIS.HS.9.7.b Assess readability of the website and/or app.
- CIS.HS.9.7.c Assess ease of navigation for both website and/or app.
- CIS.HS.9.7.d Assess the design theme of a website and/or app.
- CIS.HS.9.7.e Assess consistency of the theme across the entire website and/or app.
- CIS.HS.9.7.f Assess the functionality of links.

CIS.HS.9.8 Identify opportunities in an information technology career field including but not limited to entrepreneurial opportunities, responsibilities, education, and certification.

- CIS.HS.9.8.a Identify information technologies used in various industries.
- CIS.HS.9.8.b Discuss the impact of technology on all career fields.
- CIS.HS.9.8.c Identify common tasks in career fields.
- CIS.HS.9.8.d Discuss career opportunities in information technology career fields.
- CIS.HS.9.8.e Describe the impact of technological change and the importance of lifelong learning in this career field.

INFORMATION TECHNOLOGY APPLICATIONS I

COURSE DESCRIPTION

Students will explore emerging technologies as it applies to success in high school, college, and career. The focus will be on the importance of digital citizenship, professional communication practices, advanced document processing, professional presentations, and intermediate spreadsheet and database applications used personally and professionally.

STANDARDS AND INDICATORS:

CIS.HS.10.1 Model positive digital citizenship by applying industry-accepted ethical practices and behaviors.

- CIS.HS.10.1.a Examine and practice cultural, social, ethical, and legal issues associated with information technology.
- CIS.HS.10.1.b Formulate a critical stance by questioning the validity, accuracy, and appropriateness of information.
- CIS.HS.10.1.c Demonstrate a variety of strategies for effective and efficient searches.
- CIS.HS.10.1.d Evaluate safety and security measures for protecting information and developing digital footprints.

CIS.HS.10.2 Use document processing applications to prepare business communications.

- CIS.HS.10.2.a Create, edit, and customize documents using advanced techniques.
- CIS.HS.10.2.b Prepare and troubleshoot merged documents (e.g., envelopes, mailings, labels).
- CIS.HS.10.2.c Apply digital design strategies to design professional documents (e.g., graphic design, layout, typography, font face, font style).

INFORMATION TECHNOLOGY APPLICATIONS I (cont.)

CIS.HS.10.3 Develop and demonstrate effective communication skills and practices.

- CIS.HS.10.3.a Prepare and develop presentations that can be used in a current workplace.
- CIS.HS.10.3.b Compose electronic communication to communicate within a workplace.
- CIS.HS.10.3.c Customize a presentation using advanced features for a specific audience.

CIS.HS.10.4 Organize and manipulate data using spreadsheet applications.

- CIS.HS.10.4.a Enter and modify worksheet data and structure, format data, and problem solve in a worksheet.
- CIS.HS.10.4.b Sort and manipulate data using formulas and functions.
- CIS.HS.10.4.c Create visual representations of data (e.g., charts, pivot tables, sparklines, and conditional formatting)

CIS.HS.10.5 Identify database management concepts to manage, evaluate, and organize information.

- CIS.HS.10.5.a Compare and contrast methods for storing, organizing, and retrieving data.
- CIS.HS.10.5.b Sort and manipulate data using formulas and functions and create charts.
- CIS.HS.10.5.c Create and format a database.
- CIS.HS.10.5.d Create database objects (e.g., tables, forms, queries).
- CIS.HS.10.5.e Modify or enter records, create reports, and/or sort data.

INFORMATION TECHNOLOGY APPLICATIONS I (cont.)

CIS.HS.10.6 Identify opportunities in an information technology career field including but not limited to entrepreneurial opportunities, responsibilities, education, and certification.

CIS.HS.10.6.a Identify information technologies used in various industries.

CIS.HS.10.6.b Discuss the impact of technology on all career fields.

CIS.HS.10.6.c Identify common information technology tasks in career fields.

CIS.HS.10.6.d Discuss career opportunities in information technology career fields.

CIS.HS.10.6.e Describe the impact of technological change and the importance of lifelong learning in this career field.

CIS.HS.10.7 Describe emerging and evolving trends in information technology.

CIS.HS.10.7.a Investigate emerging trends in technology and their impact on business and industry.

CIS.HS.10.7.b Interact with new and emerging technologies.

CIS.HS.10.7.c Identify emerging technologies to create and evaluate forms of communication.

INFORMATION TECHNOLOGY APPLICATIONS II

COURSE DESCRIPTION

This course will focus on skill development in data science using word processing, spreadsheets, databases, and integration of applications utilizing advanced features. Students taking both Information Technology Applications I and II may be eligible for dual credit at a participating postsecondary institution. Skills, standards, and coursework align with industry certifications.

STANDARDS AND INDICATORS:

CIS.HS.11.1 Organize, aggregate, and manipulate data using advanced word processing features.

CIS.HS.11.1.a	Integrate other program files into word processing documents (insert, embed, and link).
CIS HS.11.1.b	Create and format tables using advanced features (formulas, styles).
CIS HS.11.1.c	Use advanced merge features to integrate spreadsheet and database information into the word processing document as fields and records.
CIS.HS.11.1.d	Create and manage styles.
CIS.HS.11.1.e	Plan, record, run, and edit Macros.

CIS.HS.11.2 Organize, aggregate, and manipulate data using advanced spreadsheet features.

CIS.HS.11.2.a	Create worksheet structures using formulas and advanced features. (e.g., logical statements, vLookup, financial, statistical functions, and named ranges).
CIS.HS.11.2.b	Interpret data through statistical analysis (e.g., sorting, filtering, forecasting, and pivot tables).
CIS.HS.11.2.c	Import, export, and share worksheet data.
CIS.HS.11.2.d	Customize formatting methods, including conditional formatting and other advanced formatting methods.

INFORMATION TECHNOLOGY APPLICATIONS II (cont.)

CIS.HS.11.3 Synthesize relational database concepts to design, manage, evaluate, and organize information.

CIS.HS.11.3.a Design tables specifying properties for data entry and relationships.

CIS.HS.11.3.b Construct multi-table queries to retrieve, organize, and aggregate data to draw conclusions.

CIS.HS.11.3.c Design forms and subforms for efficient and effective data entry or retrieval.

CIS.HS.11.3.d Design reports and subreports utilizing tables, graphs, sparklines, and pivot tables for displaying meaningful data.

CIS.HS.11.3.e Analyze relational data using Structure Query Language (SQL).

CIS.HS.11.4 Consider the relationship between different programs to utilize data in one program to the next to create new documents.

CIS.HS.11.4.a Utilize spreadsheets, presentation, and database information in word processing documents.

CIS.HS.11.4.b Utilize word processing, presentation, and database information in a spreadsheet.

CIS.HS.11.4.c Utilize word processing, spreadsheet, and database information in a presentation.

CIS.HS.11.4.d Utilize word processing and spreadsheet information in a database.

CIS.HS.11.5 Describe the importance of ethical data collection and applicable conclusions.

CIS.HS.11.5.a Analyze the privacy practices of data collection and use.

CIS.HS.11.5.b Analyze the security practices of data collection and use.

INFORMATION TECHNOLOGY APPLICATIONS II (cont.)

CIS.HS.11.6 Demonstrate critical thinking skills to integrate information technology tools to access, manage, and create new information.

CIS.HS.11.6.a Gather, evaluate, use, and disseminate information from multiple technology sources.

CIS.HS.11.6.b Create purposeful, digitally designed products (e.g., brochure, presentation, website, portfolio).

CIS.HS.11.7 Identify opportunities in an information technology career field including but not limited to entrepreneurial opportunities, responsibilities, education, and certification.

CIS.HS.11.7.a Identify information technologies used in various industries.

CIS.HS.11.7.b Discuss the impact of technology on all career fields.

CIS.HS 11.7.c Identify common tasks in career fields.

CIS.HS 11.7.d Discuss career opportunities in information technology career fields.

CIS.HS.11.7.e Describe the impact of technological change and the importance of lifelong learning in this career field.

CIS.HS.11.7.f Identify the benefits of industry certification and higher education Programs.

CIS.HS.11.7.g Identify the necessary skills to succeed in fields using data science.

DIGITAL DESIGN

COURSE DESCRIPTION

Students will focus on developing skills to plan, design, and create digital design projects using elements of composition, digital photography, and digital print design.

STANDARDS AND INDICATORS:

CIS.HS.6.1 Utilize composition techniques.

CIS.HS.6.1.a	Demonstrate rules of composition (e.g., rule of thirds, point-of-view, framing).
CIS.HS.6.1.b	Demonstrate a variety of photographic shots using a digital camera.
CIS.HS.6.1.c	Demonstrate elements of typographic design in print media (e.g., font selection, size, leading, tracking and kerning, measure, whitespace, hierarchy and scale).
CIS.HS.6.1.d	Demonstrate basic design principles such as consistency, dominance, palette, eye line, readability, alignment, and color theory.
CIS.HS.6.1.e	Differentiate between bitmap, raster, and vector images.

CIS.HS.6.2 Create and edit digital photographic images.

CIS.HS.6.2.a	Select appropriate hardware and software.
CIS.HS.6.2.b	Capture still photographic images.
CIS.HS.6.2.c	Edit still photos (e.g., cropping, color correction, layers, and levels).
CIS.HS.6.2.d	Apply multiple camera modes.
CIS.HS.6.2.e	Apply light and color principles to projects.
CIS.HS.6.2.f	Apply image stabilization.
CIS.HS.6.2.g	Apply exposure, shutter speed, and aperture.
CIS.HS.6.2.h	Export photos in a usable format.
CIS.HS.6.2.i	Name and store native and exported files in a manageable file structure (i.e.: Drive, Cloud, or external hard drive).

DIGITAL DESIGN (cont.)

CIS.HS.6.3 Create and edit digital print design.

CIS.HS.6.3.a	Select appropriate hardware and software.
CIS.HS.6.3.b	Apply elements of typographic design in print media (e.g., font selection, size, leading, tracking and kerning, measure, whitespace, hierarchy and scale).
CIS.HS.6.3.c	Apply basic design principles such as consistency, dominance, palette, eye line, readability, and alignment.
CIS.HS.6.3.d	Demonstrate knowledge of page layout (e.g.,negative space, alignment, symmetrical, and asymmetrical).
CIS.HS.6.3.e	Use layers to manage design elements and modify layer visibility using opacity and masks.
CIS.HS.6.3.f	Make, manage, and manipulate selections.
CIS.HS.6.3.g	Name and store native and exported files in a manageable file structure (ie: Drive, Cloud, or external hard drive).
CIS.HS.6.3.h	Explain the difference between modes of a print document: CMYK, RGB, grayscale, bitmap.

CIS.HS.6.4 Create and edit motion graphics objects for animation.

CIS.HS.6.4.a	Select appropriate hardware and software.
CIS.HS.6.4.b	Add motion to objects as a project or to enhance a project.
CIS.HS.6.4.c	Edit motion graphics (e.g., trim, delete, add effects, etc.).
CIS.HS.6.4.d	Export a motion graphic in a usable format.
CIS.HS.6.4.e	Name and store native and exported files in a manageable file structure i.e., Drive, Cloud, or external hard drive).

DIGITAL DESIGN (cont.)

CIS.HS.6.5 Describe working in the digital design field.

CIS.HS.6.5.a	Identify the purpose, audience, and audience needs for preparing images.
CIS.HS.6.5.b	Determine whether content is relevant to the purpose, audience, and audience needs.
CIS.HS.6.5.c	Demonstrate knowledge of basic design principles and understand best practices employed in the digital design field.
CIS.HS.6.5.d	Examine careers in the digital design field.
CIS.HS.6.5.e	Identify job market trends in the digital design field.
CIS.HS.6.5.f	Identify the benefits of industry certification and higher education in the field.

CIS.HS.6.6 Evaluate and comply with copyright laws.

CIS.HS.6.6.a	Determine the type of copyright, permissions, and licensing required to use specific content.
CIS.HS.6.6.b	Analyze the different types of copyright licenses and their uses. (e.g., Creative Commons, or Public Domain).
CIS.HS.6.6.c	Identify legal and ethical considerations for using third-party content, such as copyright, permissions, and licensing.
CIS.HS.6.6.d	Understand copyright as it applies to their own creative work.

FOUNDATIONS OF WEB DESIGN

COURSE DESCRIPTION

Students will demonstrate knowledge of web and mobile app design to create an effective website or app that captures and keeps visitors' interests. Students will demonstrate project management skills, while also enhancing creativity, problem solving, and critical thinking. Students will explore career opportunities in an information technology career field.

STANDARDS AND INDICATORS:

CIS.HS.9.1 Explain and apply appropriate web design language and terminology.

- CIS.HS.9.1.a Describe the principles and goals of website design.
- CIS.HS.9.1.b Describe the principles and goals of responsive design.
- CIS.HS.9.1.c Describe binary code.
- CIS.HS.9.1.d Define common industry terminology.

CIS.HS.9.2 Plan a website and/or app for a specific purpose.

- CIS.HS.9.2.a Develop a storyboard, mock-up, and wireframes for a website and/or app.
- CIS.HS.9.2.b Explain the design process in regards to audience, layout, time, and budget.
- CIS.HS.9.2.c Identify the target market audience's needs.
- CIS.HS.9.2.d Evaluate clients' needs based on current trends.
- CIS.HS.9.2.e Plan for responsive design.

FOUNDATIONS OF WEB DESIGN (cont.)

CIS.HS.9.3 Analyze elements and principles of design to communicate ideas consistent with project goals.

CIS.HS.9.3.a	Apply appropriate font and font family concepts.
CIS.HS.9.3.b	Demonstrate knowledge of design decisions in regards to shapes, lines, colors.
CIS.HS.9.3.c	Demonstrate knowledge of design decisions in regards to white space, margins, and layout of graphic and text.
CIS.HS.9.3.d	Incorporate text layout techniques such as kerning, leading, and alignment.
CIS.HS.9.3.e	Incorporate audio, visual, and graphic elements.
CIS.HS.9.3.f	Develop a focused concept, clear methods of conveyance, and unified theme that solves the given problem.
CIS.HS.9.3.g	Identify accessibility and standard compliance measures in order to communicate with a broad audience.
CIS.HS.9.3.h	Explain design decisions in regards to themes.
CIS.HS.9.3.i	Evaluate the impact of design decisions on the theme of a design.
CIS.HS.9.3.j	Explain design and project goals using a storyboard, mock-up, and wireframes.

CIS.HS.9.4 Analyze legal and ethical responsibilities.

CIS.HS.9.4.a	Apply copyright laws as appropriate in website and app creation.
CIS.HS.9.4.b	Discuss security issues that are related to the utilization of the computer and/or Internet.
CIS.HS.9.4.c	Describe situations where web pages and/or apps may be used unethically.
CIS.HS.9.4.d	Describe licensing agreements.
CIS.HS.9.4.e	Discuss the importance of creative commons.

FOUNDATIONS OF WEB DESIGN (cont.)

CIS.HS.9.5 Create and test websites and/or apps designed for cross browser and mobile compatibility.

CIS.HS.9.5.a Utilize standards-compliant elements in code that delivers essential content and functionality if older browsers are not capable of displaying content.

CIS.HS.9.5.b Create websites and/or apps that utilize responsive design to allow for a variety of screen sizes and geometries to view the content in a meaningful and logical fashion.

CIS.HS.9.5.c Test an application on devices of varying geometries and operating system versions to ensure maximum compatibility.

CIS.HS.9.6 Implement quality assurance processes to deliver effective digital communication.

CIS.HS.9.6.a Evaluate the website and/or app functionality.

CIS.HS.9.6.b Test a website and/or app in a variety of environments.

CIS.HS.9.6.c Evaluate site effectiveness through user search and accessibility to meet all audience needs.

CIS.HS.9.6.d Investigate web hosts.

CIS.HS.9.6.e Troubleshoot and maintain a website and/or app.

CIS.HS.9.6.f Evaluate cross-browser compatibility.

CIS.HS.9.6.g Identify the process of securing a domain name.

FOUNDATIONS OF WEB DESIGN (cont.)

CIS.HS.9.7 Critique a website and/or app in accordance with web design principles.

CIS.HS.9.7.a	Assess download time.
CIS.HS.9.7.b	Assess readability of the website and/or app.
CIS.HS.9.7.c	Assess ease of navigation for both website and/or app.
CIS.HS.9.7.d	Assess the design theme of a website and/or app.
CIS.HS.9.7.e	Assess consistency of the theme across the entire website and/or app.
CIS.HS.9.7.f	Assess the functionality of links.

CIS.HS.9.8 Identify opportunities in an information technology career field including but not limited to entrepreneurial opportunities, responsibilities, education, and certification.

CIS.HS.9.8.a	Identify information technologies used in various industries.
CIS.HS.9.8.b	Discuss the impact of technology on all career fields.
CIS.HS.9.8.c	Identify common tasks in career fields.
CIS.HS.9.8.d	Discuss career opportunities in information technology career fields.
CIS.HS.9.8.e	Describe the impact of technological change and the importance of lifelong learning in this career field.

BUSINESS COMMUNICATION

COURSE DESCRIPTION

Students will develop an understanding and appreciation for effective communication in business situations and environments. Emphasis is placed on all phases of communication: speaking, listening, thinking, responding, reading, writing, communicating non-verbally, and utilizing technology for communication.

STANDARDS AND INDICATORS:

BMM.HS.8.1 Demonstrate reading skills in a variety of business-related activities.

- BMM.HS.8.1.a Demonstrate reading comprehension by restating or summarizing information.
- BMM.HS.8.1.b Interpret and evaluate information from print and digital text features to support comprehension.
- BMM.HS.8.1.c Interpret and evaluate information from professional resources and related documents (e.g., manuals, company policies, annual reports, reference materials).

BMM.HS.8.2 Utilize active and attentive listening skills (e.g., eye contact, nonverbal cues, questioning, summarizing) for multiple situations and modalities (e.g., small/large group, presentation, one-to-one, digital).

- BMM.HS.8.2.a Integrate professional etiquette, techniques, and social protocols when communicating.
- BMM.HS.8.2.b Follow multi step directions.
- BMM.HS.8.2.c Identify barriers to listening.
- BMM.HS.8.2.d Assess and respond to non-verbal communication as an active listener.

BUSINESS COMMUNICATION (cont.)

BMM.HS.8.3 Create internal and external business correspondence to convey and obtain information effectively.

BMM.HS.8.3.a Assess the nature of effective written communications.

BMM.HS.8.3.b Utilize appropriate formats for professional writing.

BMM.HS.8.3.c Compose, edit, and revise a variety of written work consistent with professional standards.

BMM.HS.8.4 Apply skills and strategies for the delivery of effective oral communication.

BMM.HS.8.4.a Assess the nature of effective verbal communications.

BMM.HS.8.4.b Match verbal and nonverbal messages (e.g., expression, tone, body language, gestures).

BMM.HS.8.4.c Demonstrate effective oral communication skills.

BMM.HS.8.4.d Demonstrate preparation and organization of thoughts before speaking (outline, notes).

BMM.HS.8.5 Demonstrate technology and employability skills to enhance communication.

BMM.HS.8.5.a Apply the critical-thinking and career readiness skills needed to function in multiple roles in business and communities.

BMM.HS.8.5.b Analyze legal and ethical issues in organizations and society.

BMM.HS.8.5.c Demonstrate the proper etiquette used in a professional setting (e.g., professional language, device usage, and privacy) and use of technology tools, such as voice mail, video conferencing, social media, messaging, and mobile devices.

BMM.HS.8.5.d Examine perspectives and opinions of diverse employees and how these factors impact communication.

BMM.HS.8.5.e Identify appropriate spoken and written actions when applying for and leaving a job.

FOUNDATIONS OF COMPUTING

COURSE DESCRIPTION

Foundations of Computing is designed for students who have never programmed before and serves as a starting point for Computer Science. Students will explore the impact of computing on society. Beyond learning the fundamentals of programming, students build computational-thinking skills by applying computer science to collaboration tools, modeling and simulation, and data analysis.

STANDARDS AND INDICATORS:

CIS.HS.8.1 Summarize computational problems.

CIS.HS.8.1.a	Identify component parts or subproblems of a simple problem.
CIS.HS.8.1.b	Identify subproblems that make up a larger computational problem.
CIS.HS.8.1.c	Explain how solutions to multiple subproblems work together to solve a larger problem.
CIS.HS.8.1.d	Define the term algorithm and explain its relationship to computational solutions.

CIS.HS.8.2 Develop and use abstractions in computational artifacts.

CIS.HS.8.2.a	Define abstraction in terms of computer science and provide an example of how abstraction is used to manage complexity.
CIS.HS.8.2.b	Represent equivalent data using different encoding schemes (e.g., binary, unicode, Morse code, student-created codes).
CIS.HS.8.2.c	Use abstraction to manage complexity or avoid duplication of effort.
CIS.HS.8.2.d	Use and extend existing procedures within a program based on their documentation.
CIS.HS.8.2.e	Identify repetitive elements of program code and develop functionally equivalent versions that reduce redundant code or hide the complexity of a task.

FOUNDATIONS OF COMPUTING (cont.)

CIS.HS.8.3 Create computational artifacts.

CIS.HS.8.3.a	Create variables to store data in a program.
CIS.HS.8.3.b	Use and update data stored in variables.
CIS.HS.8.3.c	Develop programs that use sequences of statements, loops, and conditional statements.
CIS.HS.8.3.d	Design and develop computational artifacts that address personally- or socially relevant concerns.

CIS.HS.8.4 Use data to understand and model real-world situations.

CIS.HS.8.4.a	Filter or transform data using a computational tool.
CIS.HS.8.4.b	Explain the results of a data-driven investigation and a reproducible process for computing the results.
CIS.HS.8.4.c	Use and modify a computer simulation to understand a real-world system.
CIS.HS.8.4.d	Adjust inputs to an existing simulation to gain additional insights.

CIS.HS.8.5 Test and iteratively refine computational solutions.

CIS.HS.8.5.a	Describe an iterative design process used in creating computational artifacts.
CIS.HS.8.5.b	Apply an iterative design process to solve problems, both independently and collaboratively.
CIS.HS.8.5.c	Locate and diagnose errors in program code.
CIS.HS.8.5.d	Correct errors in program code.

IT FUNDAMENTALS

COURSE DESCRIPTION

IT Fundamentals develops the students' abilities to analyze, evaluate, strategize, and reflect upon technologies such as computer hardware, computer software, web technologies, databases, networking, security, and software development. Students will also be introduced to ever-changing information technology careers along with developing positive and ethical behaviors/practices.

STANDARDS AND INDICATORS:

CIS.HS.12.1 Identify and describe the basic components of information technology.

- CIS.HS.12.1.a Identify and distinguish the differences between input and output devices.
- CIS.HS.12.1.b Identify and explain how various components meet the needs of the user.
- CIS.HS.12.1.c Identify and analyze emerging technologies.
- CIS.HS.12.1.d Identify storage options.
- CIS.HS.12.1.e Identify the process to configure permissions for files and folders.
- CIS.HS.12.1.f Explain multiple methods of moving digital files.

CIS.HS.12.2 Identify and analyze hardware components.

- CIS.HS.12.2.a Identify the correct hardware to connect with external components.
- CIS.HS.12.2.b Determine and evaluate recommended hardware devices to solve specific problems.
- CIS.HS.12.2.c Troubleshoot basic computer hardware problems.
- CIS.HS.12.2.d Find and analyze resources to answer basic troubleshooting questions.
- CIS.HS.12.2.e Develop criteria for purchasing or upgrading computer system hardware.
- CIS.HS.12.2.f Identify and analyze proper input technologies for various tasks.

IT FUNDAMENTALS (cont.)

CIS.HS.12.3 Identify and analyze software components.

CIS.HS.12.3.a	Identify and analyze software appropriate for specific tasks.
CIS.HS.12.3.b	Research and analyze software installation and upgrade options.
CIS.HS.12.3.c	Troubleshoot potential problems with software installation (i.e. bloatware).
CIS.HS.12.3.d	Compare and contrast the functions, features, and limitations of different operating systems and utilities (i.e.,open source and mobile proprietary operating systems).

CIS.HS.12.4 Explain web technologies.

CIS.HS.12.4.a	Identify the components (e.g., wires, cables, routers, etc.) that make up the Internet.
CIS.HS.12.4.b	Describe the types of Internet connections.
CIS.HS.12.4.c	Explain Transmission Control Protocol/Internet Protocol (TCP/IP).
CIS.HS.12.4.d	Identify and compare different types of web technologies: blogs, wikis, podcasts, RSS feeds, etc.
CIS.HS.12.4.e	Explain browser cache and the process of clearing it.

CIS.HS.12.5 Design, administer, and deploy networks.

CIS.HS.12.5.a	Define basic networking terminology.
CIS.HS.12.5.b	Describe the characteristics and uses of networks, network devices, and components.
CIS.HS.12.5.c	Identify the purpose of networks and their functionality.
CIS.HS.12.5.d	Identify tools, diagnostic procedures, and troubleshooting techniques for networks.
CIS.HS.12.5.e	Describe the process of configuring, optimizing, and upgrading of networks.
CIS.HS.12.5.f	Explore and use cloud computing.
CIS.HS.12.5.g	Research and analyze basic network security solutions.
CIS.HS.12.5.h	Design a theoretical network environment and create protocols on deploying and maintaining the network.

IT FUNDAMENTALS (cont.)

CIS.HS.12.6 Apply database management strategies.

CIS.HS.12.6.a	Design and create database tables and relationships.
CIS.HS.12.6.b	Create database columns and specify properties.
CIS.HS.12.6.c	Name tables and fields in conformance with naming conventions.
CIS.HS.12.6.d	Insert, update, and delete records in a database.
CIS.HS.12.6.e	Import data into databases and transfer data between databases.
CIS.HS.12.6.f	Organize and store database files in a structured environment for users.
CIS.HS.12.6.g	Control user access to data and log access to the database by user and type of transaction.
CIS.HS.12.6.h	Backup, verify, and recover data in a database.
CIS.HS.12.6.i	Generate and print forms, reports, and results of queries (i.e., calculated fields, functions).

CIS.HS.12.7 Design, develop, test, and implement programs.

CIS.HS.12.7.a	Identify and define programming terminology.
CIS.HS.12.7.b	Explain the importance of life-long learning as a programmer.
CIS.HS.12.7.c	Analyze the strengths and weaknesses of different languages for solving a specific problem.
CIS.HS.12.7.d	Write code that uses logical operators (e.g., and, or, not, loops).
CIS.HS.12.7.e	Write code that uses conditional control structures (e.g., if, if-then-else).
CIS.HS.12.7.f	Test and debug code.
CIS.HS.12.7.g	Identify and analyze protocols to maintain the integrity of programs.

IT FUNDAMENTALS (cont.)

CIS.HS.12.8 Assess protocols for security and risk management.

CIS.HS.12.8.a	Identify the goals, objectives, and purposes of cybersecurity first principles.
CIS.HS.12.8.b	Identify different types of security threats and vulnerabilities.
CIS.HS.12.8.c	Identify and analyze policies procedures for security, privacy, and risk management.
CIS.HS.12.8.d	Explain intellectual property laws (e.g., copyright, trademark).
CIS.HS.12.8.e	Identify and analyze confidentiality concerns.
CIS.HS.12.8.f	Discuss risk loss and prevention methods.
CIS.HS.12.8.g	Analyze and evaluate passwords.
CIS.HS.12.8.h	Identify personal risks and create personal protocols to differentiate between home and work.

CIS.HS.12.9 Identify opportunities in an information technology career field.

CIS.HS.12.9.a	Identify information technologies used in various industries.
CIS.HS.12.9.b	Discuss the impact of technology on all career fields.
CIS.HS.12.9.c	Identify common tasks within the information technology career fields in occupations.
CIS.HS.12.9.d	Discuss career opportunities in information technology career fields.
CIS.HS.12.9.e	Describe the impact of technological change and the importance of lifelong learning in this career field.

COMPUTER SCIENCE PRINCIPLES - (1 YEAR)

COURSE DESCRIPTION

Computer Science Principles introduces students to the foundations of computer science with a focus on how computing powers the world. Along with the fundamentals of computing, students will learn to analyze data, create technology that has a practical impact (addresses a real-world problem or need), and gain a broader understanding of how computer science impacts people and society.

STANDARDS AND INDICATORS:

CIS.HS.2.1 Identify and develop computational problems and solutions.

CIS.HS.2.1.a	Utilize user-centered research and a development process to create innovative software solutions.
CIS.HS.2.1.b	Describe the identified algorithms using foundational principles of sequence, iteration, and selection with "non-code" techniques (e.g., pseudo code, flow charts, and sequence diagrams).
CIS.HS.2.1.c	Analyze the difference between algorithms that run in a reasonable amount of time, those that do not run in a reasonable amount of time, and those that are not solvable with a computer.
CIS.HS.2.1.d	Identify patterns between previously-solved computational problems and new problem scenarios.
CIS.HS.2.1.e	Describe linear and binary search techniques and explain their appropriateness for a given data set.
CIS.HS.2.1.f	Design a solution to a computational problem as a team.
CIS.HS.2.1.g	Explain how collaboration impacts the development of a solution.

COMPUTER SCIENCE PRINCIPLES (cont.)

CIS.HS.2.2 Construct abstractions in computational artifacts.

CIS.HS.2.2.a	Define how the term abstraction is used within the field of computer science.
CIS.HS.2.2.b	Deconstruct a complex problem into distinct functional parts using predefined constructs of a programming language (e.g., functions, procedures, and methods).
CIS.HS.2.2.c	Develop procedures or functions that use parameters to generalize behaviors in a program.
CIS.HS.2.2.d	Create an abstraction of data in order to manage problem complexity (e.g., using a list instead of multiple discrete variables).
CIS.HS.2.2.e	Investigate the advantages of a given data abstraction over others to manage complexity and/or readability in a program.
CIS.HS.2.2.f	Explain how modeling and simulation can be used to explore natural phenomena.

CIS.HS.2.3 Create computational artifacts.

CIS.HS.2.3.a	Create programs that demonstrate concepts of sequence, selection, and iteration.
CIS.HS.2.3.b	Develop programs with nested loops and/or nested conditionals.
CIS.HS.2.3.c	Implement interactive programs that process user input and/or respond to events in the system.
CIS.HS.2.3.d	Develop programs that use lists or other collection types to hold or manage data.
CIS.HS.2.3.e	Integrate grade-level-appropriate mathematical techniques, concepts, and processes in the creation of computing artifacts.
CIS.HS.2.3.f	Analyze and interpret documentation for functions and use them as part of a computational artifact.

COMPUTER SCIENCE PRINCIPLES (cont.)

CIS.HS.2.4 Use data to understand and model real-world situations.

CIS.HS.2.4.a	Explain how abstractions on binary numbers are used to represent and store various kinds of data in computer systems (e.g., hexadecimal color codes, Unicode characters, audio, and videos).
CIS.HS.2.4.b	Convert numbers between binary, decimal, and hexadecimal.
CIS.HS.2.4.c	Analyze the tradeoffs among various representations of a type of digital information (e.g., lossy versus lossless compression, encrypted vs. unencrypted, various image representations).
CIS.HS.2.4.d	Describe techniques for extracting information from data and identify common challenges with data processing.
CIS.HS.2.4.e	Use a computational tool to collect, transform, and analyze data to gain new insights and knowledge from the data.

CIS.HS.2.5 Evaluate and interpret representations of algorithms.

CIS.HS.2.5.a	Predict the output/effect of a code segment or program.
CIS.HS.2.5.b	Explain how a code segment or program functions both verbally and in writing.
CIS.HS.2.5.c	Identify and correct errors in algorithms and programs, including error discovery through testing.
CIS.HS.2.5.d	Reason about diagrammatic representations of algorithms and logic expressions, including flow charts.

COMPUTER SCIENCE PRINCIPLES (cont.)

CIS.HS.2.6 Explain how networks and computing systems work to transfer data.

CIS.HS.2.6.a	Define basic components of computer networks.
CIS.HS.2.6.b	Explain how data is sent through the Internet via packets.
CIS.HS.2.6.c	Describe properties of redundancy and fault tolerance in systems/networks like the Internet.
CIS.HS.2.6.d	Differentiate between sequential, parallel, and distributed computing approaches.

CIS.HS.2.7 Analyze the social impacts of technology and describe ethical IT practices.

CIS.HS.2.7.a	Interpret potential beneficial and harmful effects of computing innovations.
CIS.HS.2.7.b	Explain multiple causes for the digital divide and its impacts on society.
CIS.HS.2.7.c	Describe how algorithms may result in both intentional and unintentional bias.
CIS.HS.2.7.d	Investigate how computing innovations can have legal and ethical implications.
CIS.HS.2.7.e	Identify safe computing practices and how they address common vulnerabilities.

COMPUTER SCIENCE A - (1 YEAR)

COURSE DESCRIPTION

"Computer Science A introduces students to computer science through programming. Fundamental topics in this course include the design of solutions to problems, the use of data structures to organize large sets of data, the development and implementation of algorithms to process data and discover new information, the analysis of potential solutions, and the ethical and social implications of computing systems. The course emphasizes object-oriented programming and design".

-College Board, 2020, Page 7

STANDARDS AND INDICATORS:

CIS.HS.3.1 Define a computational problems and solve it.

CIS.HS.3.1.a	Define examples of computationally solvable problems and difficult-to-solve problems.
CIS.HS.3.1.b	Decompose a large-scale computational problem by identifying generalizable patterns.
CIS.HS.3.1.c	Determine code that would be used to complete code segments.
CIS.HS.3.1.d	Determine the efficiency of a program.

CIS.HS.3.2 Interpret existing code written with the Advanced Placement language subset.

CIS.HS.3.2.a	Determine the result or output of code execution, including code with and without method or function calls.
CIS.HS.3.2.b	Evaluate logical expressions to determine their resulting values.
CIS.HS.3.2.c	Predict the output of code that uses collections and multidimensional collections of data.
CIS.HS.3.2.d	Trace code involving hierarchies of classes to demonstrate how inheritance influences program behavior.
CIS.HS.3.2.e	Interpret documentation and/or a program description in order to write code that satisfies all conditions and requirements described.
CIS.HS.3.2.f	Explain common errors that will occur in given erroneous examples (e.g. null pointers, bounds exceptions, arithmetic errors, logic errors, stack overflows).
CIS.HS.3.2.g	Define recursion and diagram the behavior of a recursive function.

COMPUTER SCIENCE A (cont.)

CIS.HS.3.3 Write and implement program code with the AP language subset.

CIS.HS.3.3.a	Develop programs involving statements, logical expressions, conditionals, and iteration to satisfy design specifications.
CIS.HS.3.3.b	Process user input using an appropriate technique to solve a problem.
CIS.HS.3.3.c	Represent nested iterative and branching logical processes by using appropriate control structures.
CIS.HS.3.3.d	Write programs that organize and manipulate data in collections and multidimensional collections in order to solve a problem.
CIS.HS.3.3.e	Resolve errors in code using compiler and run-time error messages.

CIS.HS.3.4 Model real-world situations using data.

CIS.HS.3.4.a	Select appropriate data types for variables based on the needs of the problem.
CIS.HS.3.4.b	Convert extracted data to the appropriate data type for computation or storage (e.g., type casting, parsing, etc.).
CIS.HS.3.4.c	Manage numeric data types in calculations to account for floating point error and loss of precision.
CIS.HS.3.4.d	Extract relevant information from a string of text using parsing techniques within a program.
CIS.HS.3.4.e	Apply data sorting and searching algorithms in different contexts.
CIS.HS.3.4.f	Write a program that uses data analysis techniques to identify significant patterns in complex systems.
CIS.HS.3.4.g	Justify which collection type is appropriate for a given problem.

COMPUTER SCIENCE A (cont.)

CIS.HS.3.5 Develop and use abstractions in programs to promote code modularity

CIS.HS.3.5.a	Create programs using standard language-specific libraries including those explicitly identified in the Advanced Placement language subset.
CIS.HS.3.5.b	Evaluate procedural abstractions in terms of properties like efficiency, correctness, and readability.
CIS.HS.3.5.c	Define basic object-oriented concepts of encapsulation and information hiding and explain how they promote modularity.
CIS.HS.3.5.d	Implement object-oriented computer programs containing multiple student-designed classes.
CIS.HS.3.5.e	Explain is-a and has-a relationships between different data types and give examples of where each could be used within a program.
CIS.HS.3.5.f	Devise an algorithm that models a real-world phenomenon and implement it in code.

SOFTWARE DEVELOPMENT

COURSE DESCRIPTION

Software Development is intended as a integrative course in computer science and engineering programs of study. It is a research, design, and development course in which students work in groups to design, develop, and deploy an original solution to a valid, open-ended technical problem by applying a software lifecycle process. The course applies and concurrently develops secondary-level knowledge and skills in mathematics, science, technology, and other related areas.

STANDARDS AND INDICATORS:

CIS.HS.16.1 Define computational problems and solutions.

CIS.HS.16.1.a Employ user-centered research techniques to investigate the needs of one or more stakeholder groups.

CIS.HS.16.1.b Identify and design multiple potential computational solutions to a given problem.

CIS.HS.16.2 Develop abstractions in computational artifacts.

CIS.HS.16.2.a Design and evaluate the components of computational solution to an identified problem.

CIS.HS.16.2.b Use functional decomposition techniques to develop the framework for a computational solution.

CIS.HS.16.2.c Critique similar solutions or existing components of a solution to problems that have the potential for reuse in a new solution.

CIS.HS.16.3 Create computational artifacts as part of a team.

CIS.HS.16.3.a Apply knowledge of computational tools and programming language(s) to select components needed to implement a solution for a user audience.

CIS.HS.16.3.b Integrate computational components into a solution to the identified problem.

CIS.HS.16.3.c Use version control systems, integrated development environments (IDEs), and collaborative tools and practices (code documentation) in a group software project.

CIS.HS.16.3.d Define the components and structure of a standard software lifecycle process (e.g., waterfall, spiral, agile).

CIS.HS.16.3.e Demonstrate software lifecycle processes while participating on software project teams.

SOFTWARE DEVELOPMENT (cont.)

CIS.HS.16.4 Test computational solutions.

CIS.HS.16.4.a Develop a series of test cases to verify that a program performs according to its design specifications.

CIS.HS.16.4.b Evaluate programs using debugging techniques and test cases to ensure correctness of code.

CIS.HS.16.4.c Determine appropriate data collection techniques and use them to evaluate the usability, functionality, and user experience of a computational solution with stakeholders.

CIS.HS.16.4.d Use evidence and prioritize additional features and defects that should be addressed in subsequent development cycles.

CIS.HS.16.5 Apply social and ethical impacts of computing.

CIS.HS.16.5.a Identify potential threats or unintended consequences of the current iteration of a software solution.

CIS.HS.16.5.b Justify how the current version of a solution guards against external threats, bias, malicious uses, or unintended consequences.

CIS.HS.16.5.c Compare and contrast various software licensing schemes (e.g., open source, freeware, commercial).

CIS.HS.16.5.d Evaluate licenses that limit or restrict use of computational artifacts when reusing code or using resources such as libraries.

CIS.HS.16.5.e Justify an appropriate software licensing scheme for a particular computational artifact.

CIS.HS.16.5.f Demonstrate ethical attribution and adherence to applicable intellectual property licensing while using third party resources in a software solution.

SOFTWARE DEVELOPMENT (cont.)

CIS.HS.16.6 Communicate about computational artifacts and computational understandings.

CIS.HS.16.6.a	Develop and deploy a communication plan to communicate project progress with external stakeholders.
CIS.HS.16.6.b	Provide justifications for design decisions and the effect they will have on the final product.
CIS.HS.16.6.c	Present periodic updates on the development process to classmates and other stakeholders.
CIS.HS.16.6.d	Evaluate key qualities of a program through a process such as a code review.
CIS.HS.16.6.e	Communicate the final outcomes of the software solution, development process, intended use, and future development plans using an appropriate modality (e.g., portfolios, presentations).

INFORMATION TECHNOLOGY APPLICATIONS II

COURSE DESCRIPTION

This course will focus on skill development in data science using word processing, spreadsheets, databases, and integration of applications utilizing advanced features. Students taking both Information Technology Applications I and II may be eligible for dual credit at a participating postsecondary institution. Skills, standards, and coursework align with industry certifications.

STANDARDS AND INDICATORS:

CIS.HS.11.1 Organize, aggregate, and manipulate data using advanced word processing features.

CIS.HS.11.1.a	Integrate other program files into word processing documents (insert, embed, and link).
CIS HS.11.1.b	Create and format tables using advanced features (formulas, styles).
CIS HS.11.1.c	Use advanced merge features to integrate spreadsheet and database information into the word processing document as fields and records.
CIS.HS.11.1.d	Create and manage styles.
CIS.HS.11.1.e	Plan, record, run, and edit Macros.

CIS.HS.11.2 Organize, aggregate, and manipulate data using advanced spreadsheet features.

CIS.HS.11.2.a	Create worksheet structures using formulas and advanced features. (e.g., logical statements, vLookup, financial, statistical functions, and named ranges).
CIS.HS.11.2.b	Interpret data through statistical analysis (e.g., sorting, filtering, forecasting, and pivot tables).
CIS.HS.11.2.c	Import, export, and share worksheet data.
CIS.HS.11.2.d	Customize formatting methods, including conditional formatting and other advanced formatting methods.

INFORMATION TECHNOLOGY APPLICATIONS II (cont.)

CIS.HS.11.3 Synthesize relational database concepts to design, manage, evaluate, and organize information.

CIS.HS.11.3.a Design tables specifying properties for data entry and relationships.

CIS.HS.11.3.b Construct multi-table queries to retrieve, organize, and aggregate data to draw conclusions.

CIS.HS.11.3.c Design forms and subforms for efficient and effective data entry or retrieval.

CIS.HS.11.3.d Design reports and subreports utilizing tables, graphs, sparklines, and pivot tables for displaying meaningful data.

CIS.HS.11.3.e Analyze relational data using Structure Query Language (SQL).

CIS.HS.11.4 Consider the relationship between different programs to utilize data in one program to the next to create new documents.

CIS.HS.11.4.a Utilize spreadsheets, presentation, and database information in word processing documents.

CIS.HS.11.4.b Utilize word processing, presentation, and database information in a spreadsheet.

CIS.HS.11.4.c Utilize word processing, spreadsheet, and database information in a presentation.

CIS.HS.11.4.d Utilize word processing and spreadsheet information in a database.

CIS.HS.11.5 Describe the importance of ethical data collection and applicable conclusions.

CIS.HS.11.5.a Analyze the privacy practices of data collection and use.

CIS.HS.11.5.b Analyze the security practices of data collection and use.

INFORMATION TECHNOLOGY APPLICATIONS II (cont.)

CIS.HS.11.6 Demonstrate critical thinking skills to integrate information technology tools to access, manage, and create new information.

CIS.HS.11.6.a Gather, evaluate, use, and disseminate information from multiple technology sources.

CIS.HS.11.6.b Create purposeful, digitally designed products (e.g., brochure, presentation, website, portfolio).

CIS.HS.11.7 Identify opportunities in an information technology career field including but not limited to entrepreneurial opportunities, responsibilities, education, and certification.

CIS.HS.11.7.a Identify information technologies used in various industries.

CIS.HS.11.7.b Discuss the impact of technology on all career fields.

CIS.HS 11.7.c Identify common tasks in career fields.

CIS.HS 11.7.d Discuss career opportunities in information technology career fields.

CIS.HS.11.7.e Describe the impact of technological change and the importance of lifelong learning in this career field.

CIS.HS.11.7.f Identify the benefits of industry certification and higher education programs.

CIS.HS.11.7.g Identify the necessary skills to succeed in fields using data science.

DATA LITERACY AND VISUALIZATION

COURSE DESCRIPTION

This course provides an introduction to data literacy and visualization. The course focuses on practical applications of data analysis to give students concrete and applicable skills. Students will learn how to ask and answer questions with data and communicate the results to various audiences. The course also emphasizes the ethical implications of data collection and use.

STANDARDS AND INDICATORS:

CIS.HS.5.1 Collect and describe data.

CIS.HS.5.1.a	List and give examples of data types/formats (e.g., ordinal, ratio/interval, categorical, text, images).
CIS.HS.5.1.b	Recognize and define diverse sources of data.
CIS.HS.5.1.c	Identify ethical issues with data collection.
CIS.HS.5.1.d	Summarize a data set including properties of the data.
CIS.HS.5.1.e	Recognize outliers in data.
CIS.HS.5.1.f	Demonstrate appropriate course of action to handle outliers in data.
CIS.HS.5.1.g	Identify issues of representation in data and data collection, including sampling bias within broader populations.
CIS.HS.5.1.h	Describe distributions and Identify common shapes of data plots (e.g., normal curve, poisson).

DATA LITERACY AND VISUALIZATION (cont.)

CIS.HS.5.2 Analyze data

CIS.HS.5.2.a	Transform raw data from one form to another (e.g., numeric data to categorical).
CIS.HS.5.2.b	Explain and compute appropriate summary data statistics for the data.
CIS.HS.5.2.c	Use computational tools to explore relationships between variables using basic inferential statistics (e.g., correlation, t-tests, chi square).
CIS.HS.5.2.d	Identify the appropriate analysis to answer a question using data.
CIS.HS.5.2.e	Merge related data sets.

CIS.HS.5.3 Interpret data to provide greater understanding of information.

CIS.HS.5.3.a	Use results of data analysis to answer questions.
CIS.HS.5.3.b	Explain the results of a statistical analysis in light of the context of the data.
CIS.HS.5.3.c	Form and justify conclusions derived from data analysis.
CIS.HS.5.3.d	Identify threats to the interpretation of data analysis (e.g., validity, reliability, overgeneralization).

CIS.HS.5.4 Communicate data and results of analysis

CIS.HS.5.4.a	Recognize and define the elements of effective data display.
CIS.HS.5.4.b	Analyze multiple methods of representing data and justify how a representation effectively communicates a result to an intended audience.
CIS.HS.5.4.c	Use software tools to create effective visualizations of data (e.g., heat maps, scatter plots, radial graphs, etc.).
CIS.HS.5.4.d	Communicate results of data analysis to stakeholders and other audiences.
CIS.HS.5.4.e	Identify misconceptions that may arise from alternate visualizations/ representations of data.

DATA LITERACY AND VISUALIZATION (cont.)

CIS. HS 5.5 Describe how data can be used to create value for organizations and individuals.

CIS.HS.5.5.a	Identify questions that can be asked from a data set and, given a question, identify what data is needed to answer the question.
CIS.HS.5.5.b	Explain the implications of data analysis in making strategic decisions.
CIS.HS.5.5.c	Identify ethical issues with how data is collected and stored.
CIS.HS.5.5.d	Describe the difference between data privacy and data security, and how to protect both.
CIS.HS.5.5.e	Explain how data transparency can lead to replicability and identify potential concerns regarding sharing data.
CIS.HS.5.5.f	Identify how organizations collect data and meta-data and the implications for individual privacy and for organizational value.

INTRODUCTION TO DATA SCIENCE

COURSE DESCRIPTION

This course introduces data science concepts and skills at the intersection of data analysis, computer and information sciences, and mathematics. Students will work with large, real-world datasets, deploy statistical modeling techniques to make predictions based on that data, and communicate the results of their analyses. The course also critically considers the societal applications, implications, and ethics of data science.

STANDARDS AND INDICATORS:

CIS.HS.13.1 Acquire, Store, and Clean Data.

CIS.HS.13.1.a	Implement diverse methods of collecting data and recognize the implications of each method.
CIS.HS.13.1.b	Identify reliable sources of public data and use the data from them.
CIS.HS.13.1.c	Apply appropriate data cleaning techniques to handle messy data (e.g., missing values, errors, heterogeneous values, outliers, etc.).
CIS.HS.13.1.d	Determine potential ethical implications of various sources and forms of data acquisition (e.g,. Segmentation and demographic-based targeting).
CIS.HS.13.1.e	Organize data using a software tool for later retrieval and/or analysis (e.g., relational databases).
CIS.HS.13.1.f	Manipulate data to facilitate analysis (e.g., subset, reshape, classify).

INTRODUCTION TO DATA SCIENCE (cont.)

CIS.HS.13.2 Create models and draw statistical inferences from data.

CIS.HS.13.2.a Transform raw data into actionable results (e.g., scoring and ranking).

CIS.HS.13.2.b Use computational tools to understand and model the relationships between multiple variables.

CIS.HS.13.2.c Use data to predict future observations.

CIS.HS.13.2.d Analyze large and/or unstructured data.

CIS.HS.13.2.e Explain the basic mechanics of clustering algorithms and supervised/unsupervised learning from data.

CIS.HS.13.3 Evaluate the results of data analysis.

CIS.HS.13.3.a Generate and test hypotheses.

CIS.HS.13.3.b Evaluate the outcomes of data predictions.

CIS.HS.13.3.c Draw and justify conclusions using inferential analysis of data.

CIS.HS.13.3.d Make recommendations for future action based on the results of data analysis.

CIS.HS.13.3.e Identify flaws or limitations in the results of data analysis and their implications.

CIS.HS.13.4 Represent and communicate data and results of analysis.

CIS.HS.13.4.a Use computational tools to generate effective data visualizations, including spatial data.

CIS.HS.13.4.b Derive meaning from and summarize interactive visualizations of data.

CIS.HS.13.4.c Justify the efficacy of different visualizations for communicating data.

CIS.HS.13.4.d Analyze statistical representations to identify patterns and develop insight about data.

CIS.HS.13.4.e Communicate results of data analysis to various audiences.

CIS.HS.13.4.f Create and interpret visualizations of real-world processes as captured by data.

INTRODUCTION TO DATA SCIENCE (cont.)

CIS.HS.13.5 Explain the ethics and societal implications of data.

CIS.HS.13.5.a	Explain ways in which data use and analysis can benefit or threaten organizations and society.
CIS.HS.13.5.b	Describe applications and implications of artificial intelligence and automated decision making in society.
CIS.HS.13.5.c	Identify ethical and legal issues in data collection, handling, use, and retention (e.g., the CIA Triad, human subjects data, HIPAA, etc.).
CIS.HS.13.5.d	Assess tradeoffs between individual privacy and organizational/societal value arising from large-scale data collection and analysis.
CIS.HS.13.5.e	Discuss the implications of algorithmic bias and automated inequality on society.

IT FUNDAMENTALS

COURSE DESCRIPTION

IT Fundamentals develops the students' abilities to analyze, evaluate, strategize, and reflect upon technologies such as computer hardware, computer software, web technologies, databases, networking, security, and software development. Students will also be introduced to ever-changing information technology careers along with developing positive and ethical behaviors/practices.

STANDARDS AND INDICATORS:

CIS.HS.12.1 Identify and describe the basic components of information technology.

- CIS.HS.12.1.a Identify and distinguish the differences between input and output devices.
- CIS.HS.12.1.b Identify and explain how various components meet the needs of the user.
- CIS.HS.12.1.c Identify and analyze emerging technologies.
- CIS.HS.12.1.d Identify storage options.
- CIS.HS.12.1.e Identify the process to configure permissions for files and folders.
- CIS.HS.12.1.f Explain multiple methods of moving digital files.

CIS.HS.12.2 Identify and analyze hardware components.

- CIS.HS.12.2.a Identify the correct hardware to connect with external components.
- CIS.HS.12.2.b Determine and evaluate recommended hardware devices to solve specific problems.
- CIS.HS.12.2.c Troubleshoot basic computer hardware problems.
- CIS.HS.12.2.d Find and analyze resources to answer basic troubleshooting questions.
- CIS.HS.12.2.e Develop criteria for purchasing or upgrading computer system hardware.
- CIS.HS.12.2.f Identify and analyze proper input technologies for various tasks.

IT FUNDAMENTALS (cont.)

CIS.HS.12.3 Identify and analyze software components.

CIS.HS.12.3.a Identify and analyze software appropriate for specific tasks.

CIS.HS.12.3.b Research and analyze software installation and upgrade options.

CIS.HS.12.3.c Troubleshoot potential problems with software installation (i.e. bloatware).

CIS.HS.12.3.d Compare and contrast the functions, features, and limitations of different operating systems and utilities (i.e.,open source and mobile proprietary operating systems).

CIS.HS.12.4 Explain web technologies.

CIS.HS.12.4.a Identify the components (e.g., wires, cables, routers, etc.) that make up the Internet.

CIS.HS.12.4.b Describe the types of Internet connections.

CIS.HS.12.4.c Explain Transmission Control Protocol/Internet Protocol (TCP/IP).

CIS.HS.12.4.d Identify and compare different types of web technologies: blogs, wikis, podcasts, RSS feeds, etc.

CIS.HS.12.4.e Explain browser cache and the process of clearing it.

CIS.HS.12.5 Design, administer, and deploy networks.

CIS.HS.12.5.a Define basic networking terminology.

CIS.HS.12.5.b Describe the characteristics and uses of networks, network devices, and components.

CIS.HS.12.5.c Identify the purpose of networks and their functionality.

CIS.HS.12.5.d Identify tools, diagnostic procedures, and troubleshooting techniques for networks.

CIS.HS.12.5.e Describe the process of configuring, optimizing, and upgrading of networks.

CIS.HS.12.5.f Explore and use cloud computing.

CIS.HS.12.5.g Research and analyze basic network security solutions.

CIS.HS.12.5.h Design a theoretical network environment and create protocols on deploying and maintaining the network.

IT FUNDAMENTALS (cont.)

CIS.HS.12.6 Apply database management strategies.

CIS.HS.12.6.a	Design and create database tables and relationships.
CIS.HS.12.6.b	Create database columns and specify properties.
CIS.HS.12.6.c	Name tables and fields in conformance with naming conventions.
CIS.HS.12.6.d	Insert, update, and delete records in a database.
CIS.HS.12.6.e	Import data into databases and transfer data between databases.
CIS.HS.12.6.f	Organize and store database files in a structured environment for users.
CIS.HS.12.6.g	Control user access to data and log access to the database by user and type of transaction.
CIS.HS.12.6.h	Backup, verify, and recover data in a database.
CIS.HS.12.6.i	Generate and print forms, reports, and results of queries (i.e., calculated fields, functions).

CIS.HS.12.7 Design, develop, test, and implement programs.

CIS.HS.12.7.a	Identify and define programming terminology.
CIS.HS.12.7.b	Explain the importance of life-long learning as a programmer.
CIS.HS.12.7.c	Analyze the strengths and weaknesses of different languages for solving a specific problem.
CIS.HS.12.7.d	Write code that uses logical operators (e.g., and, or, not, loops).
CIS.HS.12.7.e	Write code that uses conditional control structures (e.g., if, if-then-else).
CIS.HS.12.7.f	Test and debug code.
CIS.HS.12.7.g	Identify and analyze protocols to maintain the integrity of programs.

IT FUNDAMENTALS (cont.)

CIS.HS.12.8 Assess protocols for security and risk management.

CIS.HS.12.8.a	Identify the goals, objectives, and purposes of cybersecurity first principles.
CIS.HS.12.8.b	Identify different types of security threats and vulnerabilities.
CIS.HS.12.8.c	Identify and analyze policies procedures for security, privacy, and risk management.
CIS.HS.12.8.d	Explain intellectual property laws (e.g., copyright, trademark).
CIS.HS.12.8.e	Identify and analyze confidentiality concerns.
CIS.HS.12.8.f	Discuss risk loss and prevention methods.
CIS.HS.12.8.g	Analyze and evaluate passwords.
CIS.HS.12.8.h	Identify personal risks and create personal protocols to differentiate between home and work.

CIS.HS.12.9 Identify opportunities in an information technology career field.

CIS.HS.12.9.a	Identify information technologies used in various industries.
CIS.HS.12.9.b	Discuss the impact of technology on all career fields.
CIS.HS.12.9.c	Identify common tasks within the information technology career fields in occupations.
CIS.HS.12.9.d	Discuss career opportunities in information technology career fields.
CIS.HS.12.9.e	Describe the impact of technological change and the importance of lifelong learning in this career field.

INFORMATION TECHNOLOGY APPLICATIONS II

COURSE DESCRIPTION

This course will focus on skill development in data science using word processing, spreadsheets, databases, and integration of applications utilizing advanced features. Students taking both Information Technology Applications I and II may be eligible for dual credit at a participating postsecondary institution. Skills, standards, and coursework align with industry certifications.

STANDARDS AND INDICATORS:

CIS.HS.11.1 Organize, aggregate, and manipulate data using advanced word processing features.

CIS.HS.11.1.a	Integrate other program files into word processing documents (insert, embed, and link).
CIS HS.11.1.b	Create and format tables using advanced features (formulas, styles).
CIS HS.11.1.c	Use advanced merge features to integrate spreadsheet and database information into the word processing document as fields and records.
CIS.HS.11.1.d	Create and manage styles.
CIS.HS.11.1.e	Plan, record, run, and edit Macros.

CIS.HS.11.2 Organize, aggregate, and manipulate data using advanced spreadsheet features.

CIS.HS.11.2.a	Create worksheet structures using formulas and advanced features. (e.g., logical statements, vLookup, financial, statistical functions, and named ranges).
CIS.HS.11.2.b	Interpret data through statistical analysis (e.g., sorting, filtering, forecasting, and pivot tables).
CIS.HS.11.2.c	Import, export, and share worksheet data.
CIS.HS.11.2.d	Customize formatting methods, including conditional formatting and other advanced formatting methods.

INFORMATION TECHNOLOGY APPLICATIONS II (cont.)

CIS.HS.11.3 Synthesize relational database concepts to design, manage, evaluate, and organize information.

CIS.HS.11.3.a Design tables specifying properties for data entry and relationships.

CIS.HS.11.3.b Construct multi-table queries to retrieve, organize, and aggregate data to draw conclusions.

CIS.HS.11.3.c Design forms and subforms for efficient and effective data entry or retrieval.

CIS.HS.11.3.d Design reports and subreports utilizing tables, graphs, sparklines, and pivot tables for displaying meaningful data.

CIS.HS.11.3.e Analyze relational data using Structure Query Language (SQL).

CIS.HS.11.4 Consider the relationship between different programs to utilize data in one program to the next to create new documents.

CIS.HS.11.4.a Utilize spreadsheets, presentation, and database information in word processing documents.

CIS.HS.11.4.b Utilize word processing, presentation, and database information in a spreadsheet.

CIS.HS.11.4.c Utilize word processing, spreadsheet, and database information in a presentation.

CIS.HS.11.4.d Utilize word processing and spreadsheet information in a database.

CIS.HS.11.5 Describe the importance of ethical data collection and applicable conclusions.

CIS.HS.11.5.a Analyze the privacy practices of data collection and use.

CIS.HS.11.5.b Analyze the security practices of data collection and use.

INFORMATION TECHNOLOGY APPLICATIONS II (cont.)

CIS.HS.11.6 Demonstrate critical thinking skills to integrate information technology tools to access, manage, and create new information.

CIS.HS.11.6.a Gather, evaluate, use, and disseminate information from multiple technology sources.

CIS.HS.11.6.b Create purposeful, digitally designed products (e.g., brochure, presentation, website, portfolio).

CIS.HS.11.7 Identify opportunities in an information technology career field including but not limited to entrepreneurial opportunities, responsibilities, education, and certification.

CIS.HS.11.7.a Identify information technologies used in various industries.

CIS.HS.11.7.b Discuss the impact of technology on all career fields.

CIS.HS 11.7.c Identify common tasks in career fields.

CIS.HS 11.7.d Discuss career opportunities in information technology career fields.

CIS.HS.11.7.e Describe the impact of technological change and the importance of lifelong learning in this career field.

CIS.HS.11.7.f Identify the benefits of industry certification and higher education Programs.

CIS.HS.11.7.g Identify the necessary skills to succeed in fields using data science.

CYBERSECURITY

COURSE DESCRIPTION

This is a survey course that explores fundamental knowledge and skills in the field of cybersecurity. Topics explored include cryptography, software and network vulnerabilities, governance, global impacts, and career fields in information assurance.

STANDARDS AND INDICATORS:

CIS.HS.4.1 Analyze classic and modern approaches to cryptography and cryptanalysis.

- CIS.HS.4.1.a Describe the historical evolution of cryptography, encryption, and ciphers.
- CIS.HS.4.1.b Explain the use of and mechanics behind public key encryption.
- CIS.HS.4.1.c Demonstrate how common cipher algorithms operate on sample data.
- CIS.HS.4.1.d Compare and contrast modern cryptographic techniques used to protect information in industry and government.
- CIS.HS.4.1.e Describe vulnerabilities of common cipher algorithms and demonstrate cryptanalysis techniques to decrypt messages based on these vulnerabilities.

CIS.HS.4.2 Analyze the core components of network systems, including the internet, relative to network security concerns.

- CIS.HS.4.2.a Differentiate between layers in the Open Systems Interconnection (OSI) model and explain how they work together to transmit data in networks.
- CIS.HS.4.2.b Analyze potential indicators and metrics associated with common network attacks (e.g., rogue wireless access points, man-in-the-middle, DNS poisoning, DDos, Malicious code execution, etc.).
- CIS.HS.4.2.c Propose a secure network architecture in response to a hypothetical scenario or set of design constraints (e.g. network segmentation, load balancing, network system access control, port security, wireless protocol configuration, etc.).
- CIS.HS.4.2.d Summarize virtualization and cloud computing concepts and describe how Internet of Things devices work.
- CIS.HS.4.2.e Use network reconnaissance and discovery tools to identify the properties and vulnerabilities of a network.

CYBERSECURITY (cont.)

CIS.HS.4.3 Explain the role of software in cybersecurity, including techniques to protect local host computers.

CIS.HS.4.3.a Explain the role of patching and software updates in reducing risk and compare the advantages and disadvantages of different patching strategies.

CIS.HS.4.3.b Propose and justify operating system configuration settings and policies to minimize security risks.

CIS.HS.4.3.c Analyze the tension between security and usability in software systems and describe how to minimize the impact of security policies on user experience.

CIS.HS.4.3.d Describe how scripting or other forms of automation are used to facilitate cyber attacks.

CIS.HS.4.3.e Identify abnormal indicators of software or computer performance that suggest the presence of a system attack or exploit.

CIS.HS.4.4 Identify and analyze applicable laws and policies, including principles of governance, risk, and compliance.

CIS.HS.4.4.a Analyze how social and cultural norms are mutually shaped by security policies and how this impacts both individuals and organizations.

CIS.HS.4.4.b Compare and contrast federal, state, local, and international cyber laws and regulations for individuals and businesses.

CIS.HS.4.4.c Illustrate examples of how local government decisions can impact global cybersecurity considerations.

CIS.HS.4.4.d Summarize risk management processes and concepts. (e.g., the NIST Cybersecurity Framework concepts identify, protect, detect, respond, recover).

CIS.HS.4.4.e Analyze the security policy of an enterprise environment and recommend appropriate security solutions.

CYBERSECURITY (cont.)

CIS.HS.4.5 Distinguish between data security concerns and practices.

CIS.HS.4.5.a Explain various interactions between confidentiality, integrity, and availability (i.e., "the CIA triad") for data in use, at rest, and in motion.

CIS.HS.4.5.b Explain the extent of individuals' digital footprints and discuss the potential implications thereof.

CIS.HS.4.5.c Determine and evaluate levels of access for various data classifications (e.g. confidential, private, public, sensitive, critical, proprietary).

CIS.HS.4.5.d Compare the advantages and tradeoffs of multiple authentication strategies.

CIS.HS.4.6 Identify threats, vulnerabilities and attacks that may be present in computing systems and assess their potential impacts on society.

CIS.HS.4.6.a Identify and differentiate between the different threat actors, vectors, and intelligence sources.

CIS.HS.4.6.b Identify and differentiate between the types of malware, web-based, and network attacks.

CIS.HS.4.6.c Categorize types of attacks and remedies based on their underlying similarities and differences.

CIS.HS.4.6.d Analyze system vulnerabilities, exploits, and payloads on a network (e.g. from MITRE ATT&CK® Framework), and describe potential countermeasures.

CIS.HS.4.6.e Explain how social engineering can be used to compromise individuals and organizations.

CIS.HS.4.7 Describe cybersecurity careers in a global economy.

CIS.HS.4.7.a Identify the role and responsibilities of cybersecurity professionals in diverse industries.

CIS.HS.4.7.b Map education and certification requirements to different cybersecurity careers.

CIS.HS.4.7.c Describe the impact of technological change and the importance of lifelong learning in a cybersecurity career.

CIS.HS.4.7.d Recognize the role of cybersecurity awareness in a multitude of careers.

NETWORKING

COURSE DESCRIPTION

This course is a study of the networking fundamentals in regards to managing home and corporate network systems and protocols. Students will design, plan, implement, and support computer networks. Students will also enhance problem solving, critical thinking, and analytical skills throughout this course.

STANDARDS AND INDICATORS:

CIS.HS.15.1 Explain network terminology and components.

- CIS.HS.15.1.a Define and analyze the abilities and features of a client.
- CIS.HS.15.1.b Define and analyze abilities and features of a server.
- CIS.HS.15.1.c Identify client and server functions.
- CIS.HS.15.1.d Describe how the Internet communicates through internet protocols and packets.
- CIS.HS.15.1.e Describe how routers work and how data routing helps to make the internet fault tolerant.

CIS.HS.15.2 Establish routines and procedures appropriate for network management.

- CIS.HS.15.2.a Identify hierarchies in networking file management systems.
- CIS.HS.15.2.b Describe permission issues related to file management systems.
- CIS.HS.15.2.c Use command prompt tools to access network information.
- CIS.HS.15.2.d Use the internet control message protocol to ping devices on a network.
- CIS.HS.15.2.e Exercise backup and system restoration.
- CIS.HS.15.2.f Configure a network to perform a specific function.
- CIS.HS.15.2.g Implement simple security administration.
- CIS.HS.15.2.h Perform user and group administration on a system.
- CIS.HS.15.2.i Create a virtual network environment.

NETWORKING (cont.)

CIS.HS.15.3 Apply and adapt network media and topologies to maintain a functional network.

CIS.HS.15.3.a	Describe basic network classifications, topologies, and network operating systems.
CIS.HS.15.3.b	Identify the characteristics and uses of network components (e.g., hub, switches, routers, firewall).
CIS.HS.15.3.c	Identify the characteristics of LAN transmission methods, standards, and protocols.
CIS.HS.15.3.d	Explain the difference between basic point-to-point (PTP) and point-to-multipoint (PTM) network topologies.
CIS.HS.15.3.e	Demonstrate (or map) the relationship between IP and DNS.
CIS.HS.15.3.f	Use the Developer Tools in an Internet browser to explore HTTP requests, status codes, and HTTP exchanges conducted over TCP/IP.
CIS.HS.15.3.g	Identify the basic capabilities of server operating systems.
CIS.HS.15.3.h	Identify the basic characteristics of WAN technologies.
CIS.HS.15.3.i	Identify the seven layers of the OSI model and their functions.
CIS.HS.15.3.j	Select the appropriate NIC and network configuration settings when given a network configuration.

CIS.HS.15.4 Distinguish the components and functions of network devices.

CIS.HS.15.4.a	Differentiate between major hardware components and their functions.
CIS.HS.15.4.b	Identify types of computer storage devices.
CIS.HS.15.4.c	Identify practices for hardware life cycle management.
CIS.HS.15.4.d	Analyze the cost/benefits of different networking system configurations and components.

NETWORKING (cont.)

CIS.HS.15.5 Plan, configure, and troubleshoot a network.

- CIS.HS.15.5.a Run computer diagnostics.
- CIS.HS.15.5.b Identify troubleshooting issues involving the boot process for a computer.
- CIS.HS.15.5.c Identify common symptoms and resolutions for hardware problems.
- CIS.HS.15.5.d Identify common symptoms and resolutions for software problems.
- CIS.HS.15.5.e Diagnose and resolve operating system problems with appropriate tools.

CIS.HS.15.6 Identify concepts of networking tools to manage and implement networks.

- CIS.HS.15.6.a Identify and describe the appropriate tools used by a technician.
- CIS.HS.15.6.b Describe the purpose of configuration management documentation.
- CIS.HS.15.6.c Predict the impact of a particular security implementation on network functionality when given a wiring task.
- CIS.HS.15.6.d Explain different methods and rationales of network performance optimization.
- CIS.HS.15.6.e Use the appropriate network monitoring resource to analyze traffic.

NETWORKING (cont.)

CIS.HS.15.7 Integrate security in the design and management of networks.

- CIS.HS.15.7.a Categorize different types of network security appliances and methods.
- CIS.HS.15.7.b Explain common threats, vulnerabilities, and mitigation techniques.
- CIS.HS.15.7.c Identify security protocols and describe their purpose and function.
- CIS.HS.15.7.d Define the function of remote access protocols and services.
- CIS.HS.15.7.e Explain the methods of network access security.
- CIS.HS.15.7.f Explain methods of user authentication.
- CIS.HS.15.7.g Identify the purpose, benefits, and characteristics of using a proxy.
- CIS.HS.15.7.h Implement appropriate wireless security measures.
- CIS.HS.15.7.i Install and configure a basic firewall.

CIS.HS.15.8 Identify opportunities in an information technology career field including but not limited to entrepreneurial opportunities, responsibilities, education, and certification.

- CIS.HS.15.8.a Identify information technologies used in various industries.
- CIS.HS.15.8.b Discuss the impact of technology on all career fields.
- CIS.HS.15.8.c Identify common tasks in career fields.
- CIS.HS.15.8.d Discuss career opportunities in information technology career fields.
- CIS.HS.15.8.e Describe the impact of technological change and the importance of lifelong learning in this career field.

IT FUNDAMENTALS

COURSE DESCRIPTION

IT Fundamentals develops the students' abilities to analyze, evaluate, strategize, and reflect upon technologies such as computer hardware, computer software, web technologies, databases, networking, security, and software development. Students will also be introduced to ever-changing information technology careers along with developing positive and ethical behaviors/practices.

STANDARDS AND INDICATORS:

CIS.HS.12.1 Identify and describe the basic components of information technology.

- CIS.HS.12.1.a Identify and distinguish the differences between input and output devices.
- CIS.HS.12.1.b Identify and explain how various components meet the needs of the user.
- CIS.HS.12.1.c Identify and analyze emerging technologies.
- CIS.HS.12.1.d Identify storage options.
- CIS.HS.12.1.e Identify the process to configure permissions for files and folders.
- CIS.HS.12.1.f Explain multiple methods of moving digital files.

CIS.HS.12.2 Identify and analyze hardware components.

- CIS.HS.12.2.a Identify the correct hardware to connect with external components.
- CIS.HS.12.2.b Determine and evaluate recommended hardware devices to solve specific problems.
- CIS.HS.12.2.c Troubleshoot basic computer hardware problems.
- CIS.HS.12.2.d Find and analyze resources to answer basic troubleshooting questions.
- CIS.HS.12.2.e Develop criteria for purchasing or upgrading computer system hardware.
- CIS.HS.12.2.f Identify and analyze proper input technologies for various tasks.

IT FUNDAMENTALS (cont.)

CIS.HS.12.3 Identify and analyze software components.

CIS.HS.12.3.a	Identify and analyze software appropriate for specific tasks.
CIS.HS.12.3.b	Research and analyze software installation and upgrade options.
CIS.HS.12.3.c	Troubleshoot potential problems with software installation (i.e. bloatware).
CIS.HS.12.3.d	Compare and contrast the functions, features, and limitations of different operating systems and utilities (i.e.,open source and mobile proprietary operating systems).

CIS.HS.12.4 Explain web technologies.

CIS.HS.12.4.a	Identify the components (e.g., wires, cables, routers, etc.) that make up the Internet.
CIS.HS.12.4.b	Describe the types of Internet connections.
CIS.HS.12.4.c	Explain Transmission Control Protocol/Internet Protocol (TCP/IP).
CIS.HS.12.4.d	Identify and compare different types of web technologies: blogs, wikis, podcasts, RSS feeds, etc.
CIS.HS.12.4.e	Explain browser cache and the process of clearing it.

CIS.HS.12.5 Design, administer, and deploy networks.

CIS.HS.12.5.a	Define basic networking terminology.
CIS.HS.12.5.b	Describe the characteristics and uses of networks, network devices, and components.
CIS.HS.12.5.c	Identify the purpose of networks and their functionality.
CIS.HS.12.5.d	Identify tools, diagnostic procedures, and troubleshooting techniques for networks.
CIS.HS.12.5.e	Describe the process of configuring, optimizing, and upgrading of networks.
CIS.HS.12.5.f	Explore and use cloud computing.
CIS.HS.12.5.g	Research and analyze basic network security solutions.
CIS.HS.12.5.h	Design a theoretical network environment and create protocols on deploying and maintaining the network.

IT FUNDAMENTALS (cont.)

CIS.HS.12.6 Apply database management strategies.

CIS.HS.12.6.a	Design and create database tables and relationships.
CIS.HS.12.6.b	Create database columns and specify properties.
CIS.HS.12.6.c	Name tables and fields in conformance with naming conventions.
CIS.HS.12.6.d	Insert, update, and delete records in a database.
CIS.HS.12.6.e	Import data into databases and transfer data between databases.
CIS.HS.12.6.f	Organize and store database files in a structured environment for users.
CIS.HS.12.6.g	Control user access to data and log access to the database by user and type of transaction.
CIS.HS.12.6.h	Backup, verify, and recover data in a database.
CIS.HS.12.6.i	Generate and print forms, reports, and results of queries (i.e., calculated fields, functions).

CIS.HS.12.7 Design, develop, test, and implement programs.

CIS.HS.12.7.a	Identify and define programming terminology.
CIS.HS.12.7.b	Explain the importance of life-long learning as a programmer.
CIS.HS.12.7.c	Analyze the strengths and weaknesses of different languages for solving a specific problem.
CIS.HS.12.7.d	Write code that uses logical operators (e.g., and, or, not, loops).
CIS.HS.12.7.e	Write code that uses conditional control structures (e.g., if, if-then-else).
CIS.HS.12.7.f	Test and debug code.
CIS.HS.12.7.g	Identify and analyze protocols to maintain the integrity of programs.

IT FUNDAMENTALS (cont.)

CIS.HS.12.8 Assess protocols for security and risk management.

CIS.HS.12.8.a	Identify the goals, objectives, and purposes of cybersecurity first principles.
CIS.HS.12.8.b	Identify different types of security threats and vulnerabilities.
CIS.HS.12.8.c	Identify and analyze policies procedures for security, privacy, and risk management.
CIS.HS.12.8.d	Explain intellectual property laws (e.g., copyright, trademark).
CIS.HS.12.8.e	Identify and analyze confidentiality concerns.
CIS.HS.12.8.f	Discuss risk loss and prevention methods.
CIS.HS.12.8.g	Analyze and evaluate passwords.
CIS.HS.12.8.h	Identify personal risks and create personal protocols to differentiate between home and work.

CIS.HS.12.9 Identify opportunities in an information technology career field.

CIS.HS.12.9.a	Identify information technologies used in various industries.
CIS.HS.12.9.b	Discuss the impact of technology on all career fields.
CIS.HS.12.9.c	Identify common tasks within the information technology career fields in occupations.
CIS.HS.12.9.d	Discuss career opportunities in information technology career fields.
CIS.HS.12.9.e	Describe the impact of technological change and the importance of lifelong learning in this career field.

INFORMATION TECHNOLOGY APPLICATIONS II

COURSE DESCRIPTION

This course will focus on skill development in data science using word processing, spreadsheets, databases, and integration of applications utilizing advanced features. Students taking both Information Technology Applications I and II may be eligible for dual credit at a participating postsecondary institution. Skills, standards, and coursework align with industry certifications.

STANDARDS AND INDICATORS:

CIS.HS.11.1 Organize, aggregate, and manipulate data using advanced word processing features.

CIS.HS.11.1.a	Integrate other program files into word processing documents (insert, embed, and link).
CIS HS.11.1.b	Create and format tables using advanced features (formulas, styles).
CIS HS.11.1.c	Use advanced merge features to integrate spreadsheet and database information into the word processing document as fields and records.
CIS.HS.11.1.d	Create and manage styles.
CIS.HS.11.1.e	Plan, record, run, and edit Macros.

CIS.HS.11.2 Organize, aggregate, and manipulate data using advanced spreadsheet features.

CIS.HS.11.2.a	Create worksheet structures using formulas and advanced features. (e.g., logical statements, vLookup, financial, statistical functions, and named ranges).
CIS.HS.11.2.b	Interpret data through statistical analysis (e.g., sorting, filtering, forecasting, and pivot tables).
CIS.HS.11.2.c	Import, export, and share worksheet data.
CIS.HS.11.2.d	Customize formatting methods, including conditional formatting and other advanced formatting methods.

INFORMATION TECHNOLOGY APPLICATIONS II (cont.)

CIS.HS.11.3 Synthesize relational database concepts to design, manage, evaluate, and organize information.

CIS.HS.11.3.a Design tables specifying properties for data entry and relationships.

CIS.HS.11.3.b Construct multi-table queries to retrieve, organize, and aggregate data to draw conclusions.

CIS.HS.11.3.c Design forms and subforms for efficient and effective data entry or retrieval.

CIS.HS.11.3.d Design reports and subreports utilizing tables, graphs, sparklines, and pivot tables for displaying meaningful data.

CIS.HS.11.3.e Analyze relational data using Structure Query Language (SQL).

CIS.HS.11.4 Consider the relationship between different programs to utilize data in one program to the next to create new documents.

CIS.HS.11.4.a Utilize spreadsheets, presentation, and database information in word processing documents.

CIS.HS.11.4.b Utilize word processing, presentation, and database information in a spreadsheet.

CIS.HS.11.4.c Utilize word processing, spreadsheet, and database information in a presentation.

CIS.HS.11.4.d Utilize word processing and spreadsheet information in a database.

CIS.HS.11.5 Describe the importance of ethical data collection and applicable conclusions.

CIS.HS.11.5.a Analyze the privacy practices of data collection and use.

CIS.HS.11.5.b Analyze the security practices of data collection and use.

INFORMATION TECHNOLOGY APPLICATIONS II (cont.)

CIS.HS.11.6 Demonstrate critical thinking skills to integrate information technology tools to access, manage, and create new information.

CIS.HS.11.6.a Gather, evaluate, use, and disseminate information from multiple technology sources.

CIS.HS.11.6.b Create purposeful, digitally designed products (e.g., brochure, presentation, website, portfolio).

CIS.HS.11.7 Identify opportunities in an information technology career field including but not limited to entrepreneurial opportunities, responsibilities, education, and certification.

CIS.HS.11.7.a Identify information technologies used in various industries.

CIS.HS.11.7.b Discuss the impact of technology on all career fields.

CIS.HS 11.7.c Identify common tasks in career fields.

CIS.HS 11.7.d Discuss career opportunities in information technology career fields.

CIS.HS.11.7.e Describe the impact of technological change and the importance of lifelong learning in this career field.

CIS.HS.11.7.f Identify the benefits of industry certification and higher education Programs.

CIS.HS.11.7.g Identify the necessary skills to succeed in fields using data science.

WEB DESIGN AND DEVELOPMENT

COURSE DESCRIPTION

Students will demonstrate advanced knowledge of web/app design and languages by creating a content-rich and visually-pleasing website/app that captures and keeps visitors' interests. Focus will be given to effective page layout, image creation and manipulation, interactivity, content creation, and project management. This course may be available for dual credit at a postsecondary institution.

STANDARDS AND INDICATORS:

CIS.HS.18.1 Use code that is clear, well-formatted, and appropriately documented.

CIS.HS.18.a	Identify alternative codes and discuss advantages and disadvantages that led to their decision.
CIS.HS.18.1.b	Review code to identify and fix errors.
CIS.HS.18.1.c	Determine if existing code opens a website up to vulnerabilities.

CIS.HS.18.2 Assess content for accessibility issues and discuss the issue and possible solutions.

CIS.HS.18.2.a	Analyze content flow and present alternative content with screen readers and other adaptive technologies.
CIS.HS.18.2.b	Consider mobile application functionality when network access is not available.

CIS.HS.18.3 Create a single functional web page based on a design mockup and user requirements.

CIS.HS.18.3.a	Explain client and target audience needs.
CIS.HS.18.3.b	Assess the needs of clients based on current trends.
CIS.HS.18.3.c	Demonstrate use of collaborative development tools.

WEB DESIGN AND DEVELOPMENT (cont.)

CIS.HS.18.4 Create a web program that will utilize multiple languages and servers and will run on multiple platforms.

CIS.HS.18.4.a Create a functional website with both front-end and back-end file management.

CIS.HS.18.4.b Employ a variety of web technologies to produce a final product that meets industry web development standards.

CIS.HS.18.5 Identify common tools used for workflows associated with content generation.

CIS.HS.18.5.a Identify one or more tools (i.e., proprietary, open source, or otherwise) that are capable of creating the required content (i.e., image, video, text).

CIS.HS.18.5.b Compare various tools designed for the same workflow.

CIS.HS.18.6 Create web pages/apps without the aid of a prefabricated template.

CIS.HS.18.6.a Illustrate industry standard development practices by coding web pages/apps.

CIS.HS.18.7 Identify information that may be private or subject to ethical consideration.

CIS.HS.18.7.a Identify issues with collected information such as usernames, passwords, location data, and preferences, and discuss the possible ramifications of misuse.

CIS.HS.18.7.b Identify the benefits of a minimal set of permissions when authoring a mobile app and possible consequences of over requesting permissions.

CIS.HS.18.8 Describe opportunities in an information technology career field including but not limited to entrepreneurial opportunities, responsibilities, education, and certification.

CIS.HS.18.8.a Identify information technologies used in various industries.

CIS.HS.18.8.b Discuss the impact of technology on all career fields.

CIS.HS.18.8.c Identify common tasks in career fields.

CIS.HS.18.8.d Discuss career opportunities in information technology career fields.

CIS.HS.18.8.e Describe the impact of technological change and the importance of lifelong learning in this career field.

FOUNDATIONS OF WEB DESIGN

COURSE DESCRIPTION

Students will demonstrate knowledge of web and mobile app design to create an effective website or app that captures and keeps visitors' interests. Students will demonstrate project management skills, while also enhancing creativity, problem solving, and critical thinking. Students will explore career opportunities in an information technology career field.

STANDARDS AND INDICATORS:

CIS.HS.9.1 Explain and apply appropriate web design language and terminology.

- CIS.HS.9.1.a Describe the principles and goals of website design.
- CIS.HS.9.1.b Describe the principles and goals of responsive design.
- CIS.HS.9.1.c Describe binary code.
- CIS.HS.9.1.d Define common industry terminology.

CIS.HS.9.2 Plan a website and/or app for a specific purpose.

- CIS.HS.9.2.a Develop a storyboard, mock-up, and wireframes for a website and/or app.
- CIS.HS.9.2.b Explain the design process in regards to audience, layout, time, and budget.
- CIS.HS.9.2.c Identify the target market audience's needs.
- CIS.HS.9.2.d Evaluate clients' needs based on current trends.
- CIS.HS.9.2.e Plan for responsive design.

FOUNDATIONS OF WEB DESIGN (cont.)

CIS.HS.9.3 Analyze elements and principles of design to communicate ideas consistent with project goals.

CIS.HS.9.3.a	Apply appropriate font and font family concepts.
CIS.HS.9.3.b	Demonstrate knowledge of design decisions in regards to shapes, lines, colors.
CIS.HS.9.3.c	Demonstrate knowledge of design decisions in regards to white space, margins, and layout of graphic and text.
CIS.HS.9.3.d	Incorporate text layout techniques such as kerning, leading, and alignment.
CIS.HS.9.3.e	Incorporate audio, visual, and graphic elements.
CIS.HS.9.3.f	Develop a focused concept, clear methods of conveyance, and unified theme that solves the given problem.
CIS.HS.9.3.g	Identify accessibility and standard compliance measures in order to communicate with a broad audience.
CIS.HS.9.3.h	Explain design decisions in regards to themes.
CIS.HS.9.3.i	Evaluate the impact of design decisions on the theme of a design.
CIS.HS.9.3.j	Explain design and project goals using a storyboard, mock-up, and wireframes.

CIS.HS.9.4 Analyze legal and ethical responsibilities.

CIS.HS.9.4.a	Apply copyright laws as appropriate in website and app creation.
CIS.HS.9.4.b	Discuss security issues that are related to the utilization of the computer and/or Internet.
CIS.HS.9.4.c	Describe situations where web pages and/or apps may be used unethically.
CIS.HS.9.4.d	Describe licensing agreements.
CIS.HS.9.4.e	Discuss the importance of creative commons.

FOUNDATIONS OF WEB DESIGN (cont.)

CIS.HS.9.5 Create and test websites and/or apps designed for cross browser and mobile compatibility.

CIS.HS.9.5.a Utilize standards-compliant elements in code that delivers essential content and functionality if older browsers are not capable of displaying content.

CIS.HS.9.5.b Create websites and/or apps that utilize responsive design to allow for a variety of screen sizes and geometries to view the content in a meaningful and logical fashion.

CIS.HS.9.5.c Test an application on devices of varying geometries and operating system versions to ensure maximum compatibility.

CIS.HS.9.6 Implement quality assurance processes to deliver effective digital communication.

CIS.HS.9.6.a Evaluate the website and/or app functionality.

CIS.HS.9.6.b Test a website and/or app in a variety of environments.

CIS.HS.9.6.c Evaluate site effectiveness through user search and accessibility to meet all audience needs.

CIS.HS.9.6.d Investigate web hosts.

CIS.HS.9.6.e Troubleshoot and maintain a website and/or app.

CIS.HS.9.6.f Evaluate cross-browser compatibility.

CIS.HS.9.6.g Identify the process of securing a domain name.

FOUNDATIONS OF WEB DESIGN (cont.)

CIS.HS.9.7 Critique a website and/or app in accordance with web design principles.

- CIS.HS.9.7.a Assess download time.
- CIS.HS.9.7.b Assess readability of the website and/or app.
- CIS.HS.9.7.c Assess ease of navigation for both website and/or app.
- CIS.HS.9.7.d Assess the design theme of a website and/or app.
- CIS.HS.9.7.e Assess consistency of the theme across the entire website and/or app.
- CIS.HS.9.7.f Assess the functionality of links.

CIS.HS.9.8 Identify opportunities in an information technology career field including but not limited to entrepreneurial opportunities, responsibilities, education, and certification.

- CIS.HS.9.8.a Identify information technologies used in various industries.
- CIS.HS.9.8.b Discuss the impact of technology on all career fields.
- CIS.HS.9.8.c Identify common tasks in career fields.
- CIS.HS.9.8.d Discuss career opportunities in information technology career fields.
- CIS.HS.9.8.e Describe the impact of technological change and the importance of lifelong learning in this career field.

Nebraska K-12 Fine Arts Standards: Media Arts

(Approved by the Nebraska State Board of Education March 4, 2014)

K-12 Media Arts: Students will develop knowledge and skills of current and emerging processes, techniques, and applications used in the creation of media arts as a means of expressing human experience.

		Grades K-2	Grades 3-5	Grades 6-8	Grades 9-12
Create		**FA 2.1.1 Students will explore creative processes and techniques in media arts.**	**FA 5.1.1 Students will demonstrate understanding of processes, techniques, and applications in media arts.**	**FA 8.1.1 Students will utilize processes, techniques, and application through the creation of media arts.**	**FA 12.1.1 Students will analyze and synthesize processes, techniques, and applications in media arts through the creation of media arts.**
	Conceive	FA 2.1.1.a Share imaginative ways that media arts can be used to communicate a narrative, experience, or idea (e.g., movie, podcast *(glossary)*, digital art).	FA 5.1.1.a Generate ideas for stories, events, or experiences that can be the basis of content for media arts (e.g., brainstorming, role-playing, discussion).	FA 8.1.1.a Identify artistic challenges that exist in the process of creating media arts and discover ways to implement possible solutions.	FA 12.1.1.a Engage in pre-production processes to prepare content and systems for production in media arts (e.g., scripting, storyboarding *(glossary)*, choreographing).
	Develop	FA 2.1.1.b Determine the steps, vocabulary, and the resources necessary to create media arts.	FA 5.1.1.b Develop a process with timelines and roles using steps, vocabulary, and resources in creating media arts (e.g., storyboard *(glossary)*).	FA 8.1.1.b Expand media arts vocabulary along with elements and principles of design in the creative process.	FA 12.1.1.b Apply media arts vocabulary along with elements and principles of design in the creative process.
	Innovate	FA 2.1.1.c Explore various editing tools on existing media to create media arts (e.g., capture, copy, paste).	FA 5.1.1.c Experiment with multiple strategies to combine and adapt media arts formats, ideas, and processes (e.g., editing).	FA 8.1.1.c Utilize available tools, techniques, and conventions in the creation of media arts.	FA 12.1.1.c Develop strategies, processes, and plans for creating work in media arts that reflect understanding of multiple resources and media.
	Duplicate	FA 2.1.1.d Introduce understanding of, and respect for, the accepted procedures regarding the responsible care of media arts equipment and materials.	FA 5.1.1.d Reinforce understanding of, and respect for, the accepted procedures regarding the responsible care of media arts equipment and materials.	FA 8.1.1.d Demonstrate understanding of, and respect for, the accepted procedures regarding the responsible care of media arts equipment and materials.	FA 12.1.1.d Demonstrate understanding of, and respect for, the accepted procedures regarding the responsible care of media arts equipment and materials.

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Nebraska K-12 Fine Arts Standards: Media Arts

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K-12 Media Arts: Students will develop knowledge and skills of current and emerging processes, techniques, and applications used in the creation of media arts as a means of expressing human experience.

		Grades K-2	Grades 3-5	Grades 6-8	Grades 9-12
Present		**FA 2.1.2 Students will explore ways to communicate an idea/message in media arts.**	**FA 5.1.2 Students will develop their ability to communicate an idea/message by presenting their work in media arts.**	**FA 8.1.2 Students will communicate an idea/message by presenting their work in media arts.**	**FA 12.1.2. Students will communicate an idea/message by presenting their work in media arts.**
	Construct	FA 2.1.2.a Introduce cooperation, negotiation, and communication in creating media arts (e.g., collaborative posters *(glossary)*).	FA 5.1.2.a Contribute to a collaborative project in an assigned role (e.g., leader, designer, actor, timekeeper, storyboard artist, cinematographer, director, sound editor, video editor).	FA 8.1.2.a Contribute, communicate, and edit in collaborative work, independent work, and/or or performance environment.	FA 12.1.2.a Research, organize, and integrate media arts content, processes, and aesthetic elements to convey meaning in media arts.
	Express	FA 2.1.2.b Practice manipulating media and context for personal expression in media arts productions.	FA 5.1.2.b Explore how media arts elements and context enhance overall effectiveness and expression (e.g., image, sound, light, movement, time, space).	FA 8.1.2.b Combine components of media arts to improve overall quality (e.g., tone, mood, feeling, character).	FA 12.1.2.b Refine and enhance expression through media arts, ideas, and skills over time while gathering and responding to critical feedback.
	Refine	FA 2.1.2.c Understand self and others as an audience with guided reflection. (e.g., who, what, when, where, why).	FA 5.1.2.c Construct and adapt media arts in consideration of audience and the context of the work (e.g., public service announcements *(glossary)*).	FA 8.1.2.c Utilize audience impact and response in the revision of work and planning for later work.	FA 12.1.2.c Analyze and evaluate the effectiveness of message perception to diverse audiences (e.g., age, gender, ethnicity).
	Present	FA 2.1.2.d Share or distribute media arts in a safe and appropriate venue (e.g., school website *(glossary)*, student information system).	FA 5.1.2.d Share and/or distribute media arts through a specific and/or variety of contexts (e.g., physical, virtual channels, venues, spaces, mass audiences, participants).	FA 8.1.2.d Expand opportunities for others (e.g., audience, school, community) to actively engage in the media arts (e.g., social media *(glossary)*, videos, online *(glossary)* gallery).	FA 12.1.2.d Construct, distribute, and manage works in media arts through a variety of contexts (e.g., live audiences, digital display, web *(glossary)*).

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Nebraska K-12 Fine Arts Standards: Media Arts

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K-12 Media Arts: Students will develop knowledge and skills of current and emerging processes, techniques, and applications used in the creation of media arts as a means of expressing human experience.

	Grades K-2	Grades 3-5	Grades 6-8	Grades 9-12
Respond Perceive	**FA 2.1.3 Students will explore the concept of interpretation through media arts.**	**FA 5.1.3 Students will develop ability to interpret and evaluate work produced in media arts.**	**FA 8.1.3 Students will develop ability to analyze, interpret, and evaluate work produced in media arts.**	**FA 12.1.3 Students will analyze, interpret, and evaluate work produced in media arts.**
Interpret/Evaluate	FA 2.1.3.a Identify different elements that make up media arts and how they make us feel (e.g., background music, imaging *(glossary)*, timing).	FA 5.1.3.a Compare and contrast the elements of media arts that make it unique (e.g., background music, imaging *(glossary)*, timing, message).	FA 8.1.3.a Describe the qualities and relationships of the components in media arts as related to collective personal experiences.	FA 12.1.3.a Analyze and describe various forms, methods, styles, and qualities in media arts to reflect experience and create intention.
	FA 2.1.3.b Discuss how media arts experiences can shift individual understanding.	FA 5.1.3.b Justify personal and group interpretations and reactions to a variety of media arts.	FA 8.1.3.b Analyze multiple perspectives, key components, and relationships in media arts.	FA 12.1.3.b Evaluate and interpret multiple perspectives, key components, and relationships in media arts (e.g., intention, form, context).
	FA 2.1.3.c Identify meaning in media arts.	FA 5.1.3.c Discuss components and criteria that convey meaning in media arts.	FA 8.1.3.c Interpret and evaluate possible meanings or points of view of media arts (e.g., intention, form, context).	FA 12.1.3.c Engage in self-directed and teacher-directed critiques of media arts.

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Nebraska K-12 Fine Arts Standards: Media Arts

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K-12 Media Arts: Students will develop knowledge and skills of current and emerging processes, techniques, and applications used in the creation of media arts as a means of expressing human experience.

	Grades K-2	Grades 3-5	Grades 6-8	Grades 9-12
Connect – Inquire	**FA 2.1.4 Students will explore personal and cultural connections through media arts.**	**FA 5.1.4 Students will identify personal, cultural, and historical connections through media arts.**	**FA 8.1.4 Students will examine personal, cultural, historical, and cross-disciplinary connections through media arts.**	**FA 12.1.4 Students will analyze and integrate personal and global connections through media arts.**
	FA 2.1.4.a Investigate media arts connections to school, community, and everyday life (e.g., websites, advertising *(glossary)*).	FA 5.1.4.a Examine media arts to demonstrate student interest and knowledge of self.	FA 8.1.4.a Demonstrate use of media arts to address social, cultural, or societal issues (e.g., advertising *(glossary)*, social media *(glossary)*, public service announcements *(glossary)*).	FA 12.1.4.a Use historical, cultural, aesthetic, and critical frameworks to examine the capacity of media arts to reflect, affect, and catalyze personal reflection, action, or social change.
Interact	FA 2.1.4.b Share and discuss the characteristics of digital citizenship *(glossary)* (e.g., copyright, plagiarism *(glossary)*).	FA 5.1.4.b Demonstrate knowledge of digital citizenship *(glossary)* (e.g., copyright, plagiarism, citations, validating resources *(glossary)*).	FA 8.1.4.b Demonstrate and describe the impact of digital citizenship *(glossary)* (e.g., copyright, plagiarism, citations, validating resources *(glossary)*).	FA 12.1.4.b Apply the concepts of digital citizenship *(glossary)* in media arts (e.g., copyright, plagiarism, citations, liability, validating resources *(glossary)*).
	FA 2.1.4.c Explore use of media arts as a collaborative art form to communicate information, experiences, or ideas to others.	FA 5.1.4.c Discuss and determine benefits and challenges of incorporating various ideas when creating or engaging with media arts.	FA 8.1.4.c Identify and incorporate personal or collective experiences, perspectives, and ideas of others through media arts.	FA 12.1.4.c Incorporate and analyze personal or collective experiences, perspectives, and ideas of others in media arts.
Synthesize	FA 2.1.4.d Identify the importance of media arts as a learning tool.	FA 5.1.4.d Share the importance of media arts as a learning tool and explore potential careers.	FA 8.1.4.d Examine careers in media arts and lifelong learning opportunities.	FA 12.1.4.d Evaluate the necessary training and lifelong learning skills for careers in media arts.

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Nebraska K-12 Fine Arts Standards: Visual Arts

(Approved by the Nebraska State Board of Education March 4, 2014)

K-12 Visual Arts: Students will develop and apply ideas, knowledge, and skills to create, present, respond to, and connect art with the human experience.

		Grades K-2	Grades 3-5	Grades 6-8	Grades 9-12
Create - Art to generate ideas		**FA 2.2.1 Students will use the creative process** *(glossary)* **to make works of art with a variety of materials** *(glossary)***.**	**FA 5.2.1 Students will use the creative process** *(glossary)* **to make works of art exploring subjects and themes** *(glossary)* **with a variety of materials** *(glossary)***.**	**FA 8.2.1 Students will use the creative process** *(glossary)* **to investigate and communicate personal voice in artwork.**	**FA 12.2.1 Students will use the creative process** *(glossary)* **to formulate a plan and implement aesthetic** *(glossary)* **choices in artwork.**
	Plan/ Material	FA 2.2.1.a Experiment and explore ideas and materials *(glossary)* (e.g., 2D, 3D).	FA 5.2.1.a Develop ideas using a variety of materials *(glossary)*.	FA 8.2.1.a Investigate ideas and materials *(glossary)* to demonstrate planning and refining.	FA 12.2.1.a Analyze multiple ideas and materials *(glossary)* to demonstrate planning and refining.
	Imagine/ Artistic Voice	FA 2.2.1.b Create artworks that express unique student interpretation.	FA 5.2.1.b Use observation, imagination and interpretation in creating artworks that reflect a variety of styles, themes, *(glossary)* and subjects.	FA 8.2.1.b Recognize personal voice and make stylistic choices to reflect personal identity.	FA 12.2.1.b Create and communicate a personal voice, with intention, through a body of work.
	Aesthetic Experience	FA 2.2.1.c Explore and experience the properties of various art media *(glossary)* through senses and emotions.	FA 5.2.1.c Demonstrate the connections between sensory experience *(glossary)* and expressing emotion.	FA 8.2.1.c Engage in the sensory experience *(glossary)* and relate it to making expressive artwork.	FA 12.2.1.c Engage in making art to communicate and connect aesthetic theories *(glossary)* to self-expression (e.g., imitationalism *(glossary)*, expressionism *(glossary)*, institutionalism *(glossary)*, instrumentalism *(glossary)*, formalism *(glossary)*, contextualism *(glossary)*).
	Elements/ Principles	FA 2.2.1.d Explore elements of art and principles *(glossary)* of design to brainstorm visual possibilities. (e.g., use color and shape to create pattern).	FA 5.2.1.d Identify and use elements of art and principles of design *(glossary)* to brainstorm visual possibilities (e.g., create symmetrical and asymmetrical balance using line and shape).	FA 8.2.1.d Investigate and apply relationships between elements of art and principles of design *(glossary)* to brainstorm visual possibilities (e.g., consider a variety of images and determine how line and value create emphasis in art).	FA 12.2.1.d Demonstrate and communicate understanding of relationships between elements of art and principles of design *(glossary)* by developing multiple solutions to a visual problem.
	Process/ Craftsmanship	FA 2.2.1.e Explore various techniques, skills, and the importance of craftsmanship/workmanship *(glossary)* (e.g., properly hold scissors, while turning paper, to create a well-defined shape).	FA 5.2.1.e Apply various techniques to develop craftsmanship *(glossary)* skills (e.g., use cutting and gluing techniques to produce clean edges without visible glue).	FA 8.2.1.e Investigate and demonstrate the relationship between technique, skill, and craftsmanship *(glossary)*.	FA 12.2.1.e Synthesize knowledge of relationships between advanced technique, skill, and craftsmanship *(glossary)*.
		FA 2.2.1.f Demonstrate respect for accepted procedures regarding responsible care of equipment and materials *(glossary)*.	FA 5.2.1.f Demonstrate respect for accepted procedures regarding responsible care of equipment and materials *(glossary)*.	FA 8.2.1.f Demonstrate respect for accepted procedures regarding responsible care of equipment and materials *(glossary)*.	FA 12.2.1.f Demonstrate respect for accepted procedures regarding responsible care of equipment and materials *(glossary)*.

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Nebraska K-12 Fine Arts Standards: Visual Arts

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K-12 Visual Arts: Students will develop and apply ideas, knowledge, and skills to create, present, respond to, and connect art with the human experience.

		Grades K-2	Grades 3-5	Grades 6-8	Grades 9-12
Present –Art to communicate ideas, process, and product.		**FA 2.2.2 Students will explore basic presentation methods and purposes.**	**FA 5.2.2 Students will develop presentation skills to communicate meaning.**	**FA 8.2.2 Students will understand and apply their knowledge of a variety of presentation and communication techniques.**	**FA 12.2.2 Students will integrate and apply presentation knowledge into life experiences.**
	Intent	FA 2.2.2.a Present an artist statement *(glossary)* through formal or informal communication (e.g., written, verbal).	FA 5.2.2.a Communicate artistic statements *(glossary)* using art terminology (e.g., product, process).	FA 8.2.2.a Analyze and present reflections of personal growth in an artist statement *(glossary)*.	FA 12.2.2.a Design a personal artist statement *(glossary)* by choosing from a variety of methods (e.g., poetry, multimedia).
	Selection	FA 2.2.2.b Select a work of art for display.	FA 5.2.2.b Apply basic art presentation skills in a collaborative group display.	FA 8.2.2.b Analyze, individually and collaboratively, the selection of art collections, displays, and presentations.	FA 12.2.2.b Create a portfolio *(glossary)*, digital collection *(glossary)*, or community display in a professional manner.
	Presentation Venue	FA 2.2.2.c Communicate a variety of different venues *(glossary)* to display art (e.g., describe or dramatize to an audience).	FA 5.2.2.c Examine how the process of collecting and displaying artwork varies depending on the purpose (e.g., cultivate awareness and appreciation of ideas, beliefs, experiences).	FA 8.2.2.c Explore how the meaning of art can be affected by the presentation mode or venue *(glossary)* (e.g., reproduction, digital, social media *(glossary)*, or original museum/gallery experience).	FA 12.2.2.c Compare and contrast the effectiveness of a presentation venue *(glossary)* and how it affects the artist, artwork, and audience (e.g., reproduction, digital, social media *(glossary)*, museum setting, gallery experience).

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		Grades K-2	Grades 3-5	Grades 6-8	Grades 9-12
Respond – to understand and appreciate ideas		**FA 2.2.3 Students will explore the critical process** *(glossary)* **to respond to works of art, learning about themselves and others.**	**FA 5.2.3 Students will use the critical process** *(glossary)* **to examine works of art, learning about themselves and cultures.**	**FA 8.2.3 Students will use the critical process** *(glossary)* **to compare and contrast multiple works of art, learning about themselves in the world.**	**FA 12.2.3 Students will use the critical process** *(glossary)* **to develop and defend a logical argument supporting a contextual response to a work of art.**
	Describe	FA 2.2.3.a Identify and describe a piece of art (e.g., subject matter *(glossary)*, use of color).	FA 5.2.3.a Identify and describe use of media *(glossary)* (e.g., paint, clay, collage) and techniques to create subject matter *(glossary)*, visual elements *(glossary)* and mood.	FA 8.2.3.a Identify and describe themes *(glossary)* and styles in works of art.	FA 12.2.3.a Identify and describe works of art that reveal different ideas (e.g., cultures, individuals).
	Analyze	FA 2.2.3.b Identify use of elements and principles *(glossary)* in works of art (e.g., recognize use of pattern, symmetry).	FA 5.2.3.b Categorize elements and principles *(glossary)* in works of art (e.g., group works of art by the use of line, shape, balance).	FA 8.2.3.b Compare and contrast works of art using elements and principles *(glossary)* (e.g., themes *(glossary)*, styles, cultures).	FA 12.2.3.b Formulate a rationale addressing use of elements and principles *(glossary)* in a work of art.
	Interpret	FA 2.2.3.c Interpret mood or feeling in a work of art.	FA 5.2.3.c Interpret the message communicated by a work of art, using knowledge of visual elements *(glossary)*, subject matter *(glossary)*, and mood.	FA 8.2.3.c Compare and contrast various interpretations of themes *(glossary)*, styles, and mood.	FA 12.2.3.c Interpret and explain expressive qualities of artistic styles *(glossary)* and movements (e.g., contemporary/pop cultural vs. historical art movements).
	Evaluate	FA 2.2.3.d Articulate personal artistic choice and ideas (e.g., "I like this because...," "I chose this because...").	FA 5.2.3.d Compare personal interpretation of a work of art with the interpretations of others.	FA 8.2.3.d Explain why a work of art can evoke different interpretations and how artwork is interpreted and evaluated by the way it is displayed or presented.	FA 12.2.3.d Critique and defend how aesthetic *(glossary)* choices impact the visual image and/or intended message.

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	Grades K-2	Grades 3-5	Grades 6-8	Grades 9-12
Connect - Individual perspective and identity through the study of art Artist Identity Time and Place Purpose and Function	**FA 2.2.4 Students will identify contemporary, historical, and cultural context in art and life.**	**FA 5.2.4 Students will examine contemporary, historical, and cultural context in art and life.**	**FA 8.2.4 Students will examine the significance of art in contemporary, historical, and cultural context in art and life.**	**FA 12.2.4 Students will synthesize understanding of contemporary, historical, and cultural context in art and life.**
	FA 2.2.4.a Communicate that "I can be an artist."	FA 5.2.4.a Identify ways that artists influence lives and communities.	FA 8.2.4.a Students can identify and demonstrate the role of an artist and explore art-related career opportunities.	FA 12.2.4.a Investigate how artists define, shape, and empower their lives (e.g., personal life, lifelong opportunities, careers).
	FA 2.2.4.b Identify examples of how humans have always made art.	FA 5.2.4.b Compare and contrast works of art from a variety of contemporary, historical, and cultural contexts.	FA 8.2.4.b Investigate and classify works of art from a variety of contemporary, historical, and cultural contexts.	FA 12.2.4.b Analyze and interpret works of art from a variety of contemporary, historical, cultural contexts, time periods, and cultural settings.
	FA 2.2.4.c Communicate that works of art are made for different purposes.	FA 5.2.4.c Identify and discuss purpose and function of different art forms (e.g., "is this object a sculpture, bowl, or decoration?").	FA 8.2.4.c Compare and contrast the purpose and function of different art forms. (e.g., artifacts *(glossary)* vs. fine art).	FA 12.2.4.c Synthesize how the purpose and function of art reveals aesthetic theory *(glossary)* (e.g., political, social, cultural, personal).
	FA 2.2.4.d Identify how images and objects are used to convey a story, familiar experience, or connection to the world.	FA 5.2.4.d Explore how images and objects are used to convey a story, familiar experience, or connection to the world.	FA 8.2.4.d Explain how images and objects are used to convey a story, familiar experience, or connection to the world.	FA 12.2.4.d Connect images, objects, and a personal work of art to convey a story, familiar experience, or connection to the world.

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Nebraska K-12 Fine Arts Standards: Music

(Approved by the Nebraska State Board of Education March 4, 2014)

K-12 Music: Students will develop and apply knowledge and skills to create, perform, and respond to music, making connections to human experiences.

		Grades K-2	Grades 3-5	Grades 6-8	Grades 9-12
Create		**FA 2.4.1 Students will compose, improvise, read, and perform music using pitch, rhythm, and dynamics** *(glossary)***.**	**FA 5.4.1 Students will compose, arrange, improvise, read, and perform music with melodies and accompaniments.**	**FA 8.4.1 Students will compose, arrange, improvise, read, and perform music with technical accuracy and expression.**	**FA 12.4.1 Students will compose, arrange, improvise, read, and perform music with an analytical understanding of the language of music** *(glossary)***.**
	Imagine/Plan	FA 2.4.1.a Improvise tonal and rhythmic patterns to create musical ideas, with teacher support, relating to: • specific purpose • interest • personal experience.	FA 5.4.1.a Generate concepts for original improvisation *(glossary)* or composition *(glossary)* from contrasting ideas, with teacher support, including: • specific purpose/function • interest • personal experience • expressive potential.	FA 8.4.1.a Develop a compositional *(glossary)* idea for a specific purpose or mood, with teacher guidance, including: • how elements of music *(glossary)* convey expressive intent • unity/variety • tension/release • how personal experiences influence musical choices.	FA 12.4.1.a Independently generate multiple compositional ideas *(glossary)* for a specific purpose or mood, including: • how elements of music *(glossary)* utilize expressive intent • unity/variety • tension/release • how personal experiences influence musical choices.
	Make/Evaluate/Refine	FA 2.4.1.b Explore and develop musical ideas (e.g., melody, rhythm) with teacher guidance.	FA 5.4.1.b Create, evaluate, and refine musical ideas with teacher-generated criteria (e.g., melody, rhythm, harmony).	FA 8.4.1.b Create, evaluate, and refine musical ideas that utilize a variety of compositional devices *(glossary)* (e.g., form, imitation).	FA 12.4.1.b Create, evaluate, and refine musical ideas that actualize creative intent with increasing craftsmanship.
		Left intentionally blank	*Left intentionally blank*	FA 8.4.1.c Identify and define compositional devices *(glossary)* in student creations.	FA 12.4.1.c Analyze compositional devices *(glossary)* in student creations.
	Present	FA 2.4.1.c Share music through performance or notation (non-traditional or traditional) (e.g., singing, playing) with teacher guidance.	FA 5.4.1.c Present an improvisation *(glossary)*, arrangement *(glossary)*, or composition *(glossary)*. Identify the use of selected elements of music *(glossary)*.	FA 8.4.1.d Present an improvisation *(glossary)*, arrangement *(glossary)*, or original composition *(glossary)*. Explain how elements of music *(glossary)* in the student creation are used to communicate expressive content (e.g., aurally, visually, electronically).	FA 12.4.1.d Present an improvisation *(glossary)*, arrangement *(glossary)*, or original composition *(glossary)* that conveys mood through craftsmanship. Explain how elements of music *(glossary)* in the student creation are used to communicate expressive content (e.g., aurally, visually, electronically) and evaluate the effectiveness of their use.
	Connect	FA 2.4.1.d Connect music to personal experience through creating.	FA 5.4.1.d Connect music to historical and cultural contexts and the arts *(glossary)* through creating.	FA 8.4.1.e Connect music to historical and cultural contexts, the arts *(glossary)*, and other disciplines through creating.	FA 12.4.1.e Connect music to historical and cultural contexts, the arts *(glossary)*, other disciplines, and life experience through creating.

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April 13, 2015

Nebraska K-12 Fine Arts Standards: Music

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K-12 Music: Students will develop and apply knowledge and skills to create, perform, and respond to music, making connections to human experiences.

		Grades K-2	Grades 3-5	Grades 6-8	Grades 9-12
Perform	Select/ Analyze/Interpret	**FA 2.4.2 Students will sing and/or play instruments to a variety of music that includes music elements** *(glossary)* **of rhythm, pitch, dynamics, and form.**	**FA 5.4.2 Students will sing and/or play instruments to a variety of music that incorporates multiple elements of music** *(glossary)***.**	**FA 8.4.2 Students will sing and/or play, independently and/or with others, a variety of music genres** *(glossary)* **and styles** *(glossary)* **(using technical accuracy and expression.**	**FA 12.4.2 Students will sing and/or play, independently and/or with others, a variety of music genres** *(glossary)* **and styles** *(glossary)* **using technical accuracy and expression, and synthesize feedback from various sources to evaluate performance.**
	Select/ Analyze/Interpret	FA 2.4.2.a Recognize music elements *(glossary)* (i.e., rhythm, pitch, dynamics, form), purpose, and context of selected pieces.	FA 5.4.2.a Identify expressive characteristics and components of technique, purpose, and context of selected pieces (e.g., dynamics, tempo).	FA 8.4.2.a Discuss expressive characteristics and components of technique, function, and context of selected pieces (e.g., phrasing, articulation *(glossary)*/diction).	FA 12.4.2.a Analyze and interpret expressive characteristics and components of technique, function, and context of selected pieces (e.g., timbre *(glossary)*, texture *(glossary)*).
	Rehearse/ Evaluate/Refine	FA 2.4.2.b Acquire music performance skills (e.g., posture, technique, reading music) with teacher guidance.	FA 5.4.2.b Develop and refine music performance skills (e.g., posture, technique, reading music) using teacher and peer feedback.	FA 8.4.2.b Develop and refine solo/ensemble performance skills (e.g., posture, technique, reading music) using guided self-evaluation and feedback from others.	FA 12.4.2.b Develop and refine solo/ensemble performance skills evaluation (e.g., posture, technique, reading music) using self-evaluation and feedback from others.
	Present	FA 2.4.2.c Perform (formally or informally) music using correct rhythm, pitch, and dynamics. Demonstrate appropriate performance expectations *(glossary)*.	FA 5.4.2.c Perform (formally or informally) music using correct posture, breath control, rhythm, pitch, and dynamics. Demonstrate appropriate performance expectations *(glossary)*.	FA 8.4.2.c Perform (formally or informally) music of increasing difficulty using proper tone quality, phrasing, dynamics, and articulation *(glossary)*. Demonstrate appropriate performance expectations *(glossary)*.	FA 12.4.2.c Perform (formally or informally) music of greater complexity using accurate intonation, expression, and stylistically correct interpretation of phrasing, dynamics, and articulation *(glossary)*. Demonstrate appropriate performance expectations *(glossary)*.
	Connect	FA 2.4.2.d Connect music to personal experience through performing.	FA 5.4.2.d Connect music to historical and cultural contexts and the arts *(glossary)* through performing.	FA 8.4.2.d Connect music to historical and cultural contexts, the arts *(glossary)*, and other disciplines through performing.	FA 12.4.2.d Connect music to historical and cultural contexts, the arts *(glossary)*, other disciplines, and life experience through performing.

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April 13, 2015

Nebraska K-12 Fine Arts Standards: Music

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K-12 Music: Students will develop and apply knowledge and skills to create, perform, and respond to music, making connections to human experiences.

		Grades K-2	Grades 3-5	Grades 6-8	Grades 9-12
Respond		**FA 2.4.3 Students will recognize and describe elements of music *(glossary)* to demonstrate how music makes them feel (impact of music).**	**FA 5.4.3 Students will identify and describe elements of music *(glossary)* to discern how music is appropriate for specific purposes/settings (intent of music).**	**FA 8.4.3 Students will examine and evaluate elements of music *(glossary)* to explain how music conveys mood or context (affect of music).**	**FA 12.4.3 Students will analyze and evaluate how music elicits intended responses (personal response to music).**
	Select	FA 2.4.3.a Experience music from a variety of familiar and unfamiliar sources.	FA 5.4.3.a Indicate music selections that students prefer to experience for specific purposes/settings.	FA 8.4.3.a Select appropriate music of contrasting styles *(glossary)* to listen to or perform.	FA 12.4.3.a Select appropriate music in contrasting styles *(glossary)* to listen to or perform with the audience in mind.
	Analyze/Interpret	FA 2.4.3.b Recognize and demonstrate how elements of music *(glossary)* are used by a performer or creator.	FA 5.4.3.b Identify and describe how elements of music *(glossary)* are used by a performer or creator.	FA 8.4.3.b Analyze and explain how the performer/creator uses composition *(glossary)* and performance characteristics (e.g., dynamics, phrasing) to convey expressive intent.	FA 12.4.3.b Analyze and evaluate how the performer/creator uses composition *(glossary)* and performance characteristics (e.g., form, style *(glossary)*) to convey expressive intent.
	Evaluate	FA 2.4.3.c Express ideas and opinions about a music selection.	FA 5.4.3.c Examine music performances using elements of music *(glossary)*, context, and criteria (e.g., mood, interest) generated by student/teacher.	FA 8.4.3.c Choose appropriate criteria (e.g., dynamics, tone quality) to critique expressiveness and effectiveness of a performance or composition *(glossary)* with teacher guidance. Work independently or with others.	FA 12.4.3.c Independently choose appropriate criteria (e.g., texture *(glossary)*, phrasing) to critique expressiveness and effectiveness of a performance/composition *(glossary)*.
	Connect	FA 2.4.3.d Connect music to personal experience through responding.	FA 5.4.3.d Connect music to historical and cultural contexts and the arts *(glossary)* through responding.	FA 8.4.3.d Connect music to historical and cultural contexts, the arts *(glossary)*, and other disciplines through responding.	FA 12.4.3.d Connect music to historical and cultural contexts, the arts *(glossary)*, other disciplines, and life experience through responding.

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Middle School Introduction to Ag, Food and Natural Resources

Course Description:
The introductory course for the Agriculture, Food and Natural Resources Career Cluster provides a knowledge base and technical skills in all aspects of the industry. Learners will be exposed to a broad range of agriculture, food and natural resources careers, cluster foundation knowledge and skills, introduction to leadership development, the FFA organization and career exploration. Classroom and laboratory activities are supplemented through supervised agricultural experiences and leadership programs and activities.

Course Code: 011012

Endoresements to teach: AFNR

Programs of Study to which this Course applies:

Agribusiness Systems
Agribusiness Systems Plus
Animal Systems
Animal Systems Plus
Environmental Systems
Environmental Systems Plus
Food Products and Processing Systems
Food Products and Processing Systems Plus
Plant Systems
Plant Systems Plus
Power, Structural and Technical Systems
Power, Structural and Technical Systems Plus
Diversified Agriculture Systems
Diversified Agriculture Systems Plus

AFNR.HS.1.1	
Apply AFNR business planning, management, and development principles.	
AFNR.HS.1.1.a	Apply and analyze different types of risk management strategies and structures in AFNR businesses.
AFNR.HS.1.1.c	Differentiate between and explain different business structures.
AFNR.HS.1.3	
Manage cash budgets, credit budgets and credit for an AFNR business using generally accepted accounting principles.	
AFNR.HS.1.3.b	Develop production plans.
AFNR.HS.1.5	
Use sales and marketing principles to accomplish AFNR business objectives.	
AFNR.HS.1.5.c	Analyze and apply sales principles and skills to accomplish AFNR business objectives.
AFNR.HS.2.1	
Analyze historic and current trends impacting the animal systems industry.	
AFNR.HS.2.1.a	Research the domestication of livestock and how the industries have changed and evolved over the years.
AFNR.HS.2.1.b	Assess and select animal production methods for use in animal systems based upon their effectiveness and impacts.
AFNR.HS.2.1.c	Analyze and apply laws and sustainable practices to animal agriculture from a global perspective.
AFNR.HS.2.6	
Classify, evaluate and select animals based on anatomical and physiological characteristics.	
AFNR.HS.2.6.a	Classify animals according to taxanomic classification systems and use.
AFNR.HS.2.6.b	Apply principles of comparative anatomy and physiology to uses within animal systems.
AFNR.HS.2.6.c	Select and train animals for specific purposes and maximize performance based on anatomy and physiology.
AFNR.HS.2.8	
Analyze environmental factors associated with animal production.	
AFNR.HS.2.8.a	Design and implement methods to reduce the effects of animal production on the environment.

AFNR.HS.2.8.b	Evaluate the effects of environmental conditions on animals and create plans to ensure favorable environments for animals.
AFNR.HS.3.1	
Plan and conduct natural resource management activities that apply logical, reasoned and scientifically based solutions to natural resource issues and goals.	
AFNR.HS.3.1.c	Identify proper use of tools utilized in measuring soil health.
AFNR.HS.3.2	
Analyze the interrelationships between natural resources and humans.	
AFNR.HS.3.2.a	Summarize the impacts that modern agriculture has had on our natural resources.
AFNR.HS.3.3	
Develop plans to ensure sustainable production and processing of natural resources.	
AFNR.HS.3.3.e	Examine the major causes of water pollution.
AFNR.HS.3.3.h	Describe the soil formation process.
AFNR.HS.3.3.j	Discuss the role of food chains in maintaining balanced ecosystems.
AFNR.HS.3.3.k	Demonstrate how to determine soil types and and how it affects land use.
AFNR.HS.4.5	
Explain the scope of today's food product and food processing industry.	
AFNR.HS.4.5.a	Explore career options available in the food science and food processing industry in the US and worldwide.
AFNR.HS.4.5.b	Discuss current events in food science and the food processing industry in the US and worldwide.
AFNR.HS.5.1	
Develop and implement a crop management plan for a given prodcution goal that accounts for environmental factors.	
AFNR.HS.5.1.a	Select crops based on geography and climate.
AFNR.HS.5.2	
Utilize resources efficiently and sustainably for crop production.	
AFNR.HS.5.2.b	Differentiate between various erosion control methods.
AFNR.HS.5.2.d	Analyze soil properties and chemistry.
AFNR.HS.5.4	
Apply principles of classification, plant anatomy, and plant physiology to plant production and management.	
AFNR.HS.5.4.a	Choose plants for a specific landscape and cropping situations.
AFNR.HS.5.4.d	Explain the process and stages of germination in monocots and dicots.
AFNR.HS.6.1	
Apply physical science principles and engineering applications to solve problems and improve performance in AFNR power, structural and technical systems.	
AFNR.HS.6.1.a	Apply physical science principles to metal fabrication using a variety of welding and cutting processes.
AFNR.HS.6.1.b	Apply physical science and engineering principles to design, implement, and improve safe and efficient mechanical systems in AFNR situations.
AFNR.HS.6.2	
Operate and maintain AFNR mechanical equipment and power systems.	
AFNR.HS.6.2.b	Demonstrate proper safety while operating machinery and power equipment.
AFNR.HS.CR.1	
Describe career opportunities and means to achieve those opportunities in each of the AFNR career pathways.	
AFNR.HS.CR.1.a	Evaluate and implement the steps and requirements to pursue a career opportunity in an AFNR career pathway.
AFNR.HS.CR.1.b	Examine and choose career opportunities that are matched to personal life skills, talents, and career goals in an AFNR pathway of interest.
AFNR.HS.CR.2	
Demonstrate employability skills for college and career readiness.	
AFNR.HS.CR.2.a	Model personal responsibility in the workplace and community.
AFNR.HS.CR.2.b	Speak using strategies that ensure clarity, logic, purpose and professionalism in formal and informal settings.
AFNR.HS.CR.2.g	Contribute to team-oriented projects and builds consensus to accomplish results using cultural global competence in the workplace and community.

AFNR.HS.CR.4	
Identify and demonstrate workplace safety.	
AFNR.HS.CR.4.a	Identify and explain the implication of required regulations to maintain and improve safety, health and environments management systems.
AFNR.HS.CR.4.b	Apply health and safety practices to AFNR workplaces.
AFNR.HS.CR.4.c	Use appropriate protective equipment and demonstrate safe and proper use of AFNR tools and equipment.
AFNR.HS.CR.6	
Identify and demonstrate leadership skills and traits in demand of leadership roles in the agriculture industry.	
AFNR.HS.CR.6.a	Create a self introduction including the name of the student and information about his or her personal values.
AFNR.HS.CR.6.b	Craft SMART goals to achieve by the end of a specific agricultural education course.
AFNR.HS.CR.6.c	Write a career objective.
AFNR.HS.CR.6.e	Generate a personal statement explaining how he or she hopes to serve the people around them in their community and society.

Careers and Literacy of Agriculture Middle School Course

Course Description

Agricultural knowledge enrichment and career exploration instruction is provided. Other instruction may include leadership, FFA and Supervised Agricultural Experiences (SAE).

Course Code: 018002

Program(s) of Study to which this course applies:

- All programs of study in the Agriculture, Food and Natural Resources career cluster

Course Framework	Crosswalk to Common Core Academic Standards	Crosswalk to Nebraska Academic Standards	Crosswalk to Nebraska Career Readiness Standards	Crosswalk Clarifications
Standard 1. Students will define the components of the agricultural industry.				
Benchmark 1.1 Define the agricultural industry through the Agriculture, Food, and Natural Resources career field. <u>Sample performance indicators:</u> • Develop a class definition of the Agriculture, Food, and Natural Resources career field. • Diagram Agriculture, Food, and Natural Resources career field, cluster, and pathways. • Complete Kuder® Career Search with Person Match. • Complete Kuder® Skills Assessment.	N/A	N/A	N/A	

Course Framework	Crosswalk to Common Core Academic Standards	Crosswalk to Nebraska Academic Standards	Crosswalk to Nebraska Career Readiness Standards	Crosswalk Clarifications
Benchmark 1.2 Describe the seven career pathways within the Agriculture, Food, and Natural Resources career field. <u>Sample performance indicators:</u> • Research Agriculture, Food, and Natural Resources pathways. • Identify careers that may be present in more than one pathway (Example: Plant scientist in both plant and animal systems). • Create multimedia presentations on each pathway to be shared with the rest of the class.	ELA.SL.6-8.4 ELA.WHST.6-8.2.b	LA.8.2.1.b LA.8.3.1.a SS.12.2.6.d	CR.2.B.1 CR.2.C.1 CR.10.A.1	When students *describe* information or ideas, they communicate their knowledge through either speaking or writing. To demonstrate full knowledge on the topic, students' presentations must include all the main ideas and relevant details on the subject (CC: ELA.WHST.6-8.2.b, ELA.SL.6-8.4; NE: CR.2.B.1, CR.2.C.1, LA.8 2.1.b, LA.8.3.1.a).
Benchmark 1.3 Correlate appropriate careers with each of the seven Agriculture, Food, and Natural Resources career pathways. <u>Sample performance indicators:</u> • List career titles affiliated with each career pathway. • Organize careers by educational requirements.	N/A	N/A	CR.10.A.1 CR.10.B.1	
Benchmark 1.4 Evaluate Agriculture, Food, and Natural Resources career trends. <u>Sample performance indicators:</u> • Research local, state, and national career opportunities within the Agriculture, Food, and Natural Resources career field. • Identify career growth areas in Agriculture, Food, and Natural Resources. • Identify atypical careers in Agriculture, Food, and Natural Resources.	N/A	N/A	CR.10.A.1 CR.10.B.1	

Course Framework	Crosswalk to Common Core Academic Standards	Crosswalk to Nebraska Academic Standards	Crosswalk to Nebraska Career Readiness Standards	Crosswalk Clarifications
Benchmark 1.5 Research a career within the selected pathway interest area, and summarize information in written text. Sample performance indicators: • Select an agricultural career from the Agriculture, Food, and Natural Resources pathways. • Research job tasks and conditions, interests, skills, and work values, education and experience, salary and outlook, and related occupations of the selected agricultural career.	ELA.WHST.6-8.7-9	LA.8.4.1.a-c LA.8.1.6.j	CR.5.B.1 CR.9.A.2 CR.10.A.1 CR.10.B.1	The depth of students' investigations, and thus the research standards that apply, will be determined by the nature of the task. (CC: ELA WHST.6-8.7-9; NE: CR.5.B.1, CR.9.A.2, LA.8.4.1, LA. 8.1.6).
Standard 2. Students will explore agricultural literacy concepts.				
Benchmark 2.1 Explore local, state, and national agricultural production opportunities. Sample performance indicators: • Develop a production map of local, state, and national agriculture. • Identify local agricultural producers. • Visit a local farm or production site. • Identify careers present within these production sites.	N/A	N/A	CR.10.B.1	
Benchmark 2.2 Illustrate the path that food takes from farm to table. Sample performance indicators: • Select an agricultural product produced in the local agricultural community. • Diagram the steps this product goes through from farm to table.	N/A	N/A	N/A	

Course Framework	Crosswalk to Common Core Academic Standards	Crosswalk to Nebraska Academic Standards	Crosswalk to Nebraska Career Readiness Standards	Crosswalk Clarifications
• Research historical advancements in production and processing of this product. • Create a farm to table presentation to be shared with elementary school students.				
Benchmark 2.3 Map the direct and indirect relationships of Agriculture, Food, and Natural Resources with careers. <u>Sample performance indicators:</u> • Identify all careers, agricultural and other, involved in bringing the agricultural product from farm to table. • Connect typically non-agricultural careers with the Agriculture, Food, and Natural Resources career field.	N/A	N/A	N/A	
Standard 3. Students will outline skills necessary to enter college and the workplace.				
Benchmark 3.1 Identify college and career ready skills. <u>Sample performance indicators:</u> • Develop class definitions of the college and career ready skills from the Nebraska Career Education model. • Create and perform skit, acting out a scenario using a particular college and career ready skill.	N/A	N/A	CR.1.B.1	
Benchmark 3.2 Develop educational pathway to reach career goal. <u>Sample performance indicators:</u> • Select cluster area of interest based on Kuder® survey results. • Select high school core classes to meet cluster objective. • Select elective high school classes to meet cluster objective.	N/A	N/A	CR.1.B.1 CR.10.A.1	

Course Framework	Crosswalk to Common Core Academic Standards	Crosswalk to Nebraska Academic Standards	Crosswalk to Nebraska Career Readiness Standards	Crosswalk Clarifications
• Review graduation requirements. • Research college entrance requirements. • Complete 6-year plan (4 years high school, 2 years post-secondary).				
Benchmark 3.3 Explore current job opportunities in career of choice. <u>Sample performance indicators:</u> • Research current employment options for a selected career. • Review secondary and post-secondary educational requirements and training necessary for a selected career. • Evaluate job prospects through job postings (newspapers, websites, etc.). • Attend a job fair.	N/A	N/A	CR.10.A.1	
Benchmark 3.4 Develop materials to apply for a sample job. <u>Sample performance indicators:</u> • Create a resume. • Create a cover letter. • Develop online portfolio through Nebraska Career Connections. • Develop possible interview questions and responses. • Participate in mock interviews.	ELA.WHST.6-8.4	LA.8.2.2	CR.10.C.1–2	
Standard 4. Students will explore leadership and entrepreneurship opportunities within Agriculture, Food, and Natural Resources.				
Benchmark 4.1 Illustrate the relationship between classroom instruction, leadership opportunities, and entrepreneurial skills.	N/A	N/A	N/A	

Course Framework	Crosswalk to Common Core Academic Standards	Crosswalk to Nebraska Academic Standards	Crosswalk to Nebraska Career Readiness Standards	Crosswalk Clarifications
Sample performance indicators: • Diagram the three-circle agricultural education Venn diagram. • Explain the relationship between the overlapped areas of the Venn diagram, showing that classroom, SAE, and FFA are interconnected. • Illustrate an unbalanced diagram, with strong and weak areas of an agricultural education program.				
Benchmark 4.2 Identify Agriculture, Food, and Natural Resources courses offered at the middle and high school levels. Sample performance indicators: • Read agricultural education course titles and descriptions. • Determine courses of interest that may be beneficial for a particular Agriculture, Food, and Natural Resources career pathway.	N/A	N/A	CR.10.A.3 CR.10.D.2	
Benchmark 4.3 Explore opportunities within the National FFA Organization. Sample performance indicators: • Explore the National FFA Organization website to research the organization and opportunities at the local, state, national, and international levels. • Attend a local FFA chapter meeting. • Interview chapter FFA officer about their experiences in the National FFA Organization. • Participate in local and district FFA speaking competitions. • Assist with local FFA chapter activities.	N/A	N/A	CR.10.A.1	

Course Framework	Crosswalk to Common Core Academic Standards	Crosswalk to Nebraska Academic Standards	Crosswalk to Nebraska Career Readiness Standards	Crosswalk Clarifications
Benchmark 4.4 Explore career opportunities within Supervised Agricultural Experience programs. <u>Sample performance indicators:</u> • Develop classroom definition of Supervised Agricultural Experience (SAE). • Describe the three main SAE types: Entrepreneurship, Placement, and Agriscience/Exploratory. • Brainstorm three different examples for each SAE type. • Create electronic brochure advertising an SAE idea. • List career opportunities present within a selected Supervised Agricultural Experience program.	N/A	N/A	CR.10.A.1	
Benchmark 4.5 Explore other leadership opportunities present within Agriculture, Food, and Natural Resources. <u>Sample performance indicators:</u> • List and research different professional organizations within a career pathway. • Write letter to professional organizations requesting additional information. • Invite professional organization representative to classroom to speak on current agricultural issues. • "Like" or "Follow" professional organizations on Facebook or Twitter.			CR.10.A.1	
Standard 5. Students will analyze current issues in Agriculture, Food, and Natural Resources.				
Benchmark 5.1 Identify, summarize, and analyze current developments in selected career pathway within the Agriculture, Food, and Natural Resources career field.	ELA.WHST.6-8.2.b ELA.SL.6-8.4	LA.8.2.1.b LA.8.3.1.a LA.8.1.6.d	CR.2.B.1 CR.2.C.1 CR.8.C.2	When students *summarize* information or ideas, they communicate their knowledge through either speaking or

Course Framework	Crosswalk to Common Core Academic Standards	Crosswalk to Nebraska Academic Standards	Crosswalk to Nebraska Career Readiness Standards	Crosswalk Clarifications
Sample performance indicators: • Read articles from newspapers, online publications, and other current event magazines to locate current issues in Agriculture, Food, and Natural Resources pathways. • Design multimedia project summarizing the agricultural issue and its corresponding pathway.				writing. To demonstrate full knowledge on the topic, students' presentations must include all the main ideas and relevant details on the subject. (CC: ELA.WHST.6-8.2.b; ELA.SL.6-8.4; NE: CR.2.B.1, CR.2.C.1, LA.12 2.1.b, LA. 12.3.1.a).
Benchmark 5.2 Analyze the credibility of agricultural issues as presented in the media. Sample performance indicators: • Identify industry partners (Nebraska Cattlemen, Nebraska Pork Producers, etc.) that provide viable information pertaining to agricultural issues. • Identify other sources that may provide a biased viewpoint on agricultural issues. • Compare and contrast biased and viable information sources.	ELA.RST.6-5.7	LA.8.4.1.a	CR.5.A.1	
Benchmark 5.3 Learn and practice advocacy efforts in the Agriculture, Food, and Natural Resources career field. Sample performance indicators: • Debate agricultural issues. • Correspond with lawmakers pertaining to current bills and legislation related to Agriculture, Food, and Natural Resources. • Visit the State Capitol during the Unicameral session to observe floor debate and the legislative process. • Invite an agricultural advocate (Nebraska Farm Bureau, Corn Board, state senator, etc.) to speak to the class on agricultural lobbying and policy-making.	N/A	N/A	CR.3.C.1	

Course Framework	Crosswalk to Common Core Academic Standards	Crosswalk to Nebraska Academic Standards	Crosswalk to Nebraska Career Readiness Standards	Crosswalk Clarifications
Standard 6. Students will create risk management strategies as related to a particular pathway and career within the Agriculture, Food, and Natural Resources career field.				
Benchmark 6.1 Define risk management. Sample performance indicators: • Develop a class definition of risk management. • Identify risks in the classroom and laboratory through scavenger hunt. • Summarize current event related to a recent safety accident and identify how the accident can be prevented.	ELA.RST.6-8.4	LA.8.1.5.a	CR.3.B.4	
Benchmark 6.2 Research safety data as it pertains to the Agriculture, Food, and Natural Resources career field. Sample performance indicators: • Define OSHA and the OSHA-recommended workplace procedures. • Research and report OSHA workplace injury, illness, and fatalities statistics. • Develop multimedia presentation/safety poster on the risks present within the selected pathway in Agriculture, Food, and Natural Resources. • Acquire OSHA certification as a middle/high school student.	ELA.WHST.6-8.7-9	LA.8.4.1.a-c LA.8.1.6.j	CR.5.B.1 CR.9.A.2 CR.3.B.4	The depth of students' investigations, and thus the research standards that apply, will be determined by the nature of the task. (CC: ELA WHST.6-8.7-9; NE: CR.5.B.1, CR.9.A.2, LA.8.4.1, LA. 8.1.6).
Benchmark 6.3 Develop a safety awareness plan for the working environment pertaining to a career of choice. Sample performance indicators: • Describe safety role of teachers and students within the classroom and laboratory.	N/A	N/A	CR.3.B.4	

Course Framework	Crosswalk to Common Core Academic Standards	Crosswalk to Nebraska Academic Standards	Crosswalk to Nebraska Career Readiness Standards	Crosswalk Clarifications
• Report risk management strategies, pertaining to a career field of choice, as part of the National Risk Management Essay Contest. • Demonstrate safety procedures to elementary students in a "Safety Fair" environment.				

Reference Standards Sources

- KS = Career Clusters Knowledge and Skills Statements. Revised 2008. National Career and Technical Education Foundation, Silver Spring, MD. www.careerclusters.org.
- (additional reference standards listed)

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Other Information

Suggestions for innovative teaching and learning strategies:	• Elementary Career Mentoring Projects • Career Discussion Panels • Industry Guest Speakers • Industry Tours
Related assessments:	• Kuder® Career Search with Person Match • OSHA Certification Test • Kuder® Skills Assessment
Extended learning opportunities:	• SAE Development • FFA Quizbowl Competition • Local and District FFA Speaking Competitions • FFA Community Service Opportunities

NEBRASKA PHYSICAL EDUCATION STANDARDS

Adopted by the Nebraska State Board of Education 10/7/2016

Nebraska Physical Education Standards

Kindergarten

PE.K.1 Physical Activity Skills and Movement Patterns

PE.K.1.1 Performs locomotor skills in a variety of environments.

PE.K.1.1.a Hops, gallops, jogs, runs, walks, slides, skips, and leaps while maintaining balance. (E)

PE.K.1.1.b Jumps vertically and lands with balance. (E)

PE.K.1.1.c Jumps horizontally and lands with balance. (E)

PE.K.1.1.d Exhibits a variety of locomotor skills in rhythmic activities led by teacher. (E)

PE.K.1.2 Performs non-locomotor skills in a variety of environments.

PE.K.1.2.a Maintains momentary stillness on different bases of support. (E)

PE.K.1.2.b Forms wide, narrow, curled, and twisted body shapes. (E)

PE.K.1.2.c Rolls sideways in a narrow body shape.(E)

PE.K.1.2.d Curls and stretches the body and/or parts of the body. (E)

PE.K.1.3 Performs manipulative skills in a variety of environments.

PE.K.1.3.a Throws underhand with opposite foot forward. (E)

PE.K.1.3.b Drops a ball and catches it before it bounces twice. (E)

PE.K.1.3.c Dribbles a ball with one hand, attempting the second contact. (E)

PE.K.1.3.d Pushes a ball using the inside of the foot, sending it forward. (E)

PE.K.1.3.e Kicks a stationary ball from a stationary position, demonstrating 2 of 5 critical elements. (E)

PE.K.1.3.f Volleys a lightweight object underhand, sending it upward. (E)

PE.K.1.3.g Strikes a lightweight object with a short-handled implement. (E)

PE.K.1.3.h Completes a single jump with self-turned rope. (E)

PE.K.1.3.i Jumps a long rope with teacher-assisted turning. (E)

*PE.K.2 Movement Concepts, Strategies, an*d Tactics

PE.K.2.1 Demonstrates knowledge of movement concepts in a variety of environments.

PE.K.2.1.a Differentiates between movement in self space and general space. (E)

PE.K.2.1.b Moves to a rhythm in self space. (E)

PE.K.2.1.c Travels in straight, curved, and zig zag pathways. (E)

PE.K.2.1.d Travels at different speeds in general space. (E)

PE.K.3 Health-Related Physical Activity and Fitness

PE.K.3.1 Demonstrates the knowledge to achieve and maintain a health-enhancing level of physical activity.

PE.K.3.1.a Identifies active play opportunities outside of physical education class. (E)

PE.K.3.2 Engages in physical activity.

PE.K.3.2.a Participates in physical activity in physical education class. (E)

PE.K.3.3 Exhibits the knowledge to achieve and maintain a health-enhancing level of physical fitness.

PE.K.3.3.a Recognizes that moving fast increases heart rate and breathing. (E)

PE.K.3.4 Communicates the importance of health-related fitness components and nutrition for physical activity.

PE.K.3.4.a Recognizes that food provides energy for physical activity. (E)

PE.K.4 Responsible Behavior

PE.K.4.1 Exhibits personal responsibility in physical activity settings.

PE.K.4.1.a Follows directions in group settings (e.g., safe behaviors, following rules, taking turns). (E)

PE.K.4.1.b Acknowledges responsibility for behavior when prompted. (E)

PE.K.4.2 Accepts and responds to specific corrective feedback from teacher and peers.

PE.K.4.2.a Follows instructions when prompted. (E)

PE.K.4.3 Exhibits responsible social behavior when working with others.

PE.K.4.3.a Shares equipment and space with others. (E)

PE.K.4.4 Follows rules and demonstrates proper etiquette.

PE.K.4.4.a Recognizes protocol for class activities. (E)

PE.K.4.5 Participates safely in physical activities.

PE.K.4.5.a Follows teacher directions for safe participation and proper use of equipment with minimal reminders. (E)

PE.K.5 Physical Activity Benefits

PE.K.5.1 Recognizes the benefits of physical activity for health.

PE.K.5.1.a Recognizes that physical activity is important for good health. (E)

PE.K.5.2 Recognizes the benefits of physical activity for challenge.

PE.K.5.2.a Acknowledges that some physical activities are difficult/challenging. (E)

PE.K.5.3 Recognizes the benefits of physical activity for self-expression and enjoyment.

PE.K.5.3.a Identifies physical activities that are enjoyable. (E)

PE.K.5.3.b Discusses the enjoyment of playing with friends. (E)

PE.1.1 Physical Activity Skills and Movement Patterns

PE.1.1.1 Performs locomotor skills in a variety of environments.

PE.1.1.1.a Hops, gallops, side slides, and walks in a mature pattern. (M)

PE.1.1.1.b Exhibits 2 of 5 critical elements for jumping horizontally using two-foot take-off and landing. (E)

PE.1.1.1.c Exhibits 2 of 5 critical elements for jumping vertically using two-foot take-off and landing. (E)

PE.1.1.1.d Demonstrates a variety of locomotor and non-locomotor skills in teacher-designed rhythmic activities. (E)

PE.1.1.2 Performs non-locomotor skills in a variety of environments.

PE.1.1.2.a Maintains stillness on different bases of support with different body shapes. (E)

PE.1.1.2.b Transfers weight from one body part to another in self-space. (E)

PE.1.1.2.c Rolls with either a narrow or curled body shape. (E)

PE.1.1.2.d Curls, stretches, twists, and bends the body and/or parts of the body. (E)

PE.1.1.3 Performs manipulative skills in a variety of environments.

PE.1.1.3.a Throws underhand, demonstrating 2 of 5 critical elements. (E)

PE.1.1.3.b Throws overhand with opposite foot forward. (E)

PE.1.1.3.c Catches various sizes of objects self-tossed or tossed by an accurate thrower. (E)

PE.1.1.3.d Dribbles continuously in self-space using the preferred hand. (E)

PE.1.1.3.e Pushes or dribbles a ball using the inside of the foot while walking in general space. (E)

PE.1.1.3.f Approaches a stationary ball and kicks it forward, demonstrating 2 of 5 critical elements. (E)

PE.1.1.3.g Volleys an object underhand with an open palm, sending it upward. (E)

PE.1.1.3.h Volleys a lightweight object overhead sending it upward over the head. (E)

PE.1.1.3.i Strikes an object with a short-handled implement, sending it upward. (E)

PE.1.1.3.j Strikes a ball with a bat off a tee or cone. (E)

PE.1.1.3.k Jumps consecutively forward and backward using a self-turned rope with a mature pattern. (E)

PE.1.1.3.l Jumps a long rope 3 times consecutively with teacher-assisted turning. (E)

PE.1.2 Movement Concepts, Strategies, and Tactics

PE.1.2.1 Demonstrates knowledge of movement concepts in a variety of environments.

PE.1.2.1.a Moves in self-space and general space in response to a designated rhythm. (E)

PE.1.2.1.b Travels at low, middle, and high levels. (E)

PE.1.2.1.c Travels over, under, around, and through a variety of objects. (E)

PE.1.2.1.d Differentiates between fast and slow speeds. (E)

PE.1.2.1.e Differentiates between strong and light forces. (E)

PE.1.2.1.f Moves in various directions (forward, backward, sideways) while traveling in general space. (E)

PE.1.3 Health-Related Physical Activity and Fitness

PE.1.3.1 Demonstrates the knowledge to achieve and maintain a health-enhancing level of physical activity.

PE.1.3.1.a Discusses the benefits of being physically active in structured (e.g., physical education class) or unstructured (e.g., recess) situations. (E)

PE.1.3.2 Engages in physical activity.

PE.1.3.2.a Engages in physical activity in physical education class. (E)

PE.1.3.3 Exhibits the knowledge to achieve and maintain a health-enhancing level of physical fitness.

PE.1.3.3.a Identifies the heart as a muscle that grows stronger with exercise, active play, and physical activity. (E)

PE.1.3.4 Communicates the importance of health-related fitness components and nutrition for physical activity.

PE.1.3.4.a Differentiates between healthy and unhealthy foods. (E)

PE.1.4 Responsible Behavior

PE.1.4.1 Exhibits personal responsibility in physical activity settings.

PE.1.4.1.a Uses equipment and space appropriately. (E)

PE.1.4.1.b Follows the rules and procedures of the learning environment. (E)

PE.1.4.2 Accepts and responds to specific corrective feedback from teacher and peers.

PE.1.4.2.a Responds appropriately to positive feedback from the teacher. (M)

PE.1 4.3 Exhibits responsible social behavior when working with others.

PE.1.4.3.a Works with others in a variety of class environments (e.g., small and large groups). (E)

PE.1.4.4 Follows rules and demonstrates proper etiquette.

PE.1.4.4.a Displays the established protocol for class activities. (E)

PE.1.4.5 Participates safely in physical activities.

PE.1.4.5.a Follows teacher directions for safe participation and proper use of equipment without reminders. (E)

PE.1.5 Physical Activity Benefits

PE.1.5.1 Recognizes the benefits of physical activity for health.

PE.1.5.1.a Identifies physical activity as a component of good health. (E)

PE.1.5.2 Recognizes the benefits of physical activity for challenge.

PE.1.5.2.a Accepts that challenge in physical activities can lead to success. (E)

PE.1.5.3 Recognizes the benefits of physical activity for self-expression and enjoyment.

PE.1.5.3.a Describes positive feelings that result from participating in physical activities. (E)

PE.1.5.3.b Discusses personal reasons for enjoying physical activities. (E)

PE.2.1 Physical Activity Skills and Movement Patterns

PE.2.1.1 Performs locomotor skills in a variety of environments.

PE.2.1.1.a Applies hopping, galloping, and side sliding in a variety of activity environments. (A)

PE.2.1.1.b Skips, runs, and jogs in mature patterns. (M)

PE.2.1.1.c Exhibits 4 of 5 critical elements for jumping horizontally using a variety of two-foot and one-foot take-offs and landings. (E)

PE.2.1.1.d Exhibits 4 of 5 critical elements for jumping vertically using a variety of two-foot and one-foot take-offs and landings. (E)

PE.2.1.1.e Demonstrates locomotor and non-locomotor skills in teacher-designed or student-designed rhythmic activities. (E)

PE.2.1.2 Performs non-locomotor skills in a variety of environments.

PE.2.1.2.a Balances on different bases of support, combining levels and shapes. (E)

PE.2.1.2.b Transfers weight to different body parts/bases of support for balance and/or for travel. (E)

PE.2.1.2.c Rolls in different directions with either a narrow or curled body shape. (E)

PE.2.1.2.d Differentiates among curling, stretching, twisting, and bending. (M)

PE.2.1.2.e Combines balances and weight transfers into a 3-part sequence. (E)

PE.2.1.3 Performs manipulative skills in a variety of environments.

PE.2.1.3.a Throws underhand using a mature pattern. (M)

PE.2.1.3.b Throws overhand demonstrating 2 of 5 critical elements. (E)

PE.2.1.3.c Passes with hands to a stationary partner. (E)

PE.2.1.3.d Catches a self-tossed or well-thrown large ball with hands using 2 of 5 critical elements. (E)

PE.2.1.3.e Dribbles continuously in self space with preferred hand, demonstrating 3 of 5 critical elements. (M)

PE.2.1.3.f Dribbles using preferred hand while walking in general space. (E)

PE.2.1.3.g Dribbles with feet in general space with control of ball and body. (E)

PE.2.1.3.h Uses a continuous running approach and kicks a moving ball, demonstrating 3 of 5 critical elements. (E)

PE.2.1.3.i Volleys an object underhand sending it upward with consecutive hits using 3 of 5 critical elements. (E)

PE.2.1.3.j Volleys a lightweight object overhead sending it upward with consecutive hits. (E)

PE.2.1.3.k Strikes an object with a short-handled implement upward, using consecutive hits. (E)

PE.2.1.3.l Strikes a ball with a bat off a tee or cone using correct grip and proper body orientation. (E)

PE.2.1.3.m Jumps consecutively forward and backward using a self-turned rope with a mature pattern. (M)

PE.2.1.3.n Jumps a long rope 5 times consecutively with student turners. (E)

PE.2.2 Movement Concepts, Strategies, and Tactics

PE.2.2.1 Demonstrates knowledge of movement concepts in a variety of environments.

PE.2.2.1.a Combines locomotor skills in general space to a rhythm. (E)

PE.2.2.1.b Combines shapes (e.g., narrow, wide, twisted, curved, asymmetrical and symmetrical) levels and pathways into simple travel, rhythmic, and tumbling sequences. (E)

PE.2.2.1.c Varies speed and force with gradual increases and decreases. (E)

PE.2.3 Health-Related Physical Activity and Fitness

PE.2.3.1 Demonstrates the knowledge to achieve and maintain a health-enhancing level of physical activity.

PE.2.3.1.a Describes different opportunities outside of physical education class (e.g., recess, before and after school, at home, in the community, with friends, with family) to use large-motor and/or manipulative physical activities. (E)

PE.2.3.2 Engages in physical activity.

PE.2.3.2.a Engages in physical activity in physical education class in response to instruction and practice. (E)

PE.2.3.3 Exhibits the knowledge to achieve and maintain a health-enhancing level of physical fitness.

PE.2.3.3.a Recognizes the use of own body weight as resistance (e.g., plank, animal walks) for developing strength. (E)

PE.2.3.3.b States the purpose of a warm-up and cool-down led by the teacher. (E)

PE.2.3.4 Communicates the importance of health-related fitness components and nutrition for physical activity.

PE.2.3.4.a Recognizes the impact of nutrition on physical activity. (E)

PE.2.4 Responsible Behavior

PE.2.4.1 Exhibits personal responsibility in physical activity settings.

PE.2.4.1.a Practices skills with minimal teacher prompting. (E)

PE.2.4.1.b Accepts responsibility for class expectations with behavior and performance. (E)

PE.2.4.2 Accepts and responds to specific corrective feedback from teacher and peers.

PE.2.4.2.a Accepts positive corrective feedback from the teacher. (M)

PE.2.4.3 Exhibits responsible social behavior when working with others.

PE.2.4.3.a Works with a partner with minimal teacher prompting. (E)

PE.2.4.4 Follows rules and demonstrates proper etiquette.

PE.2.4.4.a Recognizes the importance of rules and etiquette in teacher-designed physical activities. (E)

PE.2.4.5 Participates safely in physical activities.

PE.2.4.5.a Works independently and safely with or without equipment. (E)

PE.2.5 Physical Activity Benefits

PE.2.5.1 Recognizes the benefits of physical activity for health.

PE.2.5.1.a Recognizes the relationship between physical activity and good health. (E)

PE.2.5.2 Recognizes the benefits of physical activity for challenge.

PE.5.4.2.a Compares different physical activities that brings challenge and promotes confidence. (E)

PE.2.5.3 Recognizes the benefits of physical activity for self-expression and enjoyment.

PE.2.5.3.a Identifies physical activities that provide self-expression. (E)

PE.3.1 Physical Activity Skills and Movement Patterns

PE.3.1.1 Performs locomotor skills in a variety of environments.

PE.3.1.1.a Leaps using a mature pattern. (M)

PE.3.1.1.b Differentiates between sprinting and running. (A)

PE.3.1.1.c Jumps horizontally and lands from a stationary position using a mature pattern. (M)

PE.3.1.1.d Jumps vertically and lands from a stationary position using a mature pattern. (M)

PE.3.1.1.e Performs teacher-selected and developmentally appropriate dance steps. (M)

PE.3.1.1.f Performs a sequence of locomotor skills smoothly. (E)

PE.3.1.2 Performs non-locomotor skills in a variety of environments.

PE.3.1.2.a Balances on different bases of support, combining levels and shapes. (M)

PE.3.1.2.b Transfers weight from feet to hands for momentary weight support. (M)

PE.3.1.2.c Rolls in a variety of shapes, levels, and directions. (M)

PE.3.1.2.d Transitions from one balance to another with curling, stretching, twisting, and bending actions. (M)

PE.3.1.2.e Combines locomotor and non-locomotor skills and movement concepts (e.g., levels, shapes, extensions, pathways, force, time, flow) to create and perform a dance individually. (E)

PE.3.1.2.f Combines balance and weight transfers with movement concepts to create and perform a dance. (E)

PE.3.1.3 Performs manipulative skills in a variety of environments.

PE.3.1.3.a Throws underhand to a partner or target using a mature pattern. (M)

PE.3.1.3.b Demonstrates 3 of 5 critical elements of an overhand throw in a non-dynamic environment for distance and/or force. (E)

PE.3.1.3.c Passes to a stationary partner, at various distances. (E)

PE.3.1.3.d Catches a tossed ball from a partner demonstrating 4 of 5 critical elements. (E)

PE.3.1.3.e Dribbles, with preferred hand, and travels in general space, at slow to moderate jogging speed, with control of ball and body. (E)

PE.3.1.3.f Dribbles with feet in general space at slow to moderate jogging speed with control of ball and body. (E)

PE.3.1.3.g Receives a ball from a stationary partner, cushioning on reception before returning the pass. (E)

PE.3.1.3.h Performs a continuous running approach and kicks a ball along the ground demonstrating 4 of 5 critical elements. (E)

PE.3.1.3.i Performs a continuous running approach and kicks a ball in the air, demonstrating 4 of 5 critical elements. (E)

PE.3.1.3.j Kicks a stationary ball for accuracy using a continuous running approach. (E)

PE.3.1.3.k Punts a ball demonstrating 4 of 5 critical elements. (E)

PE.3.1.3.l Volleys an object with an underhand or a sidearm striking pattern, sending it forward over a net, to the wall, or over a line to a partner, demonstrating 4 of 5 critical elements. (E)

PE.3.1.3.m Volleys a lightweight object with a two-hand overhead pattern, sending it upward, demonstrating 3 of 5 critical elements. (E)

PE.3.1.3.n Strikes an object with a short-handled implement (e.g., racquet, paddle) sending it forward over a low net or to a wall, demonstrating 3 of 5 critical elements. (E)

PE.3.1.3.o Strikes an object with a long-handled implement, sending it forward using proper grip (e.g., hockey stick, bat, golf club). (E)

PE.3.1.3.p Strikes a pitched ball with a bat using 3 of 5 critical elements. (E)

PE.3.1.3.q Combines traveling with dribbling, throwing, catching, and striking in teacher-designed practice tasks. (E)

PE.3.1.3.r Performs a variety of skills for long and short ropes. (E)

PE.3.1.3.s Moves in and out of a turning long rope. (M)

PE.3.2 Movement Concepts, Strategies, and Tactics

PE.3.2.1 Demonstrates knowledge of movement concepts in a variety of environments.

PE.3.2.1.a Recognizes the concept of open space in a movement context. (E)

PE.3.2.1.b Demonstrates pathways (e.g., straight, curved, zigzag), shapes, and levels, using locomotor skills in a variety of practice tasks. (E)

PE.3.2.1.c Combines speed, direction, and force with skills. (M)

PE.3.2.1.d Employs the concept of alignment in tumbling and dance. (E)

PE.3.2.1.e Employs the concept of muscular tension with balance in tumbling and dance. (E)

PE.3.2.2 Applies knowledge of strategies and tactics in a variety of environments.

PE.3.2.2.a Performs simple strategies and tactics in chasing and fleeing activities. (E)

PE.3.2.2.b Charts participation in physical activities outside physical education class. (E)

PE. 3.3 Health-Related Physical Activity and Fitness

PE.3.3.1 Demonstrates the knowledge to achieve and maintain a health-enhancing level of physical activity.

PE.3.3.1.a Identifies benefits of physical activity to enhance health. (E)

PE.3.3.2 Engages in physical activity.

PE.3.3.2.a Engages in physical activity in physical education class with teacher prompting. (E)

PE.3.3.3 Exhibits the knowledge to achieve and maintain a health-enhancing level of physical fitness.

PE.3.3.3.a Describes the concept of fitness and provides examples of physical activity to enhance fitness. (E)

PE.3.3.3.b Recognizes the importance of warm-up and cool-down for vigorous physical activity. (E)

PE.3.3.4 Communicates the importance of health-related fitness components and nutrition for physical activity.

PE.3.3.4.a Demonstrates, with teacher direction, the health-related fitness components (e.g., push-up, curl-up, trunk lift, sit and reach). (E)

PE.3.3.4.b Identifies foods that are beneficial before and after physical activity. (E)

PE.3.4 Responsible Behavior

PE.3.4.1 Exhibits personal responsibility in physical activity settings.

PE.3.4.1.a Exhibits personal responsibility in teacher-directed activities. (M)

PE.3.4.1.b Works independently for extended periods of time. (M)

PE.3.4.2 Accepts and responds to specific corrective feedback from teacher and peers.

PE.3.4.2.a Accepts and implements positive corrective feedback from the teacher. (M)

PE.3.4.3 Exhibits responsible social behavior when working with others.

PE.3.4.3.a Works cooperatively with others. (M)

PE.3.4.3.b Praises others for their success in movement performance. (M)

PE.3.4.4 Follows rules and demonstrates proper etiquette.

PE.3.4.4.a Practices adherence to rules and etiquette in physical activity with peers. (E)

PE.3.4.5 Participates safely in physical activities.

PE.3.4.5.a Works independently and safely in physical activity settings. (M)

PE.3.5 Physical Activity Benefits

PE.3.5.1 Recognizes the benefits of physical activity for health.

PE.3.5.1.a Discusses the relationship between physical activity and good health. (E)

PE.3.5.2 Recognizes the benefits of physical activity for challenge.

PE.3.5.2.a Discusses the challenges of learning a new physical activity. (E)

PE.3.5.3 Recognizes the benefits of physical activity for self-expression and enjoyment.

PE.3.5.3.a Reflects on the reasons for enjoying selected physical activities. (M)

PE.3.5.4 Recognizes the benefits of physical activity for social interaction.

PE.3.5.4.a Describes the positive social interactions when engaged with others in physical activity. (E)

PE.4.1 Physical Activity Skills and Movement Patterns

PE.4.1.1 Performs locomotor skills in a variety of environments.

PE.4.1.1.a Performs various locomotor skills in different environments including rhythmic activities and tumbling. (A)

PE.4.1.1.b Demonstrates the mature pattern for running distance. (A)

PE.4.1.1.c Jumps horizontally and lands using a mature pattern specific to tumbling. (A)

PE.4.1.1.d Jumps vertically and lands using a mature pattern specific to tumbling. (A)

PE.4.1.1.e Combines locomotor movement patterns and dance steps to create and perform an original dance. (M)

PE.4.1.1.f Demonstrates the combination of locomotor skills with manipulative skills (e.g., dribbling, throwing, catching, and striking). (M)

PE.4.1.2 Performs non-locomotor skills in a variety of environments.

PE.4.1.2.a Balances in an inverted position with stillness and supportive base. (M)

PE.4.1.2.b Transfers weight from feet to hands, varying speed and using large extensions (e.g., mule kick, handstand, cartwheel). (M)

PE.4.1.2.c Applies rolling in a tumbling sequence. (A)

PE.4.1.2.d Transitions from one balance to another with curling, stretching, twisting, and bending actions in a tumbling sequence. (M)

PE.4.1.2.e Combines locomotor and non-locomotor skills and movement concepts (e.g., levels, shapes, extensions, pathways, force, time, flow) to create and perform a dance with a partner. (E)

PE.4.1.2.f Combines traveling with balance and weight transfers to create a tumbling sequence. (E)

PE.4.1.3 Performs manipulative skills in a variety of environments.

PE.4.1.3.a Applies underhand throwing skills with different sizes and types of objects. (A)

PE.4.1.3.b Throws overhand using a mature pattern in a non-dynamic environment. (M)

PE.4.1.3.c Throws to a partner or target with accuracy at a designated distance. (E)

PE.4.1.3.d Passes to a moving partner, at various distances. (M)

PE.4.1.3.e Catches a thrown ball at various levels (e.g., overhand and underhand) using a mature pattern in a non-dynamic environment. (M)

PE.4.1.3.f Dribbles, with both the preferred and the non-preferred hands, in self-space using a mature pattern. (M)

PE.4.1.3.g Dribbles with feet in general space, with control of ball and body, while increasing and decreasing speed. (E)

PE.4.1.3 h Passes and receives a ball with various parts of the feet (e.g., inside, outside, top) with a stationary partner, cushioning on reception before returning the pass. (E)

PE.4.1.3.i Dribbles with hands or feet in combination with other skills (e.g., passing, receiving, shooting). (E)

PE.4.1.3.j Kicks a ball along the ground using a mature pattern. (M)

PE.4.1.3.k Kicks a ball in the air using a mature pattern. (M)

PE.4.1.3.l Punts a ball using a mature pattern. (M)

PE.4.1.3.m Volleys underhand using a mature pattern in a dynamic environment (e.g., 2-square, 4-square). (M)

PE.4.1.3.n Volleys a lightweight ball with a two-hand overhead pattern, sending it upward, demonstrating 4 of 5 critical elements. (E)

PE.4.1.3.o Strikes an object with a short-handled implement (e.g., racquet, paddle) over a net or against a wall using a mature pattern. (M)

PE.4.1.3.p Strikes an object with a short-handled implement, alternating hits with a partner over a low net or against a wall. (M)

PE.4.1.3.q Strikes an object with a long-handled implement (e.g., hockey stick, bat, golf club), demonstrating 3 of 5 critical elements. (E)

PE.4.1.3.r Strikes a pitched ball with a bat using 4 of 5 critical elements. (E)

PE.4.1.3.s Combines traveling with dribbling, throwing, catching, and striking in teacher- and/or student-designed practice tasks. (E)

PE.4.1.3.t Creates a jump rope routine with either a short or long rope. (A)

PE.4.2 Movement Concepts, Strategies, and Tactics

PE.4.2.1 Demonstrates knowledge of movement concepts in a variety of environments.

PE.4.2.1.a Demonstrates the concept of open space with combination skills involving traveling within boundaries while changing speeds (e.g., dribbling and traveling). (M)

PE.4.2.1.b Combines movement concepts with skills in small-sided practice tasks, tumbling, and dance environments. (M)

PE.4.2.1.c Applies speed and force with pacing when running. (A)

PE.4.2.1.d Applies direction and force when striking an object with a short-handled implement, sending it to a designated target. (M)

PE.4.2.1.e Applies the concept of alignment in teacher-designed tumbling and dance sequences. (M)

PE.4.2.1.f Applies the concept of muscular tension with balance in teacher-designed tumbling and dance. (M)

PE.4.2.2 Applies knowledge of strategies and tactics in a variety of environments.

PE.4.2.2.a Applies simple offensive and defensive strategies in chasing and fleeing activities. (M)

PE.4.2.2 b Recognizes the types of kicks needed for different small-sided game situations and activities. (M)

PE.4.3 Health-Related Physical Activity and Fitness

PE.4.3.1 Demonstrates the knowledge to achieve and maintain a health-enhancing level of physical activity.

PE.4.3.1.a Analyzes opportunities for participating in physical activity outside physical education class. (M)

PE.4.3.2 Engages in physical activity.

PE.4.3.2.a Engages in physical activity in physical education class without teacher prompting. (M)

PE.4.3.3 Exhibits the knowledge to achieve and maintain a health-enhancing level of physical fitness.

PE.4.3.3.a Identifies the components of health-related fitness. (E)

PE.4.3.3.b Demonstrates warm-up and cool-down for cardio-respiratory fitness self-evaluation. (M)

PE.4.3.4 Communicates the importance of health-related fitness components and nutrition for physical activity.

PE.4.3.4.a Completes health-related fitness assessment (e.g., pre and post). (M)

PE.4.3.4.b Utilizes assessment results with teacher assistance to identify components needing maintenance and/or remediation. (E)

PE.4.3.4. c Identifies strategies for progress in remediation areas with teacher assistance. (M)

PE.4.3.4.d Discusses the importance of hydration and hydration choices for physical activities. (E)

PE.4.4 Responsible Behavior

PE.4.4.1 Exhibits personal responsibility in physical activity settings.

PE.4.4.1.a Exhibits responsible behavior in independent group situations. (M)

PE.4.4.1.b Reflects on personal and social behavior in physical activity settings. (M)

PE.4.4.2 Accepts and responds to specific corrective feedback from teacher and peers.

PE.4.4.2.a Listens respectfully to specific corrective feedback from peers and adults. (M)

PE.4.4.2.b Gives positive corrective feedback respectfully to peers when prompted. (E)

PE.4.4.3 Exhibits responsible social behavior when working with others.

PE.4.4.3.a Praises the movement performance of others with varying skill abilities. (M)

PE.4.4.3.b Accepts players of varying skill levels into the physical activity. (M)

PE.4.4.4 Follows rules and demonstrates proper etiquette.

PE.4.4.4.a Exhibits etiquette and adherence to rules in a variety of physical activities. (E)

PE.4.4.5 Participates safely in physical activities.

PE.4.4.5.a Works safely with peers and equipment in physical activity settings. (M)

PE.4.5 Physical Activity Benefits

PE.4.5.1 Recognizes the benefits of physical activity for health.

PE.4.5.1.a Investigates the health benefits of participation in physical activity. (M)

PE.4.5.2 Recognizes the benefits of physical activity for challenge.

PE.4.5.2.a Rates the satisfaction of participating in challenging and mastered physical activities. (M)

PE.4.5.3 Recognizes the benefits of physical activity for self-expression and enjoyment.

PE.4.5.3.a Ranks the enjoyment of participating in different physical activities. (M)

PE.4.5.4 Recognizes the benefits of physical activity for social interaction.

PE.4.5.4.a Describes and compares the positive social interactions when engaged in partner, small group, and large group physical activities. (M)

PE.5.1 Physical Activity Skills and Movement Patterns

PE.5.1.1 Performs locomotor skills in a variety of environments.

PE.5.1.1.a Combines locomotor and manipulative skills in a variety of small-sided game environments (A)

PE.5.1.1.b Paces at a variety of running distances. (A)

PE.5.1.1.c Jumps horizontally and lands in combination with other movements. (A)

PE.5.1.1.d Jumps vertically and lands in combination with other movements. (A)

PE.5.1.1.e Combines locomotor skills in cultural and/or creative dance (e.g., self and group) with correct rhythm and pattern. (A)

PE.5.1.1.f Applies the combination of locomotor and manipulative skills in small-sided practice tasks. (A)

PE.5.1.2 Performs non-locomotor skills in a variety of environments.

PE.5.1.2.a Applies the combination of balance and weight transfer in tumbling. (A)

PE.5.1.2.b Demonstrates weight transfer in tumbling. (A)

PE.5.1.2.c Applies rolling in a variety of environments (e.g., dance, games). (A)

PE.5.1.2.d Applies curling, stretching, twisting, and bending in dance and tumbling. (A)

PE.5.1.2.e Combines locomotor and non-locomotor skills and movement concepts (e.g., levels, shapes, extensions, pathways, force, time, flow) to create and perform a dance with a group. (E)

PE.5.1.2.f Combines tumbling skills with balance and weight transfers to create a tumbling sequence. (E)

PE.5.1.3 Performs manipulative skills in a variety of environments.

PE.5.1.3.a Applies underhand throwing skills with different sizes and types of objects in small-sided games. (A)

PE.5.1.3.b Throws overhand with accuracy in small-sided games. (M)

PE.5.1.3.c Passes, with both partners moving, at various distances. (A)

PE.5.1.3.d Catches a struck ball at all levels (e.g., overhand and underhand) in a non-dynamic environment. (A)

PE.5.1.3.e Catches while both partners are moving. (A)

PE.5.1.3.f Combines hand dribbling with other skills (e.g., passing, receiving, shooting) in a dynamic environment. (A)

PE.5.1.3.g Combines foot dribbling with other skills (e.g., passing, receiving, shooting) using a mature pattern. (A)

PE.5.1.3.h Passes and receives with the feet as both partners travel. (M)

PE.5.1.3.i Dribbles with hands or feet with mature patterns in a variety of small-sided games. (E)

PE.5.1.3.j Kicks in small-sided practice tasks using a mature pattern. (A)

PE.5.1.3.k Punts in small-sided practice tasks. (A)

PE.5.1.3.l Applies underhand volley in a dynamic environment using different sizes and types of balls. (A)

PE.5.1.3.m Performs a forearm pass using 3 of 5 critical elements. (E)

PE.5.1.3.n Volleys a lightweight ball, using a two-hand pattern, sending it upward to a target. (M)

PE.5.1.3.o Strikes an object consecutively with a partner, using a short-handled implement, over a net or against a wall in a dynamic environment. (A)

PE.5.1.3.p Combines striking with a long-handled implement (e.g., hockey stick, lacrosse stick) with receiving and traveling skills in practice tasks. (M)

PE.5.1.3.q Strikes a pitched ball with a bat using a mature pattern. (M)

PE.5.1.3.r Combines manipulative skills and traveling for execution to a target (e.g., scoring in soccer, hockey, basketball; receiving a pass in flag football). (M)

PE.5.1.3.s Creates a jump rope routine, with a partner or group, with either a short or long rope. (A)

PE.5.2 Movement Concepts, Strategies, and Tactics

PE.5.2.1 Demonstrates knowledge of movement concepts in a variety of environments.

PE.5.2.1.a Combines spatial concepts with locomotor and manipulative skills in a variety of small-sided games and dance. (A)

PE.5.2.1.b Combines movement concepts with skills in a variety of small-sided game environments, tumbling, and dance. (E & A)

PE.5.2.1.c Applies speed, direction, and force to strategy in small-sided games. (A)

PE.5.2.1.d Applies direction and force when striking an object with a long-handled implement, sending it to a designated target. (M)

PE.5.2.1.e Analyzes movement situations and applies movement concepts (e.g., force, direction, speed, pathways, extensions) in small-sided practice tasks. (A)

PE.5.2.1.f Applies the concept of alignment in student-designed tumbling and dance sequences. (M)

PE.5.2.1.g Applies the concepts of muscular tension with balance in student-designed tumbling and dance. (M)

PE.5.2.2 Applies knowledge of strategies and tactics in a variety of environments.

PE.5.2.2.a Applies basic offensive and defensive strategies and tactics in small-sided invasion games. (A)

PE.5.2.2.b Applies basic offensive and defensive strategies and tactics in net/wall games. (A)

PE.5.2.2.c Recognizes the types of throw, volley, or striking actions needed for different small-sided game situations and activities. (M)

PE.5.3 Health-Related Physical Activity and Fitness

PE.5.3.1 Demonstrates the knowledge to achieve and maintain a health-enhancing level of physical activity.

PE.5.3.1.a Charts and analyzes physical activity outside physical education class for fitness benefits of activities. (A)

PE.5.3.2 Engages in physical activity.

PE.5.3.2.a Engages in both teacher-directed and independent physical education class activities. (A)

PE.5.3.3 Exhibits the knowledge to achieve and maintain a health-enhancing level of physical fitness.

PE.5.3.3.a Differentiates between skill-related and health-related fitness. (M)

PE.5.3.3.b Identifies and applies the need for warm-up and cool-down for various physical activities. (A)

PE.5.3.4 Communicates the importance of health-related fitness components and nutrition for physical activity.

PE.5.3.4.a Analyzes, with teacher assistance, results of health-related fitness assessment (e.g., pre and post), comparing results with criteria for good health. (A)

PE.5.3.4.b Designs a goal-setting plan, with teacher assistance, to address ways to use physical activity to enhance and maintain fitness. (A)

PE.5.3.4.c Analyzes the impact of food choices for physical activity, youth sports, and personal health. (M)

PE.5.4 Responsible Behavior

PE.5.4.1 Exhibits personal responsibility in physical activity settings.

PE.5.4.1.a Engages in physical activity with responsible inter-personal behavior (e.g., peer-to-peer, student-to-teacher, student-to-referee). (M)

PE.5.4.1.b Exhibits responsible behavior in a variety of physical activity contexts, environments, and facilities. (A)

PE.5.4.2 Accepts and responds to specific corrective feedback from teacher and peers.

PE.5.4.2.a Gives specific corrective feedback respectfully to peers. (M)

PE.5.4.3 Exhibits responsible social behavior when working with others.

PE.5.4.3.a Accepts, recognizes, and actively involves others with varying abilities in physical activities and group projects. (A)

PE.5.4.4 Follows rules and demonstrates proper etiquette.

PE.5.4.4.a Critiques the etiquette involved in various game activities. (M)

PE.5.4.5 Participates safely in physical activities.

PE.5.4.5.a Applies safety principles with age-appropriate physical activities. (A)

PE.5.5 Physical Activity Benefits

PE.5.5.1 Recognizes the benefits of physical activity for health.

PE.5.5.1.a Compares the health benefits of participating in selected physical activities. (A)

PE.5.5.2 Recognizes the benefits of physical activity for challenge.

PE.5.5.2.a Expresses the challenge of participating in a favorite physical activity. (A)

PE.5.5.3 Recognizes the benefits of physical activity for self-expression and enjoyment.

PE.5.5.3.a Analyzes different physical activities for self-expression and enjoyment. (A)

PE.5.5.4 Recognizes the benefits of physical activity for social interaction.

PE.5.5.4.a Describes the social benefits gained from participating in physical activity. (M)

PE.6.1 Physical Activity Skills and Movement Patterns

PE.6.1.1 Performs a variety of dance and rhythmic skills and activities with competency.

PE.6.1.1.a Moves to a beat or rhythm in a dance (e.g., line, folk, social, creative, world).

PE.6.1.1.b Moves to a beat in a rhythmic activity (e.g., jump rope, cup stack, dance-fitness program, plyometric exercises).

PE.6.1.2 Performs a variety of invasion and field game skills and activities with competency.

PE.6.1.2.a Throws with a mature pattern for distance, force, and speed in a variety of practice tasks (e.g., softball, basketball, football, disc golf).

PE.6.1.2.b Catches a variety of objects with a mature pattern (e.g., softball, basketball, football, Frisbee).

PE.6.1.2.c Passes an object with hands in combination with locomotor patterns and change of direction.

PE.6.1.2.d Receives object with hands in combination with locomotor patterns and change of direction.

PE.6.1.2.e Performs pivots, fakes, and jab steps correctly without defensive pressure (e.g., basketball, soccer, lacrosse, flag football).

PE.6.1.2.f Dribbles with dominant hand using a change of speed and direction without defensive pressure in a variety of practice tasks (e.g., basketball).

PE.6.1.2.g Foot-dribbles with control, changing speed and directions, in a variety of practice tasks (e.g., soccer).

PE.6.1.2.h Dribbles with an implement with control, changing speed and directions in a variety of practice tasks (e.g., floor hockey, broomball).

PE.6.1.2.i Shoots with a mature pattern appropriate to the activity (e.g., basketball, team handball, soccer).

PE.6.1.2.j Maintains defensive ready position appropriate to the activity (e.g., basketball, volleyball, soccer, softball, flag football, wrestling).

PE.6.1.3 Performs a variety of net and wall game skills and activities with competency.

PE.6.1.3.a Performs a legal underhand serve.

PE.6.1.3.b Strikes with a mature overhand pattern in non-dynamic environment (e.g., volleyball, handball, badminton, tennis).

PE.6.1.3.c Strikes with mature pattern using the forehand and backhand strokes with a short-handled implement.

PE.6.1.3.d Strikes using a forehand volley with mature pattern and control using an implement.

PE.6.1.3.e Performs overhead two-hand volley with control.PE.6.1.3.f Performs a forearm pass with a mature pattern.

PE.6.1.4 Performs a variety of target game skills and activities with competency.

PE.6.1.4.a Throws underhand with a mature pattern in activity specific tasks (e.g., soccer, softball, bowling, bocce, horseshoes).

PE.6.1.4.b Strikes, with an implement, a stationary object (e.g., croquet, golf, shuffleboard).

PE.6.1.5 Performs a variety of fielding/striking game skills and activities with competency.

PE.6.1.5.a Strikes a pitched ball with an implement with a mature pattern.

PE.6.1.5.b Catches with hands using a mature pattern, from different trajectories, using a variety of balls in varying practice tasks.

PE.6.1.6 Performs a variety of outdoor pursuits and individual performance activities with competency.

PE.6.1.6.a Demonstrates correct technique for basic skills in one self-selected outdoor activity (e.g., fishing, archery, wall climbing, geocaching, bicycling).

PE.6.1.6.b Demonstrates correct technique for basic skills in one self-selected activity (e.g., wrestling, track and field, skating, tumbling).

PE.6.2 Movement Concepts, Strategies, and Tactics

PE.6.2.1 Applies knowledge of movement concepts, strategies, and tactics in individual performance activities, dance and rhythms.

PE.6.2.1.a Varies application of force during dance or rhythmic activities.

PE.6.2.2 Applies knowledge of movement concepts, strategies, and tactics in invasion games.

PE.6.2.2.a Creates space through locomotor movements appropriate to the activity.

PE.6.2.2.b Responds with appropriate locomotor movements while transitioning between offense and defense.

PE.6.2.3 Applies knowledge of movement concepts, strategies, and tactics in net/wall games.

PE.6.2.3.a Creates space when hitting with a short-handled implement by varying force and direction.

PE.6.2.3.b Reduces offensive options for opponents by returning to midcourt position.

PE.6.2.4 Applies knowledge of movement concepts, strategies, and tactics in target games.

PE.6.2.4.a Selects appropriate shot and/or implement based on location of the object in relation to the target.

PE.6.2.5 Applies knowledge of movement concepts, strategies, and tactics in fielding/striking games.

PE.6.2.5.a Identifies open spaces and attempts to strike object into that space.

PE.6.2.5.b Identifies the correct defensive play based on the situation (e.g., number of outs).

PE.6.2.6 Applies knowledge of movement concepts, strategies, and tactics in outdoor pursuits.

PE.6.2.6.a Makes appropriate decisions based on the weather, level of difficulty due to conditions, or ability to ensure safety of self and others.

PE.6.3 Health-Related Physical Activity and Fitness

PE.6.3.1 Demonstrates the knowledge and skill to achieve and maintain a health-enhancing level of physical activity.

PE.6.3.1.a Explains how being physically active leads to a healthy body.

PE.6.3.1.b Describes the difference between aerobic and anaerobic capacity in order to participate, in a variety of activities with moderate to vigorous intensity, for a minimum of 60 minutes a day.

PE.6.3.2 Engages in physical activity.

PE.6.3.2.a Participates in a variety of body weight strength and endurance fitness activities.

PE.6.3.2.b Participates in a variety of aerobic fitness activities using technology (e.g., video exercise games, heart rate monitors, pedometers).

PE.6.3.2.c Participates in a variety of lifetime recreational team sports, outdoor pursuits, and/or dance activities.

PE.6.3.3 Exhibits the knowledge to achieve and maintain a health-enhancing level of physical fitness.

PE.6.3.3.a Describes the components of skill-related fitness.

PE.6.3.3.b Sets and monitors a self-selected fitness goal.

PE.6.3.3.c Describes the role of warm-ups and cool-downs through dynamic movement.

PE.6.3.3.d Employs correct techniques and methods of stretching.

PE.6.3.3.e Identifies each of the components of the overload principles (Frequency, Intensity, Time, Type {FITT}) for different types of physical activity.

PE.6.3.3.f Defines resting heart rate and describes its relationship to aerobic fitness and Borg Rating of Perceived Exertion (RPE) scale.

PE.6.3.3.g Performs multi-joint and single-joint resistance training movements.

PE.6.3.3.h Identifies the concepts of muscular strength exercises and the relationship between incorrect technique and injury.

PE.6.3.3.i Designs and implements a program of remediation for any areas of weakness based on the results of health-related fitness assessment.

PE.6.3.3.j Maintains a physical activity log for at least two weeks and reflects on activity levels as documented in the log.

PE.6.3.4 Communicates the importance of health-related fitness components and nutrition for physical activity.

PE.6.3.4.a Identifies foods within each of the basic food groups and selects appropriate servings and portions for his/her age and physical activity levels.

PE.6.3.5 Communicates the importance of health-related fitness components and stress management with physical activity.

PE.6.3.5.a Identifies positive and negative results of stress and appropriate ways of dealing with each.

PE.6.4 Responsible Behavior

PE.6.4.1 Exhibits personal responsibility in physical activity settings.

PE.6.4.1.a Exhibits personal responsibility through appropriate etiquette, respect for facilities and equipment, and safe behaviors.

PE.6.4.2 Accepts and responds to specific corrective feedback from teacher and peers.

PE.6.4.2.a Implements specific corrective feedback to improve performance.

PE.6.4.3 Exhibits responsible social behavior when working with others.

PE.6.4.3.a Accepts differences among classmates in physical development, maturation, and varying skill levels by providing positive encouragement.

PE.6.4.3.b Cooperates with a small group of classmates during adventure activities, game play, or team-building activities.

PE.6.4.4 Follows rules and demonstrates proper etiquette.

PE.6.4.4.a Implements the rules and etiquette for physical activities, games, and dance activities.

PE.6.4.5 Participates safely in physical activities.

PE.6.4.5.a Uses physical activity and fitness equipment appropriately and safely with teacher guidance.

PE.6.4.5.b Applies specific safety concerns associated with the activity with teacher guidance.

PE.6.5 Physical Activity Benefits

PE.6.5.1 Recognizes the benefits of physical activity for health.

PE.6.5.1.a Identifies different types of physical activities and describes how each positively impacts health.

PE.6.5.1.b Explains how physical activity provides opportunities for reducing stress.

PE.6.5.2 Recognizes the benefits of physical activity for challenge.

PE.6.5.2.a Recognizes individual challenges in physical activity and copes in a positive way (e.g., extending effort, asking for help or feedback, modifying the tasks).

PE.6.5.3 Recognizes the benefits of physical activity for self-expression and enjoyment.

PE.6.5.3.a Associates physical activity with enjoyment.

PE.6.5.3.b Describes how moving competently in a physical activity setting creates enjoyment.

PE.6.5.3.c Identifies the relationship between self-expression and physical activity.

PE.6.5.4 Recognizes the benefits of physical activity for social interaction.

PE.6.5.4.a Respects self and others in activities and games by following the rules, encouraging others, and playing in the spirit of the game or activity (e.g., sportsmanship).

PE.7.1 Physical Activity Skills and Movement Patterns

PE.7.1.1 Performs a variety of dance and rhythmic skills and activities with competency.

PE.7.1.1.a Applies movement patterns to a beat or rhythm in a dance.

PE.7.1.1.b Applies movement patterns to a beat in a rhythmic activity.

PE.7.1.2 Performs a variety of invasion and field game skills and activities with competency.

PE.7.1.2.a Throws with a mature pattern within a dynamic environment for distance, force, and speed (e.g., softball, football, basketball, Frisbee).

PE.7.1.2.b Catches a variety of objects with a mature pattern in a dynamic environment (e.g., softball, football, basketball, Frisbee).

PE.7.1.2.c Passes an object with feet in combination with running, changing direction, and speed with competency.

PE.7.1.2.d Receives object with feet in combination with running, changing direction, and speed.

PE.7.1.2.e Performs pivots, fakes, and jab steps correctly with defensive pressure (e.g., basketball, soccer, lacrosse, flag football).

PE.7.1.2.f Dribbles with dominant and non-dominant hand using a change of speed and direction in a variety of practice tasks (e.g., basketball).

PE.7.1.2.g Foot-dribbles combined with passing, changing speed and direction, in a variety of practice tasks (e.g., soccer).

PE.7.1.2.h Dribbles with an implement combined with passing in a variety of practice tasks (e.g., floor hockey, broomball).

PE.7.1.2.i Shoots with a mature pattern, power, and accuracy in a modified game (e.g., basketball, team handball, soccer).

PE.7.1.2.j Maintains defensive ready position while moving, appropriate to the activity (e.g., basketball, volleyball, softball, flag football, wrestling).

PE.7.1.3 Performs a variety of net and wall game skills and activities with competency.

PE.7.1.3.a Performs a legal underhand serve with accuracy to a target.

PE.7.1.3.b Strikes with a mature overhand pattern in a dynamic environment (e.g., volleyball, handball, badminton, tennis).

PE.7.1.3.c Strikes with mature pattern using the forehand and backhand strokes with a long-handled implement.

PE.7.1.3.d Performs forehand and backhand volleys with mature pattern and control using an implement.

PE.7.1.3.e Performs overhead two-hand volley with control. PE.7.1.3.f Performs a forearm pass with a mature pattern to a partner.

PE.7.1.4 Performs a variety of target game skills and activities with competency.

PE.7.1.4.a Throws underhand with a mature pattern consistently in a modified target game.

PE.7.1.4.b Strikes, with an implement, a stationary object for accuracy (e.g., croquet, golf, shuffleboard).

PE.7.1.5 Performs a variety of fielding/striking game skills and activities with competency.

PE.7.1.5.a Strikes a pitched ball to an open space in a variety of practice tasks.

PE.7.1.5.b Catches with hands with a mature pattern, from different trajectories using a variety of balls in small-sided games.

PE.7.1.6 Performs a variety of outdoor pursuits and individual performance activities with competency.

PE.7.1.6.a Demonstrates correct technique for a variety of skills in one self-selected outdoor activity (e.g., fishing, archery, wall climbing, geocaching, bicycling).

PE.7.1.6.b Demonstrates correct technique for a variety of skills in one self-selected activity (e.g., wrestling, track and field, skating, tumbling).

PE.7.2 Movement Concepts, Strategies, and Tactics

PE.7.2.1 Applies knowledge of movement concepts, strategies, and tactics in individual performance activities, dance, and rhythms.

PE.7.2.1.a Applies Newton's laws of motion to various dance or movement activities.

PE.7.2.2 Applies knowledge of movement concepts, strategies, and tactics in invasion games.

PE.7.2.2.a Reduces space through locomotor movements appropriate to the activity.

PE.7.2.2.b Responds with appropriate locomotor movements while transitioning between offense and defense, communicating with teammates.

PE.7.2.3 Applies knowledge of movement concepts, strategies, and tactics in net/wall games.

PE.7.2.3.a Creates space when hitting with long-handled implement by varying force and direction and moving opponent from side to side.

PE.7.2.3.b Selects offensive shot based on opponent's location.

PE.7.2.4 Applies knowledge of movement concepts, strategies, and tactics in target games.

PE.7.2.4.a Varies the speed and/or trajectory of the shot based on location of the object in relation to the target.

PE.7.2.5 Applies knowledge of movement concepts, strategies, and tactics in fielding/striking games.

PE.7.2.5.a Utilizes a variety of shots to hit to an open space.

PE.7.2.5.b Selects the correct defensive play based on the situation (e.g., number of outs).

PE.7.2.6 Applies knowledge of movement concepts, strategies, and tactics in outdoor pursuits.

PE.7.2.6.a Analyzes the situation and makes adjustments to ensure the safety of self and others.

PE.7. 3 Health-Related Physical Activity and Fitness

PE.7.3.1 Demonstrates the knowledge and skill to achieve and maintain a health-enhancing level of physical activity.

PE.7.3.1.a Identifies barriers related to maintaining a physically active lifestyle and seeks solutions for eliminating those barriers.

P.E.7.3.2 Engages in physical activity.

PE.7.3.2.a Participates in a variety of activities with moderate to vigorous intensity for a minimum of 60 minutes a day.

PE.7.3.2.b Participates in a variety of strength and muscular endurance fitness activities using body weight (e.g., resistance bands).

PE.7.3.2.c Participates in a variety of aerobic-fitness activities using technology (e.g., video exercise games, heart rate monitors, pedometers).

PE.7.3.2 d Participates in a variety of lifetime dual and individual sports, martial arts or aquatic activities.

PE.7.3.3 Exhibits the knowledge to achieve and maintain a health-enhancing level of physical fitness.

PE.7.3.3.a Distinguishes between health-related and skill-related fitness.

PE.7.3.3.b Adjusts amount of physical activity based on quantity of exercise to maintain and/or improve fitness levels.

PE.7.3.3.c Designs a warm-up/cool-down regimen using dynamic and static stretches for a self-selected physical activity

PE.7.3.3.d Describes the overload principles of Frequency, Intensity, Time, and Type (FITT) for different types of physical activity, the training principles on which the formula is based, and how the formula and principles affect fitness.

PE.7.3.3.e Defines how the Borg Rating of Perceived Exertion (RPE) scale can be used to determine the perception of the work effort or intensity of exercise.

PE.7.3.3.f Performs a variety of single-joint and multi-joint movements in resistance training with an implement.

PE.7.3.3.g Performs appropriate techniques related to muscular strength and endurance to ensure safety and injury prevention.

PE.7.3.3.h Designs and implements a program of remediation for two areas of weakness based on the results of health-related fitness assessment.

PE.7.3.3.i Maintains a physical activity log and nutrition log for at least two weeks, and reflects on activity levels and nutrition as documented in the log.

PE.7.3.4 Communicates the importance of health-related fitness components and nutrition for physical activity.

PE.7.3.4.a Develops strategies for balancing healthy food, snacks and water intake, along with physical activity.

PE.7.3.5 Communicates the importance of health-related fitness components and stress management with physical activity.

PE.7.3.5.a Practices strategies for dealing with stress (e.g., deep breathing, guided visualization, aerobic exercise).

PE.7.4 Responsible Behavior

PE.7.4.1 Exhibits personal responsibility in physical activity settings.

PE.7.4.1.a Demonstrates both intrinsic and extrinsic motivation by selecting opportunities to participate in physical activity outside of class.

PE.7.4.2 Accepts and responds to specific corrective feedback from teacher and peers.

PE.7.4.2.a Provides positive corrective feedback to a peer using teacher-generated guidelines and incorporating appropriate tone and other communication skills.

PE.7.4.3 Exhibits responsible social behavior when working with others.

PE.7.4.3 a Demonstrates cooperation skills by establishing rules and guidelines for resolving conflicts.

PE.7.4.3.b Exhibits responsible social behaviors by cooperating with classmates, demonstrating inclusive behaviors, and supporting classmates.

PE.7.4.3.c Problem solves with a small group of classmates during adventure activities, game play, or team building activities.

PE.7.4.4 Follows rules and demonstrates proper etiquette.

PE.7.4.4.a Self-officiates modified physical activities and games.

PE.7.4.4.b Demonstrates appropriate behaviors and etiquette while observing and performing dance.

PE.7.4.5 Participates safely in physical activities.

PE.7.4.5.a Independently uses physical activity and fitness equipment appropriately and safely.

PE.7.4.5.b Applies specific safety concerns associated with the activity in individual practice.

PE.7.5 Physical Activity Benefits

PE.7.5.1 Recognizes the benefits of physical activity for health.

PE.7.5.1.a Identifies examples of activities that enhance each of the five components of health-related fitness.

PE.7.5.1.b Participates in a variety of physical activities to experience positive mental and emotional benefits.

PE.7.5.2 Recognizes the benefits of physical activity for challenge.

PE.7.5.2.a Generates positive strategies when faced with a group challenge in physical activity (e.g., offering suggestions or assistance, leading, or following others and providing possible solutions).

PE.7.5.3 Recognizes the benefits of physical activity for self-expression and enjoyment.

PE.7.5.3.a Enjoys self-selected physical activities.

PE.7.5.3.b Describes how moving competently in a physical activity setting creates enjoyment.

PE.7.5.3 c Explains the relationship between self-expression and lifelong enjoyment through physical activity.

PE.7.5.4 Recognizes the benefits of physical activity for social interaction.

PE.7.5.4.a Demonstrates the importance of social interactions by helping and encouraging others, avoiding negative comments and providing support to classmates.

PE.8.1 Physical Activity Skills and Movement Patterns

PE.8.1.1 Performs a variety of dance and rhythmic skills and activities with competency.

PE.8.1.1.a Creates a sequence of movements to a beat or rhythm in a dance.

PE.8.1.1.b Creates a sequence of movements for a rhythmic activity.

PE.8.1.2 Performs a variety of invasion and field game skills and activities with competency.

PE.8.1.2.a Throws with a mature pattern for distance, force, and speed in small-sided game play (e.g., softball, basketball, football, lacrosse, Frisbee).

PE.8.1.2.b Catches using an implement with a mature pattern in small-sided game play (e.g., lacrosse, scoop).

PE.8.1.2.c Passes an object with an implement in combination with running, changing direction, and speed with competency (e.g., hockey, lacrosse, scoop).

PE.8.1.2.d Receives object with an implement in combination with running, changing direction, and speed (e.g., hockey, broomball).

PE.8.1.2.e Performs pivots, fakes, and jab steps correctly in modified games (e.g., basketball, soccer, lacrosse, flag football).

PE.8.1.2.f Dribbles with dominant and non-dominant hand using a change of speed and direction in small-sided game play (e.g., basketball).

PE.8.1.2.g Foot-dribbles combined with passing, changing speed and direction in small-sided game play (e.g., soccer).

PE.8.1.2.h Dribbles with an implement combined with passing in modified games (e.g., floor hockey, broom ball).

PE.8.1.2.i Shoots on goal using an implement with power and accuracy in a modified game (e.g., team handball, hockey and lacrosse).

PE.8.1.2.j Utilizes drop step technique while defending (e.g., basketball, football, softball).

PE.8.1.3 Performs a variety of net and wall game skills and activities with competency.

PE.8.1.3.a Performs a legal underhand serve with accuracy in a modified game.

PE.8.1.3.b Strikes with a mature overhand pattern in a modified game (e.g., volleyball, handball, badminton, tennis).

PE.8.1.3.c Strikes with mature pattern, using the forehand and backhand strokes with a short- or long-handled implement with accuracy, in a modified game.

PE.8.1.3.d Applies forehand and backhand volleys with a mature pattern and control using an implement in a modified game.

PE.8.1.3.e Executes overhead two-hand volley with control in a modified game.

PE.8.1.3.f Performs a forearm pass with a mature pattern and control in a modified game.

PE.8.1.4 Performs a variety of target game skills and activities with competency.

PE.8.1.4.a Throws underhand for accuracy and control with a mature pattern in a modified target game.

PE.8.1.4.b Strikes, with an implement, a stationary object for accuracy and distance (e.g., croquet, golf, shuffleboard).

PE.8.1.5 Performs a variety of fielding/striking game skills and activities with competency.

PE.8.1.5.a Strikes a pitched ball with power with an implement to an open space in a variety of small-sided games.

PE.8.1.5 b Catches, using an implement, from different trajectories and speeds in a dynamic environment or modified game play.

PE.8.1.6 Performs a variety of outdoor pursuits and individual performance activities with competency.

PE.8.1.6.a Demonstrates correct technique for a variety of skills in two self-selected outdoor activities (e.g., fishing, archery, wall climbing, geocaching, bicycling).

PE.8.1.6.b Demonstrates correct technique for a variety of skills in two self-selected activities (e.g., wrestling, track and field, skating, tumbling).

PE.8.2 Movement Concepts, Strategies, and Tactics

PE.8.2.1 Applies knowledge of movement concepts, strategies, and tactics in individual performance activities, dance and rhythms.

PE.8.2.1.a Describes and applies mechanical advantage(s) for a variety of movement patterns.

PE.8.2.2 Applies knowledge of movement concepts, strategies, and tactics in invasion games.

PE.8.2.2.a Creates and reduces space using a variety of passes and offensive tactics during modified games (e.g., pivots, fakes, give and go).

PE.8.2.2.b Responds with appropriate locomotor movements while transitioning between offense and defense, communicating with teammates, and capitalizing on opportunities.

PE.8.2.3 Applies knowledge of movement concepts, strategies, and tactics in net/wall games.

PE.8.2.3.a Creates space when hitting with either a long- or short-handled implement by varying force or direction or by moving opponent side-to-side and/or forward and back.

PE.8.2.3.b Varies placement, force and timing of return to prevent anticipation by opponent.

PE.8.2.4 Applies knowledge of movement concepts, strategies, and tactics in target games.

PE.8.2.4.a Varies the speed, force, and trajectory of the shot based on location of the object in relation to the target.

PE.8.2.5 Applies knowledge of movement concepts, strategies, and tactics in fielding/striking games.

PE.8.2.5.a Identifies sacrifice situations and attempts to advance a teammate.

PE.8.2.5.b Reduces open spaces in the field by working with teammates to maximize coverage.

PE.8.2.6 Applies knowledge of movement concepts, strategies, and tactics in outdoor pursuits.

PE.8.2.6.a Implements safe protocols in self-selected outdoor activities.

PE.8.3 Health-Related Physical Activity and Fitness

PE.8.3.1 Demonstrates the knowledge and skill to achieve and maintain a health-enhancing level of physical activity.

PE.8.3.1.a Explains the connections between health-related fitness and overall physical and mental health.

PE.8.3.2 Engages in physical activity.

PE.8.3.2.a Participates in a variety of activities with moderate to vigorous intensity for a minimum of 60 minutes a day.

PE.8.3.2.b Plans and creates, with teacher assistance, a variety of strength and muscular endurance activities using body weight and light free-weights.

PE.8.3.2.c Participates in a variety of aerobic fitness activities using technology (e.g., video exercise games, heart rate monitors, pedometers).

PE.8.3.2.d Participates in self-selected lifetime sport, dance, aquatic, or outdoor activity outside of the school day.

PE.8.3.3 Exhibits the knowledge to achieve and maintain a health-enhancing level of physical fitness.

PE.8.3.3.a Compares and contrasts physical activities based on their contributions to health-related fitness components.

PE.8.3.3.b Uses available technology to self-monitor quantity of exercise and enhance current fitness level.

PE.8.3.3.c Designs and implements a variety of warm-up/cool-down regimens with a variety of dynamic and static stretches for multiple activities.

PE.8.3.3.d Uses the overload principle in preparing a personal workout.

PE.8.3.3.e Defines how the Borg Rate of Perceived Exertion (RPE) scale can be used to adjust workout intensity during physical activity.

PE.8.3.3.f Performs a variety of single-joint and multi-joint movements in resistance training with an appropriately selected resistance.

PE.8.3.3.g Identifies technical resistance progressions and determines corrections that are necessary for injury prevention and health promotion.

PE.8.3.3.h Designs and implements a program of remediation for three areas of weakness based on the results of health-related fitness assessment.

PE.8.3.3.i Designs and implements a program to improve levels of health-related fitness and nutrition.

PE.8.3.4 Communicates the importance of health-related fitness components and nutrition for physical activity.

PE.8.3.4.a Describes the relationship between poor nutrition and health risk factors.

PE.8.3.5 Communicates the importance of health-related fitness components and stress management with physical activity.

PE.8.3.5.a Performs basic movements used in other stress-reducing activities (e.g., yoga, tai chi).

PE.8.4 Responsible Behavior

PE.8.4.1 Exhibits personal responsibility in physical activity settings.

PE.8.4.1.a Accepts responsibility for personal and social behaviors and improving ones' own level of physical activity and fitness.

PE.8.4.2 Accepts and responds to specific corrective feedback from teacher and peers.

PE.8.4.2.a Provides encouragement and positive feedback to peers without prompting from the teacher.

PE.8.4.3 Exhibits responsible social behavior when working with others.

PE.8.4.3.a Responds appropriately to participants' behavior during physical activity by using rules and guidelines for resolving conflict.

PE.8.4.3.b Employs critical thinking skills to solve problems and make decisions.

PE.8.4.4 Follows rules and demonstrates proper etiquette.

PE.8.4.4.a Officiates modified physical activities and games.

PE.8.4.4.b Creates dance routines applying appropriate behavior and etiquette observing, creating, and performing dance.

PE.8.4.5 Participates safely in physical activities.

PE.8.4.5.a Independently uses physical activity and fitness equipment appropriately.

PE.8.4.5.b Identifies specific safety associated with the physical activity.

PE.8.4.5.c Applies specific safety concerns associated with the activity when practicing with peers.

PE.8.5 Physical Activity Benefits

PE.8.5.1 Recognizes the benefits of physical activity for health.

PE.8.5.1.a Explains the connections between fitness and overall physical and mental health.

PE.8.5.1.b Analyzes the empowering consequences of being physically active as it relates to physical, social, and mental/emotional health.

PE.8.5.2 Recognizes the benefits of physical activity for challenge.

PE.8.5.2.a Develops a plan of action for challenge in physical activity and makes appropriate decisions based on that plan.

PE.8.5.3 Recognizes the benefits of physical activity for self-expression and enjoyment.

PE.8.5.3.a Enjoys self-selected physical activities.

PE.8.5.3.b Describes how moving competently in a physical activity setting creates enjoyment.

PE.8.5.3.c Identifies and participates in an enjoyable activity that prompts individual expression.

PE.8.5.4 Recognizes the benefits of physical activity for social interaction.

PE.8.5.4.a Exhibits respect for self by asking for help and helping others in various physical activities.

Nebraska Physical Education Course Numbering System

High School

NUMBERING KEY	**COURSE**
PE.HS.1	Foundations for Physical Education and Fitness
PE.HS.2	Beginning Swimming
PE.HS.3	Intermediate Swimming
PE.HS.4	Fitness Swimming and Aquatic Activities
PE.HS.5	Introduction to Strength and Conditioning
PE.HS.6	Intermediate Strength and Conditioning
PE.HS.7	Advanced Strength and Conditioning
PE.HS.8	Aerobic Training
PE.HS.9	Advanced Aerobic Training
PE.HS.10	Introduction to Dance
PE.HS.11	Hip Hop Dance
PE.HS.12	Ballroom Dance
PE.HS.13	Dance Performance
PE.HS.14	Lifetime Activities
PE.HS.15	Team Games
PE.HS.16	Outdoor Pursuits
PE.HS.17	Lifeguard Training and Water Safety Instruction Aide
PE.HS.18	Sport Officiating

NOTE: ***The focus of the High School physical education standards is on planning and implementing individual physical activity goals that lead to lifelong fitness. The Team Games Course is less suited to individual lifelong fitness as these games do not encourage moderate to vigorous physical activity for all participants.***

PE.HS.1 Foundations For Physical Education and Fitness

PE.HS.1.1 Demonstrates competency in motor skills and movement patterns needed to perform a variety of physical activities.

PE.HS.1.1.a Performs and/or refines activity-specific movement skills in four or more lifetime activities (e.g., outdoor pursuits, aquatics, net games, individual performance activities).

PE.HS.1.1.b Demonstrates proficiency in multiple skills in a variety of health-related activities (e.g., running, core exercises, yoga, resistance training).

PE.HS.1.2 Applies knowledge of concepts, principles, tactics, and strategies related to movement and performance to achieve and maintain a health-enhancing level of physical activity and fitness.

PE.HS.1.2.a Applies the terminology associated with exercise and participation in selected individual performance activities, dance, net/wall games, target games, aquatics, and/or outdoor pursuits.

PE.HS.1.2.b Analyzes and improves performance of self and/or others in a selected skill using movement concepts and principles (e.g., force, motion, rotation).

PE.HS.1.2.c Creates a practice plan to improve performance of a self-selected skill.

PE.HS.1.2.d Discusses the benefits of a physically active lifestyle throughout the life cycle.

PE.HS.1.2.e Evaluates the validity of claims made by commercial products and programs pertaining to fitness and a healthy, active lifestyle.

PE.HS.1.2.f Identifies issues associated with exercising in heat, humidity and cold.

PE.HS.1.2.g Analyzes the benefits, social support network, and participation requirements of activities that can be pursued in the local environment.

PE.HS.1.2.h Evaluates risks and safety factors that might impact physical activity preferences throughout the life span.

PE.HS.1.2.i Identifies types of strength exercises (e.g., isometric, concentric, eccentric) for personal fitness development (e.g., strength, endurance, range of motion).

PE.HS.1.2.j Identifies stretching exercises (e.g., static, proprioceptive neuromuscular facilitation {PNF}, dynamic) for personal fitness development (e.g., strength, endurance, range of motion).

PE.HS.1.2.k Calculates target heart rate and applies that information to personal fitness.

PE.HS.1.2.l Creates and implements a behavior-modification plan that enhances a healthy, active lifestyle.

PE.HS.1.2.m Designs and implements a fitness program that includes all components of health-related fitness.

PE.HS.1.2.n Designs and implements a nutrition plan to maintain an appropriate energy balance for a healthy, active lifestyle.

PE.HS.1.2.o Researches stress-management strategies (e.g., mental imagery, relaxation techniques, deep breathing, aerobic exercise, meditation).

PE.HS.1.3 Recognizes the benefits of physical activity and exhibits responsible personal and social behavior in a variety of physical activity settings.

PE.HS.1.3.a Exhibits etiquette, respect for others, and teamwork while engaging in physical activity.

PE.HS.1.3.b Utilizes communication skills and strategies that promote team/group dynamics.

PE.HS.1.3.c Solves problems and thinks critically in physical activity, both as an individual and in groups.

PE.HS.1.3.d Applies best practices for participating safely in physical activity (e.g., injury prevention, proper alignment, hydration, use of equipment, implementation of rules, sun protection).

PE.HS.1.3.e Analyzes the health benefits of a self-selected physical activity.

PE.HS.1.3.f Chooses an appropriate level of challenge to experience success and desire to participate in self-selected physical activity.

PE.HS.1.3.g Selects and participates in physical activities that meet the need for self-expression and enjoyment.

PE.HS.2 Beginning Swimming

PE.HS.2.1 Demonstrates competency in motor skills and movement patterns needed to perform a variety of physical activities.

PE.HS.2.1.a Attempts basic swimming strokes (e.g., sidestroke, elementary backstroke, front crawl, and backstroke).

PE.HS.2.1.b Performs basic survival skills and drown-proofing techniques (e.g., treading, floating, water entries, lifejacket protocol).

PE.HS.2.2 Applies knowledge of concepts, principles, tactics, and strategies related to movement and performance to achieve and maintain a health-enhancing level of physical activity and fitness.

PE.HS.2.2.a Participates in water recreation games and activities to enhance fitness (e.g., water aerobics/exercises, water volleyball, water baseball).

PE.HS.2.2.b Identifies the health benefits of swimming and aquatic activities (e.g., health-related components, low impact, rehabilitation).

PE.HS.2.3 Recognizes the benefits of physical activity and exhibits responsible personal and social behavior in a variety of physical activity settings.

PE.HS.2.3.a Exhibits etiquette, respect for others and teamwork while engaging in aquatic activities.

PE.HS.2.3.b Applies best practices for participating safely in and around aquatic activities (e.g., safe entry, walking on the deck, space awareness, lifejacket protocol).

PE.HS.3 Intermediate/Advanced Swimming

PE.HS.3.1 Demonstrates competency in motor skills and movement patterns needed to perform a variety of physical activities.

PE.HS.3.1.a Performs basic swimming strokes (e.g., sidestroke, elementary backstroke, front crawl, and backstroke).

PE.HS.3.1.b Executes in water skills (e.g., turns, flag count).

PE.HS.3.1.c Executes near-water skills (e.g., starts, board approach).

PE.HS.3.2 Applies knowledge of concepts, principles, tactics and strategies related to movement and performance to achieve and maintain a health enhancing level of physical activity and fitness.

PE.HS.3.2.a Participates in water recreation games and activities to enhance fitness (e.g., water aerobics/exercises, water volleyball, water polo, kayaking, paddle boarding, yoga, dance).

PE.HS.3.2.b Designs and implements personal workouts and fitness goals in an aquatic environment (e.g., warm up, workout, cool down, Frequency, Intensity, Type, and Time {FITT}).

PE.HS.3.2.c Analyzes the health benefits of self-selected aquatic activities (e.g., health-related components, disease prevention, heart rate, target heart rate zone).

PE.HS.3.3 Recognizes the benefits of physical activity and exhibits responsible personal and social behavior in a variety of physical activity settings.

PE.HS.3.3.a Exhibits etiquette, respect for others, and teamwork while engaging in aquatic activities.

PE.HS.3.3.b Employs effective self-management skills to analyze individual barriers and modify aquatic activity patterns as needed.

PE.HS.3.3.c Performs appropriate water safety skills (e.g., safe entry, lane etiquette, diving, space awareness, reach or throw, don’t go, flag count).

PE.HS.4 Fitness Swimming and Aquatic Activities

PE.HS.4.1 Demonstrates competency in motor skills and movement patterns needed to perform a variety of physical activities.

PE.HS.4.1.a Performs four competitive strokes (e.g., butterfly, backstroke, breaststroke, front crawl).

PE.HS.4.1.b Executes in water skills (e.g., turns, flag count, survival using clothing for flotation).

PE.HS.4.1.c Executes near water skills (e.g., starts, board approach with flight, sizing paddles).

PE.HS.4.1.d Applies movement concepts and principles (e.g., force, motion, rotation) to analyze and improve performance of self and/or others in selected aquatic skills.

PE.HS.4.2 Applies knowledge of concepts, principles, tactics and strategies related to movement and performance to achieve and maintain a health enhancing level of physical activity and fitness.

PE.HS.4.2.a Designs and implements a plan to improve performance and/or maintain a healthy and active lifestyle (e.g., workouts, fin & paddle use, water exercise courses in community).

PE.HS.4.3 Recognizes the benefits of physical activity and exhibits responsible personal and social behavior in a variety of physical activity settings.

PE.HS.4.3.a Exhibits etiquette, respect for others and teamwork while engaging in aquatic activities.

PE.HS.4.3.b Selects an appropriate level of challenge to experience success and desire to participate in a self-selected aquatic activity.

PE.HS.4.3.c Utilizes communication skills and implements strategies that promote team/group dynamics in aquatic environments.

PE.HS.5 Introduction to Strength and Conditioning

PE.HS.5.1 Demonstrates competency in motor skills and movement patterns needed to perform a variety of physical activities.

PE.HS.5.1.a Performs technique for beginning resistance training and/or free-weight exercises.

PE.HS.5.2 Applies knowledge of concepts, principles, tactics, and strategies related to movement and performance to achieve and maintain a health-enhancing level of physical activity and fitness.

PE.HS.5.2.a Identifies and implements components of an appropriate effective strength and conditioning program.

PE.HS.5.2.b Identifies and uses the major muscle groups in specific exercises.

PE.HS.5.2.c Applies the terminology associated with exercise and participation in beginning strength and conditioning activities.

PE.HS.5.2.d Analyzes the validity of claims made by commercial products and programs pertaining to strength and conditioning.

PE.HS.5.2.e Analyzes and applies technology and social media as tools for supporting a strength and conditioning program.

PE.HS.5.3 Recognizes the benefits of physical activity and exhibits responsible personal and social behavior in a variety of physical activity settings.

PE.HS.5.3.a Applies best practices for participating safely in beginning strength and conditioning exercises.

PE.HS.5.3.b Selects an appropriate level of challenge to experience success and desire to participate in beginning strength and conditioning environments.

PE.HS.5.3.c Exhibits etiquette, respect for others, and teamwork while engaging in beginning strength and conditioning environments.

PE. HS.6 Intermediate Strength and Conditioning

PE.HS.6.1 Demonstrates competency in motor skills and movement patterns needed to perform a variety of physical activities.

PE.HS.6.1.a Performs technique for intermediate resistance training and free-weight exercises.

PE.HS.6.2 Applies knowledge of concepts, principles, tactics, and strategies related to movement and performance to achieve and maintain a health-enhancing level of physical activity and fitness.

PE.HS.6.2.a Identifies and performs types of strength exercises (e.g., isometric, concentric, eccentric) for personal fitness (e.g., strength, endurance, range of motion).

PE.HS.6.2.b Identifies and performs types of stretching exercises (e.g., static, proprioceptive neuromuscular facilitation {PNF}, dynamic) for personal fitness (e.g., strength, endurance, range of motion).

PE.HS.6.2.c Designs a strength and conditioning program, including all components of health-related fitness as it relates to living a healthy and active adult lifestyle.

PE.HS.6.2.d Evaluates claims of commercial products and programs for strength and conditioning.

PE.HS.6.2.e Analyzes and applies technology and social media as tools for supporting a strength and conditioning program.

PE.HS.6.2.f Applies the terminology associated with exercise and participation in intermediate strength and conditioning programs.

PE.HS.6.3 Recognizes the benefits of physical activity and exhibits responsible personal and social behavior in a variety of physical activity settings.

PE.HS.6.3.a Applies best practices for participating safely in intermediate strength and conditioning exercises.

PE.HS.6.3.b Exhibits etiquette, respect for others, and teamwork while engaging in intermediate strength and conditioning environments.

PE.HS.6.3.c Employs effective self-management skills to analyze barriers and modify intermediate strength and conditioning activities as needed to meet individual needs.

PE.HS.7 Advanced Strength and Conditioning

PE.HS.7.1 Demonstrates competency in motor skills and movement patterns needed to perform a variety of physical activities.

PE.HS.7.1.a Performs technique for advanced resistance training and free-weight exercises.

PE.HS.7.2 Applies knowledge of concepts, principles, tactics, and strategies related to movement and performance to achieve and maintain a health-enhancing level of physical activity and fitness.

PE.HS.7.2.a Analyzes and improves performance of self and/or others in a strength and conditioning exercise using movement concepts and principles (e.g., force, motion, rotation).

PE.HS.7.2.b Designs and implements a personal strength and conditioning program that supports a healthy, active lifestyle.

PE.HS.7.2.c Selects and performs exercises that use the different energy systems (e.g., adenosine triphosphate and phosphocreatine, anaerobic glycolysis, aerobic).

PE.HS.7.2.d Applies basic knowledge of energy systems for improving physical fitness.

PE.HS.7.2.e Identifies the structure of skeletal muscle and fiber types as they relate to muscle development.

PE.HS.7.2.f Creates and maintains a strength and conditioning portfolio (e.g., assessment scores, goals for improvement, plan of activities for improvement, log of activities being done to reach goals, timeline for improvement).

PE.HS.7.2.g Analyzes and applies technology and social media as tools for supporting a strength and conditioning program.

PE.HS.7.2.h Applies the terminology associated with exercise and participation in advanced strength and conditioning programs.

PE.HS.7.3 Recognizes the benefits of physical activity and exhibits responsible personal and social behavior in a variety of physical activity settings.

PE.HS.7.3.a Applies best practices for participating safely in advanced strength and conditioning exercises.

PE.HS.7.3.b Exhibits etiquette, respect for others and teamwork while engaging in advanced strength and conditioning environments.

PE.HS.7.3.c Employs effective self-management skills to analyze barriers and modify advanced strength and conditioning activities as needed to meet individual needs.

PE.HS.8 Aerobic Training

PE.HS.8.1 Demonstrates competency in motor skills and movement patterns needed to perform a variety of physical activities.

PE.HS.8.1.a Performs multiple skills in a variety of different aerobic activities.

PE.HS.8.1.b Demonstrates the correct technique associated with a variety of different activities within aerobic training.

PE.HS.8.2 Applies knowledge of concepts, principles, tactics, and strategies related to movement and performance to achieve and maintain a health-enhancing level of physical activity and fitness.

PE.HS.8.2.a Identifies and applies the movement concepts and principles utilized for the improvement of performance.

PE.HS.8.2.b Identifies a variety of aerobic activities that can be pursued in the local environment in order to evaluate the benefits of each activity for future personal use.

PE.HS.8.2.c Isolates muscle groups that correspond with exercises performed.

PE.HS.8.2.d Utilizes appropriate terminology associated with aerobic activities.

PE.HS.8.2.e Researches the benefits of aerobic activity as it pertains to a healthy adult lifestyle.

PE.HS.8.2.f Evaluates the validity of commercial products and services focusing on aerobic activity and a healthy lifestyle.

PE.HS.8.2.g Identifies and utilizes technology tools and social media resources that are effective for instruction and enhancement of specific aerobic training.

PE.HS.8.3 Recognizes the benefits of physical activity and exhibits responsible personal and social behavior in a variety of physical activity settings.

PE.HS.8.3.a Exhibits etiquette, behavior, and respect for others while engaging in aerobic activity.

PE.HS.8.3.b Develops and maintains a portfolio including personal needs assessments, goal setting, and activity plans to improve and maintain aerobic fitness.

PE.HS.8.3.c Selects and performs multiple aerobic activities which provide enjoyment.

PE.HS.8.3.d Chooses and performs at an appropriate level of challenge to experience success and desire to participate in self-selected physical activity.

PE.HS.8.3.e Analyzes the health benefits of a self-selected physical activity within aerobic training.

PE.HS.8.3.f Differentiates between personal characteristics necessary to media portrayals of idealized body images and elite performance levels in relation to achieving and maintaining a healthy level of fitness.

PE.HS.9 Advanced Aerobic Training

PE.HS.9.1 Demonstrates competency in motor skills and movement patterns needed to perform a variety of physical activities.

PE.HS.9.1.a Performs multiple skills in a variety of aerobic activities.

PE.HS.9.1.b Executes multiple techniques in a variety of resistance training activities.

PE.HS.9.2 Applies knowledge of concepts, principles, tactics, and strategies related to movement and performance to achieve and maintain a health-enhancing level of physical activity and fitness.

PE.HS.9.2.a Applies terminology associated with aerobic activities and resistance training.

PE.HS.9.2.b Analyzes and improves performance of self and others utilizing movement concepts and principles.

PE.HS.9.2.c Researches the benefits of aerobic and resistance training activities as they relate to living a healthy, active adult lifestyle.

PE.HS.9.2.d Evaluates the validity of commercial products and programs pertaining to aerobic and resistance training activities.

PE.HS.9.2.e Applies technology and social media as tools for supporting a healthy, active lifestyle.

PE.HS.9.2.f Creates a plan, trains for, and participates in a community event.

PE.HS.9.3 Recognizes the benefits of physical activity and exhibits responsible personal and social behavior in a variety of physical activity settings.

PE.HS.9.3.a Exhibits etiquette, respect for others, and teamwork while engaging in aerobic and resistance activities.

PE.HS.9.3.b Analyzes the health benefits of a self-selected aerobic activity.

PE.HS.9.3.c Applies best practices for participating safely in aerobic and resistance training activities.

PE.HS.10 Introduction to Dance

PE.HS.10.1 Demonstrates competency in motor skills and movement patterns needed to perform a variety of physical activities.

PE.HS.10.1.a Executes technical skills in a variety of dance forms (e.g., ballet, modern, hip-hop, line, jazz, ballroom).

PE.HS.10.1.b Creates and performs dance phrases to communicate ideas, images, feelings, and experiences based on inspiration from a variety of sources (e.g., create and perform a dance phrase based on a favorite song, poem, art piece).

PE.HS.10.1.c Choreographs and performs a dance in collaboration with others.

PE.HS.10.2 Applies knowledge of concepts, principles, tactics and strategies related to movement and performance to achieve and maintain a health enhancing level of physical activity and fitness.

PE.HS.10.2.a Analyzes similarities and differences in various dance forms.

PE.HS.10.2.b Choreographs a dance in collaboration with others.

PE.HS.10.2.c Performs a dance individually or with others.

PE.HS.10.3 Recognizes the benefits of physical activity and exhibits responsible personal and social behavior in a variety of physical activity settings.

PE.HS.10.3.a Applies appropriate behavior and etiquette to create and perform a variety of dance forms.

PE.HS.10.3.b Selects and participates in dance that meets the need for self-expression and enjoyment.

PE.HS.10.3.c Identifies the opportunity for social support in dance.

PE.HS.11 Hip-Hop Dance

PE.HS.11.1 Demonstrates competency in motor skills and movement patterns needed to perform a variety of physical activities.

PE.HS.11.1.a Implements dance elements within hip-hop dance.

PE.HS.11.1.b Creates and performs a dance sequence that uses a variety of hip-hop dance elements to implement simple choreographic structures and principles to fulfill choreographic intent.

PE.HS.11.1.c Choreographs and performs a hip-hop dance.

PE.HS.11.2 Applies knowledge of concepts, principles, tactics, and strategies related to movement and performance to achieve and maintain a health-enhancing level of physical activity and fitness.

PE.HS.11.2.a Analyzes similarities and differences in various hip-hop dance forms.

PE.HS.11.2.b Applies dance terminology used to communicate in hip-hop dance.

PE.HS.11.2.c Choreographs a hip-hop dance in collaboration with others.

PE.HS.11.2.d Performs a hip-hop dance individually or with others.

PE.HS.11.2.e Identifies hip-hop dance opportunities that can be pursued in the local environment.

PE.HS.11.3 Recognizes the benefits of physical activity and exhibits responsible personal and social behavior in a variety of physical activity settings.

PE.HS.11.3.a Applies appropriate behavior and etiquette to create and perform hip-hop dance.

PE.HS.11.3.b Identifies the uniqueness of hip-hop dance as a means of self-expression.

PE.HS.11.3.c Selects and participates in hip-hop dance that meets the need for self-expression and enjoyment.

PE.HS.11.3.d Identifies the opportunity for social support in hip-hop dance.

PE.HS.12 Ballroom Dance

PE.HS.12.1 Demonstrates competency in motor skills and movement patterns needed to perform a variety of physical activities.

PE.HS.12.1.a Executes technical skills in ballroom dance forms used for cultural and social occasions.

PE.HS.12.1.b Creates and performs a dance sequence that uses a variety of ballroom dance elements to implement simple choreographic structures and principles to fulfill choreographic intent.

PE.HS.12.2 Applies knowledge of concepts, principles, tactics, and strategies related to movement and performance to achieve and maintain a health-enhancing level of physical activity and fitness.

PE.HS.12.2.a Analyzes similarities and differences in various ballroom dance forms.

PE.HS.12.2.b Applies dance terminology used to communicate in ballroom dance.

PE.HS.12.2.c Identifies examples of social and technical dance forms.

PE.HS.12.2.d Identifies ballroom dance opportunities that can be pursued in the local environment.

PE.HS.12.3 Recognizes the benefits of physical activity and exhibits responsible personal and social behavior in a variety of physical activity settings.

PE.HS.12.3.a Applies appropriate behavior and etiquette to create and perform ballroom dance.

PE.HS.12.3.b Identifies the uniqueness of ballroom dance as a means of self-expression.

PE.HS.12.3.c Selects and participates in ballroom dance that meets the need for self-expression and enjoyment.

PE.HS.12.3.d Identifies the opportunity for social support in ballroom dance.

PE.HS.13 Dance Performance

PE.HS.13.1 Demonstrates competency in motor skills and movement patterns needed to perform a variety of physical activities.

PE.HS.13.1.a Creates and performs a dance sequence that uses a variety of dance elements to implement simple choreographic structures.

PE.HS.13.1.b Improvises to create and perform choreography with others (e.g., create cohesive transitions between phrases).

PE.HS.13.1.c Performs a choreographed dance individually and/or with others.

PE.HS.13.2 Applies knowledge of concepts, principles, tactics, and strategies related to movement and performance to achieve and maintain a health-enhancing level of physical activity and fitness.

PE.HS.13.2.a Analyzes similarities and differences in various dance forms.

PE.HS.13.2.b Applies dance terminology to describe how elements of movement and choreographic structures are used to communicate ideas in dance (e.g., use written and verbal expression to analyze dance in response to dance observation, creation, and performance).

PE.HS.13.2.c Investigates dance opportunities that can be pursued in the local environment.

PE.HS.13.3 Recognizes the benefits of physical activity and exhibits responsible personal and social behavior in a variety of physical activity settings.

PE.HS.13.3.a Applies appropriate behavior and etiquette to choreograph and perform a variety of dance forms.

PE.HS.13.3.b Identifies the uniqueness of creative dance as a means of self-expression.

PE.HS.13.3.c Selects and participates in dance that meets the need for self-expression and enjoyment.

PE.HS.13.3.d Identifies the opportunity for social support in dance.

PE.HS.14 Lifetime Activities

PE.HS.14.1 Demonstrates competency in motor skills and movement patterns needed to perform a variety of physical activities.

PE.HS.14.1.a Performs and/or refines activity-specific movement skills in a variety of lifetime activities.

PE.HS.14.1.b Demonstrates competent skill performance of basic and advanced skills by scoring and preventing scoring as an individual/team within authentic settings of lifetime game activities.

PE.HS.14.2 Applies knowledge of concepts, principles, tactics, and strategies related to movement and performance to achieve and maintain a health-enhancing level of physical activity and fitness.

PE.HS.14.2.a Applies class activities to a personal fitness plan.

PE.HS.14.2.b Investigates the benefits of lifetime activities and how they contribute to achieving and maintaining a health-enhancing level of physical activity and fitness.

PE.HS.14.2.c Applies appropriate strategies in a variety of lifetime activities.

PE.HS.14.2.d Applies appropriate tactical decisions in a variety of lifetime activities.

PE.HS.14.2.e Applies the rules and understanding of the terminology in a variety of lifetime activities.

PE.HS.14.2.f Communicates with teammates using proper terminology in a variety of lifetime activities.

PE.HS.14.2.g Analyzes and applies technology and social media as tools for supporting lifetime activities as part of a healthy, active lifestyle.

PE.HS.14.2.h Identifies issues associated with performing lifetime activities in heat, humidity, and cold.

PE.HS.14.2.i Analyzes the benefits, social support network, and participation requirements of lifetime activities that can be pursued in the local environment.

PE.HS.14.2.j Evaluates risk and safety factors that might affect lifetime physical activity preferences throughout the life cycle.

PE.HS.14.2.k Applies stress management strategies (e.g., mental imagery, deep breathing, meditation) for successful participation in lifetime activities.

PE.HS.14.3 Recognizes the benefits of physical activity and exhibits responsible personal and social behavior in a variety of physical activity settings.

PE.HS.14.3.a Employs effective self-management skills to analyze barriers and modify physical activity patterns in lifetime activities.

PE.HS.14.3.b Recognizes and performs modifications to lifetime activities, game expectations or behaviors to accommodate individuals with lesser or greater skills or special needs.

PE.HS.14.3.c Exhibits etiquette, respect for others, and teamwork while engaging in lifetime activities.

PE.HS.14.3.d Selects and participates in lifetime activities that meet the need for self-expression and enjoyment.

PE.HS.14.3.e Exhibits good sportsmanship and plays within the rules in a variety of lifetime activities.

PE.HS.15 Team Games

PE.HS.15.1 Demonstrates competency in motor skills and movement patterns needed to perform a variety of physical activities.

PE.HS.15.1.a Performs a variety of activity/sports specific movement skills at a mature level.

PE.HS.15.1.b Demonstrates competent skill performance of basic and advanced skills by scoring and preventing scoring as a team within authentic settings of invasion games, net/wall games, and/or striking and fielding games.

PE.HS.15.1.c Performs a variety of specialized skills in health-related fitness activities.

PE.HS.15.2 Applies knowledge of concepts, principles, tactics, and strategies related to movement and performance to achieve and maintain a health-enhancing level of physical activity and fitness.

PE.HS.15.2.a Applies class activities to a personal fitness plan.

PE.HS.15.2.b Analyzes and applies technology and social media as tools for supporting team activities as part of a healthy and active adult lifestyle.

PE.HS.15.2.c Transfers knowledge of previously learned tactics and strategies to participate in similar and/or new team activities (e.g., games, sports, world games, innovative games).

PE.HS.15.2.d Creates strategies for successful participation in a variety of team activities.

PE HS.15.2.e Applies tactics to participate successfully in a variety of team activities.

PE.HS.15.2.f Applies knowledge of various team/player positions and their role(s) in the team game or activity.

PE.HS.15.2.g Applies the rules and understanding of terminology in a variety of team games.

PE.HS.15.2.h Communicates with teammates using proper terminology in a variety of team games.

PE.HS.15.2.i Adjusts physical activity level to keep heart rate in the target zone, using available technology (e.g., pedometer, heart rate monitor) to self-monitor aerobic intensity.

PE.HS.15.2.j Identifies issues associated with performing team games in heat, humidity, and cold.

PE.HS.15.2.k Applies stress-management strategies (e.g., mental imagery, deep breathing, meditation) for successful participation in team activities.

PE.HS.15.2.l Evaluates risk and safety factors that might affect team game activity preferences throughout the life cycle.

PE.HS.15.3 Recognizes the benefits of physical activity and exhibits responsible personal and social behavior in a variety of physical activity settings.

PE.HS.15.3.a Evaluates the barriers of team activities as it relates to living a healthy and active adult lifestyle.

PE.HS.15.3.b Recognizes and performs modifications to team activities, game expectations, or behaviors to accommodate individuals with lesser or greater skills or special needs.

PE.HS.15.3.c Utilizes communication skills and strategies to promote successful participation in team activities.

PE.HS.15.3.d Applies best practices for participating safely in team sports (e.g., injury prevention, proper alignment, hydration, use of equipment, implementation of rules, sun protection).

PE.HS.15.3.e Maintains appropriate demeanor throughout team games or activities (e.g., responding to winning or losing, accepting officials call, incidental physical contact, errors).

PE.HS.15.3.f Evaluates the opportunities for social interaction and social support provided by team activities.

PE.HS.16 Outdoor Pursuits

PE.HS.16.1 Demonstrates competency in motor skills and movement patterns needed to perform a variety of physical activities.

PE.HS.16.1.a Performs and/or refines activity specific skills in a variety of outdoor pursuits (e.g., kayaking, paddleboarding, fishing, geocaching, orienteering, camping, hiking, mountain biking, climbing, obstacle course, adventure activities, high elements).

PE.HS.16.2 Applies knowledge of concepts, principles, tactics, and strategies related to movement and performance to achieve and maintain a health-enhancing level of physical activity and fitness.

PE.HS.16.2.a Applies terminology associated with participation in selected outdoor pursuits.

PE.HS.16.2.b Explores and participates in outdoor activities that can be pursued in the local environment.

PE.HS.16.2 c. Recognizes and performs modifications to outdoor pursuits, activity expectations, and behaviors to accommodate individuals with lesser or greater skills or special needs.

PE.HS.16.2.d Applies rates of perceived exertion and pacing.

PE.HS.16.2.e Identifies issues associated with participating in outdoor pursuits in heat, humidity, and cold.

PE.HS.16.2.f Analyzes the benefits, social support network, and participation requirements of outdoor activities that can be pursued in the local environment.

PE.HS.16.2.g Evaluates risk and safety factors that might affect outdoor pursuits throughout the life cycle.

PE.HS.16.2.h Analyzes and applies technology and social media as tools for supporting outdoor activities as part of a healthy and active adult lifestyle.

PE.HS.16.2.i Creates a snack plan for before, during, and after participation in outdoor pursuits that address nutrition and hydration needs for each phase.

PE.HS.16.2.j Applies stress management strategies (e.g., mental imagery, deep breathing, meditation) for successful participation in outdoor pursuits.

PE.HS.16.3 Recognizes the benefits of physical activity and exhibits responsible personal and social behavior in a variety of physical activity settings.

PE.HS.16.3.a Applies best practices for participating safely in outdoor pursuits.

PE.HS.16.3.b Analyzes the health benefits of self-selected outdoor pursuits.

PE.HS.16.3.c Evaluates the opportunities for social interaction and social support provided by outdoor pursuits.

PE.HS.16.3.d Solves problems and thinks critically in outdoor pursuits, both as an individual and in groups.

PE.HS.16.3.e Evaluates the barriers of outdoor pursuits as they relate to living a healthy, active adult lifestyle.

PE.HS.16.3.f Selects and participates in outdoor pursuits that meet the need for self-expression and enjoyment.

PE.HS.17 Lifeguard Training & Water Safety Instruction Aide

PE.HS.17.1 Demonstrates competency in motor skills and movement patterns needed to perform a variety of physical activities.

PE.HS.17.1.a Performs all lifeguarding rescue skills as required by American Red Cross (e.g., entries and approaches, active rescues, passive rescues, reaching assist).

PE.HS.17.1.b Performs all CPR/First Aid/AED skills as required by American Red Cross (e.g., ventilations, one-rescuer CPR, two-rescuer CPR, conscious choking, AED, control external bleeding).

PE.HS.17.1.c Applies the terminology associated with Water Safety.

PE.HS.17.1.d Applies the terminology associated with lifeguard skills staged in rescue situations.

PE.HS.17.2 Applies knowledge of concepts, principles, tactics, and strategies related to movement and performance to achieve and maintain a health-enhancing level of physical activity and fitness.

PE.HS.17.2.a Evaluates risks and safety factors associated with aquatic activities in heat, humidity and cold (e.g., hydration, heat exhaustion, heat stroke, hypothermia, sun exposure).

PE.HS.17.2.b Evaluates risks and safety factors associated with aquatic environments.

PE.HS.17.2.c Applies best practices for participating safely in and around aquatic activities.

PE.HS.17.3 Recognizes the benefits of physical activity and exhibits responsible personal and social behavior in a variety of physical activity settings.

PE.HS.17.3.a Exhibits etiquette and respect for others while engaging in and around aquatic activity (e.g., customer service, instructing lessons).

PE.HS.17.3.b Utilizes communication skills and strategies that promote team/group dynamics (e.g., for patrons and team responses) in aquatic environments.

PE.HS.17.3.c Thinks critically and solves problems both as an individual and in groups in aquatic environments.

PE.HS.17.3.d Discusses the benefits of a physically active lifestyle as it relates to a career of lifeguarding.

PE.HS.18 Sport Officiating

PE.HS.18.1 Demonstrates competency in motor skills and movement patterns needed to perform a variety of physical activities.

PE.HS.18.1.a Applies officiating mechanics and positioning in a variety of sports (e.g., hand signals, motions, whistles, vocabulary).

PE.HS.18.1.b Demonstrates competency in rules and regulations in a variety of sports (e.g., making the right call).

PE.HS.18.1.c Identifies regulation court/field set up and equipment safety for a variety of sports (e.g., field checks).

PE.HS.18.1.d Applies appropriate terminology associated with each sport.

PE.HS.18.2 Applies knowledge of concepts, principles, tactics, and strategies related to movement and performance to achieve and maintain a health-enhancing level of physical activity and fitness.

PE.HS.18.2.a Designs and implements a plan to improve officiating performance.

PE.HS.18.2.b Evaluates risks and safety factors associated with exercising in heat, humidity, and cold (e.g., hydration, heat exhaustion, heat stroke, hypothermia, sun exposure).

PE.HS.18.2.c Applies stress management strategies (e.g., mental imagery, relaxation techniques, deep breathing, aerobic exercise, meditation).

PE.HS.18.3 Recognizes the benefits of physical activity and exhibits responsible personal and social behavior in a variety of physical activity settings.

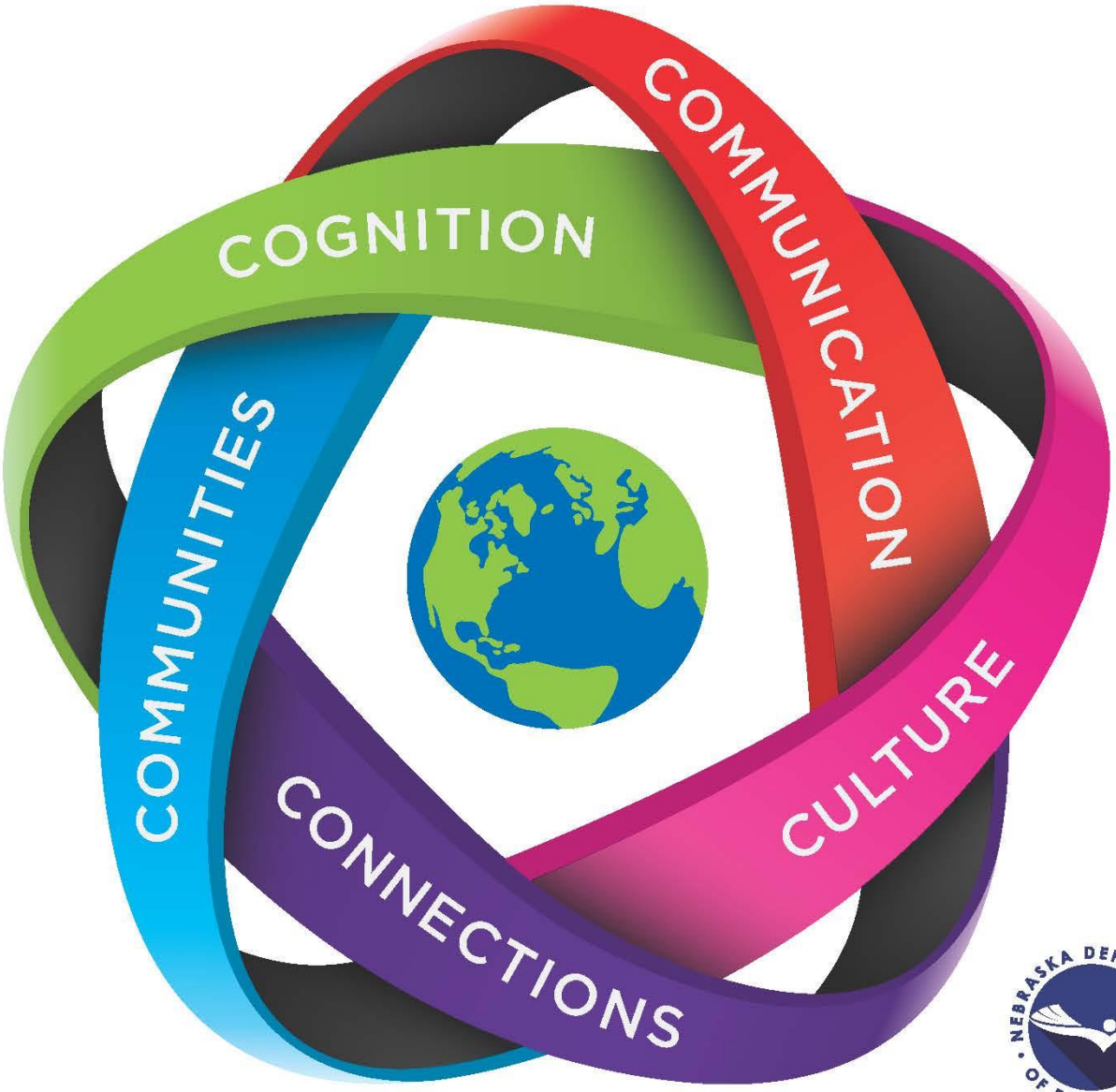
PE.HS.18.3.a Exhibits etiquette and respect for others while officiating (e.g., customer service, crowd control).

PE.HS.18.3.b Utilizes communication skills and strategies that promote team/group dynamics (e.g., crowd, participant, and team responses).

PE.HS.18.3.c Thinks critically and solves problems both as an individual and in groups.

PE.HS.18.3.d Explains the benefits of a physically active lifestyle as it relates to a career of officiating.

NEBRASKA WORLD LANGUAGE STANDARDS



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Introduction

Language and intercultural skills are critical in preparing our students to engage and thrive in the globally interconnected world in which we find ourselves. The ability to communicate with other nations and cultures is a matter of national security, economic growth, environmental sustainability, and social well-being.

In order to compete in the 21st century, Nebraska students must be able to communicate and interact effectively in at least one other language and culture. Life in our globally diverse society requires language and intercultural skills to work together with individuals from other cultures who speak other languages. Our state's economy strongly depends on international trade and businesses who require globally competent individuals who can communicate effectively to compete in a highly competitive global market. Issues of national security require highly qualified language speakers to negotiate and interact competently with other nations. Building social neighborhoods within our diverse communities are necessary to work together to provide a quality life for all.

The social and intercultural skills honed through the learning of another language, include collaborating, negotiating meaning, and mediating misunderstandings, are truly needed in a diverse, multilingual world where worldviews, cultural customs and traditions often clash. It is in world language classes that students access the manifestations of another culture, develop the ability to use language appropriately in social situations, and gain insights into others' perspectives and worldview. Research has found that learning another language, particularly at a young age, has significant cognitive benefits, such as increased memory function, critical thinking, and mind-mapping skills, creativity, and flexibility of mind. Studies have shown that students who are learning another language out-score their non-foreign language-learning peers in the verbal and math sections of standardized tests. By engaging in learning a world language, students build 21st century literacy skills essential for their future.

College readiness requires that students have the pre-requisite coursework for admission and the knowledge and skills to succeed in entry-level classes. Nebraska universities require world language learning for admission. To ensure successful post-secondary success and job-preparedness in gaining language and cultural proficiency, the Nebraska World Language Standards serve as guidelines for schools, teachers, students and other stakeholders to ensure that students' learning opportunities are standards and proficiency based.

The newly revised Nebraska World Language Standards are aligned with the *World Readiness Standards for Learning Languages* and were adapted specifically to assist Nebraska language programs, teachers and learners to establish criteria to optimize language and cultural proficiency for all learners.

Dr. Aleidine J. Moeller, Edith Greer Professor, University of Nebraska-Lincoln, President, American Council on the Teaching of Foreign Languages, 2018

Content Area Standards

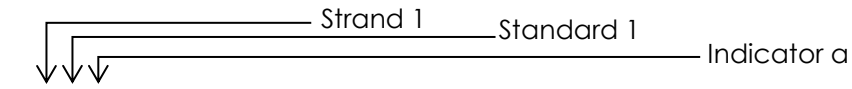
Nebraska Revised Statute 79-760.01 requires the Nebraska State Board of Education to "adopt measurable academic content standards for at least the grade levels required for statewide assessment" (Academic Content Standards, 2015). The statute specifies that those standards shall cover the subject areas of reading, writing, mathematics, science, and social studies, and, that the State Board of Education shall develop a plan to review and update standards for those subject areas every seven years. The revised statute is effective as of August 30, 2015. In addition to the content area standards required by statute, the Nebraska Department of Education (NDE) develops content area standards for Fine Arts, Physical Education, Health Education, and World Languages, as well as course-based content standards for Career and Technical Education. Although not required by law, the standards provide schools a framework for ensuring quality teaching and learning for all content areas offered in Nebraska schools.

The Nebraska World Language Standards describe the knowledge and skills that students should learn, but they do not prescribe particular curriculum, lessons, teaching techniques, or activities. These standards create a framework for teaching and learning, and they articulate a trajectory for knowledge acquisition across all grade levels. This ensures that student learning builds on prior knowledge and becomes more in-depth over time. Standards describe what students are expected to know and be able to do, while locally defined curriculum and instructional materials are used to help students master the standards.

Using the 2019 Standards

The overall structure of Nebraska's World Language Standards reflects the two-tier structure common across all Nebraska content area standards. The two levels include standards and indicators. Standards include broad, overarching content-based statements that describe the basic cognitive, affective, or psychomotor expectations of student learning. The standards are sorted by strands, which are essential components to world language learning. Indicators further describe what students must know and be able to do to at a specific level of language learning to meet the standard and provide guidance related to classroom instruction.

Reading the World Language Standards



WL1.1.a Novice Low

Strand: Students communicate effectively in a variety of situations for multiple purposes.

Standard: Students exchange information through interaction and negotiation of meaning.

Indicator: Participate in basic exchanges with isolated, high-frequency words, fragmented responses, or phrases.

Strands: The "Five C's" of World Language Learning

There are five strands or "essential components" of world language learning:

- **Communication**: Students communicate effectively in a variety of situations for multiple purposes.
- **Culture**: Students work with the language in a way that shows familiarity with and value for the cultures of the speakers of the language.
- **Connections**: Students use the language studied to reinforce and expand their knowledge, connecting language and cultural experiences to all content areas.
- **Communities**: Students can apply their world language skills to personal, community, and/or career experiences.
- **Cognition**: Students explain what they know and are able to monitor their own learning journey with support from their teachers.

Each of these strands is interwoven, existing in correlation with and dependent on the others. While these essential components, or strands, are presented distinctly, it is important to remember that they cannot be used independently. All must be present in any world language classroom.

Standards: The Expectations of World Language Learning

Each of the five strands contains several components that are long-term goals for learning. These broad, overarching content-based statements that describe the basic cognitive, affective expectations of students are standards. There are ten standards.

When a particular standard is not reflective of or responsive to an aspect of a specific language, accommodations can be made to create alternative expectations. Notations have been made after certain standards that may need special treatment in order to be applicable to specific language groups.

Indicators: Language Performance Expectations by Level

For each standard, there is an indicator that establishes the level of expectation appropriate for a given performance level. Indicators are not labeled by language courses. Course titles, such as "French Two", most often represent the level of progression in the district's world language curriculum and are often insufficient in describing the actual performance of students.

The Nebraska World Language Standards use three performance level indicators: novice, intermediate, and advanced. Each performance level indicator can be further divided into a low, mid, and high range. The definitions of novice, intermediate, and advanced are as follows:

DEFINITIONS OF PERFORMANCE LEVEL INDICATORS

Novice:

Novice students are beginning to use the language. Their performance is limited to words, phrases, and simple sentences on familiar or highly predictable topics. They may be difficult to understand. Novice listeners understand key words, true aural cognates, and formulaic expressions. Novice writers and speakers can use isolated words and phrases to identify typical cultural elements. They can use resources in the language to make connections to other content areas or to greater language communities by identifying predictable elements of a message, using cognates, and/or using extralinguistic supports. Novice learners identify and describe what they can do in language study using simple words and phrases.

Intermediate:

Intermediate students have gaps in knowledge but are able to use the language with an understanding of need and purpose. Intermediate listeners understand the main ideas and supporting details. Speakers can meet practical needs, ask and answer simple questions. Presenters can communicate information and express their own thoughts about familiar topics. Intermediate students can investigate, describe and compare their culture with those of the culture studied. These students can apply simple and concrete language to learning about other content areas and communicating within their greater language communities. They have created their own language goals and are able to articulate, if only in simple language, their personal language journey.

Advanced:

Advanced students are comfortable in using the language to provide details, to reflect, and to elaborate on both concrete and abstract information and ideas. Writers can write routine informal and some formal correspondence using major time frames, paraphrasing, and elaboration. Listeners can understand the main ideas and most details on variety of general interest topics. Readers understand a wide variety of texts characterized by one or more of the following: high level of abstraction, precision or uniqueness of vocabulary; density of information; cultural reference; or complexity of structure. Advanced students can use the language to navigate appropriately in various cultural settings within greater language communities. These students are able to analyze their language learning and to elaborate on their plans for the future.

Applying Performance Level Expectations for World Language Programming

As schools and districts move forward in establishing programming that aligns with the World Language Standards, they must first ask, "What is the ultimate expectation for language knowledge and skills at the completion of the world language program?" Once an ultimate goal has been determined, the school can dedicate the time and resources necessary to meet the goal. The critical factor to consider in this process is the level of language needed to negotiate successfully in life, careers, and academia.

Colleges and universities, and even individual departments within colleges and universities, have specific language entrance and graduation requirements. The average expectation is that incoming college freshmen will have had a minimum of two years of high school world language. This expectation, however, does not clarify the level of performance students should have. Colleges and universities usually conduct placement tests that allow students to enroll in their corresponding level of language study.

The ability to communicate in multiple languages has a proven economic value. Local, regional, national, and international markets are actively seeking employees who can respond to customers and negotiate agreements. In the graphic on the following page, The American Council on the Teaching of Foreign Languages shares a comparison of oral proficiency levels needed in the workplace in order to be career ready. Cashiers, sales clerks, and receptionists who wish to interact with clientele in a language other than English must be prepared to function at a level of Intermediate in the other language. A banking and investment customer service representative, medical interpreter, and human resource benefit specialist must be prepared to function at a level of Advanced.

Technical language, or language specific to a given profession or skill, is the ultimate preparation to apply language to careers or to community life. However, technical language classes require a strong foundation in the language and in the technical or career skill area.

Not to be disregarded, the ability to function bilingually also strongly affects one's quality of life. Language function dramatically increases cognitive function well into older age, Bilinguals have greater ability to see and understand nuances, to investigate actively, to use critical thinking, and to seek a more profound level of communication.

ORAL PROFICIENCY LEVELS IN THE WORKPLACE

ACTFL Level	ILR	Language Functions	Corresponding Professions/Positions*	Examples of Who Is Likely to Function at This Level
Distinguished	5 4	*Ability to tailor language to specific audience, persuade, negotiate. Deal with nuance and subtlety.*	Foreign Service: Diplomat, Contract Negotiator, International Specialist, Intelligence Specialist	• Highly articulate, professionally specialized native speakers • Language learners with extended (17 years) and current professional and/or educational experience in the target culture
Superior	3	*Discuss topics extensively, support opinions, hypothesize. Deal with linguistically unfamiliar situations.*	University Language Professor, Financial Services Marketing Consultant, Foreign Area Officer, Lawyer, Judge, Court Interpreter	• Well-educated native speakers • Educated language learners with extended professional and/or educational experience in the target language environment
Advanced High	2+	*Narrate and describe in past, present, and future. Deal effectively with an unanticipated complication.*	Physician, Human Resources Communications Consultant, Financial Services Senior Consultant, Quality Assurance Specialist, Marketing Manager, Financial Advisor, Broker, Military Linguist, Translation Officer	• Language learners with graduate degrees in language or a related area and extended educational experience in target environment
Advanced Mid			Banking and Investment Services Customer Service Representative, Fraud Specialist, Account Executive, Medical Interpreter, Patient Advocate, Court Stenographer, Court Interpreter, Human Resources Benefits Specialist, Technical Service Agent, Collections Representative, Estimating Coordinator	• Heritage speakers, informal learners, non-academic learners who have significant contact with language • Undergraduate majors with year-long study in the target language culture
Advanced Low	2		K–12 Language Teacher, Nurse, Social Worker, Claims Processor, Police Officer, Maintenance Administrator, Billing Clerk, Legal Secretary, Legal Receptionist, 911 Dispatcher, Consumer Products Customer Services Representative, Retail Services Personnel	• Undergraduate language majors
Intermediate High	1+	*Create with language, initiate, maintain, and bring to a close simple conversations by asking and responding to simple questions.*	Fire Fighter, Utilities Installer, Auto Inspector, Aviation Personnel, Missionary, Tour Guide	• Language learners following 6–8 year sequences of study (e.g., AP) or 4–6 semester college sequences
Intermediate Mid			Cashier, Sales Clerk (highly predictable contexts), Receptionist	
Intermediate Low	1			• Language learners following 4-year high school sequence or 2-semester college sequence • Language learners following an immersion language program in Grades K–6
Novice High	0+	*Communicate minimally with formulaic and rote utterances, lists, and phrases.*		• Language learners following content-based language program in Grades K–6
Novice Mid	0			• Language learners following 2 years of high school language study
Novice Low				

*The levels of proficiency associated with each of the positions above are minimal levels of oral proficiency based on task analyses. The minimal levels were determined by subject matter experts from companies and agencies who use ACTFL proficiency tests.

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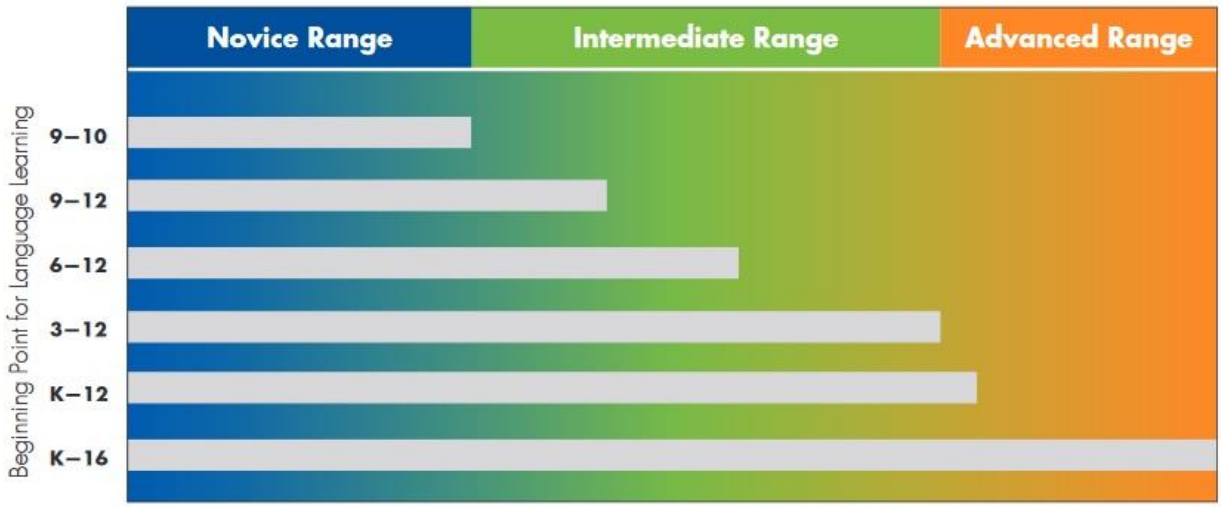
Once a district has determined an expectation for the ultimate level of language performance, programming needs will be considered. There is a definite correlation between the level of language expectation and the amount of time given to study and practice. The following model, provided by the American Council on the Teaching of Foreign Languages, shows how time is a critical component to developing language performance.



Source: "Figure 4: Time as a Critical Component for Developing Language Performance", ACTFL Performance Descriptors for Language Learners, 2012 Edition, Alexandria, VA: ACTFL, p. 6.

Students with twelve years of language study will be able to communicate information, express their thoughts, investigate, describe and elaborate on both concrete and abstract information and ideas. These students will find success using language daily in teaching, social services, medical careers, retail, and business.

In equipping students to be community volunteers, world travelers, entrepreneurs, and communicators, it is important to remember the correlation between time and ability. Essentially, a stronger investment in the duration and depth of a language program will result in higher and more useful levels of language performance.

Nebraska World Language Standards

Strand One: Communication (p. 10)
Students communicate effectively in a variety of situations for multiple purposes.

1.1 Students exchange information through interaction and negotiation of meaning.

1.2 Students understand, interpret, and analyze what is heard, read, or viewed on a variety of topics.

1.3 Students present ideas and information according to a variety of purposes and audiences.

Strand Two: Culture (p. 17)
Students work with the language in a way that shows familiarity with and value for the cultures of the speakers of the language.

2.1 Students use the language to observe and to discuss the relationship between the products, practices and perspectives of the cultures studied.

2.2 Students identify and apply culturally-appropriate language and behavior.

Strand Three: Connections (p. 20)
Students use the language studied to reinforce and expand their knowledge, connecting language and cultural experiences to all content areas.

3.1 Students apply the language of study to discuss other content areas of study.

Strand Four: Communities (p. 23)
Students can apply their world language skills to personal, community, and career experiences.

4.1 Students use knowledge and skills gained in the language to identify and create a personal education and/or career plan.

4.2 Students use digital tools in the language of study to further language study and/or to connect with a variety of backgrounds and cultures, engaging with them in ways that broaden mutual understanding and learning.

Strand Five: Cognition (p. 26)
Students explain what they know and are able to monitor their own learning journey with support from their teachers.

5.1 Students self-assess growth in language learning, practice, and understanding.

5.2 Students set language learning goals and organize priorities.

Strand One: Communication

Students communicate effectively in a variety of situations for multiple purposes.

Key point:

- Students should use language for a meaningful, communicative purpose.

Communication is the most elemental purpose of language learning. As simple as a child's first word or as complex as a discourse on the impacts of science and technology, communication is invariably tied to need, situation, purpose, and mode. These concepts are represented in later strands. Strand One focuses on the dexterity of manipulating the language and language structures in various modes of communication. The Modes of Communication are Interpersonal, Interpretive, and Presentational. The Interpersonal Mode represents negotiation of information among two or more parties. The Interpretive Mode requires an interpretation of meaning. The Presentational Mode refers to the creation of a message that others will have to interpret. All modes of communication might be conducted in written or oral format.

WL 1.1: **Students exchange information through interaction and negotiation of meaning.**

WL1.1.a Novice Low

Participate in basic exchanges with isolated, high-frequency words, fragmented responses, or phrases.

WL1.1.b Novice Mid

Participate in basic exchanges in structured contexts about familiar and predictable topics using high-frequency vocabulary and phrasing.

WL 1.1.c Novice High

Participate in basic exchanges by constructing simple questions and answers using familiar vocabulary and language structures.

WL 1.1.d Intermediate Low

Initiate, sustain, and conclude exchanges about familiar topics in structured settings and formats.

WL 1.1.e Intermediate Mid

Initiate, sustain, and conclude exchanges about familiar topics with focused structures in a series of connected sentences.

WL 1.1.f Intermediate High

Initiate, sustain, and conclude exchanges in a variety of situations on familiar topics by manipulating advanced vocabulary and language structures.

WL 1.1.g Advanced Low

Engage in unplanned exchanges and discussions on a variety of familiar and unfamiliar concrete topics.

WL 1.1.h Advanced Mid

Engage in unplanned, in-depth exchanges and discussions on a variety of concrete and abstract topics across all major time frames.

WL 1.1.i Advanced High

Engage in unplanned, in-depth exchanges by applying social and cultural norms on concrete and abstract topics, across all major time frames.

Specific Considerations for Ancient and Classical Languages (ACL):

The 2017 Standards for Classical Language Learning state, "There are philosophical differences that govern the various approaches to using interpersonal communications in the Latin classroom. Some teachers use interpersonal communication intermittently, some use it frequently, and some use it as the basis of the entire educational platform. There is growing evidence that the use of spoken Latin in the classroom facilitates student comprehension of the language, which facilitates reading it. Whichever approach a teacher uses will determine the ultimate level of proficiency that learners attain in the interpersonal mode."

Specific Considerations for Heritage Language/Native Speaker and Dual Language Courses:

Student diversity in experience and academic preparation can strongly impact any heritage language/native speaker classroom. Students who have extremely limited or no preparation in a heritage language may be considered second language learners and use these standards accordingly. However, students who have acquired a heritage language at home or who have academic experience in another language may be better served with standards that more closely align with first language acquisition. While it is not likely that any resource will exactly replicate the Nebraska World Language Standards, resources such as the WIDA Consortium's "Can Do Descriptors" may provide a richer expectation for heritage language study.

Comparison of Nebraska World Language Standards and WIDA's "Los Descriptores Podemos".

Nebraska World Language Standard 1.1: Students exchange information through interaction and negotiation of meaning. WIDA "Los Descriptores Podemos" Concrete Use of Language "Discutir" Descriptor: Dialogue and converse with others in order to jointly create knowledge and deepen understanding.
Nebraska WL1.1.a Novice Low Participate in basic exchanges with isolated, high-frequency words, fragmented responses, or phrases. WIDA "Podemos" (translated), Grade 1, Level 1 Discussion, Oral: Use drawings or other visual media to share or clarify ideas. Follow the rules of appropriate conversation (i.e.: listening attentively to others, speaking one at a time)
Nebraska WL1.1.d Intermediate Low Initiate, sustain, and conclude exchanges about familiar topics in structured settings and formats. WIDA "Podemos" (translated), Grade 6-8, Level 1 Discussion, Oral: Follow the appropriate rules of the context of discussion. (i.e.: taking turns). Prepare notes or written contributions.
Nebraska WL1.1.g Advanced Low Engage in unplanned exchanges and discussions on a variety of familiar and unfamiliar concrete topics. WIDA "Podemos" (translated), Grade 9-12, Level 1 Discussion, Oral: Prepare points or commentary in order to participate in the conversation. Use images or other supports to support your message or commentary.

Source: *Los Descriptores Podemos*. WIDA, 2016, *Los Descriptores Podemos*.

WL 1.2: **Students understand, interpret, and analyze what is heard, read, or viewed on a variety of topics.**

WL1.2.a Novice Low

Identify isolated words and phrases of messages containing high-frequency vocabulary, predictable language structures, and/or extra-linguistic support.

WL1.2.b Novice Mid

Identify elements of the explicit meaning of messages containing high-frequency vocabulary, predictable language structures, and/or extra-linguistic support.

WL 1.2.c Novice High

Identify the explicit meaning of messages containing high-frequency vocabulary, predictable language structures, and/or extra-linguistic support.

WL 1.2.d Intermediate Low

Comprehend the main idea and some supporting details of messages on familiar topics that contain familiar vocabulary and language structures.

WL 1.2.e Intermediate Mid

Comprehend the main idea and some supporting details of messages on familiar topics that contain contextualized or familiar vocabulary and language structures.

WL 1.2.f Intermediate High

Comprehend and summarize main idea and some supporting details of messages on familiar topics that may contain low-frequency vocabulary, complex language structures, and/or contextual clues.

WL 1.2.g Advanced Low

Analyze the implicit meaning literal meaning, and purpose of messages containing low-frequency vocabulary, complex language structures, and/or contextual clues.

WL 1.2.h Advanced Mid

Analyze the implicit meaning literal meaning, and purpose of messages containing contextualized interdisciplinary and/or unfamiliar vocabulary within complex language structures.

WL 1.2.i Advanced High

Analyze the implicit meaning literal meaning, and purpose of messages containing interdisciplinary and/or unfamiliar vocabulary within complex language structures.

Specific Considerations for Heritage Language/Native Speaker and Dual Language Courses:

Student diversity in experience and academic preparation can strongly impact any heritage language/native speaker classroom. Students who have extremely limited or no preparation in a heritage language may be considered second language learners and use these standards accordingly. However, students who have acquired a heritage language at home or who have academic experience in another language may be better served with standards that more closely align with first language acquisition. While it is not likely that any resource will exactly replicate the Nebraska World Language Standards, resources such as the WIDA Consortium's "Can Do Descriptors" may provide a richer expectation for heritage language study.

Comparison of Nebraska World Language Standards and WIDA's "Los Descriptores Podemos".

Nebraska World Language Standard 1.2: Students understand, interpret, and analyze what is heard, read, or viewed on a variety of topics WIDA "Los Descriptores Podemos" Concrete Use of Language "Relatar" Descriptor: Demonstrate knowledge and narrate experiences or events.
Nebraska WL1.2.a Novice Low Identify isolated words and phrases of messages containing high-frequency vocabulary, predictable language structures, and/or extra-linguistic support. WIDA "Podemos" (translated), Grade 1, Level 1 Relating, Listening: Identify words related to characters, animals or objects described orally. WIDA "Podemos" (translated), Grade 1, Level 1 Relating, Reading: Identify main characters. Recognize familiar or memorized language.
Nebraska WL1.2.d Intermediate Low Comprehend the main idea and some supporting details of messages on familiar topics that contain familiar vocabulary and language structures. WIDA "Podemos" (translated), Grade 6-8, Level 1 Relating, Listening: Identify familiar objects or places in oral presentations. WIDA "Podemos" (translated), Grade 1, Level 1 Relating, Reading: Identify principle ideas in short texts. Point out texts and posters in the classroom and school that are related to familiar stories.
Nebraska WL1.2.g Advanced Low Analyze the implicit meaning literal meaning, and purpose of messages containing low-frequency vocabulary, complex language structures, and/or contextual clues. WIDA "Podemos" (translated), Grade 9-12, Level 1 Relating, Listening: Match common and technical words and expressions with images, photos, and graphics. Identify texts, resources, products or named figures from oral presentations. WIDA "Podemos" (translated), Grade 9-12, Level 1 Relating, Reading: Highlight descriptive words and expressions in short statements. Identify formatting components in order to locate information.

Source: *Los Descriptores Podemos*. WIDA, 2016, *Los Descriptores Podemos*.

WL 1.3: **Students present ideas and information according to a variety of purposes and audiences.**

WL1.3.a Novice Low

Present information on familiar and everyday topics using isolated, high-frequency words and phrases in highly structured contexts.

WL1.3.b Novice Mid

Present information on familiar and predictable topics using high-frequency vocabulary and phrases in structured contexts.

WL 1.3.c Novice High

Present information on familiar and everyday topics using simple sentences in structured contexts.

WL 1.3.d Intermediate Low

Express personal meaning by combining and recombining familiar vocabulary and language structures in short statements and discrete sentences.

WL 1.3.e Intermediate Mid

Express personal meaning on familiar topics by creating combinations of language and structure specific to purpose and audience.

WL 1.3.f Intermediate High

Express personal meaning on familiar and unfamiliar topics using known language to compensate for higher vocabulary.

WL 1.3.g Advanced Low

Create and deliver information on familiar and unfamiliar topics, using descriptive vocabulary and organized ideas across various time frames.

WL 1.3.h Advanced Mid

Create and deliver information on familiar and unfamiliar topics, using focused or context-specific vocabulary and organized and detailed ideas across most major time frames.

WL 1.3.i Advanced High

Create and deliver information on familiar and unfamiliar topics, elaborating and clarifying detailed and organized ideas.

Specific Considerations for Ancient and Classical Languages (ACL):

The 2017 Standards for Classical Language Learning state, "The presentational mode focuses on the creation of messages to inform, to tell a story, to give an explanation, or to persuade…Communication in the presentational mode may include writing, speaking, or a combination of one of these with visual communication."

Specific Considerations for Heritage Language/Native Speaker and Dual Language Courses: Student diversity in experience and academic preparation can strongly impact any heritage language/native speaker classroom. Students who have extremely limited or no preparation in a heritage language may be considered second language learners and use these standards accordingly. However, students who have acquired a heritage language at home or who have academic experience in another language may be better served with standards that more closely align with first language acquisition. While it is not likely that any resource will exactly replicate the Nebraska World Language Standards, resources such as the WIDA Consortium's "Can Do Descriptors" may provide a richer expectation for heritage language study.

Comparison of Nebraska World Language Standards and WIDA's "Los Descriptores Podemos".

Nebraska World Language Standard 1.3: Students present ideas and information according to a variety of purposes and audiences. WIDA "Los Descriptores Podemos" Concrete Use of Language "Relatar" Descriptor: Demonstrate knowledge and narrate experiences or events.
Nebraska WL1.3.a Novice Low Present information on familiar and everyday topics using isolated, high-frequency words and phrases in highly structured contexts. WIDA "Podemos" (translated), Grade 1, Level 1 Relating, Speaking: Name words that represent familiar objects. Repeat short, typical phrases in oral narrations. WIDA "Podemos" (translated), Grade 1, Level 1 Relating, Writing: Draw and tag academic events or situations. Tag story scenes using key words.
Nebraska WL1.3.d Intermediate Low Express personal meaning by combining and recombining familiar vocabulary and language structures in short statements and discrete sentences. WIDA "Podemos" (translated), Grade 6-8, Level 1 Relating, Speaking: Name school and community events using visual supports. Respond to simple, closed questions relating to familiar topics. WIDA "Podemos" (translated), Grade 1, Level 1 Relating, Writing: Reproduce words and brief phrases related to familiar topics. Tag photos and illustrations that represent ideas studied in class.
Nebraska WL1.3.g Advanced Low Create and deliver information on familiar and unfamiliar topics, using descriptive vocabulary and organized ideas across various time frames. WIDA "Podemos" (translated), Grade 9-12, Level 1 Explaining, Speaking: Use technical vocabulary to explain processes, cycles, or phenomena. WIDA "Podemos" (translated), Grade 9-12, Level 1 Explaining, Writing: Describe photos, illustrations, and models using technical vocabulary. Explain historical events or events in sequence.

Source: *Los Descriptores Podemos*. WIDA, 2016, *Los Descriptores Podemos*.

Strand Two: Culture

Students work with the language in a way that shows familiarity with and value for the cultures of the speakers of the language.

Key points:

- The culture of the target language is fundamental to all language instruction and can be taught through implicit instruction as well as explicit instruction.
- Elements of culture can, and should be, taught in the target language whenever appropriate and feasible.
- Learners must have insight into cultural perspectives, and the ability to behave appropriately in a variety of cultural contexts, in order to be effective communicators.

Interculturality is the ability to understand the underlying histories, values, attitudes, beliefs, practices, and views that affect communication and understanding among people. It is the essence of 'it's not what was said; but how it was said'. Strand Two illustrates that true language proficiency requires an awareness of and familiarity with the connotations, social cues, and perceptions associated with language in order to communicate the desired message. Intercultural competence often results in empathy, closer introspection, greater self-awareness, and active listening.

WL 2.1: **Students use the language to observe and to discuss the relationship between the products, practices and perspectives of the cultures studied.**

WL2.1.a Novice Low

Identify and describe products, practices and perspectives using isolated words and phrases.

WL2.1.b Novice Mid

Identify products, practices, and perspectives using high-frequency vocabulary and phrases.

WL 2.1.c Novice High

Identify and describe products, practices, and perspectives using simple sentences in structured contexts.

WL 2.1.d Intermediate Low

Investigate, compare, and provide insight into products, practices, and perspectives using familiar vocabulary and limited language structures.

WL 2.1.e Intermediate Mid

Investigate and compare products, practices, and perspectives using familiar vocabulary and creating combinations of limited and advanced language structures.

WL 2.1.f Intermediate High

Investigate and compare products, practices, and perspectives using advanced language structures and known language to compensate for unfamiliar vocabulary.

WL 2.1.g Advanced Low

Analyze the products, practices and perspectives of various groups using descriptive vocabulary and organized ideas.

WL 2.1.h Advanced Mid

Analyze and explain the products, practices and perspectives of various groups using focused or context-specific vocabulary and organized and detailed ideas.

WL 2.1.i Advanced High

Analyze and explain the products, practices and perspectives of various groups using interdisciplinary and/or unfamiliar vocabulary within complex language structures.

Specific Considerations for Ancient and Classical Languages (ACL):

Although many common products have been lost to historical record, it may be possible to investigate historical artifacts. Possible products include: clothing, jewelry, dwellings, sports, literature, artwork, tools, pottery. Products may be discoverable through ancient artwork, ruins, or other artefacts.

WL 2.2: **Students identify and apply culturally-appropriate language and behavior.**

WL2.2.a Novice Low

Identify expressions unique to the cultures studied.

WL2.2.b Novice Mid

Identify and react with simple expressions and idioms unique to the languages and cultures studied.

WL 2.2.c Novice High

Identify and respond with culturally appropriate simple expressions in everyday situations in structured or highly predictable situations.

WL 2.2.d Intermediate Low

Interact with culturally appropriate learned behaviors, familiar vocabulary, and limited language structures appropriate to the social context in everyday or common scenarios.

WL 2.2.e Intermediate Mid

Interact with culturally appropriate learned behaviors, familiar vocabulary and combinations of limited and advanced language structures.

WL 2.2.f Intermediate High

Interact with culturally appropriate learned behaviors, advanced language structures and known language to compensate for unfamiliar vocabulary.

WL 2.2.g Advanced Low

Participate in intercultural situations that require the appropriate application of vocabulary, politeness or style in a given situation using familiar language.

WL 2.2.h Advanced Mid

Participate in intercultural situations that require the appropriate application of vocabulary, politeness or style in a given situation using both familiar and unfamiliar language.

WL 2.2.i Advanced High

Participate appropriately and effectively in intercultural situations that require the appropriate application of vocabulary, register, courtesy or style in any given situation.

Specific Considerations for Ancient and Classical Languages (ACL):

Daily life, idioms, and regional variations in the language may not have been recorded or may not be available to allow students to interact with these elements today. ACL educators are encouraged to present and discuss what unique expressions, idioms, and cultural language points are available.

Strand Three: Connections

Students use the language studied to reinforce and expand their knowledge, connecting language and cultural experiences to all content areas.

Key Points:

- Scaffolding and structure support the use of appropriately chosen authentic materials.
- Using authentic materials contextualizes the language, expands lexicon through production, and validates the learning of the language and the learning of the content.

Languages bring the power to communicate a message to an exponentially larger audience. Languages are a mechanism that support access to resources, opportunities, and careers. In making connections to other content areas, students will expand vocabulary, contextualize the language, and begin to seek out a pathway to personalized language learning. Strand One and Strand Two are about the finesse and use of language. Strand Three and Strand Four are about the purpose of language study: to make connections, and to apply the skills students have learned.

WL 3.1: **Students apply the language of study to discuss other content areas of study.**

WL3.1.a Novice Low

Apply isolated words and phrases to accomplish tasks or show understanding of concepts in other content areas and/or situations beyond the classroom.

WL3.1.b Novice Mid

Apply high-frequency vocabulary and predictable language structures to accomplish tasks or show understanding of concepts in other content areas and/or situations beyond the classroom.

WL 3.1.c Novice High

Apply familiar vocabulary and simple sentences to accomplish tasks or show understanding of concepts in other content areas and/or situations beyond the classroom.

WL 3.1.d Intermediate Low

Describe familiar concepts and tasks from other content areas and/or situations beyond the classroom using familiar vocabulary and language structures in short, connected sentences.

WL 3.1.e Intermediate Mid

Describe familiar concepts and tasks from other content areas and/or situations beyond the classroom by creating combinations of limited and higher-level language structures in short, connected sentences.

WL 3.1.f Intermediate High

Describe familiar concepts and tasks from other content areas and/or situations beyond the classroom using higher-level language structures and known language to compensate for unfamiliar vocabulary.

WL 3.1.g Advanced Low

Synthesize concepts and engage in tasks from other content areas and/or situations beyond the classroom using low-frequency vocabulary, higher-level language structures, and various time frames.

WL 3.1.h Advanced Mid

Synthesize concepts and engage in tasks from other content areas and/or situations beyond the classroom using interdisciplinary and/or unfamiliar vocabulary with higher-level language structures and various time frames.

WL 3.1.i Advanced High

Synthesize concepts and engage in tasks from other content areas and/or situations beyond the classroom using interdisciplinary and/or unfamiliar vocabulary with advanced language structures and various time frames.

Specific Considerations for Heritage Language/Native Speaker and Dual Language Courses:

Student diversity in experience and academic preparation can strongly impact any heritage language/native speaker classroom. Students who have extremely limited or no preparation in a heritage language may be considered second language learners and use these standards accordingly. However, students who have acquired a heritage language at home or who have

academic experience in another language may be better served with standards that more closely align with first language acquisition. While it is not likely that any resource will exactly replicate the Nebraska World Language Standards, resources such as the WIDA Consortium's "Can Do Descriptors" or "Spanish Language Development Standards" may provide a richer expectation for heritage language study.

Nebraska WL 3.1: Students apply the language of study to discuss other content areas of study. → WIDA Spanish Language Development Standards ↓	WL3.1.a Novice Low Apply isolated words and phrases to accomplish tasks or show understanding of concepts in other content areas and/or situations beyond the classroom. WL 3.1.i Advanced High Synthesize concepts and engage in tasks from other content areas and/or situations beyond the classroom using interdisciplinary and/or unfamiliar vocabulary with advanced language structures and various time frames.
Standard 1: Social and Instructional Language Emergent bilinguals communicate for social and instructional purposes within the school setting	Grade 1, Level 1 Follow oral instructions using modeling and sensory supports and partner engagement. Grade 11-12, Level 1 Sort information found in illustrated texts with a partner using graphic organizers and following a model.
Standard 2 – The Language of Language Arts Emergent bilinguals communicate information, ideas and concepts necessary for academic success in the content area of language arts	Grade 1, Level 1 Describe the use of syntactic aspects using sentence schemas, word banks, and with support from L1. Grade 11-12, Level 1 Create a graphic legend using literary resources and continuing to use interactive models and supports, including L1 and L2.
Standard 3 – The Language of Mathematics Emergent bilinguals communicate information, ideas and concepts necessary for academic success in the content area of mathematics	Grade 1, Level 1 Identify strategies according to the information graphic texts using sensory supports and L1. Grade 11-12, Level 1 Label the steps to solve quadratic equations using banks of illustrated words.
Standard 4 – The Language of Science Emergent bilinguals communicate information, ideas and concepts necessary for academic success in the content area of science	Grade 1, Level 1 Draw and label illustrations of observations of experiments using Banks of illustrated words. Grade 11-12, Level 1 Identify the effects of the pollutants presented in an oral discourse and in banks of illustrated words to complete a scheme.
Standard 5 – The Language of Social Studies Emergent bilinguals communicate information, ideas and concepts necessary for academic success in the content area of social studies	Grade 1, Level 1 Name an advantage of the use of means of transport using audio-visual aids, models, banks of illustrated words and L1 if necessary. Grade 11-12, Level 1 Name the advantages and disadvantages of economic systems using sentence frames and word banks in L1 and L2.

Source: *WIDA Spanish Language Development Standards*. WIDA, 2013, *The Spanish Language Development Standards*

Strand Four: Communities

Students can apply their world language skills to personal, community, and career experiences.

Key Points:

- Providing a connection to world languages outside of the school setting is critical to student motivation and engagement.
- Community involvement builds empathy, respect for diversity, and self-awareness.
- When there is an awareness of the world, it is far easier to find one's place within it.

Our global world and impact continue to expand. Language skills bring global connections closer to home, allowing students to connect across the world or at the market on the corner. Strand Four emphasizes participation in multilingual communities around us. With another language, students can be aware of the world and their role within it, have an understanding of community needs and concerns, and be able to take responsibility for their development as a member of their community.

WL 4.1: **Students use knowledge and skills gained in the language to identify and create a personal education and/or career plan.**

WL4.1.a Novice Low

Identify college and career options that incorporate the language studied using isolated words and phrases.

WL4.1.b Novice Mid

Identify college and career options that incorporate the language studied using high-frequency vocabulary and predictable language structures.

WL 4.1.c Novice High

Identify college and career options that incorporate the language studied using familiar vocabulary and simple sentences.

WL 4.1.d Intermediate Low

Relate, evaluate and summarize personal interests, skills, and values using familiar vocabulary and language structures in short, connected sentences.

WL 4.1.e Intermediate Mid

Relate and describe careers that align with personal skills and interests by creating combinations of limited and higher-level language structures in short, connected sentences.

WL 4.1.f Intermediate High

Relate training, education, and/or certification requirements for careers of interest using higher-level language structures and known language to compensate for unfamiliar vocabulary.

WL 4.1.g Advanced Low

Develop and list educational and career connections to a personal plan of language learning using low-frequency vocabulary and higher-level language structures.

WL 4.1.h Advanced Mid

Develop and describe educational and career connections to a personal plan of language learning that aligns with personal skills and interests using interdisciplinary and/or unfamiliar vocabulary with higher-level language structures.

WL 4.1.i Advanced High

Develop and appraise educational and career connections to a personal plan of language learning that aligns with personal skills and interests using interdisciplinary and/or unfamiliar vocabulary with advanced language structures.

WL 4.2: **Students use digital tools in the language of study to further language study and/or to connect with a variety of backgrounds and cultures, engaging with them in ways that broaden mutual understanding and learning.**

WL4.2.a Novice Low

Use digital tools to select, categorize, and paraphrase information that tends to use isolated, high-frequency words and/or phrases and extra-linguistic supports.

WL4.2.b Novice Mid

Use digital tools to select, categorize, and paraphrase information that tends to use high-frequency words and phrases in structured contexts.

WL 4.2.c Novice High

Use digital tools to select, categorize, and paraphrase information that tends to use simple sentences in structured formats on familiar or highly contextualized topics.

WL 4.2.d Intermediate Low

Use digital tools to comment, organize, and compare information in a way that expresses personal meaning using combinations of familiar vocabulary and language structures in short statements.

WL 4.2.e Intermediate Mid

Use digital tools to comment, organize, and compare information in a way that expresses personal meaning using combinations of familiar vocabulary and language structures in connected sentences.

WL 4.2.f Intermediate High

Use digital tools to comment, organize, and compare information in a way that expresses personal meaning using known language to compensate for higher vocabulary.

WL 4.2.g Advanced Low

Use digital tools to design solutions, synthesize information, and moderate information in a way that requires an understanding of literal and implicit meaning, low-frequency vocabulary, complex language structures, and/or contextual clues.

WL 4.2.h Advanced Mid

Use digital tools to design solutions, synthesize information, and moderate information in a way that requires an understanding of literal and implicit meaning, contextualized interdisciplinary and/or unfamiliar vocabulary, and complex language structures.

WL 4.2.i Advanced High

Use digital tools to design solutions, synthesize information, and moderate information in a way that requires an understanding of literal and implicit meaning, interdisciplinary and/or unfamiliar vocabulary, and complex language structures.

Strand Five: Cognition

Students explain what they know and are able to monitor their own learning journey with support from their teachers.

Key Points:

- Learning is a partnership between the student and the teacher.
- Learning to learn establishes processes and connections that more efficiently route information to its destination.
- Using the language of study to define expectations, discuss language acquisition, and to set learning goals increases the ability to place language in context.
- Taking an active role in planning for language study propels students to higher levels of proficiency.

First language learning and acquisition is a process that begins in infancy and lasts a lifetime. Second language learning and acquisition is both similar and more dynamic than first language learning. Language learning is the natural absorption of language that is firmly rooted in situational and contextual surroundings. Infants come to associate "mama", "papa", and "bottle" with things that they need. Language acquisition is a formalized study of language and its functions. It will be years before those same children understand "nouns" and can manipulate them in sentences. Strand Five serves to help educators and students remember that language learning and acquisition is a process. By learning the cognition of language study, students will be better able to engage in and take responsibility for their own learning.

WL 5.1: **Students self-assess growth in language learning, practice, and understanding.**

WL5.1.a Novice Low

Use isolated words, phrasing, or images to identify what concepts, skills, or information have been learned.

WL5.1.b Novice Mid

Use simple words or phrasing to identify what concepts, skills, or information have been learned.

WL 5.1.c Novice High

Use simple sentences or structures to identify and describe what concepts, skills, or information have been learned.

WL 5.1.d Intermediate Low

Reflect on how personal learning, practice, and understanding are evident.

WL 5.1.e Intermediate Mid

Reflect on how personal learning, practice, and understanding are evident and how learning might be improved.

WL 5.1.f Intermediate High

Reflect on personal learning, practice, and understanding in response to pre-determined goals, outcomes, or expectations.

WL 5.1.g Advanced Low

Analyze how personal learning, practice, and understanding have developed over time.

WL 5.1.h Advanced Mid

Analyze how personal learning, practice, and understanding have, or have not, prepared for future growth.

WL 5.1.i Advanced High

Analyze how personal learning, practice, and understanding can be sustained for future growth.

WL 5.2: **Students set language learning goals and organize priorities.**

WL5.2.a Novice Low

Identify what concepts, skills, or information are desired using isolated words, phrasing, or images.

WL5.2.b Novice Mid

Identify what concepts, skills, or information are desired using simple words or phrasing.

WL 5.2.c Novice High

Identify and describe what concepts, skills, or information are desired using simple sentences or guided models.

WL 5.2.d Intermediate Low

Create simple, short-term goal statements in response to units of study or other focused needs.

WL 5.2.e Intermediate Mid

Create simple, measurable, attainable, relevant, and timely goals using guided models in response to units of study or other focused needs.

WL 5.2.f Intermediate High

Create simple, measurable, attainable, relevant, and timely goals that are supported by explanation and are in response to units of study or other focused needs.

WL 5.2.g Advanced Low

Produce long-term measurable, attainable, relevant, timely goals that reflect personal interest and future plans.

WL 5.2.h Advanced Mid

Produce long-term measurable, attainable, relevant, timely goals with detailed steps that support the achievement of the goals.

WL 5.2.i Advanced High

Produce, explain, and analyze the success of long-term measurable, attainable, relevant, timely goals that reflect personal interest and future plans.

Summary of World Language Strands and Standards

The World Language Standards represent all languages, for all learners, at all levels. Although each language group has distinct linguistic components, these standards are meant to provide direction in the kinds of skills that students should accomplish at a particular level. When a particular standard is not reflective of or responsive to an aspect of a specific language, accommodations can be made to create alternative expectations.

Students communicate effectively in a variety of situations for multiple purposes.

- 1.1 Students exchange information through interaction and negotiation of meaning.
- 1.2 Students understand, interpret, and analyze what is heard, read, or viewed on a variety of topics.
- 1.3 Students present ideas and information according to a variety of purposes and audiences.

Students work with the language in a way that shows familiarity with and value for the cultures of the speakers of the language.

- 2.1 Students use the language to observe and to discuss the relationship between the products, practices and perspectives of the cultures studied.
- 2.2 Students identify and apply culturally-appropriate language and behavior.

Students use the language studied to reinforce and expand their knowledge, connecting language and cultural experiences to all content areas.

- 3.1 Students apply the language of study to discuss other content areas of study.

Students can apply their world language skills to personal, community, and career experiences.

- 4.1 Students use knowledge and skills gained in the language to identify and create a personal education and/or career plan.
- 4.2 Students use digital tools in the language of study to further language study and/or to connect with a variety of backgrounds and cultures, engaging with them in ways that broaden mutual understanding and learning.

Students explain what they know and are able to monitor their own learning journey with support from their teachers.

- 5.1 Students self-assess growth in language learning, practice, and understanding.
- 5.2 Students set language learning goals and organize priorities.

AMERICAN SCHOOL COUNSELOR ASSOCIATION

ASCA School Counselor Competencies

The ASCA School Counselor Competencies outline the knowledge, abilities, skills and attitudes that ensure school counselors are equipped to meet the rigorous demands of the profession and the needs of pre-K–12 students. These competencies help ensure new and experienced school counselors are equipped to establish, maintain and enhance a comprehensive school counseling program addressing academic achievement, career planning and personal/social development.

Organized around and consistent with "The ASCA National Model: A Framework for School Counseling Programs (Third Edition)," the competencies can be used in a variety of ways including:

School counselors
- Self-assess their own competencies
- Formulate an appropriate professional development plan

School administrators
- Guide the recruitment and selection of competent school counselors
- Develop or inform meaningful school counselor performance evaluation

School counselor education programs
- Establish benchmarks for ensuring school education students graduate with the knowledge, skills and attitudes needed for developing comprehensive school counseling programs.

I. SCHOOL COUNSELING PROGRAMS

School counselors should possess the knowledge, abilities, skills and attitudes necessary to plan, organize, implement and evaluate a comprehensive, developmental, results-based school counseling program that aligns with the ASCA National Model.

I-A: Knowledge

ASCA's position statement, The Professional School Counselor and School Counseling Preparation Programs, states that school counselors should articulate and demonstrate an understanding of:

☐ I-A-1. The organizational structure and governance of the American educational system as well as cultural, political and social influences on current educational practices

☐ I-A-2. The organizational structure and components of an effective school counseling program that aligns with the ASCA National Model

☐ I-A-3. Barriers to student learning and use of advocacy and data-driven school counseling practices to close the achievement/opportunity gap

☐ I-A-4. Leadership principles and theories
☐ I-A-5. Individual counseling, group counseling and classroom instruction ensuring equitable access to resources promoting academic achievement, career development and personal/social development for every student
☐ I-A-6. Collaborations with stakeholders such as parents and guardians, teachers, administrators and community leaders to create learning environments that promote educational equity and success for every student
☐ I-A-7. Legal, ethical and professional issues in pre-K–12 schools
☐ I-A-8. Developmental theory, learning theories, social justice theory, multiculturalism, counseling theories and career counseling theories
☐ I-A-9. The continuum of mental health services, including prevention and intervention strategies to enhance student success

I-B: Abilities and Skills

An effective school counselor is able to accomplish measurable objectives demonstrating the following abilities and skills.

☐ I-B-1. Plans, organizes, implements and evaluates a school counseling program aligning with the ASCA National Model
☐ I-B-1a. Creates a vision statement examining the professional and personal competencies and qualities a school counselor should possess
☐ I-B-1b. Describes the rationale for a comprehensive school counseling program
☐ I-B-1c. Applies the school counseling themes of leadership, advocacy, collaboration and systemic change, which are critical to a successful school counseling program
☐ I-B-1d. Describes, defines and identifies the qualities of an effective school counseling program
☐ I-B-1e. Describes the benefits of a comprehensive school counseling program for all stakeholders, including students, parents, teachers, administrators, school boards, department of education, school counselors, counselor educators, community stakeholders and business leaders
☐ I-B-1f. Describes the history of school counseling to create a context for the current state of the profession and comprehensive school counseling programs
☐ I-B-1g. Uses technology effectively and efficiently to plan, organize, implement and evaluate the comprehensive school counseling program
☐ I-B-1h. Demonstrates multicultural, ethical and professional competencies in planning, organizing, implementing and evaluating the comprehensive school counseling program

☐ I-B-2. Serves as a leader in the school and community to promote and support student success
☐ I-B-2a. Understands and defines leadership and its role in comprehensive school counseling programs
☐ I-B-2b. Identifies and applies a model of leadership to a comprehensive school counseling program
☐ I-B-2c. Identifies and demonstrates professional and personal qualities and skills of effective leaders
☐ I-B-2d. Identifies and applies components of the ASCA National Model requiring leadership, such as an advisory council, management tools and accountability
☐ I-B-2e. Creates a plan to challenge the non-counseling tasks that are assigned to school counselors

☐ I-B-3. Advocates for student success
☐ I-B-3a. Understands and defines advocacy and its role in comprehensive school counseling programs
☐ I-B-3b. Identifies and demonstrates benefits of advocacy with school and community stakeholders
☐ I-B-3c. Describes school counselor advocacy competencies, which include dispositions, knowledge and skills
☐ I-B-3d. Reviews advocacy models and develops a personal advocacy plan
☐ I-B-3e. Understands the process for development of policy and procedures at the building, district, state and national levels

☐ I-B-4. Collaborates with parents, teachers, administrators, community leaders and other stakeholders to promote and support student success
☐ I-B-4a. Defines collaboration and its role in comprehensive school counseling programs
☐ I-B-4b. Identifies and applies models of collaboration for effective use in a school counseling program and understands the similarities and differences between consultation, collaboration and counseling and coordination strategies
☐ I-B-4c. Creates statements or other documents delineating the various roles of student service providers, such as school social worker, school psychologist or school nurse, and identifies best practices for collaborating to affect student success
☐ I-B-4d. Understands and knows how to apply a consensus-building process to foster agreement in a group
☐ I-B-4e. Understands how to facilitate group meetings to effectively and efficiently meet group goals

☐ I-B-5. Acts as a systems change agent to create an environment promoting and supporting student success
☐ I-B-5a. Defines and understands system change and its role in comprehensive school counseling programs
☐ I-B-5b. Develops a plan to deal with personal (emotional and cognitive) and institutional resistance impeding the change process
☐ I-B-5c. Understands the impact of school, district and state educational policies, procedures and practices supporting and/or impeding student success

I-C: Attitudes

School counselors believe:

☐ I-C-1. Every student can learn, and every student can succeed
☐ I-C-2. Every student should have access to and opportunity for a high-quality education
☐ I-C-3. Every student should graduate from high school and be prepared for employment or college and other post-secondary education
☐ I-C-4. Every student should have access to a school counseling program
☐ I-C-5. Effective school counseling is a collaborative process involving school counselors, students, parents, teachers, administrators, community leaders and other stakeholders
☐ I-C-6. School counselors can and should be leaders in the school and district
☐ I-C-7. The effectiveness of school counseling programs should be measurable using process, perception and outcome data

II. FOUNDATIONS

School counselors should possess the knowledge, abilities, skills and attitudes necessary to establish the foundations of a school counseling program aligning with the ASCA National Model.

II-A: Knowledge

School counselors should articulate and demonstrate an understanding of:

- ☐ II-A-1. Beliefs and vision of the school counseling program that align with current school improvement and student success initiatives at the school, district and state level
- ☐ II-A-2. Educational systems, philosophies and theories and current trends in education, including federal and state legislation
- ☐ II-A-3. Learning theories
- ☐ II-A-4. History and purpose of school counseling, including traditional and transformed roles of school counselors
- ☐ II-A-5. Human development theories and developmental issues affecting student success
- ☐ II-A-6. District, state and national student standards and competencies, including ASCA Student Standards and other student standards that may complement and inform the comprehensive school counseling program
- ☐ II-A-7. Legal and ethical standards and principles of the school counseling profession and educational systems, including district and building policies
- ☐ II-A-8. The three domains of academic achievement, career planning and personal/social development

II-B: Abilities and Skills

An effective school counselor is able to accomplish measurable objectives demonstrating the following abilities and skills:

- ☐ II-B-1. Develops the beliefs and vision of the school counseling program that align with current school improvement and student success initiatives at the school, district and state level
- ☐ II-B-1a. Examines personal, district and state beliefs, assumptions and philosophies about student success, specifically what they should know and be able to do
- ☐ II-B-1b. Demonstrates knowledge of a school's particular educational vision and mission
- ☐ II-B-1c. Conceptualizes and writes a personal philosophy about students, families, teachers, school counseling programs and the educational process consistent with the school's educational philosophy and mission
- ☐ II-B-1d. Writes a school counseling vision statement that describes a future world in which the school counseling goals and strategies are being successfully achieved

- ☐ II-B-2. Develops a school counseling mission statement aligning with the school, district and state mission
- ☐ II-B-2a. Critiques a school district mission statement and identifies or writes a mission statement aligning with beliefs
- ☐ II-B-2b. Writes a school counseling mission statement that is specific, concise, clear and comprehensive, describing a school counseling program's purpose and a vision of the program's benefits for every student
- ☐ II-B-2c. Communicates the vision and mission of the school counseling program to all appropriate stakeholders

☐ II-B-3. Uses student standards, such as ASCA Student Standards and other appropriate student standards such as district or state standards, to drive the implementation of a comprehensive school counseling program
☐ II-B-3a. Crosswalks the ASCA Student Standards with other appropriate student standards
☐ II-B-3b. Prioritizes student standards that align with the school's goals

☐ II-B-4. Applies the ethical standards and principles of the school counseling profession and adheres to the legal aspects of the role of the school counselor
☐ II-B-4a. Practices ethical principles of the school counseling profession in accordance with the ASCA Ethical Standards for School Counselors
☐ II-B-4b. Understands the legal and ethical nature of working in a pluralistic, multicultural and technological society
☐ II-B-4c. Understands and practices in accordance with school district policy and local, state and federal statutory requirements
☐ II-B-4d. Understands the unique legal and ethical nature of working with minor students in a school setting
☐ II-B-4e. Advocates responsibly for school board policy and local, state and federal statutory requirements in students' best interests
☐ II-B-4f. Resolves ethical dilemmas by employing an ethical decision-making model appropriate to work in schools
☐ II-B-4g. Models ethical behavior
☐ II-B-4h. Continuously engages in professional development and uses resources to inform and guide ethical and legal work
☐ II-B-4i. Practices within the ethical and statutory limits of confidentiality
☐ II-B-4j. Continually seeks consultation and supervision to guide legal and ethical decision making and to recognize and resolve ethical dilemmas
☐ II-B-4k. Understands and applies an ethical and legal obligation not only to students but to parents, administration and teachers as well

II-C: Attitudes

School counselors demonstrate their attitudes and beliefs that all students deserve access to a comprehensive program that:

☐ II-C-1. Has an impact on every student rather than a series of services provided only to students in need
☐ II-C-2. Is an integral component of student success and the overall mission of the school and school district
☐ II-C-3. Promotes and supports academic achievement, career planning and personal/social development for every student
☐ II-C-4. Adheres to school and district policies, state laws and regulations and professional ethics standards
☐ II-C-5. Is intentional in addressing the information, opportunity and achievement gaps

III. MANAGEMENT

School counselors should possess the knowledge, abilities, skills and attitudes necessary to manage a school counseling program aligning with the ASCA National Model.

III-A: Knowledge

School counselors should articulate and demonstrate an understanding of:

- ☐ III-A-1. Leadership principles, including sources of power and authority and formal and informal leadership
- ☐ III-A-2. Organization theory to facilitate advocacy, collaboration and systemic change
- ☐ III-A-3. Presentation skills for programs such as teacher in-services, parent workshops and presentation of results reports to school boards
- ☐ III-A-4. Time management, including long- and short-term management using tools such as schedules and calendars
- ☐ III-A-5. Data-driven decision making
- ☐ III-A-6. Current and emerging technologies such as use of the Internet, Web-based resources and information management systems

III-B: Abilities and Skills

An effective school counselor is able to accomplish measurable objectives demonstrating the following abilities and skills:

- ☐ III-B-1. Self-evaluates his/her own competencies leading to and resulting in the formulation of an appropriate professional development plan
- ☐ III-B-1a. Conducts a school counseling program assessment
- ☐ III-B-1b. Negotiates a management plan for the comprehensive school counseling program with the administrator
- ☐ III-B-1c. Discusses and develops the management component of the school counseling program with the other members of the school counseling staff
- ☐ III-B-1d. Presents school counseling management tools to the principal, and finalizes an annual school counseling agreement
- ☐ III-B-1e. Discusses the anticipated program results when implementing the action plans for the school year
- ☐ III-B-1f. Participates in school counseling and education-related professional organizations
- ☐ III-B-1g. Develops a yearly professional development plan demonstrating how the school counselor advances relevant knowledge, skills and dispositions
- ☐ III-B-1h. Communicates effective goals and benchmarks for meeting and exceeding expectations consistent with the administrator/school counselor annual agreement and district performance appraisals
- ☐ III-B-1i. Uses personal reflection, consultation and supervision to promote professional growth and development

- ☐ III-B-2. Establishes and convenes an advisory council for the comprehensive school counseling program
- ☐ III-B-2a. Uses leadership skills to facilitate vision and positive change for the comprehensive school counseling program
- ☐ III-B-2b. Determines appropriate education stakeholders who should be represented on the advisory council
- ☐ III-B-2c. Develops effective and efficient meeting agendas
- ☐ III-B-2d. Reviews school data, school counseling program assessment and school counseling program goals with the advisory council

☐ III-B-2e. Records meeting notes and distributes as appropriate
☐ III-B-2f. Analyzes and incorporates feedback from the advisory council related to school counseling program goals as appropriate

☐ III-B-3. Accesses or collects relevant data, including process, perception and outcome data, to monitor and improve student behavior and achievement
☐ III-B-3a. Reviews and disaggregates student achievement, attendance and behavior data to identify and implement interventions as needed
☐ III-B-3b. Uses data to identify policies, practices and procedures leading to successes, systemic barriers and areas of weakness
☐ III-B-3c. Uses student data to demonstrate a need for systemic change in areas such as course enrollment patterns; equity and access; and achievement, opportunity and/or information gaps
☐ III-B-3d. Understands and uses data to establish goals and activities to close the achievement, opportunity and/or information gap
☐ III-B-3e. Knows how to use data to identify gaps between and among different groups of students
☐ III-B-3f. Uses school data to identify and assist individual students who do not perform at grade level and do not have opportunities and resources to be successful in school
☐ III-B-3g. Knows and understands theoretical and historical basis for assessment techniques

☐ III-B-4. Assesses use of time in direct and indirect student services and program management and school support
☐ III-B-4a. Organizes and manages time to effectively implement a comprehensive school counseling program
☐ III-B-4b. Identifies appropriate distribution of school counselor's time based on the school data and program goals
☐ III-B-4c. Creates a rationale for school counselor's use of time in the delivery component to focus on the goals of the comprehensive school counseling program
☐ III-B-4d. Identifies and evaluates fair-share responsibilities, which articulate appropriate and inappropriate counseling and non-counseling activities

☐ III-B-5. Develops calendars to ensure the effective implementation of the school counseling program
☐ III-B-5a. Creates annual and weekly calendars to plan activities to reflect school counseling program goals
☐ III-B-5b. Demonstrates time-management skills including scheduling, publicizing and prioritizing time and tasks

☐ III-B-6. Designs and implements action plans aligning with school and school counseling program goals
☐ III-B-6a. Uses appropriate academic and behavioral data to develop school counseling core curriculum, small-group and closing-the-gap action plans and determines appropriate students for the target group or interventions
☐ III-B-6b. Identifies ASCA domains, standards and competencies being addressed by each plan
☐ III-B-6c. Creates lesson plans related to the school counseling core curriculum identifying what will be delivered, to whom it will be delivered, how it will be delivered and how student attainment of competencies will be evaluated
☐ III-B-6d. Determines the intended impact on academics, attendance and behavior
☐ III-B-6e. Identifies appropriate activities to accomplish objectives
☐ III-B-6f. Identifies appropriate resources needed
☐ III-B-6g. Identifies data-collection strategies to gather process, perception and outcome data
☐ III-B-6h. Shares results of action plans with staff, parents and community.

☐ III-B-7. Implements program management and school support activities for the comprehensive school counseling program
☐ III-B-7a. Creates a program management and school support planning document addressing school counselor's responsibilities for program management and professional development
☐ III-B-7b. Coordinates activities that establish, maintain and enhance the school counseling program as well as other educational programs

☐ III-B-8. Conducts self-appraisal related to school counseling skills and performance

III-C: Attitudes

School counselors believe:

☐ III-C-1. A school counseling program/department must be managed like other programs and departments in a school
☐ III-C-2. Planning, organizing, implementing and evaluating a school counseling program are critical responsibilities for a school counselor
☐ III-C-3. Management of a school counseling program must be done in collaboration with administrators

IV. DELIVERY

School counselors should possess the knowledge, abilities, skills and attitudes necessary to deliver a school counseling program aligning with the ASCA National Model.

IV-A: Knowledge

School counselors should articulate and demonstrate an understanding of:

☐ IV-A-1. The distinction between direct and indirect student services
☐ IV-A-2. The concept of a school counseling core curriculum
☐ IV-A-3. Counseling theories and techniques that work in school, such as rational emotive behavior therapy, reality therapy, cognitive-behavioral therapy, Adlerian, solution-focused brief counseling, person-centered counseling and family systems
☐ IV-A-4. Counseling theories and techniques in different settings, such as individual planning, group counseling and classroom lessons
☐ IV-A-5. Classroom management
☐ IV-A-6. Principles of career planning and college admissions, including financial aid and athletic eligibility
☐ IV-A-7. Principles of working with various student populations based on characteristics such as ethnic and racial background, English language proficiency, special needs, religion, gender and income
☐ IV-A-8. Principles of multi-tiered approaches within the context of a comprehensive school counseling program
☐ IV-A-9. Responsive services (counseling and crisis response) including grief and bereavement
☐ IV-A-10. The differences between counseling, collaboration and consultation, especially the potential for dual roles with parents, guardians and other caretakers

IV-B: Abilities and Skills

An effective school counselor is able to accomplish measurable objectives demonstrating the following abilities and skills.

Direct Student Services

School Counseling Core Curriculum

- ☐ IV-B-1. Implements the school counseling core curriculum
- ☐ IV-B-1a. Identifies appropriate curriculum aligned to ASCA Student Standards
- ☐ IV-B-1b. Develops and presents a developmental school counseling core curriculum addressing all students' needs based on student data
- ☐ IV-B-1c. Demonstrates classroom management and instructional skills
- ☐ IV-B-1d. Develops materials and instructional strategies to meet student needs and school goals
- ☐ IV-B-1e. Encourages staff involvement to ensure the effective implementation of the school counseling core curriculum
- ☐ IV-B-1f. Knows, understands and uses a variety of technology in the delivery of school counseling core curriculum activities
- ☐ IV-B-1g. Understands multicultural and pluralistic trends when developing and choosing school counseling core curriculum
- ☐ IV-B-1h. Understands and is able to build effective, high-quality peer helper programs

Individual Student Planning

- ☐ IV-B-2. Facilitates individual student planning
- ☐ IV-B-2a. Understands individual student planning as a component of a comprehensive program
- ☐ IV-B-2b. Develops strategies to implement individual student planning, such as strategies for appraisal, advisement, goal-setting, decision-making, social skills, transition or post-secondary planning
- ☐ IV-B-2c. Helps students establish goals and develops and uses planning skills in collaboration with parents or guardians and school personnel
- ☐ IV-B-2d. Understands career opportunities, labor market trends and global economics and uses various career assessment techniques to help students understand their abilities and career interests
- ☐ IV-B-2e. Helps students learn the importance of college and other post-secondary education and helps students navigate the college admissions process
- ☐ IV-B-2f. Understands the relationship of academic performance to the world of work, family life and community service
- ☐ IV-B-2g. Understands methods for helping students monitor and direct their own learning and personal/social and career development

Responsive Services

- ☐ IV-B-3. Provides responsive services
- ☐ IV-B-3a. Lists and describes interventions used in responsive services, such as individual/small-group counseling and crisis response
- ☐ IV-B-3b. Understands appropriate individual and small-group counseling theories and techniques such as rational emotive behavior therapy, reality therapy, cognitive-behavioral therapy, Adlerian, solution-focused brief counseling, person-centered counseling and family systems
- ☐ IV-B-3c. Demonstrates an ability to provide counseling for students during times of transition, separation, heightened stress and critical change
- ☐ IV-B-3d. Understands what defines a crisis, the appropriate response and a variety of intervention strategies to meet the needs of the individual, group or school community before, during and after crisis response

☐ IV-B-3e. Provides team leadership to the school and community in a crisis
☐ IV-B-3f. Involves appropriate school and community professionals as well as the family in a crisis situation
☐ IV-B-3g. Understands the nature of academic, career and personal/social counseling in schools and the similarities and differences among school counseling and other types of counseling, such as mental health, marriage and family and substance abuse counseling, within a continuum of care
☐ IV-B-3h. Understands the role of the school counselor and the school counseling program in the school crisis plan

Indirect Student Services

Referrals

☐ IV-B-4a. Understands how to make referrals to appropriate professionals when necessary
☐ IV-B-4b. Compiles referral resources to utilize with students, staff and families to effectively address issues
☐ IV-B-4c. Develops a list of community agencies and service providers for student referrals

Consultation

☐ IV-B-5a. Shares strategies that support student achievement with parents, teachers, other educators and community organizations
☐ IV-B-5b. Applies appropriate counseling approaches to promoting change among consultees within a consultation approach
☐ IV-B-5c. Works with education stakeholders to better understand student needs and to identify strategies that promote student achievement

Collaboration

☐ IV-B-6a. Partners with parents, teachers, administrators and education stakeholders for student achievement and success
☐ IV-B-6b. Conducts in-service training or workshops for other stakeholders to share school counseling expertise
☐ IV-B-6c. Understands and knows how to provide supervision for school counseling interns consistent with the principles of the ASCA National Model

IV-C: Attitudes

School counselors believe:

☐ IV-C-1. School counseling is one component in the continuum of care that should be available to all students
☐ IV-C-2. School counselors coordinate and facilitate counseling and other services to ensure all students receive the care they need, even though school counselors may not personally provide the care themselves
☐ IV-C-3. School counselors engage in developmental counseling and short-term responsive counseling
☐ IV-C-4. School counselors should refer students to district or community resources to meet more extensive needs such as long-term therapy or diagnoses of disorders

V. ACCOUNTABILITY

School counselors should possess the knowledge, abilities, skills and attitudes necessary to monitor and evaluate the processes and results of a school counseling program aligning with the ASCA National Model.

V-A: Knowledge

School counselors should articulate and demonstrate an understanding of:

- ☐ V-A-1. Basic concepts of results-based school counseling and accountability issues
- ☐ V-A-2. Basic research sampling, methodology and analysis concepts to understand research outcomes and conduct action research
- ☐ V-A-3. Use of data to evaluate program effectiveness and to determine program needs
- ☐ V-A-4. School counseling program assessments and results reports

V-B: Abilities and Skills

An effective school counselor is able to accomplish measurable objectives demonstrating the following abilities and skills.

- ☐ V-B-1. Analyzes data from school data profile and results reports to evaluate student outcomes and program effectiveness and to determine program needs
- ☐ V-B-1a. Analyzes use of time to determine how much time is spent in school counseling program components and considers best use of time compared to student needs as identified through student data
- ☐ V-B-1b. Analyzes results from school counseling program assessment
- ☐ V-B-1c. Uses formal and informal methods of program evaluation to design and enhance comprehensive school counseling programs
- ☐ V-B-1d. Uses student data to support decision-making in designing effective school counseling programs and interventions
- ☐ V-B-1e. Measures and analyzes results attained from school counseling core curriculum, small group and closing-the-gap activities
- ☐ V-B-1f. Works with members of the school counseling team and with the administration to decide how school counseling programs are evaluated and how results are shared
- ☐ V-B-1g. Analyzes and interprets process, perception and outcome data
- ☐ V-B-1h. Reviews progress toward program goals

- ☐ V-B-1i. Uses technology in conducting research and program evaluation
- ☐ V-B-1j. Reports program results to the school counseling community
- ☐ V-B-1k. Uses data to demonstrate the value the school counseling program adds to student achievement
- ☐ V-B-1l. Uses results obtained for program improvement

- ☐ V-B-2. Understands and advocates for appropriate school counselor performance appraisal process based on school counselor competencies and implementation of the comprehensive school counseling program
- ☐ V-B-2a. Analyzes self-assessment related to school counseling skills and performance
- ☐ V-B-2b. Identifies how school counseling activities fit within categories of a performance appraisal instrument
- ☐ V-B-2c. Encourages administrators to use a performance appraisal instrument reflecting appropriate responsibilities for school counselors

☐ V-B-3a. Compares current school counseling program implementation with the ASCA National Model
☐ V-B-3b. Shares the results of the program assessment with administrators, the advisory council and other appropriate stakeholders
☐ V-B-3c. Identifies areas for improvement for the school counseling program

V-C: Attitudes

School counselors believe:

☐ V-C-1. School counseling programs should achieve demonstrable results
☐ V-C-2. School counselors should be accountable for the results of the school counseling program
☐ V-C-3. School counselors should use quantitative and qualitative data to evaluate their school counseling program and to demonstrate program results
☐ V-C-4. The outcomes of the school counseling program should be analyzed and presented in the context of the overall school and district performance

AMERICAN SCHOOL COUNSELOR ASSOCIATION

1101 King St., Suite 625
Alexandria, VA 22314-2944
www.schoolcounselor.org

Middle School Introduction to Ag, Food and Natural Resources

Course Description:
The introductory course for the Agriculture, Food and Natural Resources Career Cluster provides a knowledge base and technical skills in all aspects of the industry. Learners will be exposed to a broad range of agriculture, food and natural resources careers, cluster foundation knowledge and skills, introduction to leadership development, the FFA organization and career exploration. Classroom and laboratory activities are supplemented through supervised agricultural experiences and leadership programs and activities.

Course Code: 011012

Endoresements to teach: AFNR

Programs of Study to which this Course applies:

Agribusiness Systems
Agribusiness Systems Plus
Animal Systems
Animal Systems Plus
Environmental Systems
Environmental Systems Plus
Food Products and Processing Systems
Food Products and Processing Systems Plus
Plant Systems
Plant Systems Plus
Power, Structural and Technical Systems
Power, Structural and Technical Systems Plus
Diversified Agriculture Systems
Diversified Agriculture Systems Plus

AFNR.HS.1.1	
Apply AFNR business planning, management, and development principles.	
AFNR.HS.1.1.a	Apply and analyze different types of risk management strategies and structures in AFNR businesses.
AFNR.HS.1.1.c	Differentiate between and explain different business structures.
AFNR.HS.1.3	
Manage cash budgets, credit budgets and credit for an AFNR business using generally accepted accounting principles.	
AFNR.HS.1.3.b	Develop production plans.
AFNR.HS.1.5	
Use sales and marketing principles to accomplish AFNR business objectives.	
AFNR.HS.1.5.c	Analyze and apply sales principles and skills to accomplish AFNR business objectives.
AFNR.HS.2.1	
Analyze historic and current trends impacting the animal systems industry.	
AFNR.HS.2.1.a	Research the domestication of livestock and how the industries have changed and evolved over the years.
AFNR.HS.2.1.b	Assess and select animal production methods for use in animal systems based upon their effectiveness and impacts.
AFNR.HS.2.1.c	Analyze and apply laws and sustainable practices to animal agriculture from a global perspective.
AFNR.HS.2.6	
Classify, evaluate and select animals based on anatomical and physiological characteristics.	
AFNR.HS.2.6.a	Classify animals according to taxanomic classification systems and use.
AFNR.HS.2.6.b	Apply principles of comparative anatomy and physiology to uses within animal systems.
AFNR.HS.2.6.c	Select and train animals for specific purposes and maximize performance based on anatomy and physiology.
AFNR.HS.2.8	
Analyze environmental factors associated with animal production.	
AFNR.HS.2.8.a	Design and implement methods to reduce the effects of animal production on the environment.

AFNR.HS.2.8.b	Evaluate the effects of environmental conditions on animals and create plans to ensure favorable environments for animals.
AFNR.HS.3.1	
Plan and conduct natural resource management activities that apply logical, reasoned and scientifically based solutions to natural resource issues and goals.	
AFNR.HS.3.1.c	Identify proper use of tools utilized in measuring soil health.
AFNR.HS.3.2	
Analyze the interrelationships between natural resources and humans.	
AFNR.HS.3.2.a	Summarize the impacts that modern agriculture has had on our natural resources.
AFNR.HS.3.3	
Develop plans to ensure sustainable production and processing of natural resources.	
AFNR.HS.3.3.e	Examine the major causes of water pollution.
AFNR.HS.3.3.h	Describe the soil formation process.
AFNR.HS.3.3.j	Discuss the role of food chains in maintaining balanced ecosystems.
AFNR.HS.3.3.k	Demonstrate how to determine soil types and and how it affects land use.
AFNR.HS.4.5	
Explain the scope of today's food product and food processing industry.	
AFNR.HS.4.5.a	Explore career options available in the food science and food processing industry in the US and worldwide.
AFNR.HS.4.5.b	Discuss current events in food science and the food processing industry in the US and worldwide.
AFNR.HS.5.1	
Develop and implement a crop management plan for a given prodcution goal that accounts for environmental factors.	
AFNR.HS.5.1.a	Select crops based on geography and climate.
AFNR.HS.5.2	
Utilize resources efficiently and sustainably for crop production.	
AFNR.HS.5.2.b	Differentiate between various erosion control methods.
AFNR.HS.5.2.d	Analyze soil properties and chemistry.
AFNR.HS.5.4	
Apply principles of classification, plant anatomy, and plant physiology to plant production and management.	
AFNR.HS.5.4.a	Choose plants for a specific landscape and cropping situations.
AFNR.HS.5.4.d	Explain the process and stages of germination in monocots and dicots.
AFNR.HS.6.1	
Apply physical science principles and engineering applications to solve problems and improve performance in AFNR power, structural and technical systems.	
AFNR.HS.6.1.a	Apply physical science principles to metal fabrication using a variety of welding and cutting processes.
AFNR.HS.6.1.b	Apply physical science and engineering principles to design, implement, and improve safe and efficient mechanical systems in AFNR situations.
AFNR.HS.6.2	
Operate and maintain AFNR mechanical equipment and power systems.	
AFNR.HS.6.2.b	Demonstrate proper safety while operating machinery and power equipment.
AFNR.HS.CR.1	
Describe career opportunities and means to achieve those opportunities in each of the AFNR career pathways.	
AFNR.HS.CR.1.a	Evaluate and implement the steps and requirements to pursue a career opportunity in an AFNR career pathway.
AFNR.HS.CR.1.b	Examine and choose career opportunities that are matched to personal life skills, talents, and career goals in an AFNR pathway of interest.
AFNR.HS.CR.2	
Demonstrate employability skills for college and career readiness.	
AFNR.HS.CR.2.a	Model personal responsibility in the workplace and community.
AFNR.HS.CR.2.b	Speak using strategies that ensure clarity, logic, purpose and professionalism in formal and informal settings.
AFNR.HS.CR.2.g	Contribute to team-oriented projects and builds consensus to accomplish results using cultural global competence in the workplace and community.

AFNR.HS.CR.4	
Identify and demonstrate workplace safety.	
AFNR.HS.CR.4.a	Identify and explain the implication of required regulations to maintain and improve safety, health and environments management systems.
AFNR.HS.CR.4.b	Apply health and safety practices to AFNR workplaces.
AFNR.HS.CR.4.c	Use appropriate protective equipment and demonstrate safe and proper use of AFNR tools and equipment.
AFNR.HS.CR.6	
Identify and demonstrate leadership skills and traits in demand of leadership roles in the agriculture industry.	
AFNR.HS.CR.6.a	Create a self introduction including the name of the student and information about his or her personal values.
AFNR.HS.CR.6.b	Craft SMART goals to achieve by the end of a specific agricultural education course.
AFNR.HS.CR.6.c	Write a career objective.
AFNR.HS.CR.6.e	Generate a personal statement explaining how he or she hopes to serve the people around them in their community and society.

Careers and Literacy of Agriculture Middle School Course

Course Description

Agricultural knowledge enrichment and career exploration instruction is provided. Other instruction may include leadership, FFA and Supervised Agricultural Experiences (SAE).

Course Code: 018002

Program(s) of Study to which this course applies:

- All programs of study in the Agriculture, Food and Natural Resources career cluster

Course Framework	Crosswalk to Common Core Academic Standards	Crosswalk to Nebraska Academic Standards	Crosswalk to Nebraska Career Readiness Standards	Crosswalk Clarifications
Standard 1. Students will define the components of the agricultural industry.				
Benchmark 1.1 Define the agricultural industry through the Agriculture, Food, and Natural Resources career field. <u>Sample performance indicators:</u> • Develop a class definition of the Agriculture, Food, and Natural Resources career field. • Diagram Agriculture, Food, and Natural Resources career field, cluster, and pathways. • Complete Kuder® Career Search with Person Match. • Complete Kuder® Skills Assessment.	N/A	N/A	N/A	

Course Framework	Crosswalk to Common Core Academic Standards	Crosswalk to Nebraska Academic Standards	Crosswalk to Nebraska Career Readiness Standards	Crosswalk Clarifications
Benchmark 1.2 Describe the seven career pathways within the Agriculture, Food, and Natural Resources career field. <u>Sample performance indicators:</u> • Research Agriculture, Food, and Natural Resources pathways. • Identify careers that may be present in more than one pathway (Example: Plant scientist in both plant and animal systems). • Create multimedia presentations on each pathway to be shared with the rest of the class.	ELA.SL.6-8.4 ELA.WHST.6-8.2.b	LA.8.2.1.b LA.8.3.1.a SS.12.2.6.d	CR.2.B.1 CR.2.C.1 CR.10.A.1	When students *describe* information or ideas, they communicate their knowledge through either speaking or writing. To demonstrate full knowledge on the topic, students' presentations must include all the main ideas and relevant details on the subject (CC: ELA.WHST.6-8.2.b, ELA.SL.6-8.4; NE: CR.2.B.1, CR.2.C.1, LA.8 2.1.b, LA.8.3.1.a).
Benchmark 1.3 Correlate appropriate careers with each of the seven Agriculture, Food, and Natural Resources career pathways. <u>Sample performance indicators:</u> • List career titles affiliated with each career pathway. • Organize careers by educational requirements.	N/A	N/A	CR.10.A.1 CR.10.B.1	
Benchmark 1.4 Evaluate Agriculture, Food, and Natural Resources career trends. <u>Sample performance indicators:</u> • Research local, state, and national career opportunities within the Agriculture, Food, and Natural Resources career field. • Identify career growth areas in Agriculture, Food, and Natural Resources. • Identify atypical careers in Agriculture, Food, and Natural Resources.	N/A	N/A	CR.10.A.1 CR.10.B.1	

Course Framework	Crosswalk to Common Core Academic Standards	Crosswalk to Nebraska Academic Standards	Crosswalk to Nebraska Career Readiness Standards	Crosswalk Clarifications
Benchmark 1.5 Research a career within the selected pathway interest area, and summarize information in written text. Sample performance indicators: • Select an agricultural career from the Agriculture, Food, and Natural Resources pathways. • Research job tasks and conditions, interests, skills, and work values, education and experience, salary and outlook, and related occupations of the selected agricultural career.	ELA.WHST.6-8.7-9	LA.8.4.1.a-c LA.8.1.6.j	CR.5.B.1 CR.9.A.2 CR.10.A.1 CR.10.B.1	The depth of students' investigations, and thus the research standards that apply, will be determined by the nature of the task. (CC: ELA WHST.6-8.7-9; NE: CR.5.B.1, CR.9.A.2, LA.8.4.1, LA. 8.1.6).
Standard 2. Students will explore agricultural literacy concepts.				
Benchmark 2.1 Explore local, state, and national agricultural production opportunities. Sample performance indicators: • Develop a production map of local, state, and national agriculture. • Identify local agricultural producers. • Visit a local farm or production site. • Identify careers present within these production sites.	N/A	N/A	CR.10.B.1	
Benchmark 2.2 Illustrate the path that food takes from farm to table. Sample performance indicators: • Select an agricultural product produced in the local agricultural community. • Diagram the steps this product goes through from farm to table.	N/A	N/A	N/A	

Course Framework	Crosswalk to Common Core Academic Standards	Crosswalk to Nebraska Academic Standards	Crosswalk to Nebraska Career Readiness Standards	Crosswalk Clarifications
• Research historical advancements in production and processing of this product. • Create a farm to table presentation to be shared with elementary school students.				
Benchmark 2.3 Map the direct and indirect relationships of Agriculture, Food, and Natural Resources with careers. <u>Sample performance indicators:</u> • Identify all careers, agricultural and other, involved in bringing the agricultural product from farm to table. • Connect typically non-agricultural careers with the Agriculture, Food, and Natural Resources career field.	N/A	N/A	N/A	
Standard 3. Students will outline skills necessary to enter college and the workplace.				
Benchmark 3.1 Identify college and career ready skills. <u>Sample performance indicators:</u> • Develop class definitions of the college and career ready skills from the Nebraska Career Education model. • Create and perform skit, acting out a scenario using a particular college and career ready skill.	N/A	N/A	CR.1.B.1	
Benchmark 3.2 Develop educational pathway to reach career goal. <u>Sample performance indicators:</u> • Select cluster area of interest based on Kuder® survey results. • Select high school core classes to meet cluster objective. • Select elective high school classes to meet cluster objective.	N/A	N/A	CR.1.B.1 CR.10.A.1	

Course Framework	Crosswalk to Common Core Academic Standards	Crosswalk to Nebraska Academic Standards	Crosswalk to Nebraska Career Readiness Standards	Crosswalk Clarifications
• Review graduation requirements. • Research college entrance requirements. • Complete 6-year plan (4 years high school, 2 years post-secondary).				
Benchmark 3.3 Explore current job opportunities in career of choice. <u>Sample performance indicators:</u> • Research current employment options for a selected career. • Review secondary and post-secondary educational requirements and training necessary for a selected career. • Evaluate job prospects through job postings (newspapers, websites, etc.). • Attend a job fair.	N/A	N/A	CR.10.A.1	
Benchmark 3.4 Develop materials to apply for a sample job. <u>Sample performance indicators:</u> • Create a resume. • Create a cover letter. • Develop online portfolio through Nebraska Career Connections. • Develop possible interview questions and responses. • Participate in mock interviews.	ELA.WHST.6-8.4	LA.8.2.2	CR.10.C.1–2	
Standard 4. Students will explore leadership and entrepreneurship opportunities within Agriculture, Food, and Natural Resources.				
Benchmark 4.1 Illustrate the relationship between classroom instruction, leadership opportunities, and entrepreneurial skills.	N/A	N/A	N/A	

Course Framework	Crosswalk to Common Core Academic Standards	Crosswalk to Nebraska Academic Standards	Crosswalk to Nebraska Career Readiness Standards	Crosswalk Clarifications
Sample performance indicators: • Diagram the three-circle agricultural education Venn diagram. • Explain the relationship between the overlapped areas of the Venn diagram, showing that classroom, SAE, and FFA are interconnected. • Illustrate an unbalanced diagram, with strong and weak areas of an agricultural education program.				
Benchmark 4.2 Identify Agriculture, Food, and Natural Resources courses offered at the middle and high school levels. Sample performance indicators: • Read agricultural education course titles and descriptions. • Determine courses of interest that may be beneficial for a particular Agriculture, Food, and Natural Resources career pathway.	N/A	N/A	CR.10.A.3 CR.10.D.2	
Benchmark 4.3 Explore opportunities within the National FFA Organization. Sample performance indicators: • Explore the National FFA Organization website to research the organization and opportunities at the local, state, national, and international levels. • Attend a local FFA chapter meeting. • Interview chapter FFA officer about their experiences in the National FFA Organization. • Participate in local and district FFA speaking competitions. • Assist with local FFA chapter activities.	N/A	N/A	CR.10.A.1	

Course Framework	Crosswalk to Common Core Academic Standards	Crosswalk to Nebraska Academic Standards	Crosswalk to Nebraska Career Readiness Standards	Crosswalk Clarifications
Benchmark 4.4 Explore career opportunities within Supervised Agricultural Experience programs. <u>Sample performance indicators:</u> • Develop classroom definition of Supervised Agricultural Experience (SAE). • Describe the three main SAE types: Entrepreneurship, Placement, and Agriscience/Exploratory. • Brainstorm three different examples for each SAE type. • Create electronic brochure advertising an SAE idea. • List career opportunities present within a selected Supervised Agricultural Experience program.	N/A	N/A	CR.10.A.1	
Benchmark 4.5 Explore other leadership opportunities present within Agriculture, Food, and Natural Resources. <u>Sample performance indicators:</u> • List and research different professional organizations within a career pathway. • Write letter to professional organizations requesting additional information. • Invite professional organization representative to classroom to speak on current agricultural issues. • "Like" or "Follow" professional organizations on Facebook or Twitter.			CR.10.A.1	
Standard 5. Students will analyze current issues in Agriculture, Food, and Natural Resources.				
Benchmark 5.1 Identify, summarize, and analyze current developments in selected career pathway within the Agriculture, Food, and Natural Resources career field.	ELA.WHST.6-8.2.b ELA.SL.6-8.4	LA.8.2.1.b LA.8.3.1.a LA.8.1.6.d	CR.2.B.1 CR.2.C.1 CR.8.C.2	When students *summarize* information or ideas, they communicate their knowledge through either speaking or

Course Framework	Crosswalk to Common Core Academic Standards	Crosswalk to Nebraska Academic Standards	Crosswalk to Nebraska Career Readiness Standards	Crosswalk Clarifications
Sample performance indicators: • Read articles from newspapers, online publications, and other current event magazines to locate current issues in Agriculture, Food, and Natural Resources pathways. • Design multimedia project summarizing the agricultural issue and its corresponding pathway.				writing. To demonstrate full knowledge on the topic, students' presentations must include all the main ideas and relevant details on the subject. (CC: ELA.WHST.6-8.2.b; ELA.SL.6-8.4; NE: CR.2.B.1, CR.2.C.1, LA.12 2.1.b, LA. 12.3.1.a).
Benchmark 5.2 Analyze the credibility of agricultural issues as presented in the media. Sample performance indicators: • Identify industry partners (Nebraska Cattlemen, Nebraska Pork Producers, etc.) that provide viable information pertaining to agricultural issues. • Identify other sources that may provide a biased viewpoint on agricultural issues. • Compare and contrast biased and viable information sources.	ELA.RST.6-5.7	LA.8.4.1.a	CR.5.A.1	
Benchmark 5.3 Learn and practice advocacy efforts in the Agriculture, Food, and Natural Resources career field. Sample performance indicators: • Debate agricultural issues. • Correspond with lawmakers pertaining to current bills and legislation related to Agriculture, Food, and Natural Resources. • Visit the State Capitol during the Unicameral session to observe floor debate and the legislative process. • Invite an agricultural advocate (Nebraska Farm Bureau, Corn Board, state senator, etc.) to speak to the class on agricultural lobbying and policy-making.	N/A	N/A	CR.3.C.1	

Course Framework	Crosswalk to Common Core Academic Standards	Crosswalk to Nebraska Academic Standards	Crosswalk to Nebraska Career Readiness Standards	Crosswalk Clarifications
Standard 6. Students will create risk management strategies as related to a particular pathway and career within the Agriculture, Food, and Natural Resources career field.				
Benchmark 6.1 Define risk management. Sample performance indicators: • Develop a class definition of risk management. • Identify risks in the classroom and laboratory through scavenger hunt. • Summarize current event related to a recent safety accident and identify how the accident can be prevented.	ELA.RST.6-8.4	LA.8.1.5.a	CR.3.B.4	
Benchmark 6.2 Research safety data as it pertains to the Agriculture, Food, and Natural Resources career field. Sample performance indicators: • Define OSHA and the OSHA-recommended workplace procedures. • Research and report OSHA workplace injury, illness, and fatalities statistics. • Develop multimedia presentation/safety poster on the risks present within the selected pathway in Agriculture, Food, and Natural Resources. • Acquire OSHA certification as a middle/high school student.	ELA.WHST.6-8.7-9	LA.8.4.1.a-c LA.8.1.6.j	CR.5.B.1 CR.9.A.2 CR.3.B.4	The depth of students' investigations, and thus the research standards that apply, will be determined by the nature of the task. (CC: ELA WHST.6-8.7-9; NE: CR.5.B.1, CR.9.A.2, LA.8.4.1, LA. 8.1.6).
Benchmark 6.3 Develop a safety awareness plan for the working environment pertaining to a career of choice. Sample performance indicators: • Describe safety role of teachers and students within the classroom and laboratory.	N/A	N/A	CR.3.B.4	

Course Framework	Crosswalk to Common Core Academic Standards	Crosswalk to Nebraska Academic Standards	Crosswalk to Nebraska Career Readiness Standards	Crosswalk Clarifications
• Report risk management strategies, pertaining to a career field of choice, as part of the National Risk Management Essay Contest. • Demonstrate safety procedures to elementary students in a "Safety Fair" environment.				

Reference Standards Sources

- KS = Career Clusters Knowledge and Skills Statements. Revised 2008. National Career and Technical Education Foundation, Silver Spring, MD. www.careerclusters.org.
- (additional reference standards listed)

Contributors

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NCE Staff: Matt Kreifels, Nebraska Department of Education
Other:

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Approval date:

Revision date *(if changes made after final draft)*:

Other Information

Suggestions for innovative teaching and learning strategies:	• Elementary Career Mentoring Projects • Career Discussion Panels • Industry Guest Speakers • Industry Tours
Related assessments:	• Kuder® Career Search with Person Match • OSHA Certification Test • Kuder® Skills Assessment
Extended learning opportunities:	• SAE Development • FFA Quizbowl Competition • Local and District FFA Speaking Competitions • FFA Community Service Opportunities

Keyboarding Applications

Course Description

Keyboarding is identified as a foundation knowledge and skill area for all students regardless of their c
course is designed for students to learn touch typing techniques and proper keystroking while continu
proofreading skills as well as speed and accuracy. Students will demonstrate keyboarding proficiency i
reports, and tables). Students will demonstrate acceptable ethical and social behavior while developin

Program of Study to which the course applies
Middle Level

Course Code 033501

Course Content

Standard 1	**Students will demonstrate proper touch typing technique and work station management.**
Benchmark 1.1	Demonstrate appropriate keyboarding skills using home row keys, proper finger placement, and key reaches.
Sample Performance Indicator 1.1.1	Use the home row and correct reaches.
Sample Performance Indicator 1.1.2	Use the top row of the keyboard for number keying.
Sample Performance Indicator 1.1.3	Use the numeric keypad for number keying.
Sample Performance Indicator 1.1.4	Key rhythmically.
Benchmark 1.2	Use correct posture at the computer.
Sample Performance Indicator 1.2.1	Sit up straight, square, and centered to the keyboard.
Sample Performance Indicator 1.2.2	Place feet flat on the floor.
Sample Performance Indicator 1.2.3	Use proper chair height.
Sample Performance Indicator 1.2.4	Sit proper distance from the keyboard.
Sample Performance Indicator 1.2.5	Place hands slightly off the keyboard with wrists flat.
Sample Performance Indicator 1.2.6	Keep shoulders relaxed and elbows at side.
Sample Performance Indicator 1.2.7	Keep fingers slightly curved.
Sample Performance Indicator 1.2.8	Discuss health and ergonomic issues related to the use of technology.
Benchmark 1.3	Maintain workstation, equipment, materials, and supplies.
Sample Performance Indicator 1.3.1	Identify malfunctions, missing programs, or problems with the computer and let the instructor know.
Sample Performance Indicator 1.3.2	Straighten and clean workstations/work areas.
Sample Performance Indicator 1.3.3	Leave equipment according to instructor's directions.
Sample Performance Indicator 1.3.4	Exit software programs and shut down computer properly.
Sample Performance Indicator 1.3.5	Keep food, liquid, and magnets away from computer components.
Sample Performance Indicator 1.3.6	Demonstrate proper care of storage media (e.g., CD/DVDs, USB flash drives).
Standard 2	**Students will develop keyboarding skills to improve speed and accuracy.**

Benchmark 2.1		Demonstrate speed and accuracy (30 wpm, 90% accuracy, 1-minute paragraph timing).
Sample Performance Indicator	2.1.1	Practice drills that encourage speed with accuracy.
Sample Performance Indicator	2.1.2	Work toward a controlled rate of speed that will provide a high degree of accuracy.
Sample Performance Indicator	2.1.3	Assess progress using speed and accuracy grading scales.
Sample Performance Indicator	2.1.4	Apply correct techniques during daily practice.
Standard 3		**Students will understand social, ethical, and**
Benchmark 3.1		Demonstrate ethical behavior when using technology.
Sample Performance Indicator	3.1.1	Review computer lab policies and procedures.
Sample Performance Indicator	3.1.2	Discuss the importance of respecting the privacy of other students' work.
Sample Performance Indicator	3.1.3	Explain copyright laws.
Sample Performance Indicator	3.1.4	Discuss the importance of keyboarding skill in all career fields.
Standard 4		**Students will use basic features of word processing applications.**
Benchmark 4.1		Open and save a document.
Sample Performance Indicator	4.1.1	Open new and previously saved files.
Sample Performance Indicator	4.1.2	Open files from and save files to a network folder, the hard drive, or other storage media.
Sample Performance Indicator	4.1.3	Use save as and save command.
Benchmark 4.2		Input and format text within a document at the keyboard.
Sample Performance Indicator	4.2.1	Key text from monitor/screen or copy (e.g. textbook, printed materials).
Sample Performance Indicator	4.2.2	Insert and delete text.
Sample Performance Indicator	4.2.3	Drag and drop, cut, copy, and paste text.
Sample Performance Indicator	4.2.4	Change font type, size, style, and color.
Sample Performance Indicator	4.2.5	Set text alignment.
Sample Performance Indicator	4.2.6	Change page setup options (e.g., margins, alignment, orientation).
Sample Performance Indicator	4.2.7	Set line spacing.
Sample Performance Indicator	4.2.8	Practice hard return, word wrap, and page break.
Sample Performance Indicator	4.2.9	Utilize undo and redo.
Sample Performance Indicator	4.2.10	Compose original documents at the keyboard using correct sentence and paragraph structure.
Benchmark 4.3		Proofread and edit a document.
Sample Performance Indicator	4.3.1	Use the spelling and grammar check.
Sample Performance Indicator	4.3.2	Use proofreader's marks to edit a document.
Sample Performance Indicator	4.3.3	Use the select feature to make editing changes.
Benchmark 4.4		Use word processing applications to create different types of documents.
Sample Performance Indicator	4.4.1	Key a short report (e.g., single page, multi-paragraph, multi-page).
Sample Performance Indicator	4.4.2	Key a personal business letter.
Sample Performance Indicator	4.4.3	Key a business letter.
Sample Performance Indicator	4.4.4	Insert table and text into table (e.g., class schedule).

career interest. This middle-level
ing to develop composition and
in document formatting (letters,
g keyboarding skills.

CTE Reference

VDE: Keyboarding Apps 37, 41

OPS Level 1 CA01-A 1.2
MKSS 1.2.1
MKSS 1.2.4
MKSS 1.2.5
MKSS 1.2.7

MKSS 1.2.3
MKSS 1.2.3.1
MKSS 1.2.3.2
MKSS 1.2.3.3
MKSS 1.2.3.4
MKSS 1.2.3.5
MKSS 1.2.3.6
MKSS 1.2.3.7

MKSS 2.6

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VDE Keyboarding Apps 37
VDE Keyboarding Apps 37
VDE Keyboarding Apps 37

VDE Keyboarding Apps 37

MKSS 1.4.2

MKSS 1.4.3

OPS Level 1 CA01-A 1.3

VDE Keyboarding Apps 45 &
Nebraska Schools' Data
VDE Keyboarding Apps 45

VDE Keyboarding Apps 45

VDE Keyboarding Apps 45
LPS Keyboarding - Grade 6, #2

CKSS 2
CKSS 2
CKSS 2: 2-6

CKSS 2: 2-3
MKSS 2.2.2

CKSS 2

MKSS 3.10
CKSS 1-3: 1-3-3
CKSS 1-3: 1-3-3

CKSS 1-3: 1-3-3-2
CKSS 1-3: 1-3-3-1

MKSS 3.1

CKSS 3-1: 3-1-3
MKSS 3.13
MKSS 3.14
MKSS 3.15
MKSS 3.32

MKSS 3.17
MKSS 3.21
MKSS 3.27
MKSS 3.40

MKSS 3.6

MKSS 3.1
MKSS 3.45
CKSS 3.2: 3-2-3
CKSS 3.2: 3-2-11-1

CKSS 3.2: 3-2-1

MKSS 3.72
MKSS 3.75
MKSS 3.75
MKSS 3.75

Reference Sheet

Key Code	Source
VDE	Virginia Department of Education
LPS	Lincoln Public Schools - NE
OPS	Omaha Public Schools - NE
MKSS	Missouri Keyboarding Scope & Sequence
CKSS	Cengage Keyboarding Scope & Sequence

Suggestions for innovative teaching and learning strategies
Related Assessments

Extended Learning Opportunities

Professional Development Opportunities

Community Links/Resources available

Additional Resources for Educators

Listed here (not sentences)

Typeracer.com
EduTyping.com
NDE - Elementary Keyboarding Training
Conferences (e.g., NCE Conference, NBEA, NETA)
NDE Elementary Keyboarding Virtual Workshop - http://www.education.ne.gov/BMIT/vekw.html
Professional Associations (e.g., NSBEA, NETA, ACTE)
internet4classrooms.com
www.teachervision.com
www.tammyworcester.com/
FBLA Formatting Guide: http://www.fbla-pbl.org/docs/FBLA-PBLFormat%20Guide2010.pdf

Contributors		
First Name	***Last Name***	***Organization/School Representing***
Jill	Oltman	Crete Middle School
Nathan	Livingston	Beveridge Middle School - Omaha
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Heather	Steiner	Schoo Middle School - Lincoln

	Date
Creation Date	7/11/2012
Approval Date	
Revision Date	

Exploring Skilled and Technical Science – 6th Grade

Course Description

In this course students will explore fundamentals in Skilled and Technical Sciences at the 6th grade level.

Course Code: 100706

Course Content	CTE Reference Standards	Crosswalk to Nebraska Academic Crosswalk
Standard 1. Students will understand and accurately apply measurement.		
Benchmark 1.1 Demonstrate linear measurement Sample performance indicators: • Read a ruler	KS - MNC10.01.01 KS – ESS01.03.01 KS – ESS01.03.02 KS – ESS01.03.04 STL12.1 STL13.F	MA6.2.5 (1) SC8.1.1.j (1)
Standard 2. Students will know and model safe lab procedures and techniques.		
Benchmark 2.1 The student will know safety requirements. Sample performance indicators: • Follow lab procedures • Demonstrate proper storage and handling of materials • Demonstrate safe tool operation • Demonstrate proper use of safe personal protection equipment	KS - MNC06.05.03 KS – ACC06.01.03 KS – ESS06 KS – SCC06 KS – SCPA10.02.04 STL12.H-K	
Standard 3. Students will be introduced to Design and Problem Solving.		
Benchmark 3.1 Design/Problem Solving Sample performance indicators: • Identify the problem	KS - MNC03 KS – ACC03.01.01 KS – ACC03.01.05 KS – ACC07.01	MA6.2.4 (1) MA6.2.5 (1) CCSS: MA(6.G.1) (1) SC8.1.3 (2)

Course Content	CTE Reference Standards	Crosswalk to Nebraska Academic Crosswalk
• Brainstorm for ideas • Select best solution • Complete model/prototype • Test and evaluate model/prototype • Redesign and improve	KS – TRC03 KS – TRC07 KS – ESS03.01 KS – ESS03.02 KS – ESS03.03 KS – SCPA10.01.04 STL8E-G STL9.F-H STL11.H	
Standard 4. Students will define Technology.		
Benchmark 4.1 The student will understand the core concepts of technology. Sample performance indicators: • Human made • Product and process • Systems model • Invention and innovation	KS - MNC10.01.02 KS - MNC05 KS – ACC05 KS – TRC07 STL1.F-H STL2.M-P,T STL7.F	
Benchmark 4.2 The student will be aware of technological impacts Sample performance indicators: • Cost and benefits • Societal responsibilities	KS - MNC10.01.02 KS – MNC05.01.03 KS – ACC08.01.01 KS – ACC08.01.03 STL4.D-G STL5.D-F STL6.D-G STL7.C	
Standard 5. Students will explore career opportunities.		
Benchmark 5.1 The students will examine and report on the Skilled and Technical Sciences (STS) Career Field.		

Course Content	CTE Reference Standards	Crosswalk to Nebraska Academic Crosswalk
Sample performance indicators: • Architecture & Construction • Manufacturing • Science, Technology, Engineering, & Math (STEM) • Transportation, Distribution, & Logistics (TDL)	KS – MNC04 KS – MNC09 KS – ACC04 KS – ACC05.03.01 KS – ESS09.07 KS – SCC09.01 STL18.F-G STL19.H STL20.F-I	
Benchmark 5.2 The students will explore and report on emerging technologies. Sample performance indicators: • Robotics • Nanotechnology • Green Technologies • Space Exploration • Energy	KS – MNC04 KS – MNC09 KS – ACC04 KS – ACC10.02.02 STL14.G STL15.F,H STL16.E-F STL17.H STL18.F STL19.F-G	

Reference Standards Sources

- KS = Career Clusters Knowledge and Skills Statements. Revised 2008. National Career and Technical Education Foundation, Silver Spring, MD. www.careerclusters.org.
- (additional reference standards listed)

Contributors

Secondary: Jim Jelkin – Sunrise Middle School (Kearney, Nebraska), Jim Sapp – Southern (Wymore, Nebraska), Randy Stribley – Papillion-LaVista South (Papillion, Nebraska), David Shabram – Westside Middle School (Omaha, Nebraska). Dan Craney – Platteview High School (Springfield, Nebraska)

Exploring Skilled and Technical Science – 7th Grade

Course Description:

In this course students will explore fundamentals in Skilled and Technical Sciences at the 7th grade level.

Code: 100707

Course Content	CTE Reference Standards	Crosswalk to Nebraska Academic Standards
Standard 1. Students will understand and accurately apply measurement.		LA.1.1.5.b(1)
Benchmark 1.1 Demonstrate linear measurement Sample performance indicators: • Read a standard ruler • Read a metric ruler	KS – ESS01.03.01-05 KS - MNC10.01.01 STL12.I STL13.F	MA7.1.3 (1) MA7.2.5 (1) CCSS: MA(7.NS.2) (1) SC8.1.1.j (1)
Standard 2. Students will know and model safe lab procedures and techniques.	KS – TRC06	LA.1.1.5.b(1)
Benchmark 2.1 The student will know safety requirements. Sample performance indicators: • Complete a safety test with 100% accuracy • Sign a safety contract	KS – TRC10.03 KS - MNC06.05.03 KS – ACC06.01.03 KS – ESS06 KS – SCC06 KS – SCPA10.02.01,04-04 STL12.H-K	

Course Content	CTE Reference Standards	Crosswalk to Nebraska Academic Standards
Benchmark 2.2 The student will practice appropriate classroom safety. Sample performance indicators: • Demonstrate safe tool operation • Demonstrate proper use of safe personal protection equipment • Operate and maintain a safe working environment • Demonstrate proper storage and handling of materials	KS – ESS06.01.05-07 KS – TRC09 STL12.H-K	
Standard 3. Students will be introduced to technical communication.	KS-MNC10.01.01	LA.1.1.5.b(1)
Benchmark 3.1 Understand and produce sketches and working drawings. Sample performance indicators: • Distinguish views • Interpret dimensions • Identify symbols and line types • Complete orthographic and isometric sketch(s)	KS – ESS02.01.02,04-06 KS – ACC10.01.01 KS – ACC10.01.02 KS – ACC10.01.04	
Benchmark 3.2 Technical reading and writing Sample performance indicators: • Demonstrate proper use of terminology through journal entries • Follow a plan of procedure • Follow written and verbal instructions • Access information from a variety of sources	KS – ESS02.01.02,04-05 STL11.K STL17.H-I,K	LA.1.1.6.d,f(1) LA.1.2.2.a(1)
Benchmark 3.3 Design/Problem Solving Sample performance indicators: • Proper use of terminology • Recognize design/problem solving steps • Teamwork	KS – ESS03.01.01-11 KS – SCPA03.01.01 STL11.H-L STL17.K	MA7.2.4 (1) CCSS: MA(7.G.1) SC8.1.3 (2)

Course Content	CTE Reference Standards	Crosswalk to Nebraska Academic Standards
Benchmark 3.4 Information and Communication Technology Sample performance indicators: • Audio/ Video Communication • Digital Communication • Graphic Communication	KS – ESS02.01.06 KS – ESS02.06 KS – SCPA03.01.02 STL17.H-K	
Standard 4. Students will experience skills needed to complete a project.	KS – NMC10.01	LA.1.1.5.b(1)
Benchmark 4.1 The student will identify needed supplies. Sample performance indicators: • Identify materials • Identify material applications	KS – SCPA10.01.01-02 STL9.G	MA8.1.4 (1)
Benchmark 4.2 The student will process material. Sample performance indicators: • Demonstrate cutting processes • Demonstrate drilling/boring • Demonstrate sanding/grinding • Demonstrate forming processes • Demonstrate finishing processes	KS - ACC10.02.01 KS – ACC10.02.03 KS – SCPA10.01.01-04 KS – SCPA10.02.03-04 STL9.F,H STL11.L	MA7.1.3 (1) MA7.2.5 (1) CCSS: MA(7.NS.3)
Benchmark 4.3 The student will identify tools. Sample performance indicators: • Identify the tools • Inspect and report tool conditions • Select and apply the appropriate tool	KS – ACC10.02.02 KS – ACC10.02.03 KS – SCPA10.01.01-02 KS – SCPA10.02.03-04 STL12.I,K	LA.1.2.2.a(1)

Course Content	CTE Reference Standards	Crosswalk to Nebraska Academic Standards
Standard 5. Students will explore career opportunities.	KS – NMC01	LA.1.1.5.b(1) LA.1.1.6.d,f(1)
Benchmark 5.1 The students will examine and report on the Skilled and Technical Sciences (STS) Career Field. <u>Sample performance indicators:</u> • Architecture & Construction • Manufacturing • Science, Technology, Engineering, & Math (STEM) • Transportation, Distribution, & Logistics (TDL)	KS - NMC04 KS – NMC09 KS – ACC05.02 KS – ESS09.07.01 KS – SCC09.01.01 STL18.F-G STL19.H STL20.F-I	
Benchmark 5.2 The students will explore and report on emerging technologies. <u>Sample performance indicators:</u> • Robotics • Nanotechnology • Green Technologies • Space Exploration • Energy	STL14.G STL15.F,H-I STL16.E-H STL17.H-K STL18.F-G STL19.F-H	

Reference Standards Sources

- KS = Career Clusters Knowledge and Skills Statements. Revised 2008. National Career and Technical Education Foundation, Silver Spring, MD. www.careerclusters.org.
- (additional reference standards listed)

Contributors

Secondary: Jim Jelkin – Sunrise Middle School (Kearney, Nebraska), Jim Sapp – Southern (Wymore, Nebraska), Randy Stribley – Papillion-LaVista South (Papillion, Nebraska), David Shabram – Westside Middle School (Omaha, Nebraska). Dan Craney – Platteview High School (Springfield, Nebraska)

Exploring Skilled and Technical Science – 8th Grade

Course Description

In this course students will explore fundamentals in Skilled and Technical Sciences at the 8th grade level.
Code: 100708

Course Content	CTE Reference Standards	Crosswalk to Nebraska Academic Standards
Standard 1. Students will understand and accurately apply measurement.		LA.2.1.5.b(1)
Benchmark 1.1 Demonstrate linear measurement Sample performance indicators: • Read a ruler to an accuracy of 1/16” • Read a ruler to an accuracy of 1 mm • Manipulate fractions accurately	KS – ESS01.03.01-05 KS - ACC01.01.01 KS – ACC01.01.03 KS - MNC10.01.01 STL12.I STL13.F	MA8.1.3 (1) MA8.2.5 (1) CCSS: MA(8.NS.2) (1)
Standard 2. Students will know and model safe lab procedures and techniques.	KS – TRC06 KS - NMC06.01	LA.2.1.5.b(1)
Benchmark 2.1 The student will know safety requirements. Sample performance indicators: • Complete a safety test with 100% accuracy • Sign a safety contract	KS - ESS06.01.01.03-04 KS – TRC10.03 KS - MNC06.05.03 KS – ACC06.01.03 KS – ACC06.01.02 KS – ESS06 KS – SCC06 KS – SCPA10.02.01 KS – SCPA10.02.03 KS – SCPA10.02.04 STL12.H-K	LA.2.1.6.d,f(1)

Course Content	CTE Reference Standards	Crosswalk to Nebraska Academic Standards
Benchmark 2.2 The student will practice appropriate classroom safety. <u>Sample performance indicators:</u> • Demonstrate safe tool operation • Demonstrate proper use of safe personal protection equipment • Operate and maintain a safe working environment • Demonstrate proper storage and handling of materials	KS - ESS06.01.05,07 KS – ACC06.01.03 KS – TRC09 STL12.H-K	
Standard 3. Students will use technical communication.		LA.2.1.5.b(1)
Benchmark 3.1 Read a working drawing <u>Sample performance indicators:</u> • Distinguish views • Identify line type • Interpret dimensions • Identify symbols	KS – ESS02.01.02,04 KS – ACC10.01.01 KS - NMC02 STL11.I-J STL12.I-K	
Benchmark 3.2 Produce a working drawing <u>Sample performance indicators:</u> • Complete orthographic sketch(s) • Complete isometric sketch(s) • CAD software – 2D and/or 3D	KS – ESS02.01.05-06 KS – ESS04.02.01 KS – SCPA03.01.03 KS – ACC10.01.02 KS – ACC10.01.04 KS – NMC10.01.01 STL11.H-L STL12.I-K STL17.J-K	MA8.2.4 (1) CCSS: MA(7.G.1)
Benchmark 3.3 Technical reading and writing <u>Sample performance indicators:</u> • Demonstrate proper use of terminology through journal entries • Use and/or create a plan of procedure	KS – ESS03.01.01-11 KS – SCPA03.01.01 KS - NMC02 STL11.K STL17.H-I,K	LA.2.1.6.d,f(1) LA.2.2.a(1)

Course Content	CTE Reference Standards	Crosswalk to Nebraska Academic Standards
• Follow written and verbal instructions		
Benchmark 3.4 Design/Problem Solving <u>Sample performance indicators:</u> • Proper use of terminology • Recognize design/problem solving steps • Teamwork	KS – ACC03.01 KS – ACC07.01 KS – NMC03 STL11.H-L STL17.K	MA8.1.4 (1) LA.2.1.6.d,f(1)
Standard 4. Students will recognize material types and properties.		LA.2.1.5.b(1)
Benchmark 4.1 The student will identify different types of materials. <u>Sample performance indicators:</u> • Identify materials • Identify properties • Identify material applications	KS – SCPA10.01.01-02 KS - ACC10.02.02 STL1.F-H STL9.G	
Standard 5. Students will demonstrate material processing.		LA.2.1.5.b(1)
Benchmark 5.1 The student will know material processes. <u>Sample performance indicators:</u> • Know cutting processes • Know drilling/boring • Know sanding/grinding • Know forming processes • Know finishing processes	KS – SCPA10.01.01-02 KS - MNC10.01.02 KS – ACC10.02.01 STL9.F	

Course Content	CTE Reference Standards	Crosswalk to Nebraska Academic Standards
Benchmark 5.2 The student will demonstrate material processes. Sample performance indicators: • Demonstrate cutting processes • Demonstrate drilling/boring • Demonstrate sanding/grinding • Demonstrate forming processes • Demonstrate finishing processes	KS – ACC10.02.03 KS – SCPA10.01.01-04 KS – SCPA10.02.03-04 STL9.F,H STL11.L	MA8.1.3 (1) MA8.2.5 (1) CCSS: MA(7.NS.3)
Standard 6. Students will select tools for the correct operation.		LA.2.1.5.b(1)
Benchmark 6.1 The student will identify tools. Sample performance indicators: • Identify the tools • Inspect and report tool conditions • Select and apply the appropriate tool	KS – SCPA10.01-02 KS – SCPA10.02.03-04 KS - ACC10.02.01 STL12.I,K	LA.2.2.a(1)
Standard 7. Students will explore career opportunities.	KS – NMC01	LA.2.1.5.b(1) LA.2.1.6.d,f(1) LA.2.2.a(1) LA.2.3.1.a(1)
Benchmark 7.1 The students will examine and report on the Skilled and Technical Sciences (STS) Career Field. Sample performance indicators: • Architecture & Construction • Manufacturing • Science, Technology, Engineering, & Math (STEM)	KS – ESS09.07.01 KS – SCC09.01.01 KS – ACC05.02 KS – NMC04 KS – NMC09 KS – NMC10 STL18.F-G STL19.H	

Course Content	CTE Reference Standards	Crosswalk to Nebraska Academic Standards
• Transportation, Distribution, & Logistics (TDL)	STL20.F-I	
Benchmark 7.2 The students will explore and report on emerging technologies. <u>Sample performance indicators:</u> • Robotics • Nanotechnology • Green Technologies • Space Exploration • Energy	STL14.G STL15.F, H-I STL16.E-I STL17.H-K STL18.F-I STL19.F-H,K	

Reference Standards Sources

- KS = Career Clusters Knowledge and Skills Statements. Revised 2008. National Career and Technical Education Foundation, Silver Spring, MD. www.careerclusters.org.
- (additional reference standards listed)

Contributors

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HTRS TITANS

2025-2026 Titan School Calendar

Draft

August 2025						
Su	M	Tu	W	Th	F	Sa
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

September 2025						
Su	M	Tu	W	Th	F	Sa
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

October 2025						
Su	M	Tu	W	Th	F	Sa
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

November 2025						
Su	M	Tu	W	Th	F	Sa
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30						

December 2025						
Su	M	Tu	W	Th	F	Sa
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

January 2026						
Su	M	Tu	W	Th	F	Sa
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

February 2026						
Su	M	Tu	W	Th	F	Sa
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28

March 2026						
Su	M	Tu	W	Th	F	Sa
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

April 2026						
Su	M	Tu	W	Th	F	Sa
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

May 2026						
Su	M	Tu	W	Th	F	Sa
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

5	Teacher Workday/Inservice
5	1:30 Dismisal
5	No-School Holiday
5	End of Quarter

172 Student Days - 185 Teacher
Includes 1 day for P/T Conf and Open House)

August 2025 (12 Student / 18 Teacher)

6	Video Training Day/New Teacher Orientation
7-8	Teacher In-service
11	First Day Fall Practice
11-13	Teacher In-service
14	First Day K - 12
18	First Day PreK

September 2025 (19 Student / 19 Teacher)

1	No-School / Labor Day
10	1:30 Dismissal / Fair
11-12	No-School / Fair

October 2025 (21 Student / 22 Teacher)

3	No School Teacher In-Service
17	End of 1st Quarter (44 Days)
20	1:30 Dismissal /P-T Conferences 2:00 pm to 7:00pm
24	No School

November 2025 (16 Student / 17 Teacher)

3	No School - Teacher In-Service
17	First Day of Winter Practice
26-28	Thanksgiving Break

December 2025 (15 Student / 15 Teacher)

19	1:30 Dismissal / End 1st Semester (84 Days)
24 - 28	5 Day Practice/Competition Moratorium
22 - 31	No-School / Christmas Break

January 2026 (17 Student / 19 Teacher)

1 -2	No-School / Christmas Break
5	No-School / Teacher Workday
6	Start of 2nd Semester
19	No-School
26	No-School -Teacher Workday

February 2026 (18 Student / 19 Teacher)

2	No School/ Teacher In-service
24	1:30 Dismissal - P/T Conferences 2:00 pm to 7:00pm
27	No School

March 2026 (20 Student / 20 Teacher)

6	End 3rd Quarter (40 Days)
13 -16	No School / Spring Break

April 2026 (20 Student / 20 Teacher)

3	No School / Good Friday
6	No School

May 2026 (14 Student / 2 Seniors / 15 Teacher)

1	Senior's Last Day
4	10:00AM Start - Teach
7	PreK Last Day
9	Graduation 2:00 pm
20	1:30 Dismissal /Last Day / End 2nd Semester (89 Days)
21	Teacher Workday

DELL Technologies

Your quote is ready for purchase.

Complete the purchase of your personalized quote through our secure online checkout before the quote expires on **May. 10, 2025**.

You can download a copy of this quote during checkout.

Place your order

Quote Name:	**Latitude 3340s & USB-C Adapters**	Sales Rep	Vinicius Werneck
Quote No.	**3000188082110.4**	Phone	1(800) 4563355
Total	**$19,521.25**	Email	Vinicius.Werneck@dell.com
Customer #	7850520	**Billing To**	ACCOUNTS PAYABLE
Quoted On	Apr. 10, 2025		HUMBOLDT PUBLIC SCHOOLS
Expires by	May. 10, 2025		810 CENTRAL AVE
Contract Name	Dell Midwestern Higher Education Compact (MHEC) Master Agreement		HUMBOLDT, NE 68376-6111
Contract Code	C000000979569		
Customer Agreement #	MHEC-04152022		
Deal ID	28944601		

Message from your Sales Rep

Please use the Order button to securely place the order with your preferred payment method online. You may contact your Dell sales team if you have any questions. Thank you for shopping with Dell.

Regards,
Vinicius Werneck

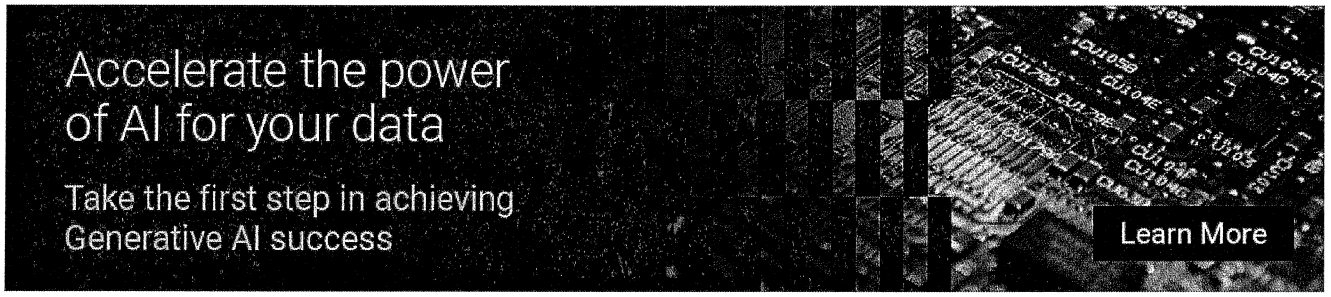
Shipping Group

Shipping To	Shipping Method
COMPUTER PROFESSIONAL HUMBOLDT PUBLIC SCHOOLS 810 CENTRAL AVE HUMBOLDT, NE 68376 (402) 862-2151	Standard Delivery

Product	Unit Price	Quantity	Subtotal
Dell Latitude 3340, BTX	**$746.71**	**25**	**$18,667.75**
Dell 65W USB-C Adapter	**$28.45**	**30**	**$853.50**

Dell Marketing LP. U.S. only. Dell Marketing LP. is located at One Dell Way, Mail Stop 8129, Round Rock, TX 78682

Subtotal:	**$19,521.25**
Shipping:	**$0.00**
Non-Taxable Amount:	**$19,521.25**
Taxable Amount:	**$0.00**
Estimated Tax:	**$0.00**
Total:	**$19,521.25**



Shipping Group Details

Shipping To

COMPUTER PROFESSIONAL
HUMBOLDT PUBLIC SCHOOLS
810 CENTRAL AVE
HUMBOLDT, NE 68376
(402) 862-2151

Shipping Method

Standard Delivery

	Unit Price	Quantity	Subtotal
Dell Latitude 3340, BTX	**$746.71**	**25**	**$18,667.75**

Estimated delivery if purchased today:
Apr. 17, 2025
Contract # C000000979569
Customer Agreement # MHEC-04152022

Description	SKU	Unit Price	Quantity	Subtotal
Dell Latitude 3340, BTX	210-BGCK	-	25	-
13th Gen Intel Core i5-1335U (12 MB cache, 10 cores, up to 4.60 GHz Turbo)	379-BFBK	-	25	-
Windows 11 Pro, English, Brazilian Portuguese PT-BR, French, Spanish	619-ARSB	-	25	-
Activate Your Microsoft 365 For A 30 Day Trial	658-BCSB	-	25	-
Integrated Intel Iris Xe Graphics for i5-1335U Processor with 8 GB LPDDR5 Memory for 2-in-1	338-CHJK	-	25	-
Intel vPro Management Disabled	631-BBBB	-	25	-
8 GB, LPDDR5, 4800 MT/s, integrated	370-BBGH	-	25	-
256 GB, M.2 2230, PCIe NVMe, SSD, Class 35	400-BOSX	-	25	-
2in1, 13.3" FHD 1920x1080, 60Hz, WVA/IPS, Touch, AG, 300 nit, NTSC 72%, Gorilla Glass, Pen Support	391-BHHD	-	25	-
English US backlit keyboard, 79-key	583-BHBS	-	25	-
Intel AX201/AX211 WLAN Driver	555-BJDS	-	25	-
Intel(R) Wi-Fi 6E (6 if 6E unavailable) AX211, 2x2, 802.11ax, Bluetooth Wireless Card	555-BHHU	-	25	-
3-cell, 54 Wh, ExpressCharge™ Capable, ExpressCharge™ Boost Capable	451-BDBR	-	25	-
65W AC adapter, USB Type-C, EcoDesign	492-BDMN	-	25	-
Palmrest, No Fingerprint Reader	346-BJBZ	-	25	-
E4 Power Cord 1M for US	450-AMEI	-	25	-
Quick Start Guide for 3340 2-in-1	340-DDPF	-	25	-
SERI Guide (ENG/FR/Multi)	340-AGIK	-	25	-
ENERGY STAR Qualified	387-BBLW	-	25	-
Fixed Hardware Configuration	998-HBSQ	-	25	-
Dell Additional Software	658-BFQB	-	25	-
Latitude 3340 2-in-1 Min Packaging, 65W, Type-C, WLAN AX201/AX211	340-DFXL	-	25	-
POD Label, 100% tie to L10 BTS & BTP	389-EFCN	-	25	-
FHD/IR Camera, Temporal Noise Reduction, Camera Shutter, Mic	319-BBIE	-	25	-
EPEAT 2018 Registered (Gold)	379-BDZB	-	25	-

Latitude 3340 Bottom Door	321-BJBK	-	25	-
Intel® Rapid Storage Technology Driver	409-BCWZ	-	25	-
Dell Limited Hardware Warranty Extended Year(s)	975-3461	-	25	-
Dell Limited Hardware Warranty	997-6727	-	25	-
ProSupport Plus: Accidental Damage Service, 3 Years	997-6746	-	25	-
ProSupport Plus: Keep Your Hard Drive, 3 Years	997-6755	-	25	-
ProSupport Plus: Next Business Day Onsite, 1 Year	997-6762	-	25	-
ProSupport Plus: Next Business Day Onsite, 2 Year Extended	997-6764	-	25	-
ProSupport Plus: 7x24 Technical Support, 3 Years	997-6773	-	25	-
Thank you for choosing Dell ProSupport Plus. For tech support, visit www.dell.com/contactdell or call 1-866-516-3115	997-8367	-	25	-

	Unit Price	Quantity	Subtotal
Dell 65W USB-C Adapter	**$28.45**	**30**	**$853.50**

Estimated delivery if purchased today:
Apr. 17, 2025
Contract # C000000979569
Customer Agreement # MHEC-04152022

Description	SKU	Unit Price	Quantity	Subtotal
Dell 65W USB-C Adapter	492-BDQM	-	30	-

Subtotal:	**$19,521.25**
Shipping:	**$0.00**
Estimated Tax:	**$0.00**
Total:	**$19,521.25**

Important Notes

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Electronically linked terms and descriptions are available in hard copy upon request.

DELL Technologies

Your quote is ready for purchase.

Complete the purchase of your personalized quote through our secure online checkout before the quote expires on **May. 04, 2025**.

You can download a copy of this quote during checkout.

Place your order

Quote Name:	**85 Chromebooks**	Sales Rep	Vinicius Werneck
Quote No.	**3000186798471.4**	Phone	1(800) 4563355
Total	**$26,227.60**	Email	Vinicius.Werneck@dell.com
Customer #	7850520	**Billing To**	ACCOUNTS PAYABLE
Quoted On	Apr. 04, 2025		HUMBOLDT PUBLIC SCHOOLS
Expires by	May. 04, 2025		810 CENTRAL AVE
Contract Name	Dell Midwestern Higher Education Compact (MHEC) Master Agreement		HUMBOLDT, NE 68376-6111
Contract Code	C000000979569		
Customer Agreement #	MHEC-04152022		
Deal ID	28944601		

Message from your Sales Rep

Please use the Order button to securely place the order with your preferred payment method online. You may contact your Dell sales team if you have any questions. Thank you for shopping with Dell.

Regards,
Vinicius Werneck

Shipping Group

Shipping To

COMPUTER PROFESSIONAL
HUMBOLDT PUBLIC SCHOOLS
810 CENTRAL AVE
HUMBOLDT, NE 68376
(402) 862-2151

Shipping Method

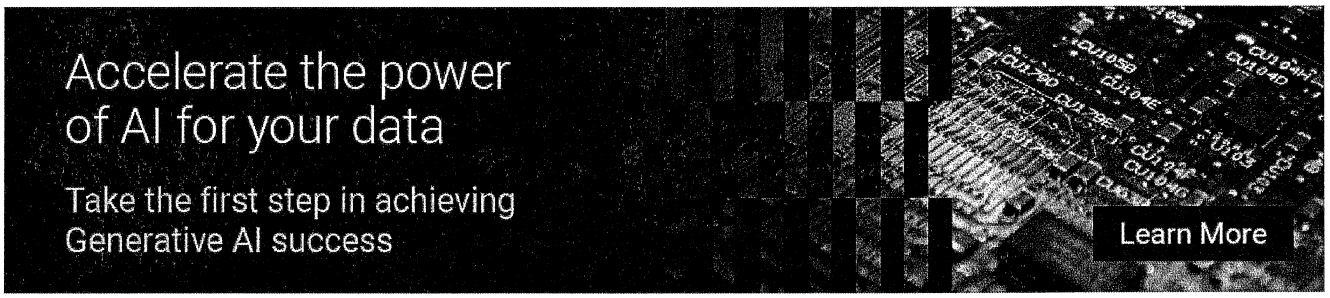
Standard Delivery

Product	Unit Price	Quantity	Subtotal
Dell Chromebook 3110 2-in-1	**$308.56**	**85**	**$26,227.60**

25/26 K-3 replacement (4 yr cycle)

Dell Marketing LP. U.S. only. Dell Marketing LP. is located at One Dell Way, Mail Stop 8129, Round Rock, TX 78682

Subtotal:	**$26,227.60**
Shipping:	**$0.00**
Non-Taxable Amount:	**$26,227.60**
Taxable Amount:	**$0.00**
Estimated Tax:	**$0.00**
Total:	**$26,227.60**



Shipping Group Details

Shipping To

COMPUTER PROFESSIONAL
HUMBOLDT PUBLIC SCHOOLS
810 CENTRAL AVE
HUMBOLDT, NE 68376
(402) 862-2151

Shipping Method

Standard Delivery

	Unit Price	Quantity	Subtotal
Dell Chromebook 3110 2-in-1	**$308.56**	**85**	**$26,227.60**

Estimated delivery if purchased today:
Apr. 14, 2025
Contract # C000000979569
Customer Agreement # MHEC-04152022

Description	SKU	Unit Price	Quantity	Subtotal
Dell Chromebook 3110 2-in-1	210-BCGJ	-	85	-
Intel Celeron N4500 (2 Core, 4M cache, base 1.1GHz, up to 2.8GHz), 4GB Memory, 64GB Storage	338-CMWN	-	85	-
4GB 2933MHz LPDDR4 Non-ECC	370-AGYU	-	85	-
64GB eMMC Hard Drive	400-BNIB	-	85	-
11.6" HD (1366 x 768) Anti-Glare Touch, Camera & Microphone, WLAN Capable, with Pen Support	391-BGHM	-	85	-
Single Point Non Backlit, English US 2n1	580-AJZY	-	85	-
Intel Dual Band Wi-Fi 6 AX201 2x2 802.11ax 160MHz	555-BHJR	-	85	-
3 Cell 42Whr Longlife Battery	451-BCWJ	-	85	-
65W AC adapter, USB Type-C, TCO Gen9 compliant	450-BCPZ	-	85	-
Palmrest, No WFC	346-BHQU	-	85	-
E4 Power Cord 1M for US	537-BBBL	-	85	-
Quick Start Guide	340-CXHE	-	85	-
LCD with touch	320-BENP	-	85	-
Not Included	631-ABBH	-	85	-
Google Zero Touch Enrollment	634-BYQH	-	85	-
Chrome Education Upgrade	634-BYQI	-	85	-
SERI Guide (ENG/FR/Multi)	340-AGIK	-	85	-
Fixed Hardware Configuration	998-GRBR	-	85	-
Label C3, nonWFC, support Stylus, 3110V	389-EEIO	-	85	-
System Shipment, Chromebook 3110 2-in-1	340-CXHF	-	85	-
Intel 11th Gen Celeron CPU label.	389-DYFS	-	85	-
BTS/BTP Smart Selection Shipment, Chromebook (VS)	800-BBQM	-	85	-
Bottom Door	321-BHER	-	85	-
Dell Limited Hardware Warranty Initial Year	868-9746	-	85	-
ProSupport Plus Accidental Damage Service, 1 Year	868-9774	-	85	-
ProSupport Plus Next Business Day Onsite, 1 Year	868-9775	-	85	-
ProSupport Plus 7x24 Technical Support, 1 Year	868-9776	-	85	-

Thank you for choosing Dell ProSupport Plus. For tech support, visit www.dell.com/contactdell or call 1-866-516-3115	997-8367	-	85	-

Subtotal:	**$26,227.60**
Shipping:	**$0.00**
Estimated Tax:	**$0.00**
Total:	**$26,227.60**

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Electronically linked terms and descriptions are available in hard copy upon request.

DELL Technologies

Your quote is ready for purchase.

Complete the purchase of your personalized quote through our secure online checkout before the quote expires on **Apr. 10, 2025**.

You can download a copy of this quote during checkout.

Place your order

Quote Name:	**27 Chromebooks**	Sales Rep	Vinicius Werneck
Quote No.	**3000186798471.1**	Phone	1(800) 4563355
Total	**$8,385.66**	Email	Vinicius.Werneck@dell.com
Customer #	7850520	**Billing To**	ACCOUNTS PAYABLE
Quoted On	Mar. 11, 2025		HUMBOLDT PUBLIC SCHOOLS
Expires by	Apr. 10, 2025		810 CENTRAL AVE
Contract Name	Dell Midwestern Higher Education Compact (MHEC) Master Agreement		HUMBOLDT, NE 68376-6111
Contract Code	C000000979569		
Customer Agreement #	MHEC-04152022		
Deal ID	28944601		

Message from your Sales Rep

Please use the Order button to securely place the order with your preferred payment method online. You may contact your Dell sales team if you have any questions. Thank you for shopping with Dell.

Regards,
Vinicius Werneck

Shipping Group

Shipping To

COMPUTER PROFESSIONAL
HUMBOLDT PUBLIC SCHOOLS
810 CENTRAL AVE
HUMBOLDT, NE 68376
(402) 862-2151

Shipping Method

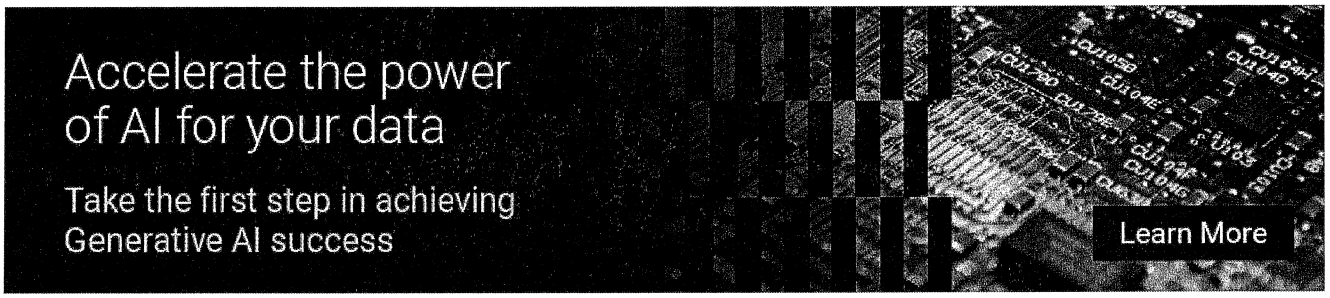
Standard Delivery

Product	Unit Price	Quantity	Subtotal
Dell Chromebook 3110 2-in-1	**$310.58**	**27**	**$8,385.66**

25/26 4th grade

Dell Marketing LP. U.S. only. Dell Marketing LP. is located at One Dell Way, Mail Stop 8129, Round Rock, TX 78682

Subtotal:	**$8,385.66**
Shipping:	**$0.00**
Non-Taxable Amount:	**$8,385.66**
Taxable Amount:	**$0.00**
Estimated Tax:	**$0.00**
Total:	**$8,385.66**



Shipping Group Details

Shipping To

COMPUTER PROFESSIONAL
HUMBOLDT PUBLIC SCHOOLS
810 CENTRAL AVE
HUMBOLDT, NE 68376
(402) 862-2151

Shipping Method

Standard Delivery

	Unit Price	Quantity	Subtotal
Dell Chromebook 3110 2-in-1	**$310.58**	**27**	**$8,385.66**

Estimated delivery if purchased today:
Mar. 20, 2025
Contract # C000000979569
Customer Agreement # MHEC-04152022

Description	SKU	Unit Price	Quantity	Subtotal
Dell Chromebook 3110 2-in-1	210-BCGJ	-	27	-
Intel Celeron N4500 (2 Core, 4M cache, base 1.1GHz, up to 2.8GHz), 4GB Memory, 64GB Storage	338-CMWN	-	27	-
4GB 2933MHz LPDDR4 Non-ECC	370-AGYU	-	27	-
64GB eMMC Hard Drive	400-BNIB	-	27	-
11.6" HD (1366 x 768) Anti-Glare Touch, Camera & Microphone, WLAN Capable, with Pen Support	391-BGHM	-	27	-
Single Point Non Backlit, English US 2n1	580-AJZY	-	27	-
Intel Dual Band Wi-Fi 6 AX201 2x2 802.11ax 160MHz	555-BHJR	-	27	-
3 Cell 42Whr Longlife Battery	451-BCWJ	-	27	-
65W AC adapter, USB Type-C, TCO Gen9 compliant	450-BCPZ	-	27	-
Palmrest, No WFC	346-BHQU	-	27	-
E4 Power Cord 1M for US	537-BBBL	-	27	-
Quick Start Guide	340-CXHE	-	27	-
LCD with touch	320-BENP	-	27	-
Not Included	631-ABBH	-	27	-
Google Zero Touch Enrollment	634-BYQH	-	27	-
Chrome Education Upgrade	634-BYQI	-	27	-
SERI Guide (ENG/FR/Multi)	340-AGIK	-	27	-
Fixed Hardware Configuration	998-GRBR	-	27	-
Label C3, nonWFC, support Stylus, 3110V	389-EEIO	-	27	-
System Shipment, Chromebook 3110 2-in-1	340-CXHF	-	27	-
Intel 11th Gen Celeron CPU label.	389-DYFS	-	27	-
BTS/BTP Smart Selection Shipment, Chromebook (VS)	800-BBQM	-	27	-
Bottom Door	321-BHER	-	27	-
Dell Limited Hardware Warranty Initial Year	868-9746	-	27	-
ProSupport Plus Accidental Damage Service, 1 Year	868-9774	-	27	-
ProSupport Plus Next Business Day Onsite, 1 Year	868-9775	-	27	-
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Shipping:	**$0.00**
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Total:	**$8,385.66**

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PRIME SECURED

We have prepared a quote for you

Replacement camera for P1354

Estimate # 014102 v4

Prepared for:

HTRS Public Schools

George Griffith
georgegriffith@htrstitans.org

Prepared by:

Prime Secured

Dave Kanne
dkanne@primesecured.com

Friday, March 21, 2025

HTRS Public Schools
George Griffith
810 Central Ave
Humboldt, NE 68376
georgegriffith@htrstitans.org

Dear George ,

Thank you for inviting Prime Secured to participate in the selection process for your upcoming project. We are honored that you have entrusted us with your organization's technology needs and want to provide you with the peace of mind of knowing that Prime Secured is the right choice as your partner.

Established in the heart of the Midwest, in Elkhorn, NE, since 2001, Prime Secured has made it our mission to become the most sought-after technology partner. We deliver technology services including physical security solutions, networking, and managed IT services, to customers both locally and nationally.

What sets Prime Secured apart is our dedication to assembling highly skilled and passionate teams that genuinely care about you and your organization. We believe that effective project execution begins with a dedicated team. That's why every one of our clients receives a team tailored to their unique needs, comprising an executive sponsor, an account manager, a program manager, a project engineer, a service coordinator, and dedicated technicians. This approach ensures that we consistently deliver top-tier results in designing, installing, and servicing your project.

One of the hallmarks of our service is the unexpected level of customer care that our clients often praise. At Prime Secured, we firmly believe that every customer deserves nothing less than the best customer experience. Our commitment to this principle is deeply rooted in our core values. To *serve*, to be *growth-minded*, to *play chess, not checkers,* which means adopting a strategic approach to problem-solving, understanding everyone's perspective and experiences through *everyone has a story, collect it*, and, of course, taking pride in our work and the services we provide by *owning it.*

These governing core values guide every aspect of our operations and define the exceptional quality of service you can expect when working with Prime Secured.

On behalf of the entire Prime Secured team, we want to thank you once again for considering Prime Secured for your upcoming project. We are excited about the possibility of collaborating with your organization and contributing to your success. We look forward to partnering with you and your team.

Thank you,

Dave Kanne
Outside Sales Representative
Prime Secured

This is a confidential and proprietary document of Prime Communications, Inc. DBA Prime Secured. In receipt of this document the recipient agrees not to reproduce, copy or transmit this document or the information contained herein.

Statement of Work

Installation Materials

Notice: Due to pervasive supply chain disruptions across the industry, we anticipate potential delays in material deliveries which might influence project timelines. At Prime Secured, we're diligently collaborating with manufacturers and distributors to expedite the delivery process wherever feasible. To further assist, we may reach out with suggestions for alternative materials that align with your project needs. We deeply appreciate your understanding and patience during these unprecedented times.

Project Preparation

Notice: All preparatory work that falls within the purview of the client and directly affects the parameters outlined within this scope of work should be concluded prior to the arrival of Prime personnel on-site. In the event that any aspect of the client's responsibilities, which are integral to the commencement or seamless execution of Prime's tasks, remains outstanding, thereby impeding the execution of our work, a supplementary re-mobilization fee of $500, alongside applicable mileage and drive time charges, shall be levied in conjunction with the overall project cost.

Scope of Project

Hardware Only

Prime Secured will provide (5) cameras for HTRS Public Schools in Humboldt NE. Cameras will connect to the customers existing Genetec system.

Parts to include:

- (5) Axis P1468LE Cameras
- (5) Patch Cables

Install work will be done by customer

This is a confidential and proprietary document of Prime Communications, Inc. DBA Prime Secured. In receipt of this document the recipient agrees not to reproduce, copy or transmit this document or the information contained herein.

Video Surveillance

Qty	Product Description
	Outdoor Cameras
5	P1468LE/4K/VANBLT/IR/ANA/IP67X
	Patch Cable
5	PATCH CORD INDUSTRIALNET CA

Subtotal: **$5,907.60**

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Replacement camera for P1354

Prepared by:

Prime Secured
Dave Kanne
(402) 884-8473
dkanne@primesecured.com

Prepared for:

HTRS Public Schools
810 Central Ave
Humboldt, NE 68376
George Griffith
(402) 862-2151
georgegriffith@htrstitans.org

Quote Information:

Quote #: 014102
Version: 4
Delivery Date: 03/21/2025
Expiration Date: 05/14/2025

Quote Summary

Description	Amount
Video Surveillance	$5,907.60
Total:	**$5,907.60**

Prime Secured will invoice all material 100% upon order and progressive bill all labor monthly. Terms are Net 30.

Acceptance and Incorporation by Reference

This Order together with the Master Services Agreement and Service Attachments and other terms and conditions identified on Terms and Conditions, all of which are incorporated herein by reference (collectively, the “Agreement”) is between Prime Secured (sometimes referred to as “we,” “us,” “our,” or “Provider”), and the customer found on the signature block at the end of this Order (sometimes referred to as “you,” “your,” or “Client”). This Agreement is effective as of the date both parties have signed below (the “Effective Date.”). Both Provider and Client are sometimes referred to individually as a “Party”, or together as the “Parties”. Any capitalized terms in this Order not directly defined are referred to in the applicable document identified on Terms and Conditions of this Order. If there is a conflict between this Order, the Master Services Agreement, any Service Attachment, or Terms and Conditions, this Order will control.

By signing below, Client acknowledges, represents, and warrants that it has read and agrees to the terms and conditions identified on Terms and Conditions to this Order which are incorporated as if fully set forth herein.

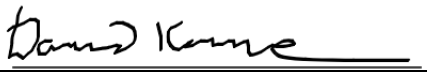
The parties hereby agree that electronic signatures to this Order shall be relied upon and will bind them to the obligations stated herein. Each party hereby warrants and represents that it has the express authority to execute this Agreement(s). This Order supersedes all prior negotiations, proposals, orders, agreements and communications between the parties regarding Provider’s Services.

Provider may make changes to the Agreement at any time. If there are changes, Provider will revise the date at the top of the document. Provider may or may not provide Client with additional notice regarding such changes. Client should review the terms and conditions regularly. Unless otherwise noted, the amended terms and conditions will be effective immediately, and your continued use of the Services thereafter constitute your acceptance of the changes. If you do not agree to the amended terms and conditions, you must stop using the Services immediately. Please note, you may incur a termination fee or other third-party fees, if applicable.

The parties, acting through their authorized officers, hereby execute this Agreement.

This is a confidential and proprietary document of Prime Communications, Inc. DBA Prime Secured. In receipt of this document the recipient agrees not to reproduce, copy or transmit this document or the information contained herein.

Prime Secured

Signature: 

Name: Dave Kanne

Title: Outside Sales Representative

Date: 03/21/2025

HTRS Public Schools

Signature:

Name: George Griffith

Date:

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Exclusions and Clarifications

Sales Tax

By Default, Prime Secured does not include sales tax on estimates unless specifically requested. Applicable sales tax will be calculated and added upon invoicing

Exclusions and Clarifications

Video

Network Switches to be provided and installed by Others
- A Network Switch must be located within 300 cabling feet of all network devices to be installed by Prime
- Verify device installation locations and final quantities with Prime representative. Minimum requirements:
  - 2 ports per Server (1 for iDrac, 1 for Security Network)
  - 1 port per Workstation
  - 1 port per Camera
  - 1 port per Network Master Controller
  - 1 port per Network Door Controller
  - 1 port per Intercom Device
  - 1 port per PBX
  - 1 port per Network IO Device
  - 1 port per Alarm Detection Panel
- All Network Switches shall be POE, capable of providing a minimum of 15 watts per port. Some network devices may require more than 15 watts, verify actual power consumption with Prime representative
- All Network Switches shall provide gigabit connectivity to all devices
- SFP modules are to be provided and installed by others where required

Patch Panels and associated Jacks to be provided and installed by Others
- All Patch Panels and associated Jacks to be provided and installed by others
- Patch Panels shall be Cat5e or higher
- Patch Panels must be located within 300 cabling feet of all network devices to be installed by Prime
- Verify device locations and quantities with Prime representative

Network Cabling to be provided and installed by Others
- All pathways, sleeves, conduit, cable tray, firestopping, network cabling, jacks, surface mount boxes, patch panels, and patch cables to be provided and installed by others
- All junction box faceplates and other accessories to be provided and installed by others. If face plates are not available at time of cable install, it will be the responsibility of the pathway vendor to install the faceplate and close the junction box
- Network cabling shall be Cat5e or higher
- Cabling runs shall not exceed 300 cable feet from patch panel to device

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Exclusions and Clarifications

- All cabling shall be certified per EIA/TIA-568-B standards and guaranteed to be free of defects or faults. Any troubleshooting performed by Prime that is determined to be the fault of cabling defects will be billed to the customer at standard T&M rates
- All cabling shall be labeled with patch panel location and jack number at the device side for easy identification of termination location

General

IP Addresses Provided by others

- Customer must provide individual IP Addresses, or a block of IP Addresses to support the addition of all IP devices to be installed as part of this project
- Devices which require an IP address include, but are not limited to:
  - 2 IPs per Server (1 for iDrac, 1 for Security Network)
  - 1 IP per Workstation
  - 1 IP per Camera
  - 1 IP per Network Master Controller
  - 1 IP per Network Door Controller
  - 1 IP per Intercom Device
  - 1 IP per PBX
  - 1 IP per Network IO Device
  - 1 IP per Alarm Detection Panel

Network Racks to be provided and installed by Others

- All 2 and 4 post network racks to be provided and installed by others
- All cable management equipment to be provided and installed by others

Prime assumes that any existing equipment or equipment provided by others as part of this project is in good working order and is configured and installed correctly to allow the system to operate as intended. This includes but is not limited to cabling and cabling termination, network switch and router configurations, network architecture, network backbone, servers, workstations, and any other components of the network infrastructure. No labor is included in this estimate to assist with configuration or troubleshooting of equipment and services provided by others. Any troubleshooting performed by Prime that is determined to be the fault of equipment or configurations provided by others will be billed to the customer at standard T&M rates

Unless otherwise stated in this Scope of Work all cyber security protections, windows updates, patches, and software maintenance to be provided and maintained by others. These services can be provided by Prime via a Service Agreement, consult your Prime sales representative for more information

Any work not explicitly included in this scope of work is implicitly excluded from the project

Prime Communications utilizes the Privileged Remote Access Management platform BeyondTrust to commission, perform training, and remotely administrate our customers' systems. A jump client will be installed on all servers. All remote sessions are audit tracked, recorded, and protected by 2FA

Unless otherwise stated in the scope of work, system commissioning performed by Prime shall consist

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Exclusions and Clarifications

of the following tasks. Prime will initially perform these configuration tasks, but is not responsible for ongoing maintenance of these items. If additional commissioning tasks are required by the customer, please contact your Prime sales representative. Any additional commissioning performed beyond this list will be billed at standard T&M rates

- Servers
  - Configure storage drives per best practices
  - Disable indexing on Video storage drives
  - Adjust Time Zone and Time settings
  - Enable RDP
  - Set Windows name
  - Change default Admin password and document
  - Configure Server IP Address, Subnet Mask, and Gateway and document
  - Configure automatic Daily Database backups
- Core Software
  - Apply updated GSC License file to software
  - Change default Admin password and document
  - Configure Partitions per customer needs
  - Configure Areas per customer needs
- Cameras
  - Program Camera IP Address, Subnet Mask, and Gateway and document
  - Change default Camera password and document
  - Upgrade Camera firmware to the latest supported by current version of software
  - Confirm WDR is enabled, and video quality settings are appropriate for camera scene
  - Add Camera to software
  - Add Camera to proper Partition and Area
  - Rename Camera per standards and with customer input
  - Configure Camera streams to established Prime or Customer standards
  - Enable Dynamic FPS and Dynamic GOP if supported
  - Configure Motion Detection settings to established Prime or Customer standards
  - Verify Cameras are streaming live video
  - Verify Cameras are recording
  - Screenshot approved view and or create Config Tool Thumbnail
  - Link Cameras to other entities where applicable
- Users
  - Create User Groups and assign Privileges per Customer requirements
  - Prime will configure a small initial group of Genetec Administrator / Power Users.

Administration of Users will be covered during the training, Prime is not responsible for adding all Genetec Users to the system or for ongoing Genetec User administration

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Terms & Conditions

Terms and Conditions

To view our current terms and conditions, please proceed to https://primesecured.com/legal.

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PRIME SECURED

We have prepared a quote for you

Remote Install for Quote #14102

Estimate # 014872 v2

Prepared for:

HTRS Public Schools

George Griffith
georgegriffith@htrstitans.org

Prepared by:

Prime Secured

Dave Kanne
dkanne@primesecured.com

Friday, March 21, 2025

HTRS Public Schools
George Griffith
810 Central Ave
Humboldt, NE 68376
georgegriffith@htrstitans.org

Dear George ,

Thank you for inviting Prime Secured to participate in the selection process for your upcoming project. We are honored that you have entrusted us with your organization's technology needs and want to provide you with the peace of mind of knowing that Prime Secured is the right choice as your partner.

Established in the heart of the Midwest, in Elkhorn, NE, since 2001, Prime Secured has made it our mission to become the most sought-after technology partner. We deliver technology services including physical security solutions, networking, and managed IT services, to customers both locally and nationally.

What sets Prime Secured apart is our dedication to assembling highly skilled and passionate teams that genuinely care about you and your organization. We believe that effective project execution begins with a dedicated team. That's why every one of our clients receives a team tailored to their unique needs, comprising an executive sponsor, an account manager, a program manager, a project engineer, a service coordinator, and dedicated technicians. This approach ensures that we consistently deliver top-tier results in designing, installing, and servicing your project.

One of the hallmarks of our service is the unexpected level of customer care that our clients often praise. At Prime Secured, we firmly believe that every customer deserves nothing less than the best customer experience. Our commitment to this principle is deeply rooted in our core values. To *serve*, to be *growth-minded*, to *play chess, not checkers,* which means adopting a strategic approach to problem-solving, understanding everyone's perspective and experiences through *everyone has a story, collect it*, and, of course, taking pride in our work and the services we provide by *owning it.*

These governing core values guide every aspect of our operations and define the exceptional quality of service you can expect when working with Prime Secured.

On behalf of the entire Prime Secured team, we want to thank you once again for considering Prime Secured for your upcoming project. We are excited about the possibility of collaborating with your organization and contributing to your success. We look forward to partnering with you and your team.

Thank you,

Dave Kanne
Outside Sales Representative
Prime Secured

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Statement of Work

Installation Materials

Notice: Due to pervasive supply chain disruptions across the industry, we anticipate potential delays in material deliveries which might influence project timelines. At Prime Secured, we're diligently collaborating with manufacturers and distributors to expedite the delivery process wherever feasible. To further assist, we may reach out with suggestions for alternative materials that align with your project needs. We deeply appreciate your understanding and patience during these unprecedented times.

Project Preparation

Notice: All preparatory work that falls within the purview of the client and directly affects the parameters outlined within this scope of work should be concluded prior to the arrival of Prime personnel on-site. In the event that any aspect of the client's responsibilities, which are integral to the commencement or seamless execution of Prime's tasks, remains outstanding, thereby impeding the execution of our work, a supplementary re-mobilization fee of $500, alongside applicable mileage and drive time charges, shall be levied in conjunction with the overall project cost.

Scope of Project

Prime Secured will provide Professional Services only for remote configuration and commissioning of the (4) cameras sold on Quote #14102.

Quote to include the following:

- Remote Configuration & Commissioning for (4) P1468 cameras
- Upgrade system from 5.10 to 5.13
- Transfer (4) old P1354 licenses to the (4) new P1468 licenses

No onsite labor included. No material included.

Customers' existing server and workstations must meet the minimum requirements to upgrade to Genetec 5.13. A new server and or workstations are not included in this quote.

Workstation Minimum Requirements include:

Intel ® Core™ 2 X6800 @ 2.93 GHz
2 GB of RAM or better
32-bit operating system
80 GB hard drive for OS and Security Center applications, with a minimum of 6
GB of free disk space to install the Security Center client application
256 MB PCI-Express x16 video card
1280 x 1024 or higher screen resolution with 96 dpi 100 Mbps Ethernet network interface card

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Statement of Work

Server Minimum Requirements include:

Intel ® Core™ 2 Duo E6850 3.0 GHz or better
4 GB of RAM or better
80 GB hard drive for OS and Security Center applications, with a minimum of 15 GB of free disk space to install a Security Center server
Separate storage disk from OS primary disk for Archiver storage
32-bit operating system
100/1000 Mbps Ethernet network interface card
Standard SVGA video card

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Software Upgrade

Qty	Product Description
	Genetec Software
1	Security Center Version 5.13.

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Remote Install for Quote #14102

Prepared by:

Prime Secured
Dave Kanne
(402) 884-8473
dkanne@primesecured.com

Prepared for:

HTRS Public Schools
810 Central Ave
Humboldt, NE 68376
George Griffith
(402) 862-2151
georgegriffith@htrstitans.org

Quote Information:

Quote #: 014872
Version: 2
Delivery Date: 03/21/2025
Expiration Date: 05/11/2025

Quote Summary

Description	Amount
Professional Services	$5,132.86
Total:	**$5,132.86**

Prime Secured will invoice all material 100% upon order and progressive bill all labor monthly. Terms are Net 30.

Acceptance and Incorporation by Reference

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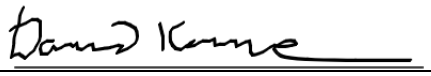
Prime Secured

Signature: 

Name: Dave Kanne

Title: Outside Sales Representative

Date: 03/21/2025

HTRS Public Schools

Signature:

Name: George Griffith

Date:

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Exclusions and Clarifications

Sales Tax

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Exclusions and Clarifications

General
IP Addresses Provided by others - Customer must provide individual IP Addresses, or a block of IP Addresses to support the addition of all IP devices to be installed as part of this project - Devices which require an IP address include, but are not limited to: - 2 IPs per Server (1 for iDrac, 1 for Security Network) - 1 IP per Workstation - 1 IP per Camera - 1 IP per Network Master Controller - 1 IP per Network Door Controller - 1 IP per Intercom Device - 1 IP per PBX - 1 IP per Network IO Device - 1 IP per Alarm Detection Panel
Network Racks to be provided and installed by Others - All 2 and 4 post network racks to be provided and installed by others - All cable management equipment to be provided and installed by others
Prime assumes that any existing equipment or equipment provided by others as part of this project is in good working order and is configured and installed correctly to allow the system to operate as intended. This includes but is not limited to cabling and cabling termination, network switch and router configurations, network architecture, network backbone, servers, workstations, and any other components of the network infrastructure. No labor is included in this quote to assist with configuration or troubleshooting of equipment and services provided by others. Any troubleshooting performed by Prime that is determined to be the fault of equipment or configurations provided by others will be billed to the customer at standard T&M rates
Unless otherwise stated in this Scope of Work all cyber security protections, windows updates, patches, and software maintenance to be provided and maintained by others. These services can be provided by Prime via a Service Agreement, consult your Prime sales representative for more information
Any work not explicitly included in this scope of work is implicitly excluded from the project
Prime Secured utilizes the Privileged Remote Access Management platform BeyondTrust to commission, perform training, and remotely administrate our customers' systems. A jump client will be installed on all servers. All remote sessions are audit tracked, recorded, and protected by 2FA

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Exclusions and Clarifications

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- Servers
  - Configure storage drives per best practices
  - Disable indexing on Video storage drives
  - Adjust Time Zone and Time settings
  - Enable RDP
  - Set Windows name
  - Change default Admin password and document
  - Configure Server IP Address, Subnet Mask, and Gateway and document
  - Configure automatic Daily Database backups
- Core Software
  - Apply updated GSC License file to software
  - Change default Admin password and document
  - Configure Partitions per customer needs
  - Configure Areas per customer needs
- Cameras
  - Program Camera IP Address, Subnet Mask, and Gateway and document
  - Change default Camera password and document
  - Upgrade Camera firmware to the latest supported by current version of software
  - Confirm WDR is enabled, and video quality settings are appropriate for camera scene
  - Add Camera to software
  - Add Camera to proper Partition and Area
  - Rename Camera per standards and with customer input
  - Configure Camera streams to established Prime or Customer standards
  - Enable Dynamic FPS and Dynamic GOP if supported
  - Configure Motion Detection settings to established Prime or Customer standards
  - Verify Cameras are streaming live video
  - Verify Cameras are recording
  - Screenshot approved view and or create Config Tool Thumbnail
  - Link Cameras to other entities where applicable
- Doors
  - Program IP Address, Subnet Mask, and Gateway for any network Door Controllers and document
  - Change default Door Controller password and document
  - Update Door Controller firmware to the latest supported by current version of software
  - Add Door to software
  - Add Door and Door Controller to proper Partition and Area

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Exclusions and Clarifications

- Configure hardware connections and door properties appropriately
- Configure Access Rules, Schedules, Alarms, and Linked Cameras where applicable per Customer standards

- Cardholders
  - Create Cardholder Groups, Access Rules, and Schedules per Customer requirements
  - Create Custom Fields for Cardholders per Customer requirements
  - Prime will cover the creation of Badge Templates during training. Unless otherwise stated in Scope of Work, Prime is not responsible for creation of large quantities of Badge Templates
  - Prime will cover Cardholder administration during training. Unless otherwise stated in the Scope of Work, Prime is not responsible for adding all Cardholders to the system or for ongoing Cardholder administration
- Users
  - Create User Groups and assign Privileges per Customer requirements
  - Prime will configure a small initial group of Genetec Administrator / Power Users. Administration of Users will be covered during the training, Prime is not responsible for adding all Genetec Users to the system or for ongoing Genetec User administration

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Terms & Conditions

Terms and Conditions

To view our current terms and conditions, please proceed to https://primesecured.com/legal.

This is a confidential and proprietary document of Prime Communications, Inc. DBA Prime Secured. In receipt of this document the recipient agrees not to reproduce, copy or transmit this document or the information contained herein.

6401 Q ST
STE 101
LINCOLN, NE 68505
Phone (402) 476-6644

Invoice	FF0323
Date	12-12-24
Store	DT
Type	****Quote****
Reprint	040425 10:50
A/R Account	HHUMB01

Bill to
HUMBOLDT-TABLE ROCK SCHOO 810 CENTRAL AVE HUMBOLDT, NE 68376

Ship to
HUMBOLDT-TABLE ROCK SCHOO 810 CENTRAL AVE HUMBOLDT, NE 68376

Warehouse	P/O Number		Terms	Sold At		Bill to Phones	Ship to Phones
			N30	DT	Home	(402) 862-2151	(402) 862-2151
Salesperson		Salesperson			Work		
215 MICHAEL C					Cell		

UPDATED QUOTE 4/4/25 GOOD FOR 30 DAYS THANK YOU FOR CONSIDERING OUT PROPOSAL!

ORDER WILL BE DROP SHIPPED TO THE SCHOOL REQUESTED BY M COFFEY

Item Number	Description	Brand	U/M	Order	Ship	Each	Disc%	Ext. Amt.
8210	NPS MELODY CHAIR 17.5" *SPE(	SLM	EA	45	0	90.00		4050.00
DY82	NPS DOLLY FOR 8200 CHAIRS*S	SLM	EA	3	0	200.00		600.00
SHBO	SHIP/HANDLING B&O DEPT	HOUSE	EA	1	0	826.00		826.00

VISIT US AT www.dietzemusic.com

Sales Amount	5476.00
5.500% Sales Tax	.00
Freight	.00
Total	5476.00

PLEASE SIGN AND DATE ABOVE. THANK YOU!

Kansas City Audio-Visual
REMIT TO: PO Box 24570
SHIP TO: 7535 Troost Ave.
Kansas City, MO 64131-0570
(800) 798-5228 | www.kcav.com

QUOTE 50595

BILL TO	JOB LOCATION
Humboldt - Table Rock - Steinauer Public Schools	Humboldt - Table Rock - Steinauer Public Schools
810 Central Ave	810 Central Ave
Humboldt, NE 68376	Humboldt, NE 68376

Contact: Jason Guenther
jasonguenther@htrstitans.org, (402)862-2151
Date: 04-01-2025
Expires: 04-25-2025

Contact: Jason Guenther
jasonguenther@htrstitans.org
Sales Rep: Dustin Frank
dfrank@kcav.com, (800)798-5228 EXT 151

TITLE

HTRS - 75MP4x3+DT+Mobile+Install - 4-1-25

MANUFACTURER	PART NUMBER	DESCRIPTION	QTY	UNIT PRICE	TOTAL PRICE
Boxlight	MimioPro754	75" UHD/4K includes wifi and wall mount	3.00	$2,325.00	$6,975.00
Clear Touch	CTI-STAND-ADJM-M1	Adjustable Mobile Stand - Curve-Shaped Open Base with Manual (hand-crank) Height Adjustment	1.00	$899.10	$899.10
KCAV	SHIP-HANDLING	Shipping & Handling of all above items	1.00	$499.53	$499.53
KCAV		Workmanship Warranty (90 days)	1.00	$0.00	$0.00
.		Budget for Tariffs charged	1.00	$787.41	$787.41

Installation Services
Commissioning
Installation - IFP - 1-10 Rooms - No Wiring
Installation of IFP and Diversitrak (qty 1-10)
Installation - IFP+Mobile Cart Assembly
Installation - IE Travel Fee
Project Management

Installation Services Total: **$2,328.73**

Subtotal:	$11,489.77
Tax:	$0.00
TOTAL:	**$11,489.77**

COMMENTS

Price drop on MP4 units, over $300.

Rm110 (mobile board)
Rm212 (straight mount)
Rm205 (rolling track which I already have)

GENERAL TERMS

ORDER INSTRUCTIONS:

1. Please be sure your purchase order reflects shipping/handling terms as indicated on this quote.
2. Pricing is valid for 30 calendar days from date of this quote unless otherwise noted by the expiration date.
3. To place your order, send this quote and purchase order to: orders@kcav.com. POs cannot be accepted on watermarked unauthorized quotes.

HIGHLIGHTS:

1. Credit card payments will incur a 4% convenience fee in allowed states.
2. Both hardware-only orders and installation projects over $50,000 require a 50% deposit.
3. A 25% restocking fee may be charged on returned items. Return shipping is the responsibility of the customer.

ALL SALES ARE SUBJECT TO KCAV TERMS & CONDITIONS:

These Terms & Conditions are by and between Kansas City Audio-Visual, Inc. (the "Company") and the undersigned Customer (the "Customer").
1. GRANT OF SECURITY INTEREST: By signing below, Customer acknowledges that this contract serves as a security agreement within the meaning of the Uniform Commercial Code (UCC), and Customer agrees that Company may file such UCC financing statements as are appropriate to perfect Company's security interest in the equipment.

2. INSTALLATION: Customer hereby grants to Company or its agent the right to install the equipment, to the extent such installation is specified above. Customer represents and warrants that all necessary governmental and third-party approvals for installation of the equipment have been obtained, unless otherwise specified. Delays in installation caused by public agencies, manufacturers, suppliers, acts of God, pandemics, strikes or other union bargaining, and all acts not directly attributable to Company, shall not in any way affect the obligations of Customer, and Company's obligations with respect to such installation shall be suspended during the event causing the delay. Company shall not be responsible for damages from any such delay.
3. TAXES, FEES, AND PERMITS: Customer agrees to pay Company all applicable Federal, State, and local taxes, excises, permits, and fees. All dollars in this Agreement are pre-tax, unless otherwise stipulated.
4. SHIPPING: All shipments of equipment are FOB Company's distribution facilities.
5. RESPONSIBILITY: Until balance is paid, Customer agrees to take proper care of the equipment on premises and to be responsible for any damage or loss by fire, theft, casualty, or any other cause whatsoever, and will not permit or suffer same to be removed from the place of its location at address of Customer, without written consent of Company or assigns.
6. GENERAL: This Agreement constitutes the sole and entire understanding between the parties with respect to the subject matter hereof and supersedes all prior conversations, agreements, representations and promises, whether verbal or written. No modification of this Agreement shall be valid, unless made in writing and properly signed by each party. The provisions of this Agreement are severable; if any clause or provision shall be held invalid or unenforceable, in whole or in part, then such invalidity shall attach only to such clause or provision. Customer shall pay all attorneys' fees and other costs and charges incurred by Company in the collection of debt.
7. INFRASTRUCTURE: In the event that Company is installing equipment or systems that require connectivity to the Customer's network including, but not limited to, VOIP connectivity, internet access, wireless network access, firewall traversal, and/or port forwarding, Company may advise Customer as to the network requirements, but any responsibility for infrastructure on the part of Company stops at the installed equipment's network jack or wireless connection and configuration of the network settings on the device sold by Company. Company is not responsible for updating network settings in the event the Customer's network changes. If the Customer's network is not "Plug and Play," then any custom network settings must be supplied by Customer to Company before the start of installation.
8. INSTALLATION AND SITE PREPARATION: Installation (field assembly, interconnection, equipment calibration and checkout) is to be performed by the Company's trained technical employees. The Company shall be entitled to employ subcontractors and/or agents to assist in or carry out, in whole or in part, the installation. In the event installation by Company employees is prevented by trade unions, Customer shall arrange with the trade unions at its own expense to complete installation. The Company is thereafter liable only for supervision of installation. Company agrees to coordinate with other trades to facilitate satisfactory work progress. If Company's work in progress is impeded by other trades and/or contractors (excluding Company's own subcontractors) or by scheduling delays due to Customer, time delays in the final installation as well as additional charges including labor, travel and reasonable expenses may result. Customer shall be responsible for preparing, at its own expense, the installation site in accordance with the Company's instructions, including the requirements specified in the proposal. Company shall not be responsible for any high-voltage electrical work, ceiling modifications, structural modifications, or mechanical systems modifications. Unless otherwise specified, Customer shall provide the Company with source code for any non-Company programmed remote control system required to be modified under the terms of this Agreement. Customer shall provide the Company with reasonable access to the installation site before delivery, based upon a mutually agreed upon project schedule, for purposes of determining site readiness for installation. Customer will designate an individual on Customer's staff to serve as a contact person for all site preparation and installation issues. Customer shall indemnify the Company against any loss, damage or claim arising out of the condition of the storage and installation premises. Customer shall obtain at its expense and keep effective all permissions, licenses, and permits whenever required for the installation and/or use of the equipment and the premises where the equipment shall be situated.
9. LIMITATIONS OF WARRANTY - PRODUCTS OF OTHERS: Unless otherwise specified, no warranty is provided for "consumables," including batteries, lamps, glassware and evacuated devices. Company's sole obligation with respect to any material or part identified in the quotation, literature, or specifications furnished to the Customer as manufactured or supplied by others, shall be to pass on to Customer the applicable manufacturer's warranties, if any.
10. CHOICE OF LAW AND SEVERABILITY: This agreement shall be interpreted in accordance with and governed in all respects by the law of Missouri. Venue shall be Kansas City, Missouri. Should any provision of this Agreement be found invalid or unenforceable by a court of competent jurisdiction or by operation of any applicable law, it shall not affect the validity of any other provision contained herein.
11. PROJECT/ORDER CANCELLATION: Customer must notify Company via both orders@kcav.com and sales representative in writing to cancel a project or order. Upon receipt of the notice, Company will acknowledge in writing Customer's order cancellation and provide the official date of cancellation. Customer agrees to pay Company for any labor expended or scheduled up to the order cancellation date, including but not limited to engineer time, design time, labor and travel completed, shipping costs, and other expenses related to the order. Assuming the equipment can be returned to the vendor, Customer agrees to pay a 25% restocking fee in addition to any applicable shipping charges. If the vendor will no longer accept the return of the equipment, Customer agrees to be responsible for the full cost of the equipment. Custom items may be noncancellable and are not returnable.
12. RESTOCKING FEES: In the event Customer wishes to return any equipment, Customer agrees to pay restocking fees of 25% of the sale price in addition to any applicable shipping charges.
13. CHANGE ORDERS: Any changes of scope made to the design of the system or the contractual agreements in implementation or functionality will require a mutually agreed upon "Change Order" form signed by an authorized representative for the Customer.
14. TARIFFS: If any products included in the proposal are impacted by international tariff changes, the Company reserves the right to adjust or cancel the proposal.
15. PROFESSIONAL DEVELOPMENT SERVICES: Unless specified otherwise, any purchased training or professional development services must be conducted within 12 months of placement of the sales order, unless mutually agreed upon otherwise in writing. Company will consider any contract to deliver professional development services fulfilled on the date 12 months after placement of sales order.
16. DESIGN SERVICES: All designs are the property of the Company. If Customer contracts with the Company to implement the design, the design shall become the property of Customer. If Customer wants to use the Company's design for an RFP, bid or any other purposes without implementation by the Company, the Company will advise Customer of the fee to purchase the design. Upon payment of the fee, the design becomes the property of Customer.
17. CONFIDENTIALITY: This Agreement and all drawings, specifications, and designs are the property of the Company. Proprietary information provided to Customer (or its agents) is for the sole purpose of demonstrating the Company's capabilities and shall be held in confidence. These materials may not be copied, distributed or disclosed in any way without the sole written permission of an authorized representative of the Company. Any effort to do so will be considered a violation of copyright law.
18. PARAGRAPH HEADINGS: The paragraph headings contained herein are for the convenience of reference only and shall not be construed to affect the interpretation or construction of any substantive provision of this Agreement.

PAYMENT TERMS:

1. DELAYS: All orders are subject to the Company's ability to make delivery at the time specified, and the Company shall not be liable for damages for failure to make partial or complete delivery. The Company shall not be liable for delays in delivery caused by forces not reasonably within Company's control (including but not limited to delays or defaults by carriers, extreme cold weather, floods, fires, storms, or other acts of God, war or act of public enemy or civil disturbance, strikes, lock-outs, shortages of labor or raw materials and supplies, action of any governmental authority, or any other force majeure event). Customer shall be liable for any added expenses incurred by the Company because of, including but not limited to, Customer's delay furnishing requested information to the Company; delays resulting from order changes by Customer; delays related to Customer's network configuration or other systems issues; or conditions affecting installation duration, off-hours or continuous workdays of 8 am to 5 pm.

2. EQUIPMENT AND MATERIALS PRICE INCREASE: Company shall be entitled to additional compensation from Customer in the event there is a significant increase in price of any specific item of equipment or materials of seven percent (7%) or more between the date the Agreement is signed and the date that equipment and materials are purchased for the work to be performed on the project.
3. DELIVERY COSTS & CLAIMS: Customer agrees to pay for all shipping or transportation costs of the equipment as and if stated on Company's proposal and/or the invoice. Company shall not be liable to Customer for any damage to or loss of equipment in transit. Company's only recourse as to such damage or loss shall be with or against carrier, and all claims must be filed with the carrier. Upon delivery, Customer must inspect and verify that contents match the packing list and are without damage. If there are any discrepancies or damages, Customer must notify Company in writing within three (3) business days, or such claims shall be waived.
4. HARDWARE-ONLY ORDERS: Orders over $50,000 consisting of hardware only require a 50% deposit.
5. INSTALLATION PROJECTS: In keeping with industry standards, payment terms for projects over $50,000 that involve installation are as follows:

- 50% deposit in advance of start of project
- 40% invoiced following delivery of hardware
- 10% remaining invoiced following completion of project

6. PAYMENT & PAST DUE ACCOUNTS: All payments are due within thirty (30) days of the invoice date unless an advance deposit is required on Company's quote. A finance charge of the lesser of 1.5% per month (18% - APR) or the highest rate permitted by law will be assessed on all past due accounts. Interest charged on a past due invoice will be assessed from the date of the invoice. Customer agrees to reimburse Company for all attorneys' fees and court costs in connection with default of these payment terms by Customer.
7. CREDIT & CREDIT CARD PURCHASES: Credit payment terms must have the prior approval of Company. Company reserves the right to stop delivery of equipment or provision of services if Customer's financial condition becomes impaired or unsatisfactory to the Company. Additionally, Company may require payment in advance or other security, and, in the absence thereof, may cancel, without liability, the unfilled portion of an order. Credit card purchases shall be subject to a four percent (4%) convenience fee where allowed.

IF YOU WISH TO ACCEPT THIS QUOTE AND RELATED STATEMENT OF WORK, PLEASE SIGN AND RETURN

BUYER:_____ DATE:_____
(Print Name)

SIGNATURE:_____ PO NO.:_____

If your purchasing or accounts payable departments require a purchase order for invoicing, please provide the PO number associated with acceptance of this quote and attach that PO with the signed quote. If signing this quote in lieu of a PO, please indicate what reference KCAV should use in the invoice PO field when invoicing. Please also verify that KCAV has correct shipping and billing address on file either by calling our office directly or by providing a PO at a later date with correct billing/shipping information.

PROPOSAL

AHRS Construction, Inc. *General Contractor*

533 Railroad Street - Bern, Kansas 66408
(785) 336-6118 - Fax (785) 336-3744

TO: George Griffith - Superintendent
HTRS Schools
810 Central Ave
Humboldt, NE 68376
georgegriffith@htrstitans.org

PHONE	DATE
402-862-2235	**4/10/2025**

JOB NAME/LOCATION
HTRS - Concrete Sidewalks/Stairs (West Side)
**Revision 1*

JOB NUMBER	JOB PHONE

We hereby submit specifications and estimates for:

> Labor, materials, and equipment to provide the work specified below. Scope of work will consist of:

Removal and replacement of sidewalks & stairs on the West side of the school, with the following clarifications:
- ~3,200 SF of sidewalk demo and ~2,700 SF of new sidewalk & steps
- Sidewalks to be 4" thick & reinforced w/ either 3/8" rebar or wire mesh reinforcing
- PVC pipe sleeves for potential future irrigation system (or electrical lines) to be installed in 5 locations underneath sidewalks
- New galvanized steel railings to be installed at 2 sets of stairs. No painting included.
- Small retaining wall to be installed at the SW corner around the fire hydrant
  - No other retaining walls to be installed
- Include 3/4" PVC conduit routed underground from sign to the building (no core drilling into the building & no wiring or connections)
- Grass seeding at disturbed areas. No watering or maintenance included.

Exclusions:
- Taxes (assumed to be tax exempt)
- Building permit fees
- Work to be done during regular business hours
- Based on work being done during 2025 (based on 2025 concrete prices)
- Winter conditions (including concrete additives, insulated blankets to cover concrete, heat to thaw subgrade)
- Landscaping (landscape rock or plantings)
- Painting edges of steps
- Watering & maintenance of newly seeded grass
- Removal of electrical/light pole

We Propose hereby to furnish material and labor - complete in accordance with the above specifications, for the sum of:

Forty-seven thousand seven hundred twenty-eight and 00/100 dollars ($ **47,728**).

Payment to be made as follows:

Total due upon completion. Invoice is due upon receipt, past due after 30 days. Interest will be added at a rate of 1-1/2%

All material is guaranteed to be as specified. All work to be completed in a professional manner according to standard practices. Any alteration or deviation from above specifications involving extra costs will be executed only upon written orders, and will become an extra charge over and above the estimate. All agreements contingent upon strikes, accidents or delays beyond our control. Owner to carry fire, tornado and other necessary insurance. Our workers are fully covered by Worker's Compensation Insurance.

Authorized Signature

Note: This proposal may be withdrawn by us if not accepted within days.

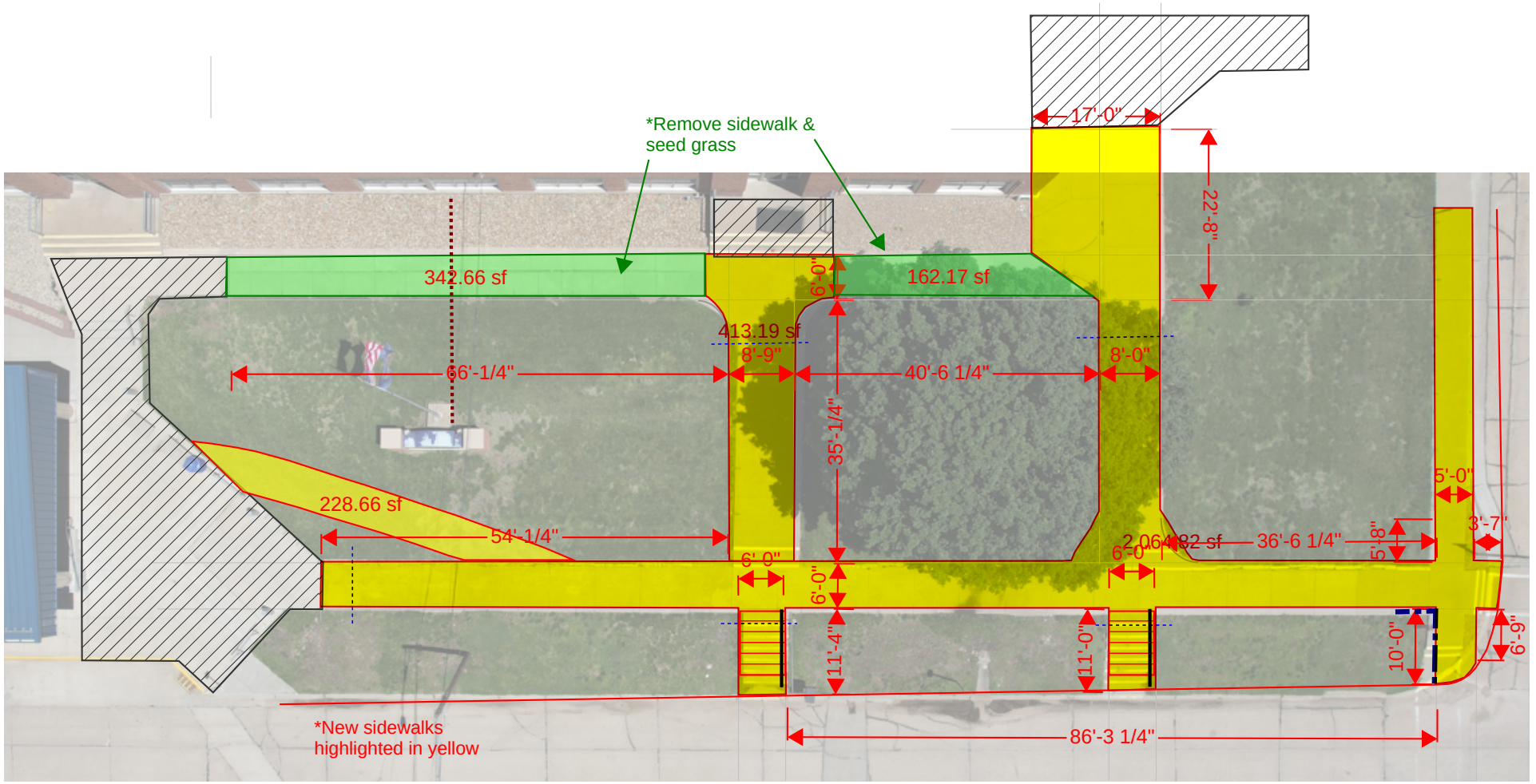
Acceptance of Proposal - The above prices, specifications and conditions are satisfactory ard are hereby accepted. You are authorized to do the work as specified. Payment will be made as outlined above.

Signature _____

Signature _____

Date of Acceptance: _____

HTRS Schools - West Side Sidewalks



PROPOSAL

AHRS Construction, Inc. *General Contractor*

533 Railroad Street - Bern, Kansas 66408
(785) 336-6118 - Fax (785) 336-3744

TO: George Griffith - Superintendent
HTRS Schools
810 Central Ave
Humboldt, NE 68376
georgegriffith@htrstitans.org

PHONE	DATE
402-862-2235	**4/11/2025**

JOB NAME/LOCATION
HTRS - Stage Stairs

JOB NUMBER	JOB PHONE

We hereby submit specifications and estimates for:

> Labor, materials, and equipment to provide the work specified below. Scope of work will consist of:

Removal and replacement of one set of stairs at the stage, with the following clarifications:
- Remove stair structure, rails & landings
- Install new set of stairs, rails & landing (similar to sketch included)
- Includes painting stair structure black

Exclusions:
- Taxes (assumed to be tax exempt)
- Building permit fees
- Work to be done during regular business hours

We Propose hereby to furnish material and labor - complete in accordance with the above specifications, for the sum of:

Four thousand three hundred forty-eight and 00/100 dollars ($ **4,348**).

Payment to be made as follows:

Total due upon completion. Invoice is due upon receipt, past due after 30 days. Interest will be added at a rate of 1-1/2%

All material is guaranteed to be as specified. All work to be completed in a professional manner according to standard practices. Any alteration or deviation from above specifications involving extra costs will be executed only upon written orders, and will become an extra charge over and above the estimate. All agreements contingent upon strikes, accidents or delays beyond our control. Owner to carry fire, tornado and other necessary insurance. Our workers are fully covered by Worker's Compensation Insurance.

Acceptance of Proposal - The above prices, specifications and conditions are satisfactory ard are hereby accepted. You are authorized to do the work as specified. Payment will be made as outlined above.

Date of Acceptance: _____

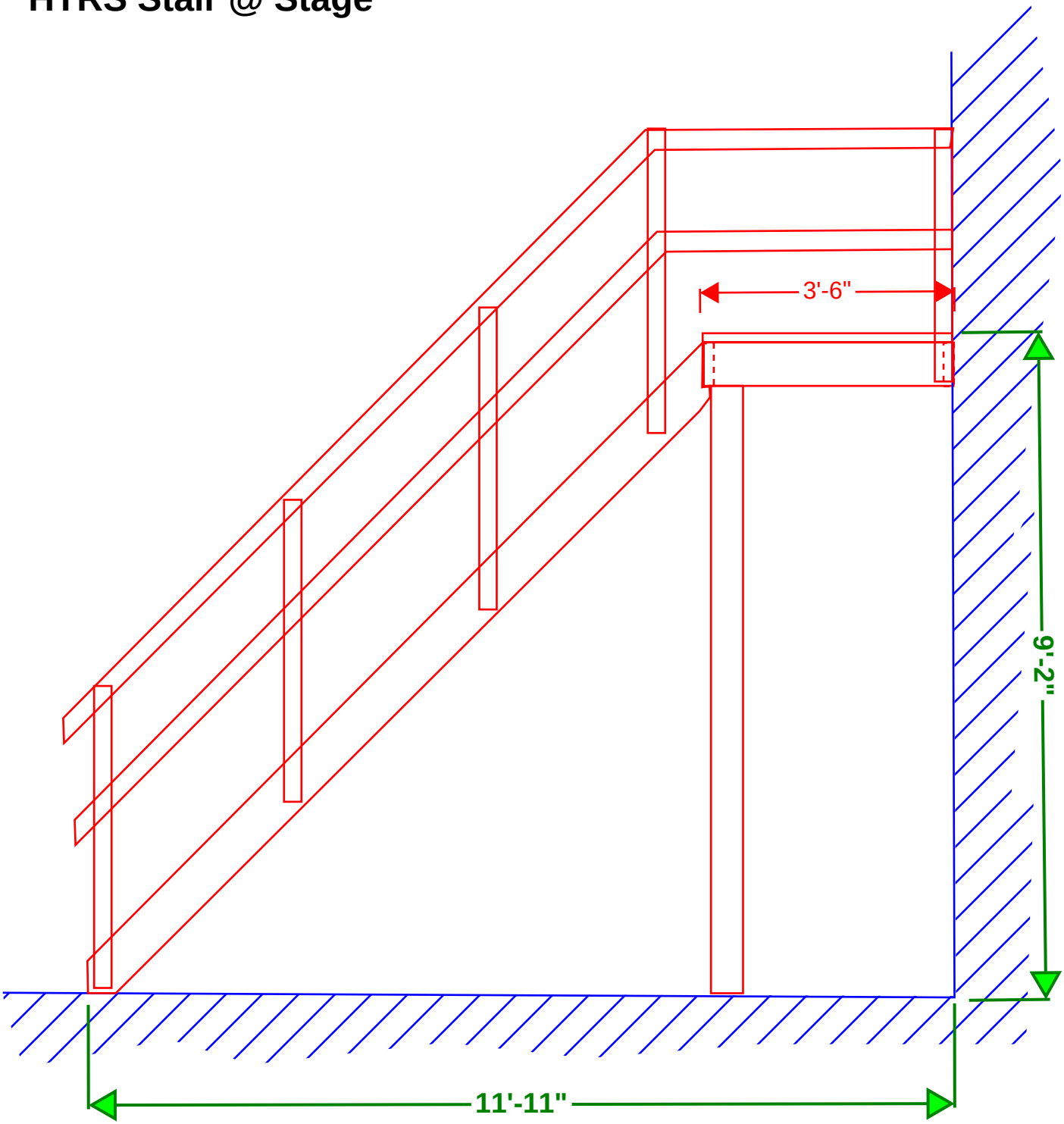
Authorized Signature

Note: This proposal may be withdrawn by us if not accepted within _____ days.

Signature _____

Signature _____

HTRS Stair @ Stage



*(*Current stair is ~9'-7". New stair to stop by pipes along the wall)*

***Actual stair layout & framing members may vary*

***Stair to be removed, for reference*

El Camino Electric
65441 716 Rd
Falls City, NE 68355
(402) 245-3628
elcaminoelectric@gmail.com

Estimate

ADDRESS

Dr. George Griffith
HTRS Public Schools
810 Central Ave
Humboldt, NE 68376

ESTIMATE #
DATE 04/04/2025

ACTIVITY	QTY	RATE	AMOUNT
Install receptacle for stove, fridge and hood in the southwest room on 2nd floor			
Labor	48	85.00	4,080.00
State electrical permit	1	185.00	185.00
1" EMT	180	2.85	513.00
#12 THWN stranded copper wire	800	0.40	320.00
#10 THWN stranded copper wire	200	0.55	110.00
#8 THWN stranded copper wire	600	0.95	570.00
QO 2-40 bolt on breaker	1	119.50	119.50
QO 1-20 bolt on breaker	2	52.60	105.20
Misc materials	1	600.00	600.00

TOTAL **$6,602.70**

Accepted By

Accepted Date

QUOTATION

Creative Sites, LLC

11506 Pierce Street

Omaha, NE 68144

402-614-4606

Date: April 7th, 2025

Customer: HTRS Early Learning Center
Attn: Chelsey Sullivan
800 Long Branch St
Humboldt, NE, 68376

Project: Playground Improvements

BCI Burke Company

SY-3629	$21,210
Percussion Play Dragonfly	$2,229
Percussion Play Bumblebee	$1,893
Freight	$3,430
Ecoturf Turf Surfacing 900 sf	$16,200
Installation	$28,875
Total	$73,837

**Delivery is 5-6 weeks ARO.
**This quotation is good for 90 days.
**Terms are net 30.
**Sales tax is not included.

_____ _____

Julie Kutilek
Creative Sites, LLC

Accepted by

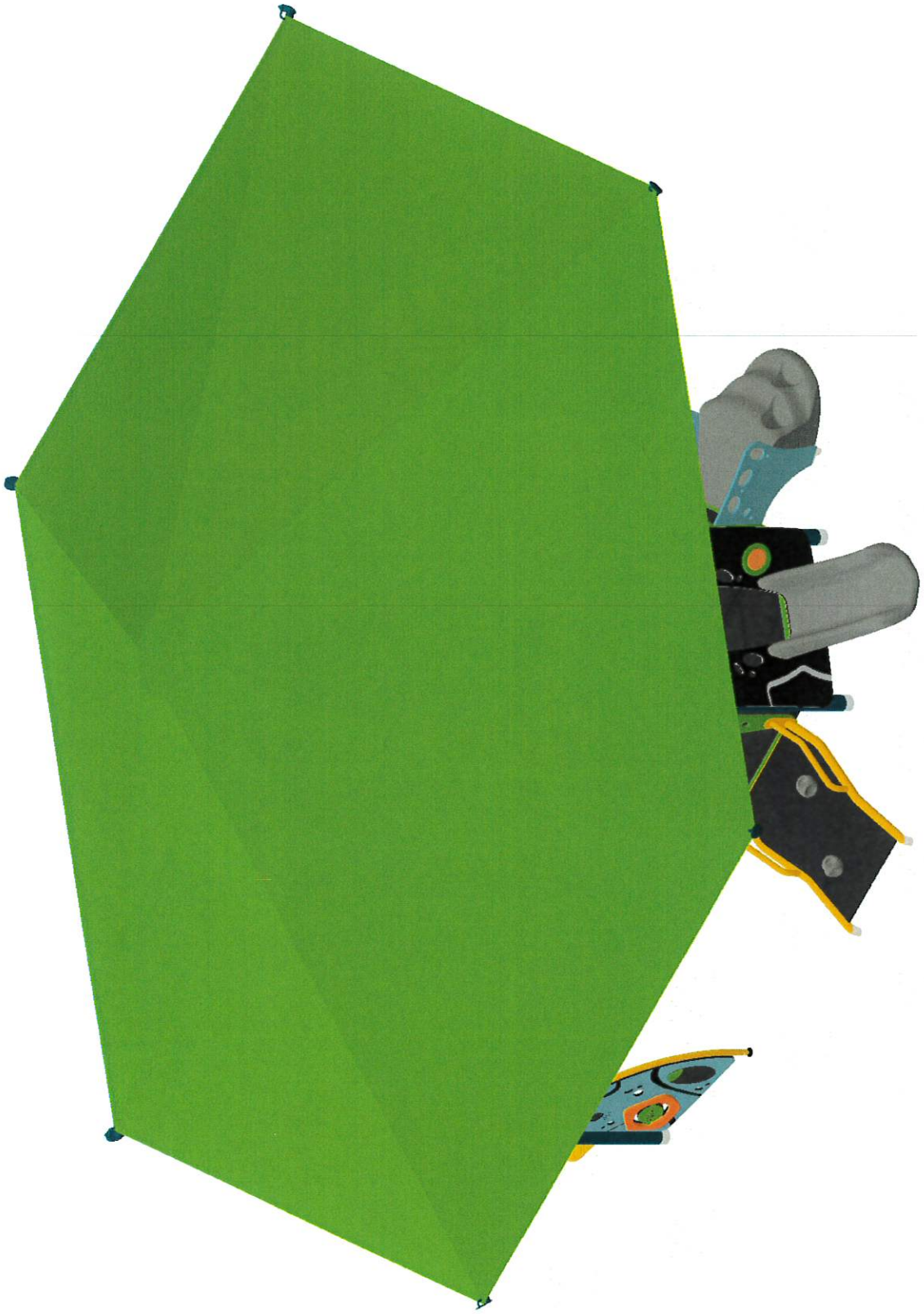
Burke
PLAY THAT MOVES YOU.
BCIBURKE.COM • 800.266.1250

HUMBOLDT EAR[illegible] CHILDHOOD

PROPOSAL [illegible]05-197791-1

3D Designer: Felicia

Creative Sites
PLAY ENVIRONMENTS



SERIES Synergy

ISOMETRIC VIEW

GROUP:
SY-3629

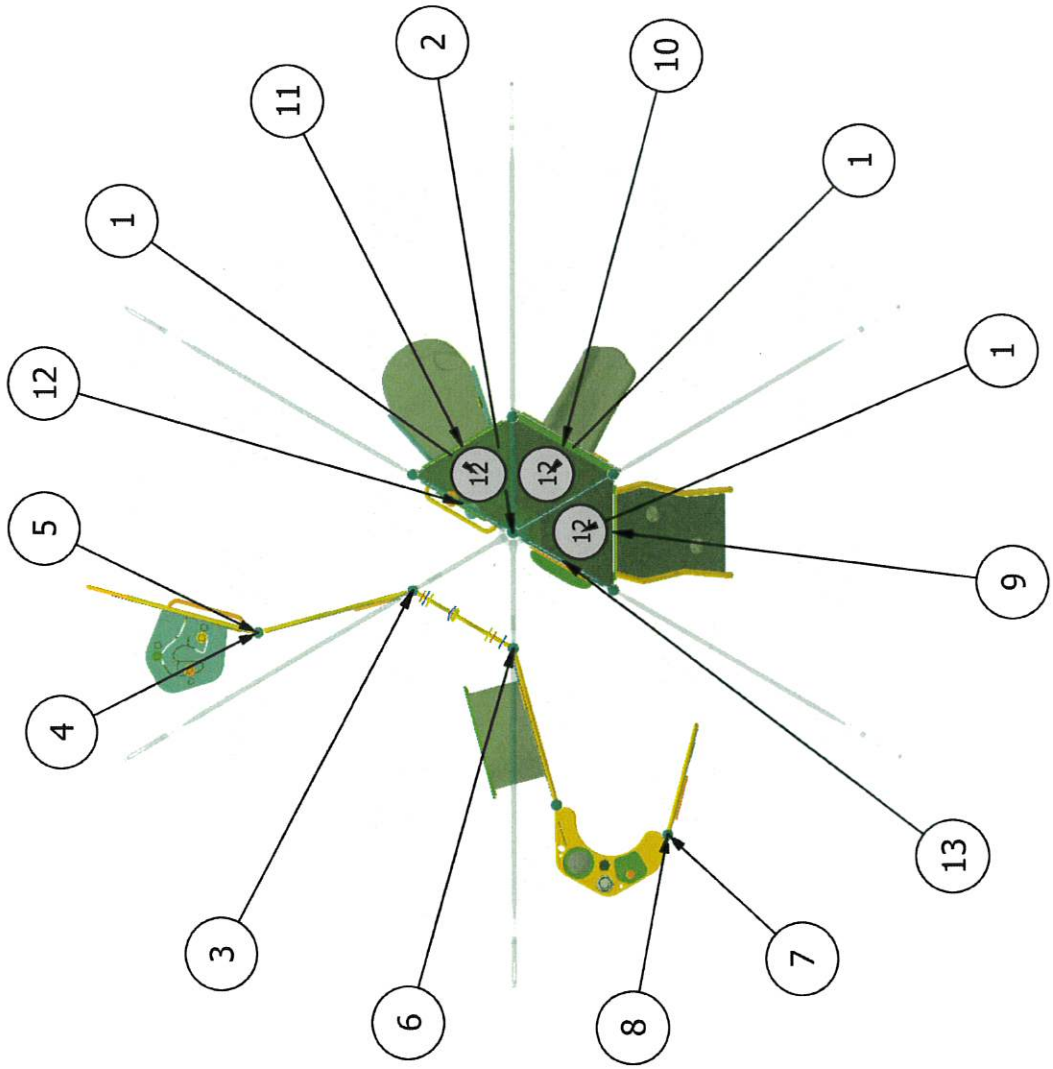
DESIGNED FOR AGES:
6 to 23

Humboldt Public Schools
Humboldt, NE 68376-6106

03/04/2025

Creative Sites, LLC
905-197791-1
Designer: Lee Olig

ITEM	COMP.	DESCRIPTION
1	290-0106	TRIANGLE PLATFORM
2	490-0127	EZ TENSION HEX SHADEPLAY CANOPY
3	590-0414	ABACUS 6-23
4	590-0449	SENSORY WALL LINK, 6-23
5	590-0441	GAME TABLE TALL ACTIVITY ARCH, 6-23
6	590-0447	BIVY TUNNEL LINK, 6-23
7	590-0442	SENSORY TABLE, 6-23
8	590-0448	PEEK-A BOO ACTIVITY ARCH, 6-23
9	390-0330	BOULDER CRAWL, 6-23
10	490-0188	SPARK SLIDE
11	390-0331	SPROUT CRAWL, 6-23
12	590-0439	ROLLER GAME PLAY PANEL 6-23
13	590-0440	ART SPOT PLAY PANEL, 6-23



SERIES Synergy

COMPONENT VIEW

GROUP:
SY-3629

DESIGNED FOR AGES:
6 to 23

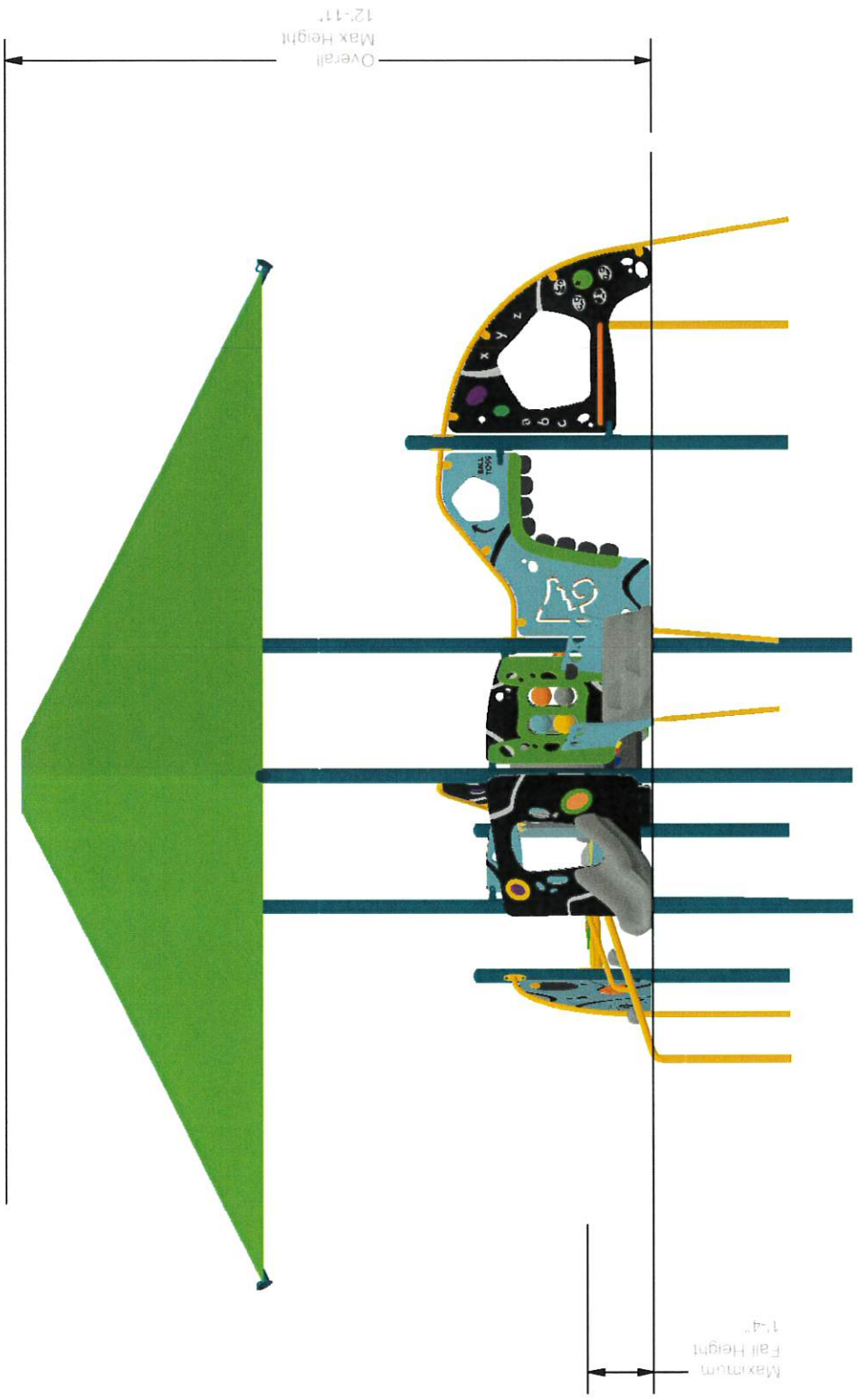
Humboldt Public Schools
Humboldt, NE 68376-6106

Burke
PLAY THAT MOVES YOU.

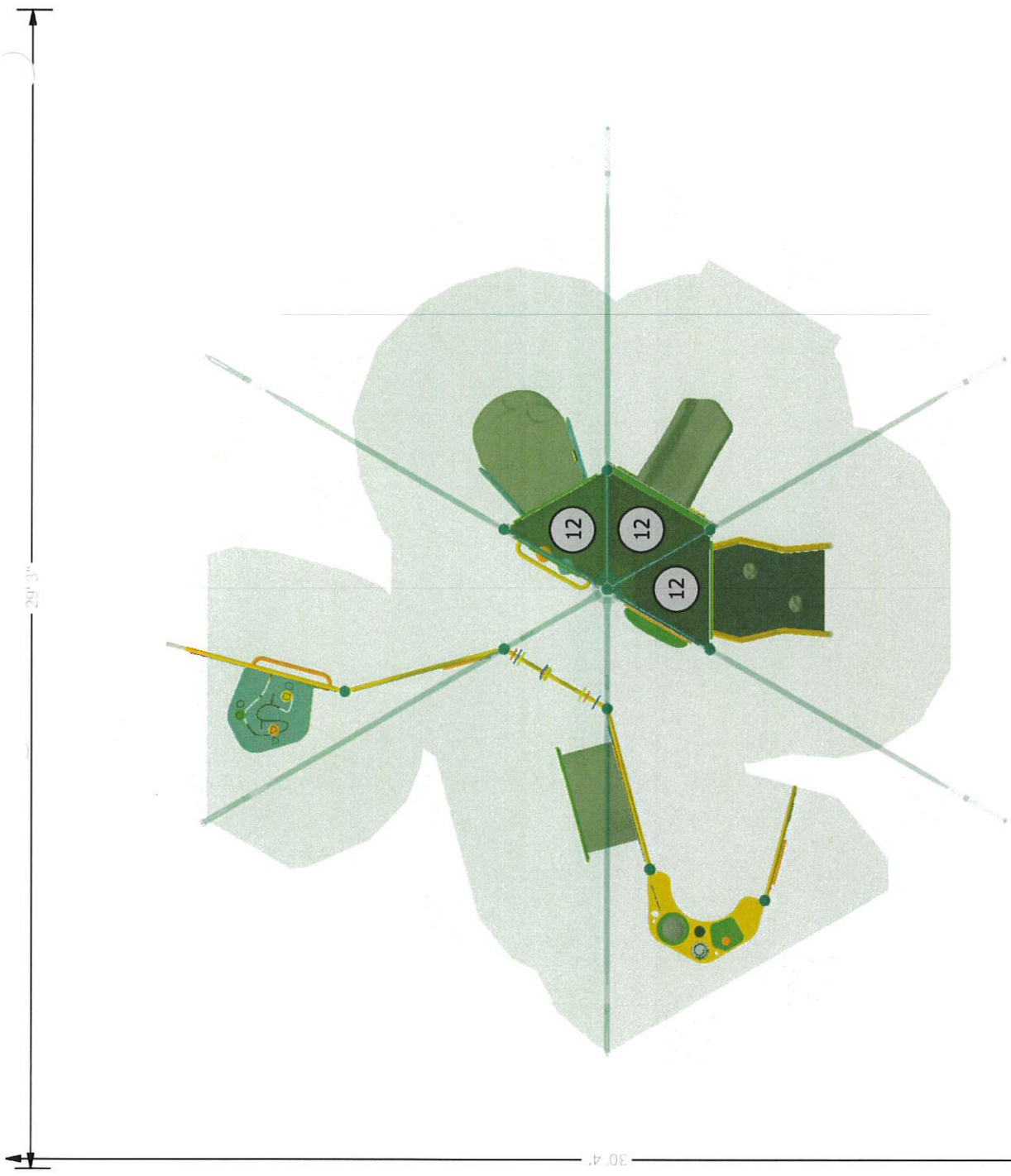
03/04/2025

Creative Sites, LLC
905-197791-1

Designer: Lee Olig



SERIES Synergy		ELEVATION VIEW
GROUP: SY-3629 **DESIGNED FOR AGES:** 6 to 23	**Humboldt Public Schools** Humboldt, NE 68376-6106 Burke PLAY THAT MOVES YOU.	03/04/2025 **Creative Sites, LLC** **905-197791-1** Designer: Lee Olig



PLAYGROUND ACCESSIBILITY (Provided/Required)

TOTAL EVENTS	ELEVATED EVENTS	TRANSFER ACCESSIBLE EVENTS	RAMP ACCESSIBLE EVENTS	GROUND EVENTS	TYPES OF GROUND EVENTS
2	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0

The use and layout of play components identified in this plan conform to the CPSC guidelines. U.S. CPSC recommends the separation of age groups in playground layouts.

OVERALL BOUNDING OF USE ZONES **The space requirements shown here are to ASTM standards. Requirements for other standards may be different.
Area: 885.2 sq.ft.
Perimeter: 119 ft.
STRUCTURE SIZE: 30' 4" x 29' 3"
POST SIZE(S): 5"

Warning: Accessible safety surfacing material is required beneath and around this equipment that is compliant with ASTM, CPSC, and ADAAG requirements.

SERIES Synergy

SITE PLAN VIEW

GROUP:
SY-3629

DESIGNED FOR AGES:
6 to 23

Humboldt Public Schools
Humboldt, NE 68376-6106

Burke
PLAY THAT MOVES YOU.

03/04/2025

Creative Sites, LLC
905-197791-1

Designer: Lee Olig

HUMBOLDT PUBLIC SCHOOLS

800 Long Branch St | Humboldt, NE 68376-6106

Proposal 905-197791-1 | 3/4/2025 | 2025 Pricing

The play components identified in this proposal are IPEMA certified. The use and layout of these components conform to the requirements of ASTMF1487. To verify product certification, visit www.ipema.org.

The space requirements shown in this proposal are to ASTM standards. Requirements for other standards may be different.

Synergy

Component No.	Description	Qty	User Cap.	Ext. User Cap.	Weight	Ext. Weight
072-0300-75C	3 1/2" OD X 75" CAPPED POST	3	0	0	28	84
072-0300-91C	3 1/2" OD X 91" CAPPED POST	1	0	0	34	34
072-0302-133S	3 1/2" OD X 133" SWAGED POST	6	0	0	49	294
290-0106	TRIANGLE PLATFORM	3	2	6	33	99
390-0330	BOULDER CRAWL, 6-23	1	2	2	72	72
390-0331	SPROUT CRAWL, 6-23	1	1	1	52	52
490-0127	EZ TENSION HEX SHADEPLAY CANOPY	1	0	0	470	470
490-0188	SPARK SLIDE	1	1	1	80	80
590-0414	ABACUS 6-23	1	2	2	9	9
590-0439	ROLLER GAME PLAY PANEL 6-23	1	1	1	15	15
590-0440	ART SPOT PLAY PANEL, 6-23	1	1	1	51	51
590-0441	GAME TABLE TALL ACTIVITY ARCH, 6-23	1	4	4	80	80
590-0442	SENSORY TABLE, 6-23	1	1	1	18	18
590-0447	BIVY TUNNEL LINK, 6-23	1	2	2	67	67
590-0448	PEEK-A BOO ACTIVITY ARCH, 6-23	1	2	2	29	29
590-0449	SENSORY WALL LINK, 6-23	1	2	2	42	42

Total User Capacity: 25
Total Weight: 1508 lbs.

Proposal 905-197791-1 | 3/4/2025 | 2025 Pricing

COLOR SELECTION LIST | Default Color Option

AMERICAN FENCE COMPANY

Omaha Lincoln Des Moines Grand Island Sioux Falls Rochester Sioux City Cedar Rapids
AmeriFence Corporation – Kansas City

3301 N 35th St | Lincoln, NE 68504 | (402)467-2511 | j.boettcher@americafence.com

Salesman | Connor Goode | Phone | 402-616-4035 | Email | c.goode@americafence.com

Date: 2/28/2025 Phone: Fax:

Customer Name: Humboldt Table Rock Public School #70

Billing Address: 810 Central Ave., Humboldt, NE 68376

Location of Job: 800 Long Branch St., Humboldt, NE 68376

Cell Phone: 402-245-7368 Contact Name: Gary

Contact E-Mail: htrsbusbarn@gmail.com

Billing E-mail: georgegriffith@htrstitans.org

Specifications:

Installation of Two A-Frame Gates - Installation of 4' Tall x 4' Wide Galvanized Chain Link Walk Gate

Furnish and Install Materials

American Fence will furnish and install (1ea) 22'6" wide and (1ea) 27'6" wide A-frame style gates at the entrances to the gravel lot at the Humboldt Track & Field. Both gates will have two new 4" O.D. galvanized gate posts set into concrete footings next to the existing chain link end posts. Both gate frames will be built out of 1-5/8" O.D. galvanized tubing. The hinges will consist of standard bulldog swing hinges. The latch will consist of a strong-arm style latch that is pad-lockable. Padlock is not included. Both gates will have a gate holdback installed that keeps them in the open position.

American Fence will furnish and install (1ea) new 4' wide x 4' tall galvanized chain link gate into the existing fence to the right of the South A-frame gate. This will require a new 3" O.D. latch post set into a concrete footing. Standard gate hinges and a pad-lockable latch is included.

Total excluding tax (Form 17 required) is $5,559.04

NOTE: NOT RESPONSIBLE FOR SPRINKLERS SYSTEMS. *ESTIMATE GOOD FOR 10 DAYS*.

Note: Your project was estimated based on what we see. Objects below ground that interfere with your post installation will not be the responsibility of AFC such as your foundation, buried paving or pavers, roots, old fence footings, etc. Any adjustments additional materials, trips and labor will be at an additional expense.

Please call Connor Goode at 402-616-4035 with any question

Specification for Fencing

Overall Length	Overall Height
Fabric	**Rail**
Dia. Line Post	**Dia. Corner/End Post**
Dia. And Depth of Footing	**Dia. And Depth of Footing**
Walk Gates	**Drive gates**
Dia. Walk Gate Post	**Dia. Drive Gate Post**

Notes and Exclusions:

1.) Unless otherwise noted, one mobilization is included for the installation of the fence.

2.) Unless otherwise noted, block-out(s) in concrete/masonry for fence by others. No core drilling included.

3.) No permit, survey and/or staking included. Fence line to be staked by others.

4.) Unless otherwise noted, no removals, grading, grubbing and/or demolition included.

5.) Private utilities to be located by others. Fence line to be staked clear of utilities.

6.) Unless otherwise noted, no electrical wire, wiring, grounding, conduit and/or connections included.

7.) If project is bid as tax exempt, a valid NE Tax Exemption form MUST be received prior to AFC beginning any work.

8.) Customer agrees to complete AFC Scheduling Installation Project Checklist prior to AFC beginning work. Form available for review upon request.

Due to unprecedented steel price increases, contractor to pay for stored materials or provide for subsequent future price increases after award of contract. AFC will provide storage

Accounts not paid within thirty days will be charged eighteen percent (18%) per annum.

REV: 4-1-19

We agree to provide the work in accordance with the information stated here in the amount of; **See Above**

Authorized Signature: *Connor Goode* Date: **2/28/2025**

On the back and or second page of this proposal are very important terms and conditions that we are requesting that you review. If you do not have these terms and conditions; do not execute and contact your sales rep. Upon your review, if you have any questions please contact us. After review and agreement, please sign below indicating that you have fully read, understood and agree with the terms and conditions stated above. **We impose a surcharge of 3% on all credit cards that is not greater than our cost of acceptance.**

Customer/Contractor Signature: Date:

Please Provide a Billing E-mail:

Terms and Conditions

Customer assumes full responsibility for the location of property pins, staking of the fence and any inaccurately placed pins and/or stakes. Customer understands that American Fence Company has staked the fence based on the proposal and/or in consideration of existing utilities that may not reflect the actual location of customers property. Customer agrees to defend, hold harmless and indemnify American Fence Company from and against all claims, liabilities and expenses for trespass and other damage or loss arising out of the location of said fence. Customer hereby assumes full responsibility for the damage to any marked and unmarked underground utility, telephone, T.V., Cable or sprinkler system pipes. If the customer requests, agrees or allows American Fence Company from and against all claims, liabilities and expenses as a result of damage to these utilities and related property. If the contract price is not paid when due, the customer agrees to allow American Fence Company to trespass on to their property and remove the fence at the company's discretion. Furthermore, the customer agrees indemnify and hold harmless American Fence Company for any damage done to the property as a result of removal of the fence. All modifications shall be in writing and shall be affixed to the original bid. This agreement and any subsequent modification/s shall be contingent upon strikes, accidents, shortages or delays beyond the control of American Fence Company. Any time stated for installation is purely estimated. The customer agrees and accepts that American Fence Company will not extend discounts or credits for any delays or be held responsible for interest charges on any payments made by the customer. Any changes to the fence due to varying ground conditions are not the responsibility of American Fence Company. Customer to carry fire, tornado and other necessary insurance. This proposal cannot be withdrawn by the customer after acceptance of proposal. American Fence Company has the right to reject any bid. All legal and related fees accrued in an effort to collect on this account for whatever reason will be the responsibility of the customer. By signing this proposal, the customer has completely reviewed and agreed with the prices, specifications and conditions as stated herein. Furthermore, the customer is authorizing American Fence Company to complete the work. The customer is financially responsible for cancellation fees and cost of special-order materials in the event the customer elects to cancel the contract. Terms: 60% Down. Balance due on the date of completion. A service and handling charge of 5% per month – 60% annum will be applied to delinquent accounts past 10 days. We impose a surcharge of 3% on all credit cards that is not greater than our cost of acceptance.

Network for Educator Effectiveness
2800 Maguire Blvd.
Columbia, MO 65211
PHONE 844-793-4357
EMAIL nee@missouri.edu
WEB NEEAdvantage.com

Humboldt Table Rock Steinauer
810 Central Ave.
Humboldt, NE 68376

April 9, 2025

Statement of Support Services

Pre-Implementation Planning and Consultation

During the months prior to implementation, NEE field support staff will conduct orientation session(s) to provide all staff with information, resources, and other relevant materials to aid in the understanding of the NEE system. Tasks involved in this phase:

- Building orientation meeting(s)
- Selection of NEE indicators for district and/or buildings

Evaluator and Supervisor Training

All building and selected district office administrators will complete the NEE New Evaluator training. *(Note: If evaluators have completed NEE training within the past three years, they may complete NEE Recertification training instead of NEE New Evaluator training.)* NEE training certifies administrators as NEE evaluators to provide them with access to the NEE Data Tool. Task involved in this phase:

- Administrators who will evaluate teachers register for and complete the relevant NEE training.

Data Tool District Account Setup

One person in the district will upload the district flat file containing pertinent data fields to the NEE Data Tool. This task will enable users to login, create their own unique password, and use the data system.

NEE Implementation Preparation for Teachers

Prior to school starting, teachers may complete an "Intro to NEE" online training to familiarize themselves with the NEE Data Tool and basics of the evaluation process. The "Intro to NEE" resource is located in the EdHub online library, accessed through the NEE Data Tool. Tasks involved in this phase:

- Users are provided with their login information and a basic guide to enter the Data Tool and navigate to the "Intro to NEE" online training.
- Teachers are provided with the scoring rubrics to be used in their building for review.
- NEE's monthly implementation timeline document is distributed to all teachers to clearly establish the sequence of events during the school year.

On-site Follow-up Technical Assistance by NEE Field Support Staff

- Upon request, NEE field support staff will visit the district and/or buildings to assist in further administrator or teacher support training to ensure a smooth implementation.

Statement of Database Services

Teacher Access

Each teacher is provided with a password-protected account to:

- store data and artifacts related to the NEE evaluation components.
- access their formative evaluation reports at any time.
- provide unlimited access to the EdHub learning modules (PD).

Evaluator Access

Each trained evaluator is provided a password-protected account giving them access to:

- teachers in their assigned building (principals) or district (central office administrators)

This access allows the evaluator to enter data on the following NEE teacher evaluation measures: Classroom Observation, Unit of Instruction, and Teacher Professional Development Plan. The NEE Student Survey data, if utilized, will enter the database directly from the online survey component.

Access to Building and District Reports

Each trained administrator will be given password-protected access to reports appropriate for their access level (building or district level). These reports can be accessed as often as desired.

Online Student Survey Services

NEE provides a student survey instrument that schools can utilize if desired. The survey can be customized to align with the specific indicators used in the classroom observation process in each building. NEE provides clear guidance in the summer training and help documentation within the NEE Data Tool to administer the online survey.

Access to School Specialist Evaluation Materials

In addition to the teacher evaluation components, NEE provides evaluation measures for the following school specialist positions:

- Principals
- Counselors
- Library Media Specialists
- Instructional Coaches
- Speech-Language Pathologists
- Paraprofessionals

Annual Cost

NEE fees are based on student enrollment of the district (PK-12), as reported to the relevant state department of education. The Nebraska Department of Education currently lists the Humboldt Table Rock Steinauer enrollment at 298 students. That is in NEE's 200-399 pricing range, resulting in an annual fee of $1,770. This price covers all services outlined above for a July 1 to June 30 fiscal cycle. Once implemented, the NEE subscription automatically renews for an additional 12-month period each year unless the district provides written notice by April 1 of the then-current term.

Optional add-on: NEE POWERHub Peer Observation Tool

The NEE POWERHub peer observation tool is available within the NEE Data Tool online platform for an extra fee. POWERHub is priced at $40 per user for schools that subscribe to the NEE evaluation system or $50 per user for nonsubscribers.

NETWORK for EDUCATOR EFFECTIVENESS

In affiliation with the University of Missouri

www.NEEAdvantage.com

About NEE

The Network for Educator Effectiveness is a comprehensive educator evaluation system with a purpose: to grow teachers and improve schools. NEE brings together classroom observations with multiple measures of effectiveness in a secure online portal designed to record feedback, start meaningful conversations, and provide high-quality resources for educator growth and development. NEE was developed in 2011 at the University of Missouri's College of Education & Human Development.

Who We Serve

320	1,075	37,183	373,342
districts	buildings	teachers	students

NEE works with schools in five states - Missouri, Nebraska, Kansas, Illinois, and Florida - and continues to add more.

NEE NETWORK for EDUCATOR EFFECTIVENESS

NEE Membership Includes:

- **Training for school leaders**
  NEE training focuses on effective evaluation and feedback practices to support teacher growth.

- **Access to the NEE Data Tool**
  The online platform securely manages evaluation data and provides reports to stay organized.

- **Access to the EdHub Library**
  More than 500 modules for self-paced, individual learning are available in the online platform.

- **Classroom observation rubrics**
  Access to 27 rubrics that schools select from to use in their classroom observations.

- **Student survey and multiple measures**
  NEE provides multiple measures for schools to incorporate in teachers' evaluations, if desired.

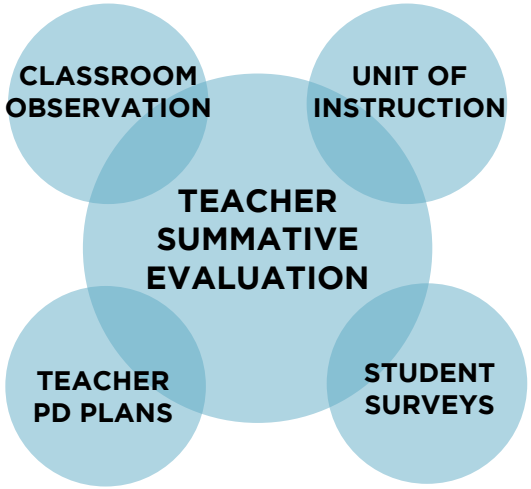
- **School specialist evaluations**
  Evaluation tools are available for principals, counselors, instructional coaches, and others.

All NEE services are packaged and provided to schools at one cost based on student count.

NEE NETWORK for EDUCATOR EFFECTIVENESS

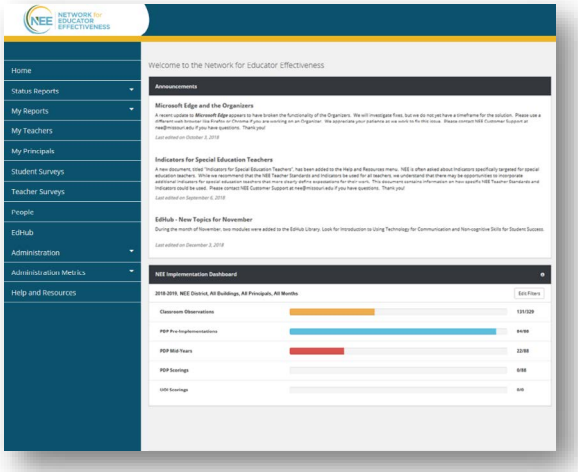
NEE Teacher Evaluation

A comprehensive framework to promote growth



MULTIPLE MEASURES OF EFFECTIVENESS

Four measures are available for schools to use in their teacher evaluation processes. Schools select which measures to incorporate.



ENTERED IN AN ONLINE PLATFORM

NEE evaluation data comes together in the **NEE Data Tool**, a secure online platform designed to help school leaders streamline evaluations.

LINKED TO PROFESSIONAL LEARNING

Through the Data Tool, NEE schools enjoy access to EdHub, a unique web-based resource library with more than 500 professional learning activities.

NETWORK for EDUCATOR EFFECTIVENESS

Additional Support

In addition to teachers, NEE provides evaluation tools aligned to the unique professional standards for:

- Principals
- Speech-language pathologists
- School librarians
- School counselors
- Instructional coaches
- Paraprofessionals

DEDICATED SUPPORT FOR YOUR SCHOOL
NEE's Member Services team works side-by-side with your district on training and implementation. All NEE Member Services representatives are experienced K-12 educators with administrative experiences. When you call or email the NEE Help Desk, you get a real person who will answer your questions promptly and expertly.

NEE NETWORK for EDUCATOR EFFECTIVENESS

The NEE Data Tool

ONLINE EVALUATION SYSTEM

The NEE Data Tool is a custom-built, password-protected online platform that gives administrators a powerful tool for evaluation insights and data-driven decision-making. All district personnel who are evaluated using the NEE system have access to the NEE Data Tool.

With the NEE Data Tool, school leaders can:

COMPLETE CLASSROOM OBSERVATIONS

Principals can score classroom observations and provide feedback for teachers to view.

EVALUATE OTHER NEE COMPONENTS

Launch student surveys, upload and evaluate the TPDP and/or UOI.

VIEW REPORTS & TRENDS

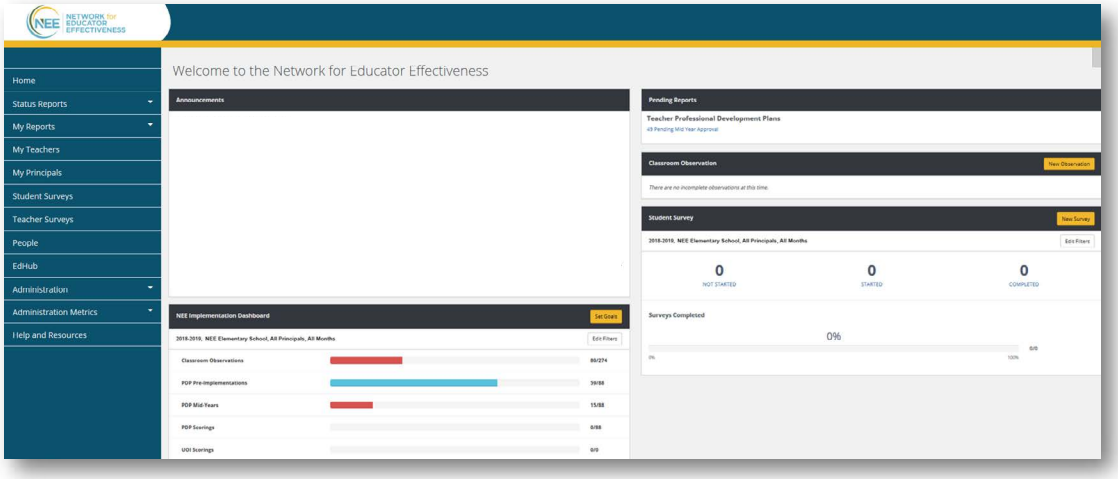
Numerous reports help administrators stay organized and view evaluation trends.

STREAMLINE SUMMATIVE REPORTS

NEE evaluation data comes together in one summative report to save administrators time.

ACCESS EDHUB

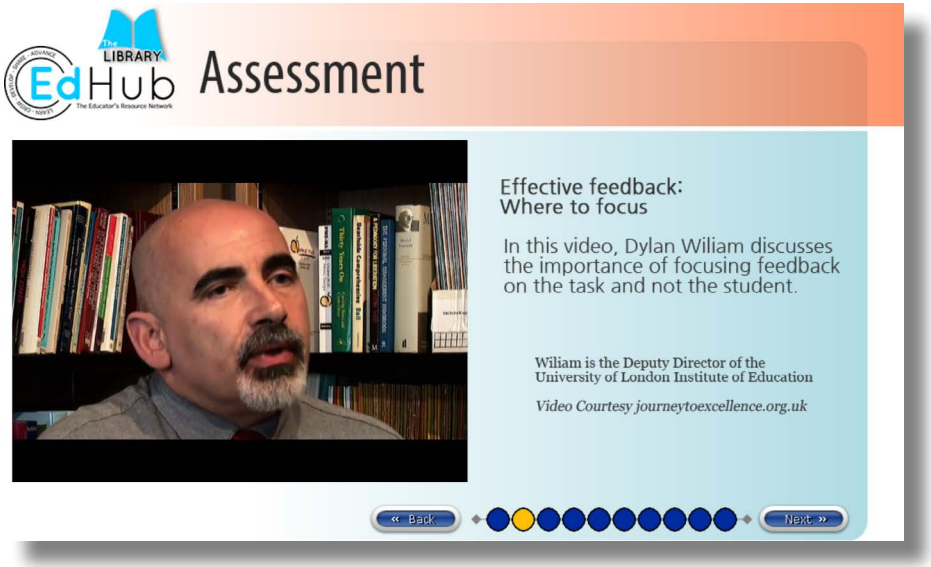
Both administrators and teachers can access EdHub.



NETWORK for EDUCATOR EFFECTIVENESS

EdHub
The Educator's Resource Network

Every evaluation component within NEE is linked to professional development through NEE's online professional learning library, EdHub, which is accessed through your NEE Data Tool login.



In EdHub, there are 500 professional learning resources available on the following topics:

Assessment
Beginning Teacher Assistance
Building Instructional Skills
Classroom Management
Classroom, School & Community Culture
Collaboration for Student Success
Communication
Content Knowledge and Cognitive Engagement
Culturally Responsive Teaching
Curriculum
Data Analysis
Educational Leadership
Indicator Scoring Practice Videos
Indicator Video Exemplars
Instructional Strategies
MSIP-6 Resources
NEE Training Materials
Peer Observation
Professional Practices
Remote Teaching & Learning
School Board Members
Special Education
Student Learning, Growth & Development
Technology
Unit of Instruction Examples
Webinar Library

NEE NETWORK for EDUCATOR EFFECTIVENESS

NETWORK for EDUCATOR EFFECTIVENESS

CONTACT

(844) 793-4357

nee@missouri.edu

www.NEEAdvantage.com

In affiliation with the University of Missouri

NETWORK FOR EDUCATOR EFFECTIVENESS

Agreement
University of Missouri
Assessment Resource Center
and
the District

This Agreement is between The Curators of the University of Missouri, a public corporation and institution of higher education organized and existing under the laws of the State of Missouri, through and on behalf of the Assessment Resource Center ("ARC") in the College of Education (collectively "University") and

School District Name:	Humboldt Table Rock Steinauer
School District Address:	810 Central Ave., Humboldt, NE 68376

("District") relating to District's subscription to the University's web-based tool called the Network for Educator Effectiveness ("NEE Tool"), and the District's use of the following elements:

- ☒ NEE Teacher, NEE Specialist, and NEE Principal Evaluation Measures
- ☐ NEE Professional Responsibilities Evaluation
- ☐ NEE POWERHUB Peer Observation Measure

The initial term ("Initial Term") of this Agreement is as indicated below.

☒ This Agreement is a single year agreement of one "Annual Period" beginning on July 1, 2025 ("Effective Date") and ending on June 30, 2026. Payment of an "Agreement Fee" of $1,770 for the Initial Term is due before September 1, 2025 or this Agreement shall terminate automatically on September 1, 2025.

☐ This Agreement is a multi-year agreement consisting of _____ "Annual Periods" beginning on July 1, _____ ("Effective Date") and ending on June 30, _____. Payment of an "Agreement Fee" of $ _____for the Initial Term is due before September 1, _____ or this Agreement shall terminate automatically on September 1, _____.

The standard terms and conditions set forth in Exhibit A form part of this Agreement, and are incorporated by reference. To the extent there is a conflict between this Agreement and Exhibit A, Exhibit A controls.

Part I. As part of this Agreement, the University agrees to do the following:

1. Provide access to the web-based NEE Tool for all End Users (as defined in Exhibit A). Each End User's level of access to NEE will be based on the role identified for each End User (e.g., principal, teacher) by the District.
2. Provide annual evaluator trainings to the District.

Part II. As part of this Agreement, the District agrees to do the following:

1. In the case of an agreement with an Initial Term of one Annual Period, make timely payment of the "Agreement Fee" to the University based on the fee schedule available and published effective March 1st of the current calendar year at https://nee-onlinemanager.missouri.edu/FeeSchedule by the first September 1 date after the Effective Date. Published fees are be based on the latest student head count for the District reported to the applicable state Department of Education as of the Effective Date. For agreements having an Initial Term consisting of multiple Annual Periods, the overall Agreement Fee will also be based on the number of Annual Periods of the Initial Term and the latest student head count for the District reported to the applicable state Department of Education as of the Effective Date. This Agreement Fee must be paid by the first September 1 date after the Effective Date. However, no portion of the Agreement Fee applicable to the Initial Term shall be refundable or reduced based upon any reduction in student head count during the Initial Term.
2. Submit electronically (import) all requested rosters that identify End Users and their NEE Role, as soon as available but not later than the first September 1 date after the Effective Date, and to maintain and update throughout the year and establish a policy to ensure secure access.
3. Ensure that each person identified by Customer as an End User has completed the trainings required by the University to become an End User.
4. As more generally set forth in Exhibit A, grant permission to the University the following rights regarding all District NEE Data (including data at the District, school, and End User level) that the District provides to NEE through the NEE Tool or other means, during the term of this Agreement and thereafter. This includes the right of the University:
    a. To digitally store the District NEE Data on University servers;
        i. District NEE Data entered into NEE's digital storage space is not confidential as between the District and NEE.
        ii. The District represents and warrants that it is legally authorized to enter the District NEE Data into NEE's digital storage space. The District represents and warrants that it has gained any and all necessary releases and authorizations pertaining to District NEE Data entered into NEE's digital storage space, including but not limited to parental releases for student information and/or images.
        iii. The District acknowledges that by entering District NEE Data into NEE's digital storage space, no confidential, fiduciary, contractually implied or other relationship is created between the District and the University.
    b. To identify the District as a NEE Member;
    c. To use District NEE Data for monitoring, analysis, evaluation and research;
        i. Reports that may identify the District NEE Data will only be viewable internally by NEE staff for purposes such as quality assurance, technical support, and improvement of NEE.
        ii. Reports, publications, or presentations that may be published or disseminated publicly will not include any identifying information of the District, school, or any individual End User.
        iii. NEE encourages researchers to use the de-identified and/or aggregated data to improve education. No personally identifying information will be shared.
5. As more generally set forth in Exhibit A, acknowledge that the intent of the NEE Tool is

to enhance the effectiveness of educators by highlighting areas for growth and that NEE is not purporting to be the District's exclusive tool of evaluation for purposes of promotion, discipline, or termination. The District further acknowledges that any choice to incorporate the NEE Tool into its evaluation processes is at the sole discretion, responsibility, and liability of the District. The District is responsible for results obtained from the use of the NEE Tool and that the University and its service units have no liability in relation to what the District chooses to do with the District NEE Data obtained from the use of the NEE Tool; nor can the University or its units be liable for fraud or fraudulent misrepresentation knowingly or unknowingly undertaken by the District or any of its End Users.

6. Designate a District staff member as the NEE Point of Contact who will serve as the primary conduit for communication related to this Agreement, the NEE Tool, and training and support and services related to membership in NEE. When requested, the NEE Point of Contact will channel NEE communication to appropriate District staff, including communications to End Users or District Technical Support Staff.
7. Consider participation in opportunities initiated by the University, by member Districts, or others, to enhance the performance and content of NEE based on End User experiences, to share best practices for its implementation, to share learning from analysis of NEE and other data, and other forms of knowledge sharing to the NEE members.

For the District:

_____

Superintendent of Schools

University of Missouri:

Thomas Hairston

Director, NEE

Chase Bunger, OSPA

Michele Kennett

Michele Kennett, Division of Research

EXHIBIT A: NEE TOOL SUBSCRIPTION AGREEMENT

STANDARD TERMS AND CONDITIONS

Article I. Definitions

Section 1.01 "Customer" means the legal entity identified as the District in the first paragraph of page 1 of this Agreement.

Section 1.02 "Customer Data" means all information, data, or material which is uploaded to, transferred through, posted, processed, entered, collected by, collected on behalf of, or generated using the NEE Tool by Customer. "Customer Data" includes, for example, all documents, spreadsheets, text, and reports generated by an End User using the NEE Tool.

Section 1.03 "End User" means an individual employed by Customer:

(a) Who has been assigned a Customer Role by the Customer; or
(b) Who has been supplied a user identification and password by Customer (or by University at Customer's request); and

Customer is solely responsible for assigning each End User a level of access. Further, failure on the part of any individual identified by Customer as being an End User to receive the required University annual trainings will result in access privileges to the NEE Tool being denied or revoked to the individual.

Section 1.04 "Intellectual Property" means, without limitation, all patents, trademarks, trade names, copyrights, trade secrets, and confidential information, further including all ideas, inventions, original works of authorship, mask works, technical data, know how, machines, research, plans, products, processes, services, software, developments, formulas, technology, designs, drawings, engineering, hardware configuration information, marketing material and plans, logos, artwork, trade dress, service marks, business methods, and business information, whether or not protectable by applicable patent, copyright, trade name, trademark, trade secret or other laws.

Section 1.05 "NEE Tool" means the on-line tools available at https://nee-onlinemanager.missouri.edu and any associated software, including any new releases, modifications, updates, improvements or enhancements to the web site. The NEE Tool includes all computer code, graphics, user interfaces, page headers, images, footers, links, illustrations, graphics, animations, video clip, multimedia clips, text and audiovisual content used.

Section 1.06 "Third Party Content" means any information, data, or materials, including without limitation documents, spreadsheets, text, images, audiovisual media, designs, patterns, entries, web pages, reports, and similar material – regardless of whether in visual, written, audible, or electronic form, which is owned or controlled by third parties that is displayed, included, or made available using the NEE Tool. Third Party Content may be either (1) internally accessible using the NEE Tool or (2) externally accessible, for example, by providing a link to such Third Party Content.

Article II. Grant of License

Section 2.01 License to Customer and End Users.

(a) For the fee set forth at https://nee-onlinemanager.missouri.edu/FeeSchedule and

otherwise subject to the terms and conditions of this Agreement, University hereby grants to Customer and its End Users a limited, non-exclusive, non-transferable, non-sublicensable license to access and use, on a software-as-a-service (SaaS) basis only, the NEE Tool for Customer's non-commercial internal purposes only during the term of this Agreement. Continuing access to the NEE Tool is contingent upon compliance with the terms and conditions of this Agreement.

(b) End Users may download, print and store selected portions of the material on the NEE Tool under the licenses set forth in Section 2.01(a) provided such End User:

(i) only uses copies of the NEE Tool material (other than Customer Data provided by such End User) for End User's own personal, non-commercial, educational, training, evaluation, and professional development purposes; and

(ii) does not copy, reproduce or post any NEE Tool material (other than Customer Data provided by such End User) publicly, including but not limited to through dissemination on any network computer, or broadcast or redistribution of the material (other than Customer Data provided by such End User) in any media or through any channel; and

(iii) ensures the security and confidentiality of all account logins and passwords assigned to the End User in order to limit access to the assigned End User; and

(iv) does not modify or alter the NEE Tool material (other than Customer Data provided by such End User); and

(v) does not delete, obscure or change any copyright, trademark or other proprietary notice or disclaimers contained in the NEE Tool material (other than Customer Data provided by such End User); and

(vi) attributes the source of the NEE Tool material if the material states the name of the author (in the case of a copyrightable work), the performer (in the case of a performer's performance), the maker (in the case of a sound recording); and

(vii) complies with any purposes or conditions for which such NEE Tool material was uploaded, created, or otherwise made.

Section 2.02 License to University. Customer hereby grants to University a perpetual, irrevocable, worldwide, royalty-free, sublicensable, transferable, non-exclusive license to:

(a) use, reproduce, display, adapt, modify, create derivative works of, translate, or use the Customer Data for purposes of quality assurance, technical support, and improvement of the NEE Tool; and

(b) use, reproduce, display, adapt, modify, create derivative works of, translate, use, or distribute any aggregated anonymized Customer Data for reporting, research, academic, or educational purposes, provided that the same: (i) does not contain any personally identifying information; and (ii) does not identify Customer or any particular End User in anyway.

Section 2.03 Revisions. All annual fees, if applicable, set forth in the current University price schedule may be revised by University on an annual basis.

Section 2.04 Nonpayment. Any amount not received by University when due and not disputed in good faith shall be subject to a late fee of 1.5% per month, or the maximum charge permitted by law, whichever is less. If Customer's account is overdue (except with respect to charges disputed in good faith), in addition to any of its other rights or remedies, University reserves the right to suspend use and access to the NEE Tool provided to Customer and its End Users, without liability

to Customer, until such amounts are paid in full.

Section 2.05 End User Agreement. Customer understands and agrees that in order to gain access to and use the NEE Tool, all End Users must create an account with the University and comply with the terms of this Agreement.

Section 2.06 Security. Customer is responsible for ensuring that all End Users maintain security by safeguarding passwords. Further, because of the sensitive and confidential nature of the Customer Data stored by University using the NEE Tool, Customer agrees to inform its End Users that they must prevent unauthorized access to the NEE Tool, including maintaining security of passwords.

Section 2.07 Liability for End Users. Customer is responsible and liable for any and all acts and omissions of its End Users made in connection with this Agreement. Without limiting the foregoing, Customer agrees to be jointly and severally liable for any and all acts and omissions of its employees, consultants, and independent contractors made in connection with this Agreement.

Section 2.08 End User Access Not Transferable. Unless otherwise agreed in writing, an individual End User's right to use the NEE Tool is not transferable to another individual End User. It is a material breach of this Agreement for Customer (or its End Users) to allow unauthorized access to the NEE Tool.

Article III. Customer Responsibilities

Section 3.01 Representations and Warranties. Customer, on behalf of its employees, consultants, and independent contractors, represents and warrants that Customer:

(a) has the authority and capacity to enter into this Agreement and to carry out and perform its obligations as set forth herein;
(b) shall be solely responsible for ensuring that its access and use of the NEE Tool by its End Users does not violate any laws to which Customer is subject or violate or infringe the rights of any third party, including without limitation those involving spamming, privacy, obscenity, or defamation, copyright, trademark, patent, child protective email address registry, FERPA, and export control;
(c) shall not remove any proprietary notices or labels of University or third parties with respect to Third Party Content;
(d) shall be solely responsible for the fairness, adequacy, accuracy, completeness, quality, integrity, reliability, truthfulness, and legality of all Customer Data and of the means of acquisition of the Customer Data;
(e) shall provide to University such information and data as is reasonably necessary to enable University to perform its obligations under this Agreement;
(f) shall use commercially reasonable efforts to prevent unauthorized access to or use of the NEE Tool, and notify University promptly of any such unauthorized access or use;
(g) shall not use the NEE Tool to store or transmit any unlawful, hateful, infringing, harmful, threatening, abusive, harassing, offensive, libelous, defamatory, slanderous, immoral, pornographic, indecent, obscene, fraudulent, discriminatory, or objectionable or unacceptable material;
(h) shall not use the NEE Tool to store or transmit viruses, worms, time bombs, Trojan horses and other harmful or malicious code, files, scripts, agents or programs;

(i) shall not interfere with or disrupt the integrity or performance of the NEE Tool;
(j) shall not attempt to gain unauthorized access to the NEE Tool or its related systems or networks, including any access to the NEE Tool code;
(k) shall not, except as expressly permitted in this Agreement, permit any third party to access the NEE Tool by anyone beyond those authorized End Users;
(l) shall not copy, distribute, reproduce, publish, license, create derivate works based on, transfer, rent, lease, sublicense, modify, adapt, translate, reverse engineer, decompile, or disassemble any or a portion of the NEE Tool;
(m) shall not advertise or solicit funds for goods or services using the NEE Tool;
(n) shall not, except for Customer's own internal non-commercial use, copy, frame, or mirror any part or content of the NEE Tool; and
(o) shall not build a service or web site that competes with the NEE Tool.

Section 3.02 University Rights. Customer is solely responsible for the Customer Data as part of the NEE Tool. University has the right to monitor the Customer Data but shall have no obligation to do so. If University, in its sole discretion, deems any Customer Data to be unlawful, hateful, infringing, harmful, threatening, abusive, harassing, offensive, libelous, defamatory, slanderous, immoral, pornographic, indecent, obscene, fraudulent, discriminatory, or objectionable or unacceptable, University has the right, but not the obligation, to remove or deny access to such Customer Data. Customer agrees that University shall not be liable to Customer for any action taken by University to remove or restrict access to such Customer Data, nor for any action taken to restrict access to any Customer Data posted in violation of any law, regulation or rights of a third party. University reserves the right to take all reasonable actions to remove or restrict access to any such Customer Data, including restriction, suspension or termination of Customer's access to NEE Tool and/or deletion of the Customer Data in question.

Section 3.03 Equipment. Customer shall be responsible for obtaining and maintaining any equipment and ancillary services needed to connect to, access or otherwise use the NEE Tool, including, without limitation, modems, hardware, server, software, operating system, networking, web servers, long distance or local telephone service (collectively, "Equipment"). Customer shall be responsible for ensuring that such Equipment is compatible with the NEE Tool and complies with all configurations and specifications provided by University, which may be amended from time to time.

Article IV. Proprietary Rights and Customer Content

Section 4.01 University Ownership of IP in the NEE Tool. Customer acknowledges that University shall own all right, title, and interest to the NEE Tool and all Intellectual Property therein. Without limiting the foregoing, the software, workflow processes/protocols, indicator scoring guides, designs, know-how and other technologies provided by University as part of it allowing access to the NEE Tool are the proprietary property of University and its licensors, and all right, title and interest in and to such items, including all associated intellectual property rights, remain only with University and its licensors. University reserves all rights unless expressly granted in this Agreement.

Section 4.02 Customer Data. All Customer Data is and will be, as among University, and End User, and Customer, the property of Customer or End User. The Customer Data is licensed to University in accordance with Section 2.02.

Section 4.03 Feedback. University has and will have a perpetual, irrevocable, worldwide,

royalty-free, sub-licensable, transferable, non-exclusive license to use or incorporate into the NEE Tool, without any obligation to compensate Customer in any way, any comments, suggestions, enhancement requests, recommendations or other feedback provided by Customer, its End Users, and any other Customer employees or agents relating to the NEE Tool.

Section 4.04 Disclaimer of Third Party Content. University makes no representations or warranties, and expressly disclaims all implied warranties and conditions with respect to all Third Party Content, and will not be liable to Customer or any End User for any damage, cost, loss, expense or liability suffered or incurred by Customer as a result of its use or inability to use any Third Party Content.

Section 4.05 Access to Third Party Content. The NEE Tool features and functionalities that interoperate with Third Party Content are entirely dependent upon the continuing availability of such Third Party Content and any Intellectual Property related thereto. If a third party ceases to make available any such Third Party Content on which any aspect of the NEE Tool depends, then University may alter or cease providing such features or functionality without prior notice to Customer or any End User. Similarly, University will alter or cease providing features or functionality if required to do so by applicable laws. In addition, Third Party Content that may be accessed from, displayed on, or linked to from the NEE Tool are not available in all languages or in all countries or regions. University makes no representation that the NEE Tool or such Third Party Content is appropriate or available for use in any particular location. To the extent that any End User chooses to use or access the NEE Tool and/or Third Party Content, each End User does so as his/her own initiative and shall be solely responsible for compliance with any applicable laws, including but not limited to applicable local laws. University reserves the right to change, suspend, remove, or disable access to any Third Party Content at any time without notice. In no event will University be liable for the removal of or disabling of access to any such Third Party Content. University may also impose limits on the use of or access to certain Third Party Content, in any case and without notice or liability.

Article V. Confidential Information

Section 5.01 Confidentiality

(a) Customer understands and acknowledges that Customer Data is not confidential as between Customer and University. Customer represents and warrants that it is legally authorized to enter the Customer Data using the NEE Tool and that Customer has gained any and all necessary releases and authorizations pertaining to the Customer Data, including but not limited to parental releases for student information or images and compliance with the Family Educational Rights and Privacy Act (FERPA). Customer acknowledges that by entering data using the NEE Tool, no confidential, fiduciary, contractually implied or other relationship is created between Customer and University.

(b) In accordance with the license granted in Section 2.02(b) for all Customer Data used for reporting, research, academic, or educational purposes, including any academic publications, University shall remove any personally identifying information in the Customer Data.

(c) Customer understands and agrees that University may store the Customer Data indefinitely and may also disclose the same to third parties, without notice to Customer or the End User if required by law or in the good faith belief that such disclosure is reasonably necessary to (a) enforce or comply with this Agreement or

(b) respond to claims that the Customer Data violates the rights of any third party.

Section 5.02 Sunshine Law. Customer acknowledges that University is subject to the Missouri Sunshine Act, 610 RSMo. All Customer Data shall be owned by Customer and to the extent permitted by law, shall be deemed to constitute "individually identifiable personnel records, performance ratings or records pertaining to employees or applicants for employment" of Customer under RSMo 610.021(13).

Article VI. Disclaimer of Warranties

Section 6.01 No Editorial Control. Customer acknowledges that University exercises no editorial control over Customer Data. The views and opinions expressed in such information do not reflect those of University. University makes no warranties or representations regarding the fairness, adequacy, accuracy, completeness, quality, integrity, reliability, truthfulness, and legality of such information.

Section 6.02 No Warranty. Notwithstanding anything else contained in this Agreement, University does not represent or warrant that:

(a) the features or functionality contained in the NEE Tool (including the NEE Tool) will meet the requirements of Customer or any of its End Users;
(b) any particular results can or will be achieved from the use of the NEE Tool;
(c) any educational, training, evaluation, or professional development programs contained in the NEE Tool are suitable for any purpose;
(d) the operation or availability of the NEE Tool will be uninterrupted or error-free; or
(e) any requirements of any civil or governmental authority to which Customer is subject shall be met.

Section 6.03 No Warranty. THE NEE TOOL (AND ANY THIRD PARTY CONTENT) IS PROVIDED "AS IS" AND "AS AVAILABLE" WITHOUT WARRANTIES OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO WARRANTIES OF TITLE OR IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR USE, OR WARRANTIES OF NON-INFRINGEMENT. TO THE FULLEST EXTENT PERMISSIBLE BY LAW, UNIVERSITY MAKES NO WARRANTIES AND SHALL NOT BE LIABLE FOR THE USE OF THE NEE TOOL, INCLUDING WITHOUT LIMITATION ANY INTERRUPTION OR ERROR IN THE NEE TOOL UNDER ANY CIRCUMSTANCES.

Article VII. Limitations of Liabilities and Remedies, and Indemnities

Section 7.01 Limitation of Liabilities. IN NO EVENT SHALL UNIVERSITY ITS CURRENT OR FORMER CURATORS, AGENTS, EMPLOYEES, AND AFFILIATES BE LIABLE FOR ANY SPECIAL, EXEMPLARY, INDIRECT, PUNITIVE, INCIDENTAL OR CONSEQUENTIAL DAMAGES OF ANY KIND, REGARDLESS OF THE FORM OF ACTION, WHETHER IN CONTRACT (INCLUDING FUNDAMENTAL BREACH), STRICT LIABILITY, OR IN TORT (INCLUDING NEGLIGENCE OR OTHERWISE), AND INCLUDING ECONOMIC DAMAGE OR INJURY TO PROPERTY AND LOST PROFITS, ATTORNEYS' AND EXPERTS' FEES, REGARDLESS OF WHETHER UNIVERSITY MAY BE ADVISED, MAY HAVE OTHER REASON TO KNOW, OR IN FACT MAY KNOW OF THE POSSIBILITY, INCLUDING BUT NOT LIMITED TO ALL CLAIMS ARISING OUT OF THIS AGREEMENT, ALL USE OF THE NEE TOOL, OR WITH RESPECT TO THE INSTALLATION, IMPLEMENTATION, CUSTOMIZATION, USE, INABILITY TO USE, OPERATION OR SUPPORT OF THE NEE TOOL. Without limiting the

foregoing, Customer acknowledges that it is solely responsible and liable for any results obtained from the use of the NEE Tool and that University has no liability in relation to what Customer chooses to do with the Customer Data obtained from the use of the NEE Tool.

Section 7.02 Remedies: Aggregate Liability. In no event will the total aggregate liability of University to Customer for any and all claims relating to this Agreement, based upon any legal theory, including but not limited to breach of warranty, breach of contract (including fundamental breach), negligence, other tort claims or strict liability exceed the last Annual Period fee paid prior to the first act or omission giving rise to the claim.

Section 7.03 Indemnity. To the extent permitted by applicable law, Customer will defend, indemnify, and hold harmless University, its current or former, curators, agents, employees, and affiliates from any and all claims, actions or demands, including, without limitation, reasonable legal fees, accounting fees, and expert fees, arising out of, related to, or in conjunction with (a) the use of the NEE Tool by Customer and its End Users, directors, agents, employees and representatives, including but not limited to those based on any fraudulent, invalid, duplicate, incomplete, unauthorized, or misleading information submitted or reported, (b) any unauthorized use, access or distribution of the NEE Tool caused, in whole, or in part, by Customer or its End Users; (c) any breach of any term, condition, obligation, covenant, representation, or warranty by Customer or its End Users, (d) any violation of any law or regulation by Customer or its End Users (including but not limited to any rights of privacy), (e) the infringement, misappropriation or violation by Customer or its End Users of any patent, copyright, trademark, trade secret or other proprietary or privacy right of a third party, or (f) the exercise or any rights granted to Customer under this Agreement.

Article VIII. Term and Termination

Section 8.01 Term. The term of this Agreement is set forth in the second paragraph on page one of this Agreement.

In the case where the Initial Term is a single Annual Period, this Agreement shall automatically renew effective July 1st of each calendar year for additional successive Annual Periods unless the District provides written notice of its intent not to renew this Agreement at least 90 days prior to the end date (June 30th) of then current Annual Period.

In the case where the Initial Term consists of more than one Annual Period, this Agreement shall automatically renew for successive Annual Periods effective the first July 1st date after the Initial Term and on each July 1st date thereafter unless the District provides written notice of its intent not to renew this Agreement at least 90 days prior to the end date (June 30th) of the Initial Term or the then current Annual Period.

The Agreement Fee for each renewed Annual Period shall be the fee available and published effective March 1st of the then current calendar year at https://nee-onlinemanager.missouri.edu/FeeSchedule based on the latest student head count for the District reported to the applicable state Department of Education. District must pay the Agreement Fee for each renewed Annual Period before September 1 of that period.

Section 8.02 University's Right to Terminate. University may, in its sole discretion, immediately terminate this Agreement, suspend Customer's ability to access the NEE Tool (in whole or in part), or suspend the delivery of the NEE Tool (in whole or in part) if Customer or its End User commits a breach of the terms of this Agreement or any other agreement between

Customer and University, and such breach has not been rectified within twenty (20) days of receipt of notice by Customer requiring that Customer remedy such breach. In the case of an agreement with an Initial Term consisting of more than one Annual Period, University may terminate this Agreement during the Initial Term as to any upcoming Annual Periods in the event the student head for District increases by more than 25% from the reported student head count as of the Effective Date.

District's Right to Terminate. In the case where the Initial Term consists of more than one Annual Period, District may give notice during any current Annual Period of its intent to terminate this Agreement as to all subsequent Annual Periods by delivering written notice of intent to terminate to University at least 90 days prior to June 30th of the then current Annual Period. If Customer provides such timely notice, the Agreement shall terminate effective June 30th of the then current Annual Period. University will refund to District only fees applicable to Annual Periods subsequent to the end of the then current Annual Period during which timely notice of intent to terminate is received. Refund amounts for timely terminated subsequent Annual Periods will be calculated as follows: 100% of remaining of years.

Section 8.03 No Waiver. Notwithstanding termination of this Agreement for any reason, such termination will not relieve either party from any obligation or liability that has accrued under this Agreement to the date thereof, or from the performance of its obligations under this Agreement to the date thereof.

Section 8.04 Survival. All provisions of this Agreement that would reasonably be expected to survive the termination or expiration of this Agreement shall do so, including Section 2.02 (License to University), Section 3.01 (Representations and Warranties), Section 4.01 (University Ownership of the NEE Tool), Section 4.03 (Feedback), Section 4.04 (Disclaimer of Third Party Content), Section 4.05 (Access to Third Party Content), Article V (Confidential Information), Article VI (Disclaimer of Warranties), Article VII (Limitation of Liabilities, Remedies, and Indemnities), Article VIII (Term and Termination) and Article IX (Miscellaneous).

Section 8.05 Customer Data Portability Upon Termination. Upon termination of this Agreement, University will make only the raw classroom observations, student surveys, professional development plans, unit of instructions, specialist organizers, and principal evaluation measures contained in the Customer Data available to Customer for export or download solely in a Microsoft Excel (.XLS) or Common Separated Values (.CSV) file format through August 31. For clarity, the University will not provide any customizable reports, or written components of any organizer instruments after termination. After August 31, University will have no obligation to maintain or provide any Customer Data to Customer. The University, may in its discretion, extend the time period for accessing the foregoing Customer Data for an additional fee.

Article IX. Miscellaneous

Section 9.01 Headings. The headings of the paragraphs of this Agreement are inserted for convenience only and shall not constitute a part hereof.

Section 9.02 Polls/Feedback. University, may, from time to time (but no more than quarterly), conduct polls of End Users to ascertain and measure the use and enjoyment of the NEE Tool by End Users. Customer agrees to encourage its End Users to cooperate with University by providing the information requested by University in order for University to improve and

expand the NEE Tool.

Section 9.03 Publicity. Customer agrees that University will have the right to use the name and logos of Customer in its University's promotional materials (including, without limitation, on any web sites owned or controlled by University), and to indicate that Customer is a subscriber of the NEE Tool.

Section 9.04 Trademarks. "Network for Educator Effectiveness", "NEE", and "EDHUB" are trademarks, service marks, and/or trade names of The Curators of the University of Missouri. All other company names, brand names, trademarks and logos are the property of their respective owners. Nothing contained on the NEE Tool or this Agreement will be construed as granting any license or right to use any trademarks (whether by implication or otherwise), including "Network for Educator Effectiveness", "NEE", and "EDHUB" except with the express written permission of University or such other party that may be the owner thereof.

Section 9.05 Force Majeure. University shall not be liable for any delay or failure to perform its obligations under this Agreement resulting from any cause beyond its reasonable control, including but not limited to fires, explosions, earthquakes, floods, strikes, work stoppages or slow-downs or other industrial disputes, accidents, riots or civil disturbances, acts of civil or military authorities, delays by carriers, suppliers or materials shortages, and interruption or failure of telecommunication of digital transmission links or internet slowdowns or failures. Notwithstanding the foregoing, each party acknowledges and agrees that the foregoing does not operate so as to excuse it from prompt payment of any and all sums due by it to the other in accordance with terms and conditions of this Agreement.

Section 9.06 Sovereign Immunity. Customer agrees that nothing in this Agreement is intended or shall be construed as a waiver, either express or implied, of any of the immunities, rights, benefits, defenses or protections provided to University under governmental or sovereign immunity laws from time to time applicable to University.

Section 9.07 Notices. Any notice permitted or required under this Agreement must be in writing. Unless otherwise specified herein, any such notice will be deemed delivered: (a) on the day of delivery in person; (b) one day after deposit with an overnight courier, fully prepaid; (c) on the date sent by facsimile transmission; or (d) on the date sent by e-mail, if confirmed with a "read receipt" if made to the following:

If to University:
Associate Director
Sponsored Programs Administration
University of Missouri
601 Turner Avenue
Turner Avenue Garage, Room 200
Columbia, MO 65211

with a copy to:

Director
Technology Advancement Office
University of Missouri
440A Bond Life Sciences Center

Columbia, MO 65211

With a copy to:
Director
nee@missouri.edu
Network for Educator Effectiveness
College of Education
University of Missouri
2800 Maguire Boulevard
Columbia, MO 65201

If to Customer:
The address set forth for the District in the first paragraph of this Agreement.

Section 9.08 No Waiver. Neither party's failure to enforce strict performance of any provision of this Agreement will be construed as a waiver of any provision or right.

Section 9.09 Relationship of the Parties. This Agreement does not create a partnership, joint venture, agency, franchise, and fiduciary or employment relationship between the parties.

Section 9.10 Assignment. This Agreement is binding upon and shall inure to the benefit of University, its successors and assigns. University may assign this Agreement in connection with a merger or sale of substantially all the assets of the NEE Tool as a business-like unit within University. This Agreement shall not be transferred or assigned, in whole or in part, by Customer without the prior written consent of University, and any attempted transfer or assignment without such consent shall be void.

Section 9.11 Third Party Contractors. University will have the right to engage the services of third party contractors to perform any NEE Tool on its behalf without the prior consent of Customer.

Section 9.12 Further Assurances. University and Customer, from time to time, shall promptly and duly execute and deliver all documents and take such action as may be reasonably necessary or desirable in order to effectively carry out the intent and purposes of this Agreement, to protect the interests of the parties and to establish, protect and perfect the rights, remedies and interests granted or intended to be granted under this Agreement.

Section 9.13 No reliance. Customer hereby acknowledges and agrees that in entering into this Agreement it has not relied on any warranty, representation or undertaking except as expressly set out in this Agreement.

Section 9.14 Injunctive Relief. Customer acknowledges that University will be irreparably harmed by any breach of this Agreement by the unauthorized use of the NEE Tool and, further, that monetary damages may not be a sufficient remedy for such harm. Customer agrees that University shall be entitled, without waiving any other rights or remedies and without further demonstration of irreparable harm or the inadequacy of monetary damages, to obtain injunctive or other equitable relief in the event of any breach of this Agreement by Customer or by Customer's unauthorized use of the NEE Tool.

Section 9.15 Severability. If any term or provision of this Agreement shall be found by a court of competent jurisdiction to be invalid, illegal or otherwise unenforceable, the same shall not

affect the other terms or provisions hereof or the whole of this Agreement, but such term or provision shall be deemed modified to the extent necessary in the court's opinion to render such term or provision enforceable, and the rights and obligations of the parties shall be construed and enforced accordingly, preserving to the fullest permissible extent the intent and agreement of the parties herein set forth.

Section 9.16 No Offset. Customer will have no right to set-off or deduct any amount from any subscription fees owing to University under this Agreement or any training fees otherwise due to University.

Section 9.17 Certification. If this Agreement has a total potential value of $100,000 or more, and if Customer is a company with ten (10) or more employees, then Customer certifies that it, and any company affiliated with it, does not boycott Israel and will not boycott Israel during the term of this Agreement. In this paragraph, the terms "company" and "boycott Israel" shall have the meanings described in Section 34.600 of the Missouri Revised Statutes.

Section 9.18 Entire Agreement. This Agreement, together with the other documents incorporated into this Agreement by reference, constitutes the entire agreement between the parties with regard to the matters dealt with in this Agreement, and supersedes all prior representation, negotiations, understandings and agreements, oral or written, between the parties, with respect thereto.

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Dr. George Griffith
HTRS Public Schools
810 Central Ave.
Humbolt, NE 68378

Dear Dr. Griffith,

I am writing to formally submit my resignation from my teaching position at the HTRS school district. This decision was not made lightly, as I have truly valued my time as part of this school community.

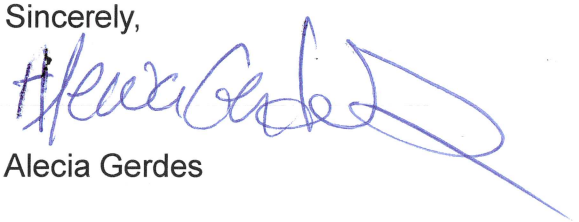
Over the years, I have had the privilege of growing both professionally and personally, thanks to the unwavering support and collaboration of my colleagues and administration. I am deeply grateful for the opportunities I have had to learn, contribute, and evolve as an educator.

After careful consideration, I have decided to accept a teaching position within my home school district. This opportunity allows me to serve my local community while continuing to grow in my profession. While I am excited for this next chapter, I will sincerely miss the relationships I have built here and will always carry fond memories of my time at HTRS.

I am committed to ensuring a smooth transition in my remaining time and will do all I can to support my students and colleagues during this period. Please let me know how I can assist in this process.

Thank you again for your leadership, support, and encouragement. I look forward to staying in touch and hope that our paths cross again in the future.

Sincerely,



Alecia Gerdes

March 26, 2025

Dear Dr. C.

After much prayer and discussion with family and friends, I have decided to retire at the end of the school year.

My 12 years at HTRS have taught me patience, empathy, resilience and flexibility. I hope to use these skills in my next journey in life.

I will cherish the many great relationships I've developed with staff and students.

I want to thank you for always being there when I needed someone to talk to. Your humor always brightened my days.

Sincerely
Robin Thacker

HTRS TITANS

April 14, 2025

On Monday morning the administrative team meets to develop job descriptions for the counselors and athletic director. I will also be working on a job description for the SPED Director, Mrs. Kroll. This will provide job descriptions for all the certified leadership positions.

The Early Learning Center has received its regular operating license, we had to be in operation for a year under a probationary license to begin with. It was pointed out we should update our playground and a few other items that are not very costly. Saydee Hardesty will be the director moving forward but Chelsey Sullivan will be her mentor and listed as co-director on the license. Our six-pence program has been approved for another year, and I hope they will still fund this. We currently serve 9 children in the six-pence program, but we are supposed to have 12 and Chelsey continues to recruit more families. We have never had many more students since my time in the district, so this continues to be an ongoing issue. For the new board members who may not be aware of what six-pence does, the district provides a home visitor who will meet with the parent(s) of children birth to three provide parenting assistance for new parents, identify students with any educational needs or services and provides assistance with needs of the children like diapers, books, and other items to meet the needs of children birth to three.. Mrs. Sullivan does an excellent job with this program and Mrs. Kroll has several years' experience as a director of a six-pence program so she can bring fresh ideas to our program.

Mrs. Kroll and I met with Alecia to discuss their job descriptions but will need to be adjusted into Mrs. Kroll's job description.

Kim C., Kim S. and I have met with Curriculum Works to get a start on the curriculum process. As the curriculum person, I had an additional meeting with them to work on the expectations I have for the planning and implementation of the curriculum process.

Our STEAM night was a great success, and I want to thank all the staff members who took the time to arrange this program.

I was unable to attend the ALICE (Active shooter training) on March 25-26 but was given credits to use for another training session which I will attend in June.

I spoke with Terry Oltman with SAPP Brothers, and we have a solution for the times when a receipt will not print out. We are using SAPP Brothers more, especially since many of our buses need to be fueled at night.