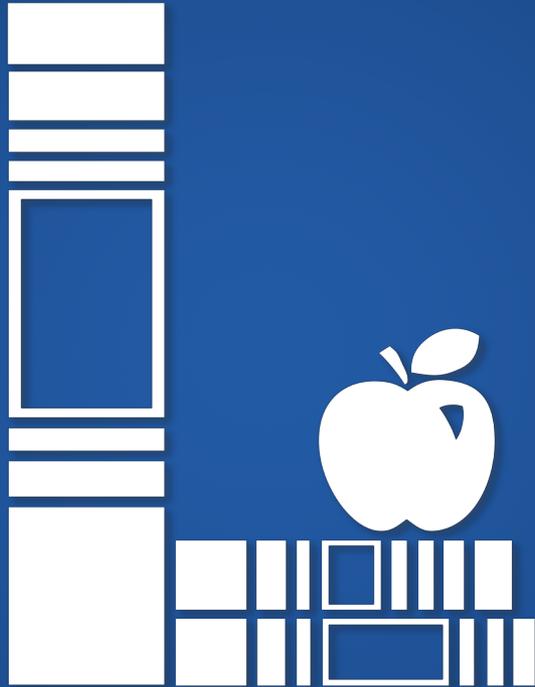


Board of Education Special Meeting/Work  
Session  
Tuesday, February 26, 2019, 4:30 PM  
Lincoln Public Schools District Office 5905 O  
Street Lincoln, NE 68510

1. LPS BOARD OF EDUCATION INFORMATION
2. CALL TO ORDER
3. ROLL CALL
4. ANNOUNCE OPEN MEETING ACT POSTING AND LOCATION
5. 2018-19 ANNUAL GOALS AND PRIORITIES STATUS UPDATE:  
IMPLEMENT A 21ST CENTURY HUMAN RESOURCES AND BUSINESS SYSTEMS
6. STRATEGIC PLAN AND 2018-19 ANNUAL GOAL AND PRIORITY UPDATE: FUTURE READY GLOBAL CITIZENS/FOCUS PROGRAMS/ALTERNATIVE INSTRUCTION
7. REQUEST FOR CLOSED SESSION
  1. Request for Closed Session - Negotiations/Collective Bargaining, Property/Real Estate, Litigation, Security, Criminal Misconduct, Personnel, and Legal Advice Matters
8. ADJOURNMENT



**Strategic Plan and 2018-19  
Annual Goal and Priority  
Update: Future Ready Global  
Citizens/Focus  
Programs/Alternative  
Instruction**

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# Goals

- Board of Education and Superintendent's Goal:  
Evaluate the effectiveness of existing focus programs and explore options for alternative instructional delivery methods.
- Strategic Plan Future Ready Global Citizens Goal:  
Investigate the feasibility of developing additional K-12 focus programs, strengthening existing focus programs, and other programming options.

# High School Option Task Force

# High School Option Task Force Members:

Dr. Steve Joel

Cindy Baum (CTE)

Dr. James Blake (Science)

Dr. Leslie Eastman (Assessment and Evaluation)

Kurt Glathar (Focus Program Principal)

Dr. Dan Hohensee (TCA)

Dr. Pat Hunter-Pirtle (Director Secondary Education)

Dr. Matt Larson (Instruction)

John Neal (Assistant to Superintendent)

Takako Olson (Director of Curriculum)

Walter Powell (Equity, Diversity & Multicultural Education)

Jessilyn Vraspir (Instruction)

Dr. Liz Standish (Business Affairs)

Scott Wieskamp (Director of Operations)

# High School Option Task Force Charge:

**“Evaluate the effectiveness of existing focus programs and explore options for alternative instructional delivery methods.”**

## **Objective 1**

Determine what, if any, new curricular themes should be implemented in existing and new high schools in LPS. This will involve thorough research of national trends and tendencies.

## **Objective 2**

Evaluate the enrollment trends and effectiveness of current LPS focus programs: Arts and Humanities, The Career Academy, International Baccalaureate, ROTC, and Science Focus.

## **Objective 3**

Engage secondary principals, CTE teachers, parents, and students in discussions centered on Objectives 1 and 2.

# Current Option Program Overview

- Arts and Humanities Focus Program
- Science Focus Program
- International Baccalaureate Program
- The Career Academy
- Air Force JROTC

# Current Option Program Overview

The Evaluation focused on three broad areas:

- Enrollment & Capacity
- Academic Effectiveness
- Parent, Student, and Teacher perceptions

# Arts & Humanities

- Since 2014-15, enrollment has varied from 62-72. Current enrollment is 67; capacity is 80.
- Program is near LHS. Currently 51% of the students attend from high schools other than LHS; all high schools are currently represented.
- Retention from ninth to twelfth grade is 36% (Fall 2018).
- Mean graduation rate is higher than the district.

# Arts & Humanities

- Compared to a matched sample of students:
  - Mean ACT scores are consistently above district means in English, Reading , ELA, and STEM, and at or below in Writing, Math, and Science.
  - Percent of students meeting state expectations on NSCAS ACT was higher on all subtests in 2018.

# International Baccalaureate

- Since 2016-17, enrollment has varied from 164-188 (includes pre-IB courses). Current enrollment is 188; capacity is driven by staffing.
- Program is at LHS.
- Of students who take pre-IB courses in grade 10, retention as seniors is 55%. For students who begin the program in grade 11, retention is 100%.
- Historically between 74% and 86% of students participating in the program earn the IB diploma.
- Mean graduation rate is higher than the district (100%).

# International Baccalaureate

- Compared to a matched sample of students:
  - Mean ACT scores are consistently above district means in all areas.
  - Percent of students meeting state expectations on NSCAS ACT is consistently higher on all subtests (98-100%).

# Science Focus

- Since 2014-15, enrollment has varied from 94-104. Current enrollment is 94; capacity at the new facility will be 160-170.
- Program is located at the Children's Zoo. Students from all six high schools attend with over 50% of current attendees from LHS and East.
- Retention from ninth to twelfth grade is 48% (Fall 2018).
- Mean graduation rate is higher than the district (100%).

# Science Focus

- Compared to a matched sample of students:
  - Mean ACT scores are consistently above district means in all areas except Writing.
  - Percent of students meeting state expectations on NSCAS ACT is consistently higher on all subtests (85-100%).

# The Career Academy

- Since 2015-16, enrollment has varied from 333 to 511. Current enrollment is 511. Enrollment this fall increased over 30% and is projected to increase again next fall. Capacity is approximately 500 students per session (morning and afternoon).
- Program is located at Southeast Community College. Students from all six high schools currently attend. The distribution is relatively even with 40% of attendees currently from SE and East.
- Retention in the program has been as low as 58%, but reached a high this fall of 67%.
- Mean graduation rate is higher than the district.

# The Career Academy

- Compared to a matched sample of students:
  - Mean ACT scores are higher in Reading, Writing, Math, Science, and STEM, but lower in English and ELA.
  - Percent of students meeting state expectations on NSCAS ACT is higher on all subtests.

# Air Force JROTC

- Since 2014-15, enrollment has varied from 78 to 96. Current enrollment is 80; capacity is 149.
- Program is housed at Northeast. 24% of the students come from other high schools; all high schools are currently represented, including non-public high schools.
- Retention from ninth to twelfth grade is 12% (Fall 2018).
- Mean graduation rate is as high or higher than the district.

# Air Force JROTC

- Compared to a matched sample of students:
  - Mean ACT scores are identical to the district.
  - Percent of students meeting state expectations on NSCAS ACT is identical.

# Parent Perceptions

	A & H n = 18	Science n = 43	IB n = 21	TCA n = 86	AF JROTC n = 28
My student seems to <b>like school better</b> now that he/she attends this option program	78%	79%	76%	90%	79%
My student seems <b>more connected</b> to school now that he/she attends this program	89%	74%	76%	72%	93%
My student has experienced <b>educational opportunities</b> that are not available in a traditional high school	94%	93%	91%	99%	86%
I am <b>satisfied</b> with the education my student is receiving in this option program	100%	91%	91%	97%	97%

# Student Perceptions

	<b>A &amp; H</b> n = 60	<b>Science</b> n = 89	<b>IB</b> n = 86	<b>TCA</b> n = 213	<b>AF JROTC</b> n = 74
I <b>like</b> coming to this option program <b>more</b> than my home school	97%	88%	65%	81%	78%
In this option program I have had opportunities to be <b>actively involved</b> in my own learning	100%	94%	88%	92%	91%
In this option program, I have more opportunities for “ <b>hands-on</b> ” applications and <b>connections</b> to <b>everyday life</b> than at my home high school	100%	94%	67%	93%	89%

# Student Perceptions

	<b>A &amp; H</b> n = 60	<b>Science</b> n = 89	<b>IB</b> n = 86	<b>TCA</b> n = 213	<b>AF JROTC</b> n = 74
Since I have been attending this option program, my <b>motivation</b> to learn has <b>increased</b>	88%	80%	67%	85%	81%
I am <b>satisfied</b> with the education I am receiving from this option program	93%	97%	90%	92%	92%

# Other Common Themes

- Students and parents choose to attend a program due to the curriculum/their personal interests.
- Students and parents report stronger relationships with teachers and a sense of community in the programs.
- Students perceive teachers to have high expectations and the curriculum to be more rigorous.

# Other Common Themes

- Teachers in all programs except IB report there are students who may not have graduated from high school without participation in the program.
- Teachers in the programs report high degrees of satisfaction.

# Moving Forward/Challenges

- Retention is a concern that will be addressed by individual programs.
- There is some additional capacity in existing focus programs, but it isn't significant.
- The Curriculum Department has started the process of exploring alternative instructional delivery methods, including more robust e-learning options and personalized learning options.

# Option Task Force Charge:

**“Evaluate the effectiveness of existing focus programs and explore options for alternative instructional delivery methods.”**

## **Objective 1**

Determine what, if any, new curricular themes should be implemented in existing and new high schools in LPS. This will involve thorough research of national trends and tendencies.

## **Objective 2**

Evaluate the enrollment trends and effectiveness of current LPS focus programs: Arts and Humanities, The Career Academy, International Baccalaureate, ROTC, and Science Focus.

## **Objective 3**

Engage secondary principals, CTE teachers, parents, and students in discussions centered on Objectives 1 and 2.

# Data Gathering Process

- Thirty-six schools in 15 states were identified as being nationally recognized for innovation in delivering special and alternative curricular focus programs.
- School District Visits
- Community Presentations
- Stakeholder Surveys: students, parents, and counselors.
- Focus groups: secondary principals, CTE teachers, students, parents, and counselors.

# Initial Data Gathering Process

Thirty-six schools in 15 states were identified as being nationally recognized for innovation in delivering special and alternative curricular focus programs.

1. Agribusiness
2. Agricultural (or Urban Ag)
3. Architectural & Engineering Design
4. Aviation/Flight
5. Biotechnology
6. Business/Finance
7. Coding
8. College Prep/Early College
9. Communications/  
Broadcasting
10. Construction
11. Cosmetology
12. Culinary
13. Cybersecurity
14. Dentistry
15. Education
16. Electrical Systems  
Technology
17. Engineering
18. English
19. Entrepreneurship
20. Environmental Studies
21. Fine Arts/Music
22. Freshman Success
23. Health Professions
24. Hospitality/Tourism  
Management Recreation
25. International Baccalaureate
26. Internet Development
27. Internships
28. Law/Law Enforcement
29. Leadership
30. Manufacturing
31. Marketing
32. Math
33. Mechatronics/Robotics
34. Military/JROTC
35. Natural Resources
36. Personal Computer Support
37. Science
38. Skilled and Technical  
Sciences
39. Social Studies
40. STEM
41. Technology
42. Transportation Technology/  
Mechanic Training/  
Automotive Technology/ Ag  
Power
43. Urban Planning
44. Visual Arts
45. Welding
46. World Language
47. Zoo Academy

# Data Gathering Process: School Visits

- Ten schools in four states were identified for visits by members of the Task Force:
  - Academies of Grand Island Senior High, Grand Island, NE
  - New Tech High School, Sioux Falls, SD
  - Chicago High School of Agricultural Sciences, Chicago, IL
  - William Jennings Bryan High School, Omaha, NE
  - Dallas Independent School District, Dallas, TX:
    - Science and Engineering Magnet High School
    - The Magnet School for the Talented & Gifted
    - City Lab High School
    - The Innovation, Design, Entrepreneurship Academy
    - W. H. Adamson High School
    - Garza Early College High School

# Data Gathering Process: Surveys and Focus Group Themes

- Favorable perception of current option/focus programs.
- Perceived need for additional focus program options.
- Expressed desire for alternative instructional delivery methods.
- Expressed desire for problem-based learning, community partnerships, and personalized learning options.

(Surveys: students n = 10, parents n = 41, counselors n = 22; focus groups conducted at NE, E, and NS)

# Data Gathering Process: Community Presentations

- Nebraska Department of Labor – information related to labor market forecasts and trends in Nebraska.
- G. W. Carver Global Impact Leadership Institute – the study of global issues surrounding innovative research, conservation, and geopolitical implications of global food production systems.
- Duncan Aviation – program would introduce students to the aviation industry and potential careers.

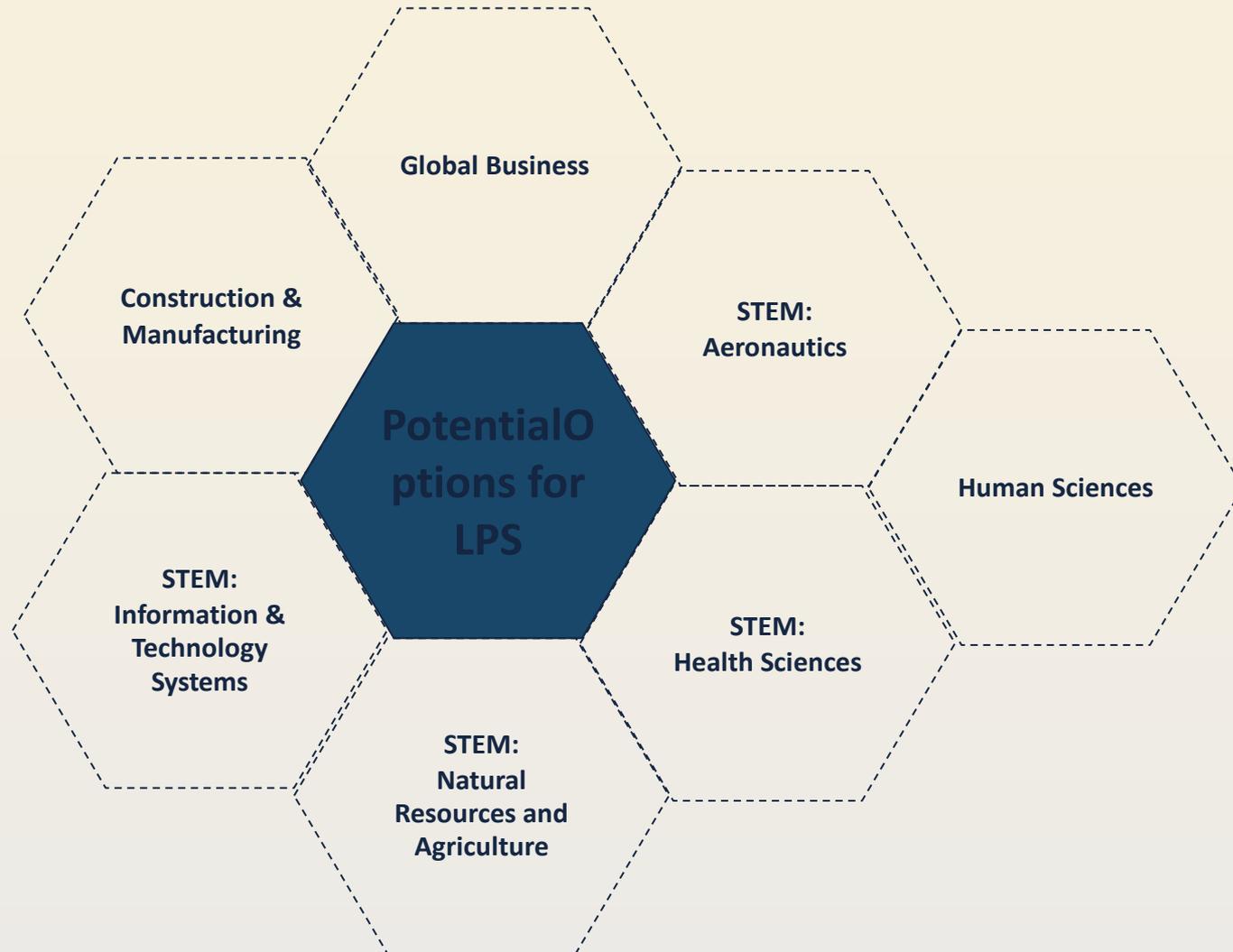
# Future Considerations from the Task Force

- Any future comprehensive high school(s) should have an embedded curricular area of focus.
- Existing high schools should consider the addition of an embedded curricular area of focus to provide additional choice and personalization for students.

# Future Considerations from the Task Force

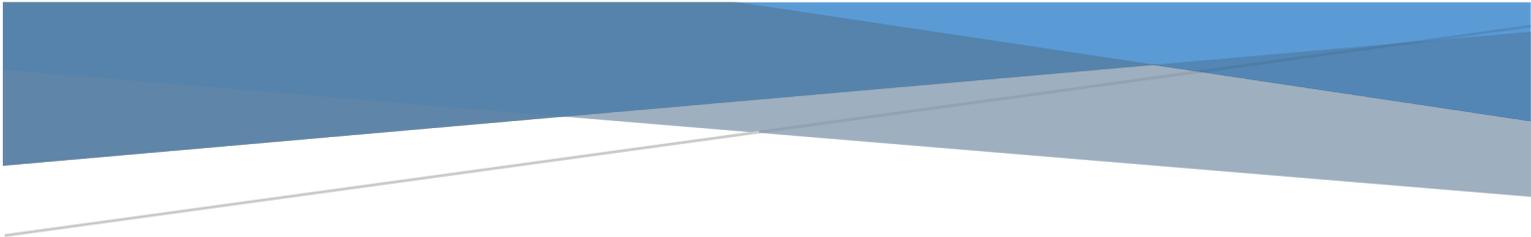
- Curricular areas of focus should emphasize problem- and community-based learning in an environment that would provide both academic content in the focus area as well as personalized learning experiences.

# Future Direction Considerations



# Future Directions/Considerations

Once the decision is made concerning future high school facility plans, then appropriate curriculum task forces can be formed to begin the process of designing specific programs.



# OPTION PROGRAM REPORT

## Abstract

The purpose of this report is to evaluate the enrollment trends and effectiveness of the current LPS student “Option Programs” as requested by the Lincoln Public Schools Board of Education.

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# Option Program Report

## Purpose and Organization of Evaluation

The purpose of this report is to evaluate the enrollment trends and effectiveness of the current LPS student “Option Programs” as requested by the Lincoln Public Schools Board of Education. The term “Option Programs” is used in this report to identify five different types of programs (Arts and Humanities Focus Program, Science Focus Program, Air Force JROTC, International Baccalaureate Program, The Career Academy) within the Lincoln Public Schools that, although they have some different qualities, share the following like attributes:

- Students enter the program of their own choice.
- Enrollment in the program requires at least some separation from students’ general home high school experience.
- Each program is designed for specific purposes that go beyond on the purposes of the six comprehensive high schools, with special focus on rigor, relationships, and relevancy.

The following set of questions was developed to guide the evaluation. Questions 1 and 2 address issues associated with enrollment trends and questions 3, 4, 5, 6, 7 and 8 address issues associated with the effectiveness.

1. What is the demographic make-up of each program?
2. Are students enrolled in the option program different from those who are not?
3. Do students remain in the program once they enter?
4. How do students participating in the option program perform on standardized assessments compared to students in the district and similar students?
5. How does the grade point average of students participating in the option program compare to the district means and to similar students?
6. How do graduation rates for students in the option program compare with district graduation rates?
7. Do students who have participated in the option program enroll in and remain in college or university undergraduate studies at rates similar or different from students who have not participated?
8. What are the perceptions of staff, students and parents about their Option Program?

A logic model was developed in order to identify how to best address each question listed above. The logic model was organized by Option Program given that each program is somewhat unique. The model included the following information: program goal, evaluation objective, existing data or collecting new data, location of data, timeframe (number of years), deadline for the analysis of data, and finally how the data are reported. While elements of the logic model were tailored to each program there was a common set of data that was analyzed for each program. The list of reports that are common across all five Option Programs are as follows:

1. Enrollment trends:
  - a. Grade
  - b. Home high school
  - c. Program participation (SpEd, Free/Reduced Lunch, Gifted)
  - d. Ethnicity

- e. Gender
- 2. Effectiveness:
  - a. Retention in Program
  - b. PreACT
  - c. ACT - Average Scale Score
  - d. NSCAS ACT - Percent Meeting Expectations
  - e. Cumulative Mean Weighted GPA – 3-year trend
  - f. Graduation Status
  - g. College Participation - National Student Clearinghouse
  - h. Survey Responses - Staff, Students and Parents

This report is organized in five separate sections, one for each Option Program. Each section begins with a brief executive summary that provides an overview of noteworthy results. The executive summary is followed by tables and graphs that contain the reports listed above that were designed to answer the questions identified as part of the development of the evaluation plan.

### Analysis of Enrollment Trends and Program Effectiveness based on Achievement and Other Data

Data were collected from a variety of sources. It is important to note that student data are a “point in time snapshot” of the students and programs. Enrollment data are based on the official fall student counts for the Arts and Humanities Focus Program, Science Focus Program, and The Career Academy. Data are presented from Fall 2014 to Fall 2018 for the Arts and Science Focus Programs and from the inception of The Career Academy in Fall 2015 to Fall 2018. Air Force JROTC enrollment numbers were collected from course enrollments each school year beginning in 2014-15 and in fall 2018. Lists of participants in the International Baccalaureate (IB) Program were provided by the school for the 2016-17 and 2017-18 school years and for Fall 2018. To remain in the IB Program, twelfth graders must attempt to meet the diploma requirements, including taking IB courses, taking connected exams, and working toward completion of three projects, including an extended essay. IB Diploma recipients are students who have met all of the IB program requirements and received enough points on IB exams.

Comparisons for program effectiveness are available with all Lincoln Public Schools (LPS) students. Random matched samples of grade eleven students for each program for the 2017-18 school year were also selected to allow comparison of ACT scores and GPAs. Samples were matched as closely as possible on gender, ethnicity, eighth grade Reading and Math NeSA scores, participation in gifted and Special Education Programs, and (if NeSA scores were not available) primary high school.

#### Retention

To answer the question of whether students remain in each program after enrolling, we calculated the numbers of students who were enrolled as ninth graders (or the earliest grade students participate) and who were still enrolled as twelfth graders. Students may enroll as early as ninth grade in Arts Focus, Science Focus, and AFJROTC. Students may begin at TCA in eleventh grade. For the IB Program, students may begin taking PreIB courses in ninth grade. However, many students take the ninth grade PreIB courses who do not intend to enroll in the IB Program because these courses are the main differentiated option at Lincoln High in that grade level. As a result, we looked at retention for students enrolled in the tenth grade PreIB English course. All students who continue in the IB Program would be expected to take this course. Additionally, we counted the numbers of students who were enrolled in tenth grade PreIB in Fall 2015 and in eleventh grade IB in Fall 2016 who completed the IB Diploma.

#### Achievement Results

Achievement data include PreACT and ACT scores. PreACT scores are presented for students in grades 10 and 11 in Fall 2017. Fall 2017 was the first year LPS gave the PreACT. Mean scale scores (Composite, English, Reading, Math, Science, and STEM) are available for students in each option program and for all students in LPS. Mean scale scores (Composite, English, Reading, Writing, ELA, Math, Science, and STEM) and percentages of students meeting state expectations are available for students in grade 11 in Spring 2017 and Spring 2018. Spring 2017 was the first year the ACT was used as the state achievement test for high school. ACT data are available for matched samples of students in Spring 2018.

### Grade Point Average

Mean weighted GPAs were calculated for students in grade twelve in Spring of 2016 to 2018 for each program and all of LPS. Mean weighted GPAs are also available for grade 11 students in each program and a matched sample of 11th grade students for each program in Spring of 2018.

### Graduation Status

Numbers and percentages of students with each of several graduation outcomes (graduated, dropped, reached age 21 prior to finishing four years of high school, and still enrolled after four years of high school) for each program and all of LPS were calculated. Graduation analyses were based on students enrolled in the program (or LPS) as twelfth graders who were in their fourth year in high school based on data reported to the Nebraska Department of Education (NDE). Data are available for students in NDE graduation cohorts (based on the year began ninth grade) in 2015 to 2017. The 2018 graduation cohort data were not available at the time these analyses were completed.

### College Attendance

Information about college attendance the fall following graduation and the type of institution the students attended are available for 2015 to 2017 graduates from the Student Clearinghouse. Numbers and percentages of students who returned for a second term at their higher ed. institution are also available for 2015 and 2016 graduates. Student Clearinghouse reports and data were not available for fall 2018 at the time these analyses were completed.

## Surveys

Additional data was collected from students, parents, and teachers who completed online surveys. The surveys were administered via Qualtrics® survey software. Administrators or staff at each program were asked to disseminate links to the surveys to the appropriate groups. Over the course of 3 weeks, 30 teachers, 197 parents, and 530 students completed their respective survey. Questions on the survey included reasons for participating in the option program, identification of strengths and weaknesses of the program, and higher education goals, just to name a few.

Survey results are presented by Option Program for each survey administered. Responses from Likert-type items (scale items ranging from “Agree” to “Disagree”) are presented in tables. Several open-ended questions were also presented in the surveys and answers to those questions were clustered into common themes and are presented after the tables. Institutional Review Board approval is not required to collect student, teacher, and parent survey data for site-based program evaluation.

# SECTION 1

# AIR FORCE JUNIOR ROTC (AFJROTC) PROGRAM

## Air Force Junior ROTC (AFJROTC) – Summary of Reports

### Enrollment:

- Enrollment has fluctuated slightly over the last few years hovering around 80 students, with a low of 78 and a high of 96. According to Trent Woodruff, "...our HQ mandates that we be at a minimum of 100 cadets and a maximum of 149 cadets. We are currently on probation with efforts to reach that number (100). The maximum number can be raised, but it would require that a third instructor be hired."
- Draws most heavily from Lincoln Northeast High School where the program is housed, with 24% from various high schools across the city including non-public high schools.
- Enrollment includes a significant number of students who participate in the free/reduced lunch program (fluctuating from 50 to 69%) and who receive special education services (ranges from 15 to 25%). There are also a handful of students who receive ELL or gifted services.
- The majority of students who participate in this program identify as white (72 to 79%), with Hispanic (5 to 15%) the next largest group.
- There are more male students participating in the program than female students (58 to 71%).

### Effectiveness:

- Of the students who began the program as grade 9 students in 2015-2016, only 12% remain in the program as seniors (Fall, 2018).
- PreACT mean scale scores are consistently slightly below district means.
- ACT mean scale scores are also consistently slightly below district means. However, when mean scale scores are compared to a matched sample, performance is identical.
- The percent of students meeting state expectations on the NSCAS ACT, is significantly lower than the district. However, when the percent who are meeting expectations is compared with a matched sample, performance is identical.
- The mean cumulative weighted GPA (end of school year) is consistently lower than the district.
- The high school graduation rate for seniors in the program is as high or higher than the district.
- The rate of college attendance is lower than the district rate.

## Air Force Junior ROTC (AFJROTC) Enrollment and Outcome Data

### Enrollment and Demographics

The numbers for 2018-19 are for fall, whereas the other years include anyone enrolled at any time during the school year.

Grade										
	2014-15		2015-16		2016-17		2017-18		Fall 2018	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
<b>9</b>	24	31%	34	37%	31	39%	32	33%	27	34%
<b>10</b>	23	29%	20	22%	19	24%	28	29%	23	29%
<b>11</b>	13	17%	24	26%	16	20%	21	22%	17	21%
<b>12</b>	18	23%	13	14%	14	18%	15	16%	13	16%
<b>Total</b>	78	100%	91	100%	80	100%	96	100%	80	100%

School										
	2014-15		2015-16		2016-17		2017-18		Fall 2018	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
<b>Lincoln High</b>	0	0%	2	2%	1	1%	0	0%	3	4%
<b>East</b>	3	4%	8	9%	8	10%	6	6%	1	1%
<b>Northeast</b>	63	81%	71	78%	61	76%	73	76%	64	76%
<b>Southeast</b>	1	1%	2	2%	0	0%	2	2%	1	1%
<b>North Star</b>	3	4%	2	2%	0	0%	2	2%	6	7%
<b>Southwest</b>	6	8%	3	3%	4	5%	2	2%	5	6%
<b>Non-Public</b>	2	3%	3	3%	6	8%	11	11%	4	5%

Note: The students enrolled at non-public schools are only counted in the percentages for school because we do not have the other demographic information for them.

Program										
	2014-15		2015-16		2016-17		2017-18		Fall 2018	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
<b>ELL</b>	0	0%	0	0%	1	1%	3	3%	4	5%
<b>Special Education</b>	12	15%	20	22%	20	25%	21	22%	13	16%
<b>Free/Reduced Lunch</b>	45	60%	48	56%	48	69%	41	50%	39	49%
<b>Gifted</b>	6	8%	8	9%	10	13%	11	11%	6	8%

Note: Free/Reduced Lunch status is not available for all students. Percentages are calculated on the data that are available.

Ethnicity										
	2014-15		2015-16		2016-17		2017-18		Fall 2018	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
<b>American Indian/Alaska Native</b>	1	1%	0	0%	0	0%	1	1%	0	0%
<b>Asian</b>	4	5%	3	3%	3	4%	3	3%	4	5%
<b>Black or African American</b>	3	4%	4	4%	10	13%	4	4%	3	4%
<b>Hispanic</b>	8	10%	9	10%	4	5%	14	15%	7	9%
<b>Two or More</b>	4	5%	7	8%	4	3%	5	5%	3	4%
<b>White</b>	58	74%	68	75%	59	74%	69	72%	63	79%

Gender										
	2014-15		2015-16		2016-17		2017-18		Fall 2018	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
<b>Female</b>	25	32%	26	29%	25	31%	36	38%	34	43%
<b>Male</b>	53	68%	65	71%	55	69%	60	63%	46	58%

Retention: How many students enrolled in ninth grade 2015-16 were enrolled fall 2018?

<b>AFJROTC Retention</b>	
<b>Grade 9</b>	34
<b>Grade 12</b>	4
<b>Percent Retained</b>	12%

PreACT Results: Fall 2017 Mean PreACT Scale Scores

<b>AFJROTC Pre-ACT Fall 2017</b>		
	<b>Grade 10</b>	<b>Grade 11</b>
<b>ROTC</b>		
<b>Number of Students</b>	26	13.0
<b>LPS</b>		
<b>Number of Students</b>	2654	2587
<b>ROTC Composite</b>	16.2	18.5
<b>LPS Composite</b>	18.4	19.3
<b>ROTC English</b>	13.7	16.1
<b>LPS English</b>	16.2	17.4
<b>ROTC Reading</b>	17.4	18.9
<b>LPS Reading</b>	19.8	20.7
<b>ROTC Math</b>	16.4	19.5
<b>LPS Math</b>	18.4	19.3
<b>ROTC Science</b>	16.8	18.5
<b>LPS Science</b>	18.5	19.4
<b>ROTC STEM</b>	16.8	19.3
<b>LPS STEM</b>	18.7	19.6

## ACT Results: Mean Scale Scores on Statewide ACT 2016 to 2018, Including 2018 Matched Sample

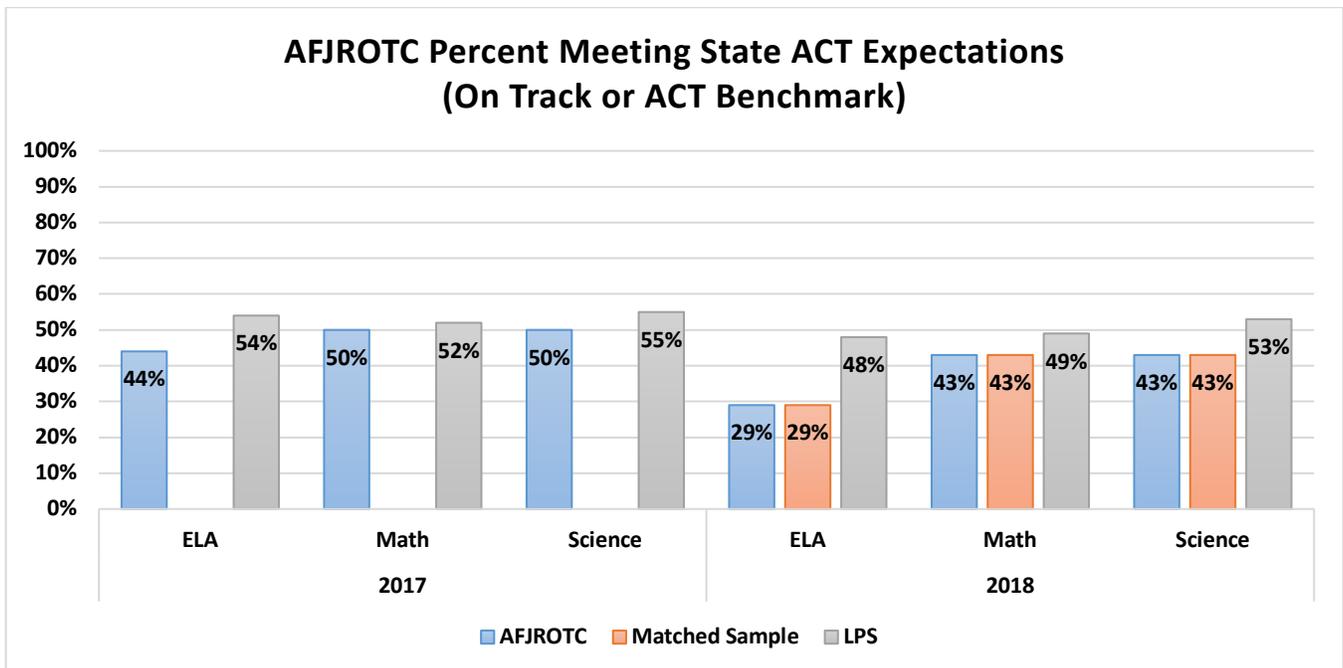
Note: A random matched sample of eleventh graders was selected to allow comparison of ACT scores and GPAs. The sample was matched as closely as possible with students in the program based on gender, ethnicity, 8th grade Reading and Math NeSA scores, participation in gifted and Special Education Programs, and (if NeSA scores were not available) primary high school.

<b>AFJROTC ACT Scale Scores</b>			
	<b>Spring 2016</b>	<b>Spring 2017</b>	<b>Spring 2018</b>
<b>ROTC Number of Students</b>	19	14	14
<b>LPS Number of Students</b>	2307	2700	2708
<b>ROTC Composite</b>	18.9	20.9	18.1
<b>LPS Composite</b>	20.4	19.9	19.5
<b>ROTC English</b>	17.7	19.6	17.9
<b>LPS English</b>	19.0	18.7	18.4
<b>ROTC Reading</b>	19.3	22.1	18.9
<b>LPS Reading</b>	20.9	20.3	19.8
<b>ROTC Writing</b>	--	6.1	5.1
<b>LPS Writing</b>	--	6.5	6.3
<b>ROTC ELA</b>	--	19.4	16.1
<b>LPS ELA</b>	--	19.0	18.2
<b>ROTC Math</b>	18.8	20.5	18.2
<b>LPS Math</b>	20.4	20.0	19.4
<b>ROTC Science</b>	19.3	21.4	17.4
<b>LPS Science</b>	20.6	20.0	19.8
<b>ROTC STEM</b>	19.3	21.1	18.0
<b>LPS STEM</b>	20.7	20.3	19.9

AFJROTC Spring 2018 ACT Scale Scores with Matched Sample									
	Students	Composite	English	Reading	Writing	ELA	Math	Science	STEM
ROTC	14	18.1	17.9	18.9	5.1	16.1	18.2	17.4	18.0
Matched Sample*	14	18.1	17.9	18.9	5.1	16.1	18.2	17.4	18.0

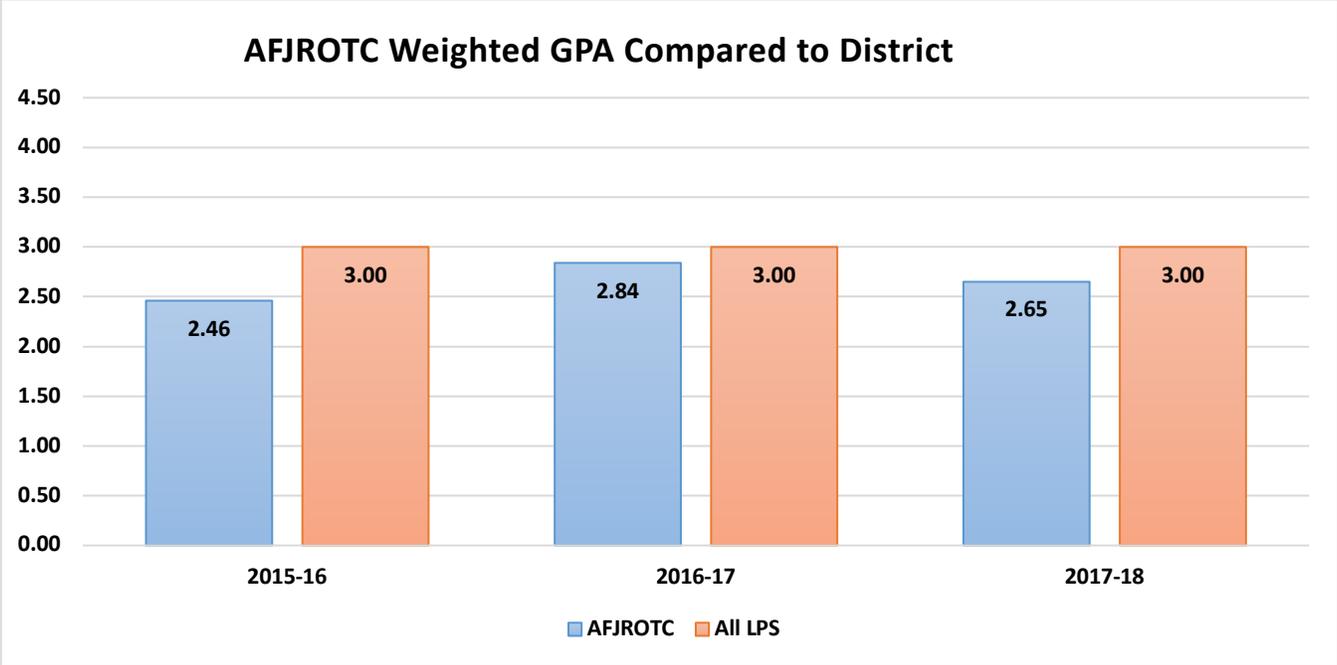
ACT Results: Percent Meeting State ACT Expectations (On Track or ACT Benchmark)

AFJROTC Percent Meeting State ACT Expectations (On Track or ACT Benchmark)						
	2017			2018		
	ELA	Math	Science	ELA	Math	Science
AFJROTC	44%	50%	50%	29%	43%	43%
Matched Sample				29%	43%	43%
LPS	54%	52%	55%	48%	49%	53%



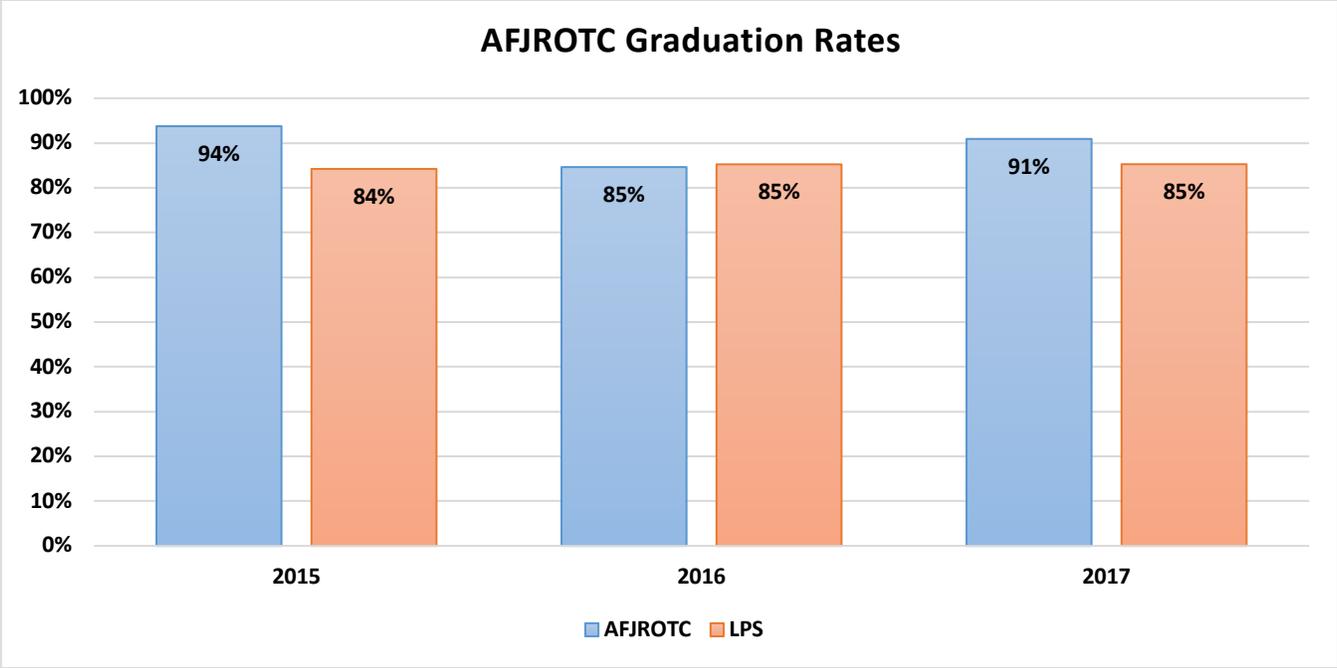
GPA: Cumulative Mean Weighted GPA at the end of the School Year

AFJROTC Weighted GPA Compared to District			
	2015-16	2016-17	2017-18
AFJROTC	2.46	2.84	2.65
All LPS	3.00	3.00	3.00



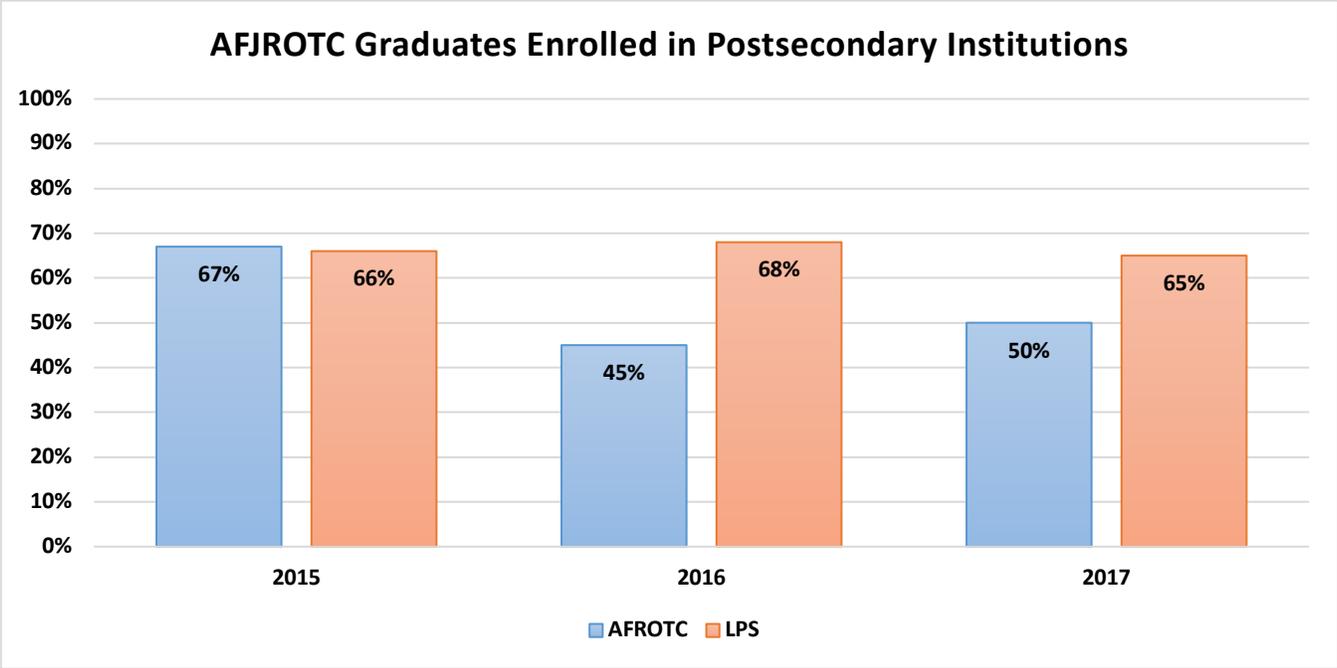
Graduation Status for 12<sup>th</sup> Graders

AFJROTC Graduation Rates			
	2015	2016	2017
AFJROTC	94%	85%	91%
LPS	84%	85%	85%



College Participation: Information Reported to the Student Clearinghouse

AFJROTC Graduates Enrolled in Postsecondary Institutions			
	2015	2016	2017
AFROTC	67%	45%	50%
LPS	66%	68%	65%



## The Air Force JROTC (AFJROTC) Program – Survey Results

### The Air Force JROTC Program Teacher Survey Results

100% of The Air Force JROTC Program teachers responded to the online survey. The teacher responses to individual items are detailed in Tables T01 – T03.

Table T01: AFJROTC Teacher Survey Question: How long have you been a teacher?

<b>Number of Years</b>	<b>Number of Teachers</b>	<b>Percent of Teachers</b>
1-5 years	1	50%
6-10 years	0	0%
11-15 years	0	0%
16-20 years	1	50%
21-25 years	0	0%
26 years +	0	0%

Table T02: AFJROTC Teacher Survey Question: How long have you taught in this option program?

<b>Number of Years</b>	<b>Number of Teachers</b>	<b>Percent of Teachers</b>
1-3 years	0	0%
4-6 years	1	50%
7-10 years	0	0%
More than 10 years	1	50%

TableT03: AFJROTC Teacher Survey Responses to Likert-type Items

<b>Question</b>	<b>Agree or Somewhat Agree</b>	<b>No Opinion</b>	<b>Disagree or Somewhat Disagree</b>
Teaching in this option program is more appealing to me than teaching in a traditional high school.	100%	0%	0%
I look forward to the time I can get back to a traditional high school.	0%	100%	0%
This program is better for my students than a traditional high school.	100%	0%	0%
Students in this option program are more motivated to learn than students I taught in traditional high schools.	50%	50%	0%
Students in this option program are more connected to school than students I taught in traditional high schools.	50%	50%	0%
Students in this option program have more opportunities to be actively involved in their own learning than students I taught in traditional high schools.	50%	50%	0%
I expect more from my students in this option program than students I taught in traditional high schools.	50%	50%	0%
I receive appropriate support from the administration of this option program.	100%	0%	0%
I am satisfied with how this administration handles discipline problems.	100%	0%	0%
The administration in this option program effectively helps me solve problems.	100%	0%	0%

The survey asked teachers three questions about the AFJROTC Program. The questions and responses are summarized below.

1. **Provide an example of a student or family (anonymously) you have taught or supported who otherwise might have dropped out of high school had it not been for AFJROTC. Please describe the student's situation and how the program helped him or her.**
  - We have had a number of cadets who have stated they would have left school if not for AFJROTC. One in particular stands out in that he really wanted to join the Army. He could have done that with a GED, but knew that our program gave him some advantages once he joined so he stuck it out with us. He had a very serious stutter, which led to a lot of anxiety and some bullying, so we really became a place where he felt comfortable being himself and his stutter actually decreased over his time.
  
2. **What do you like best about teaching in AFJROTC?**
  - I have a lot of autonomy in how the program operates.
  - There is flexibility in the curriculum I teach.
  - I am able to build strong relationships with the students in the program.
  
3. **What recommendations do you have for improvement to AFJROTC?**
  - I would like LPS to provide a budget to help with uniforms, busing, and the ROTC ball.
  - We already make improvements as we see the need and/or based on cadet feedback.

## The Air Force JROTC Program Parent Survey Results

Twenty-eight (28) parents of students enrolled in the AFJROTC program responded to the online survey. Their responses are detailed in Tables P01 and P02. Additionally, their responses to the open-ended items are summarized.

Table P01: AFJROTC Parent Survey Question: What year is your student?

Grade Level	Number of Students	Percent of Students
Freshman	10	35%
Sophomore	9	31%
Junior	5	17%
Senior	4	14%

Table P02: AFJROTC Parent Survey Responses to Likert-type Items

Question	Agree or Somewhat Agree	No Opinion	Disagree or Somewhat Disagree
My student seems to like school better now that he/she attends this option program.	79%	10%	10%
My student seems to be more connected to school now that he/she attends this option program.	93%	3%	3%
The teachers in this option program are more interested in my student than teachers at the home high school.	72%	10%	17%
My student will graduate from high school.	100%	0%	0%
My student has educational plans after high school.	90%	0%	10%
My student's grades have improved since attending this option program.	66%	17%	17%
The teachers in this option program have higher expectations of my student than the teachers in the home high school.	69%	10%	21%
The faculty and staff at this option program keep me informed about my student's progress in school.	83%	7%	10%
My student has experienced educational opportunities that are not available in a traditional high school.	86%	14%	0%
I am satisfied with the education my student is receiving in this option program.	97%	0%	3%

Parents surveyed were asked three open-ended questions. The questions and responses are summarized below. The number in parenthesis indicates the number of similar responses.

- 1. *How was the decision made for your student to attend this option program?*** Responses to this question included:
  - My child was interested after hearing about the program through an orientation. (8)
  - My child made the decision to attend the program. (7)
  - My child was interested because of friends who were attending or had participated in the program. (2)
  - My child has a desire to be in the military after graduating. (10)
  - The program provides the opportunity to build character and develop leadership skills. (2)
  
- 2. *What is the best thing about your student attending this option program?*** Responses to this question included:
  - The program helps to build character and leadership skills. (12)
  - The program has helped to develop/prepare my child's interest in the military. (3)
  - The program creates/reinforces high expectations (grades, resume builder, structure). (8)
  - The program has provided my child with a connection to a group, the school, and/or the community. (6)
  - The program provides unique opportunities/purpose for my child. (5)
  - The program has helped my child become more confident. (4)
  - The program has strong teachers/leaders. (5)
  
- 3. *Is there anything about the AFJROTC program you would like changed?*** Responses to this question included:
  - The program seems to focus too much on competition versus collaboration. (2)
  - There is too much emphasis on maintaining enrollment versus building the program. (1)
  - It is difficult/time consuming/costly to provide transportation back and forth from our home school. (6)
  - The program should be at expanded to other schools. (2)
  - Improve communication with parents about events. (2)
  - Buildings need to take the program more seriously (stop students for being bullied for wearing their uniforms, take it seriously, provide higher regard). (3)
  - Reestablish the military drill competition. (1)
  - Provide more resources/increase number of instructors for the program. (2)
  - No change. (7)

## The Air Force JROTC Program Student Survey Results

Seventy-four (74) students currently enrolled in an option program participated in the online survey conducted in October 2018. The student responses are summarized in Tables S01 – S04. Responses to open-ended questions are summarized at the end of this section.

Table S01: Student Survey Responses: What year are you?

Grade Level	Number of Students	Percent of Students
Freshman	26	35%
Sophomore	23	31%
Junior	12	16%
Senior	13	18%

Table S02: Student Survey Responses: What is your home high school?

High Schools	Number of Students	Percent of Students
Bryan Community	1	1%
East	2	3%
Lincoln High	3	4%
North Star	5	7%
Northeast	57	77%
Southeast	0	0%
Southwest	4	5%

Table S03: Student Survey Responses: What is your current plan after you graduate from high school?

Program	Number of Students	Percent of Students
Join the military	29	39%
Attend college or university	25	34%
Don't know yet	8	11%
Attend college AND join the military	4	5%
Work to save money for college or university	2	3%
Attend a trade school to get a skilled job	2	3%
Get a job	1	1%
Start a business	1	1%
Join the police force	1	1%

Table S04: AFJROTC Student Survey Responses to Likert-type Items

<b>Question</b>	<b>Agree or Somewhat Agree</b>	<b>No Opinion</b>	<b>Disagree or Somewhat Disagree</b>
I will graduate from high school.	95%	3%	3%
I would not be thinking about graduation had I not attended this option program.	20%	12%	68%
I am prepared for college.	70%	5%	24%
I like coming to school each day.	74%	4%	22%
I like coming to this option program more than my home school.	78%	12%	10%
My grades are better now that I attend this option program.	68%	10%	23%
In this option program, students have more opportunities for “hands-on” applications and connections to everyday life experiences than at my home school.	89%	5%	5%
Teachers in this option program have higher expectations for student work than at my home high school.	80%	5%	15%
I felt more connected to the teachers at my home high school than I do to the teachers in this option program.	34%	19%	46%
In this option program I have had more opportunities to be actively involved in my own learning.	91%	7%	1%
Since I have been attending this option program, my interest in learning about one or more fields of study related to this program has increased.	82%	7%	10%
Since I have been attending this option program, my motivation to learn has increased.	81%	7%	10%
I feel more connected to the students at my home high school than the students in this option program.	50%	18%	31%
I would recommend this option program to my friends.	92%	1%	5%
I am satisfied with the education I am receiving from this option program.	92%	1%	5%

Students surveyed were asked four open-ended questions. The questions and responses are summarized below. The number in parenthesis indicates the number of similar responses.

**1. Describe how the decision was made for you to attend AFJROTC? Who was involved in the decision? What events lead up to the decision?**

- I was interested because of friends/family who were attending/had participated in the program or parent wanted me to join. (27)
- I had a desire to be in the military after graduating. (23)
- I was interested after hearing about the program through an orientation/counselor/cadet presentation or Lt. Plumb or other officers. (7)
- I made the decision to attend the program. (6)
- The program provides the opportunity to build leadership skills/character and challenge myself. (7)
- I heard the program is fun and develops coordination skills. (8)
- People in my family have a tradition of serving/being in the military. (4)
- It fit with my schedule/zero hour offering or get more credit. (3)

**2. What is the best thing about attending AFJROTC?**

- The program has provided me the opportunity to meet new people/be social and to make/strengthen connections with others. (24)
- The program provides unique learning opportunities (events, field trips, community service, schedule, fitness, hands-on). (16)
- The program helps to build character (self-discipline), leadership, and teamwork skills. (15)
- The program has helped to develop/prepare my interest in the military. (9)
- The program challenges me to learn new things and creates/reinforces high expectations (grades, resume builder) (10)
- The program has strong teachers/leaders. (3)
- Everything (can't distinguish). (2)
- It is really fun. (4)

**3. What could be changed about this Option Program (AFJROTC) to make it better for you?**

- Nothing/don't know. (22)
- Increase the challenge/expectations, discipline, and leadership development in the program. (12)
- Increase community outreach opportunities/projects and get more people involved in these events.(6)
- Wear uniforms every day. (1)
- Provide transportation to other and from other schools. (1)
- Increase student awareness of/enrollment in program. (1)
- Include other branches of military. (1)
- Change/do not require wearing uniforms/hairstyle or community service. (3)
- Provide more food and drink. (3)
- Have some events on holidays rather than weekends. (1)
- Increase funding of program. (1)
- Have it at another time (not so early.) (1)

## SECTION 2

# ARTS AND HUMANITIES FOCUS PROGRAM

## Arts and Humanities Focus Program – Summary of Reports

### Enrollment:

- Enrollment has fluctuated slightly over the last few years, with a low of 62 students and a high of 72. The existing facility can comfortably accommodate 70 to 80 students.
- Draws most heavily from Lincoln High School (49-58%), followed by Lincoln Southeast High School (13 to 25%) with the rest coming from various high schools across the city.
- Enrollment includes a significant number of students who participate in the gifted program (19 to 27%) compared to district numbers (12.6%). The percent of students who participate in the free/reduced lunch program (22 to 29%) is lower than the overall district percent (46%). There are far fewer students who receive special education services (1 to 10%) with no students receiving ELL services.
- The majority of students who participate in this program identify as white (75 to 82%), with Two or More being the next largest ethnic group (9 to 11%).
- There are significantly more female students participating in the program than male students (84 to 91%).

### Effectiveness:

- Of the students who began the program as grade 9 students in 2015-2016, only 36% remain in the program as seniors (Fall, 2018).
- PreACT mean scale scores are consistently above district means in English and Reading and at or below district means in Math, Science, and STEM.
- ACT mean scale scores are also consistently above district means in English, Reading, ELA, and STEM and at or below in Writing, Math, and Science. This pattern is similar when mean scale scores are compared to a matched sample.
- The percent of students who meet state expectations on the NSCAS ACT is higher than the district in ELA, but lower in Math and Science in 2017, but higher on all sub-tests in 2018. The same pattern can be seen the percent meeting expectations is compared to a matched sample.
- The mean cumulative weighted GPA (end of school year) is higher than the district mean for two of the three years examined.
- The high school graduation rate for seniors in the program is higher than the district.
- The rate of college attendance is lower than the district rate.

# Arts & Humanities Focus (Arts Focus) Enrollment and Outcome Data

## Enrollment and Demographics

Grade										
	Fall 2014		Fall 2015		Fall 2016		Fall 2017		Fall 2018	
	Number	Percent								
<b>9</b>	7	10%	11	18%	26	41%	16	22%	19	28%
<b>10</b>	18	26%	8	13%	13	20%	26	36%	18	27%
<b>11</b>	21	30%	24	39%	10	16%	18	25%	18	27%
<b>12</b>	23	33%	19	31%	15	23%	12	17%	12	18%
<b>Total</b>	69	100%	62	100%	64	100%	72	100%	67	100%

School										
	Fall 2014		Fall 2015		Fall 2016		Fall 2017		Fall 2018	
	Number	Percent								
<b>Lincoln High</b>	40	58%	34	55%	37	58%	38	53%	33	49%
<b>East</b>	7	10%	6	10%	2	3%	4	6%	6	9%
<b>Northeast</b>	2	3%	3	5%	4	6%	3	4%	2	3%
<b>Southeast</b>	9	13%	11	18%	16	25%	13	18%	11	16%
<b>North Star</b>	4	6%	6	10%	5	8%	5	7%	7	10%
<b>Southwest</b>	7	10%	2	3%	0	0%	9	13%	8	12%

Note: These data do not include students at non-public schools enrolled in the program.

Program										
	Fall 2014		Fall 2015		Fall 2016		Fall 2017		Fall 2018	
	Number	Percent								
<b>ELL</b>	0	0%	0	0%	0	0%	0	0%	0	0%
<b>Special Education</b>	2	3%	6	10%	4	6%	4	6%	1	1%
<b>Free/Reduced Lunch</b>	15	22%	18	29%	14	22%	19	26%	16	24%
<b>Gifted</b>	17	25%	12	19%	16	25%	15	21%	18	27%

Ethnicity										
	Fall 2014		Fall 2015		Fall 2016		Fall 2017		Fall 2018	
	Number	Percent								
<b>American Indian/Alaska Native</b>	0	0%	0	0%	0	0%	1	1%	0	0%
<b>Asian</b>	0	0%	0	0%	0	0%	1	1%	0	0%
<b>Black or African American</b>	1	1%	1	2%	2	3%	2	3%	2	3%
<b>Hispanic</b>	6	9%	7	11%	7	11%	6	8%	3	4%
<b>Two or More</b>	7	10%	6	10%	6	9%	8	11%	7	10%
<b>White</b>	55	80%	48	77%	49	77%	54	75%	55	82%

Gender										
	Fall 2014		Fall 2015		Fall 2016		Fall 2017		Fall 2018	
	Number	Percent								
<b>Female</b>	58	84%	54	87%	54	84%	63	88%	61	91%
<b>Male</b>	11	16%	8	13%	10	16%	9	13%	6	9%

Retention: How many students enrolled in ninth grade 2015-16 were enrolled fall 2018?

<b>Arts Focus Retention</b>	
<b>Grade 9</b>	11
<b>Grade 12</b>	4
<b>Percent Retained</b>	36%

PreACT Results: Fall 2017 Mean PreACT Scale Scores

<b>Arts Focus Pre-ACT Fall 2017</b>		
	<b>Grade 10</b>	<b>Grade 11</b>
<b>Arts Focus</b>		
<b>Number of Students</b>	25	16.0
<b>LPS</b>		
<b>Number of Students</b>	2654	2587.0
<b>Art Composite</b>	19.3	19.5
<b>LPS Composite</b>	18.4	19.3
<b>Art English</b>	19.1	19.3
<b>LPS English</b>	16.2	17.4
<b>Art Reading</b>	22.6	21.7
<b>LPS Reading</b>	19.8	20.7
<b>Art Math</b>	16.8	17.3
<b>LPS Math</b>	18.4	19.3
<b>Art Science</b>	18.2	19.3
<b>LPS Science</b>	18.5	19.4
<b>Art STEM</b>	17.9	18.5
<b>LPS STEM</b>	18.7	19.6

## ACT Results: Mean Scale Scores on Statewide ACT 2016 to 2018, Including 2018 Matched Sample

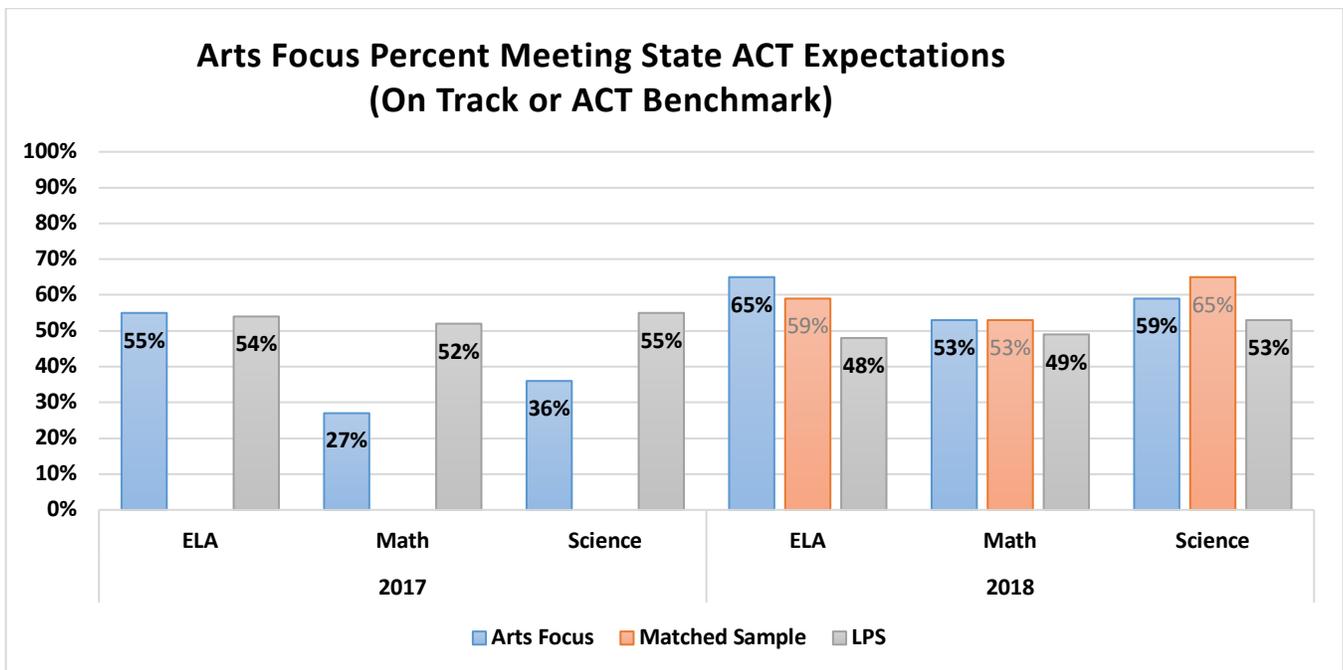
Note: A random matched sample of eleventh graders was selected to allow comparison of ACT scores and GPAs. The sample was matched as closely as possible with students in the program based on gender, ethnicity, 8th grade Reading and Math NeSA scores, participation in gifted and Special Education Programs, and (if NeSA scores were not available) primary high school.

Arts Focus ACT Scale Scores			
	Spring 2016	Spring 2017	Spring 2018
<b>Art Number of Students</b>	19	9	17
<b>LPS Number of Students</b>	2307	2700	2708
<b>Art Composite</b>	20.0	20.0	20.6
<b>LPS Composite</b>	20.4	19.9	19.5
<b>Art English</b>	19.8	20.2	20.2
<b>LPS English</b>	19.0	18.7	18.4
<b>Art Reading</b>	22.4	22.8	22.9
<b>LPS Reading</b>	20.9	20.3	19.8
<b>Art Writing</b>	--	6.1	6.1
<b>LPS Writing</b>	--	6.5	6.3
<b>Art ELA</b>	--	19.8	19.5
<b>LPS ELA</b>	--	19.0	18.2
<b>Art Math</b>	17.6	17.0	19.4
<b>LPS Math</b>	20.4	20.0	19.4
<b>Art Science</b>	19.8	19.6	19.8
<b>LPS Science</b>	20.6	20.0	19.8
<b>Art STEM</b>	19.0	18.4	20.1
<b>LPS STEM</b>	20.7	20.3	19.9

Arts Focus Spring 2018 ACT Scale Scores with Matched Sample									
	Students	Composite	English	Reading	Writing	ELA	Math	Science	STEM
<b>Arts &amp; Humanities</b>	17	20.6	20.2	22.9	6.1	19.5	19.4	19.8	20.1
<b>Matched Sample</b>	17	20.1	19.2	20.0	6.9	19.1	19.8	20.5	20.4

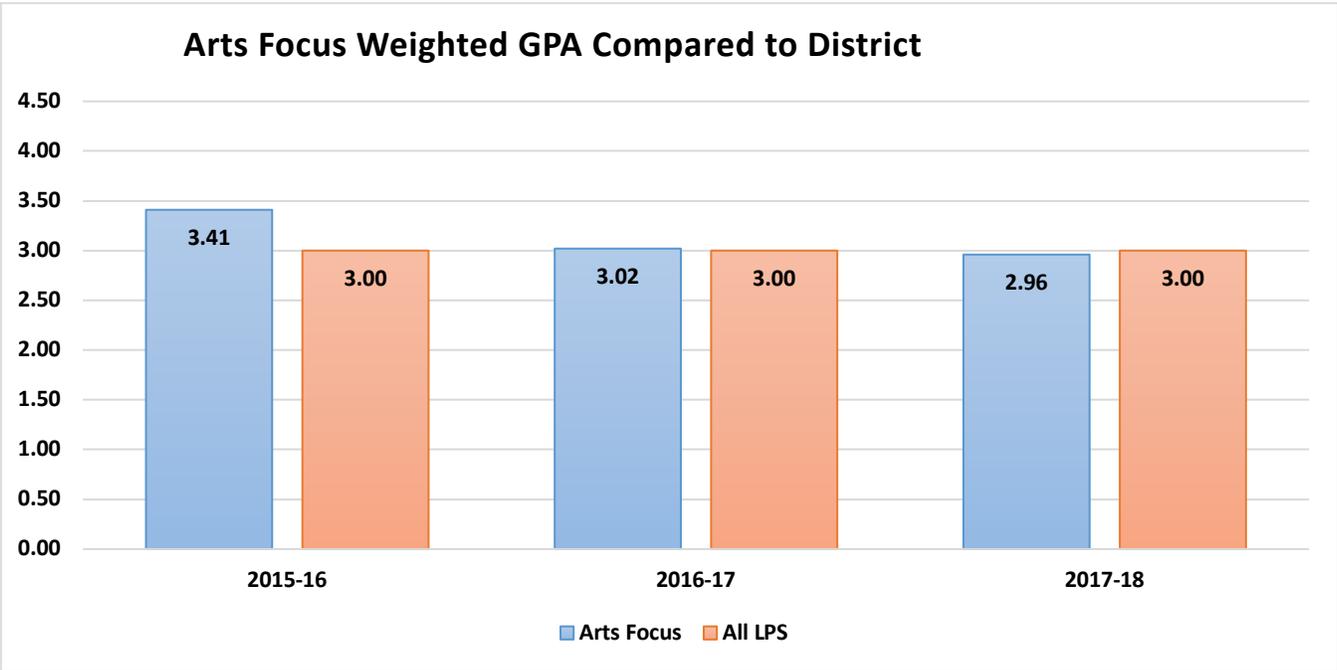
ACT Results: Percent Meeting State ACT Expectations (On Track or ACT Benchmark)

Arts Focus Percent Meeting State ACT Expectations (On Track or ACT Benchmark)						
	2017			2018		
	ELA	Math	Science	ELA	Math	Science
<b>Arts Focus</b>	55%	27%	36%	65%	53%	59%
<b>Matched Sample</b>				59%	53%	65%
<b>LPS</b>	54%	52%	55%	48%	49%	53%



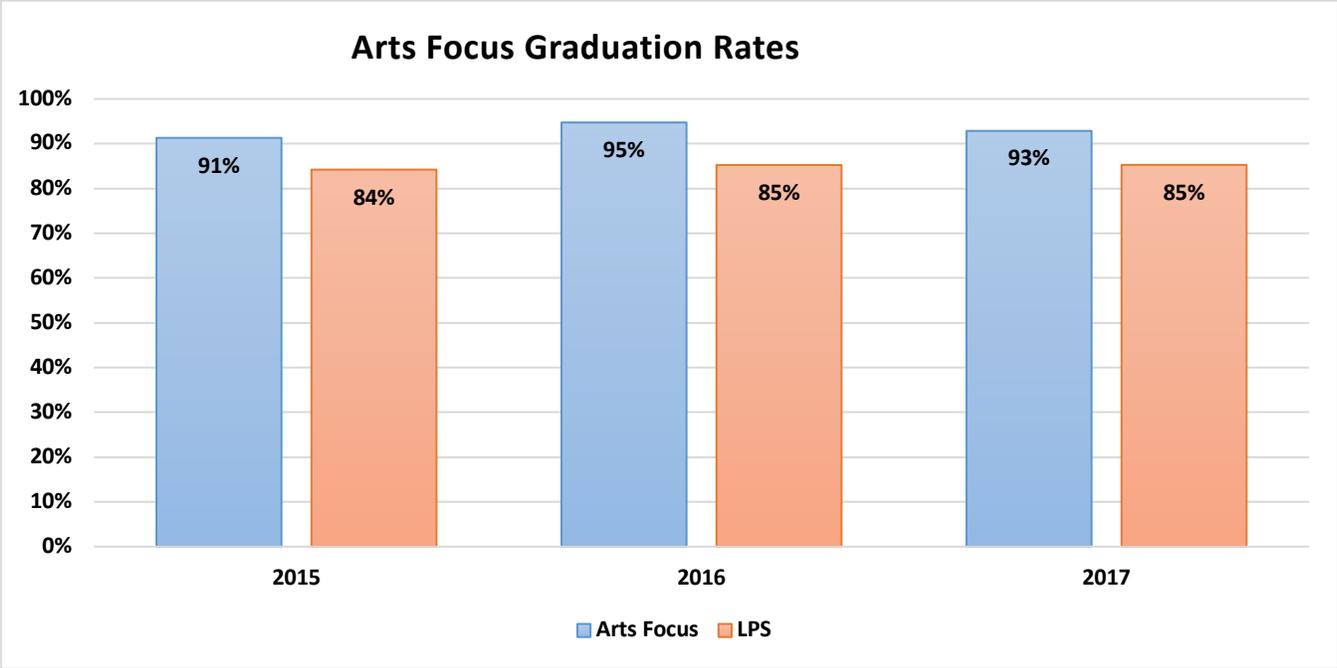
GPA: Cumulative Mean Weighted GPA at the end of the School Year

Arts Focus Weighted GPA Compared to District			
	2015-16	2016-17	2017-18
Arts Focus	3.41	3.02	2.96
All LPS	3.00	3.00	3.00



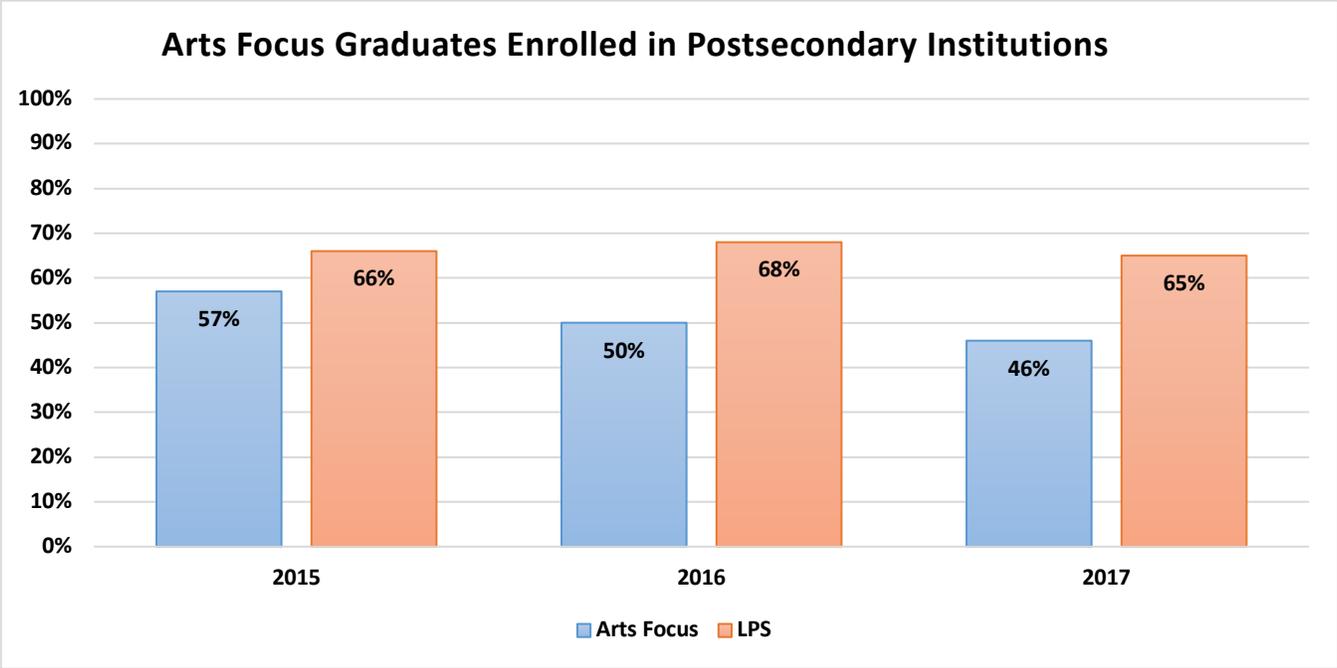
Graduation Rates for 12<sup>th</sup> Graders

Arts Focus Graduation Rates			
	2015	2016	2017
Arts Focus	91%	95%	93%
LPS	84%	85%	85%



College Participation: Information Reported to the Student Clearinghouse

Arts Focus Graduates Enrolled in Postsecondary Institutions			
	2015	2016	2017
Arts Focus	57%	50%	46%
LPS	66%	68%	65%



## Arts & Humanities Focus Program (Arts Focus) – Survey Results

### Arts & Humanities Focus Program Teacher Survey Results

Six (6) Arts & Humanities Focus Program teachers responded to the online survey. The teacher responses to individual items are detailed in Tables T01 – T03.

Table T01: Arts & Humanities Focus Program Teacher Survey Question: How long have you been a teacher?

<b>Number of Years</b>	<b>Number of Teachers</b>	<b>Percent of Teachers</b>
1-5 years	0	0%
6-10 years	1	33%
11-15 years	1	33%
16-20 years	0	0%
21-25 years	0	0%
26 years +	1	33%

Table T02: Arts & Humanities Focus Program Teacher Survey Question: How long have you taught in this Option Program?

<b>Number of Years</b>	<b>Number of Teachers</b>	<b>Percent of Teachers</b>
1-3 years	1	33%
4-6 years	1	33%
7-10 years	0	0%
More than 10 years	1	33%

Table T03: Arts & Humanities Focus Program Teacher Survey Responses to Likert-type Items

Question	Agree or Somewhat	No Opinion	Disagree or Somewhat
	Agree	Opinion	Disagree
Teaching in this option program is more appealing to me than teaching in a traditional high school.	100%	0%	0%
I look forward to the time I can get back to a traditional high school.	0%	0%	100%
This program is better for my students than a traditional high school.	100%	0%	0%
Students in this option program are more motivated to learn than students I taught in traditional high schools.	100%	0%	0%
Students in this option program are more connected to school than students I taught in traditional high schools.	100%	0%	0%
Students in this option program have more opportunities to be actively involved in their own learning than students I taught in traditional high schools.	100%	0%	0%
I expect more from my students in this option program than students I taught in traditional high schools.	67%	0%	33%
I receive appropriate support from the administration of this option program.	67%	0%	33%
I am satisfied with how this administration handles discipline problems.	67%	0%	33%
The administration in this option program effectively helps me solve problems.	67%	0%	33%

The survey asked teachers three questions about offerings at the Arts & Humanities Focus Program. The questions and responses are summarized below. The number in parenthesis indicates the number of similar responses.

- Provide an example of a student or family (anonymously) you have taught or supported who otherwise might have dropped out of high school had it not been for The Arts and Humanities Focus Program. Please describe the student's situation and how the program helped him or her.**

  - The student had an anger issue that often got him in trouble with friends and adults. He thrived when he had adults who could help him work through his anger. He liked to learn, but was distracted by personal issues that at first made his attendance a concern. His grades were also low as a result. With accountability and support, he was able to graduate on time despite difficulties at home with an ill mother whom he supported.
  - I have known countless students who were on the edge of not continuing because traditional schools were not meeting their needs and they could not find people to whom they could relate. The structure and institutional nature of traditional schools does not appeal to some students and they find it difficult or impossible to have success in those types of environments.

2. **What do you like best about teaching in The Arts and Humanities Focus Program?**

- I like the freedom to think creatively and take risks. (1)
- I like to help students think outside the box. (1)
- I like knowing my students and being able to plan to meet their individual needs and interests. (2)
- I like the passion and engagement my students have because of their ability to choose projects they are interested in. (1)

3. **What recommendations do you have for improvement to The Arts and Humanities Focus Program?**

- Continue to hire people who understand the philosophy behind AHFP (forward thinking, community connected, engaging). (1)
- There needs to be a counselor as part of our faculty (providing emotional support and college readiness). (1)
- We could use more space to support advanced-level students. (1)
- We could use more funding to support our specialized technology needs. (1)

## Arts & Humanities Focus Program Parent Survey Results

Eighteen (18) parents of students in the Arts & Humanities Focus Program responded to the online survey. Their responses are detailed in Tables P01 and P02. Open-ended item responses are also summarized.

Table P01: Arts & Humanities Focus Program Parent Survey Question: What year is your student?

Grade Level	Number of Students	Percent of Students
Freshman	5	28%
Sophomore	7	39%
Junior	5	28%
Senior	1	6%

Table P02: Arts & Humanities Focus Program Parent Survey Responses to Likert-type Items

Question	Agree or Somewhat Agree	No Opinion	Disagree or Somewhat Disagree
My student seems to like school better now that he/she attends this option program.	78%	11%	11%
My student seems to be more connected to school now that he/she attends this option program.	89%	6%	6%
The teachers in this option program are more interested in my student than teachers at the home high school.	94%	0%	6%
My student will graduate from high school.	94%	6%	0%
My student has educational plans after high school.	89%	6%	0%
My student's grades have improved since attending this option program.	44%	33%	22%
The teachers in this option program have higher expectations of my student than the teachers in the home high school.	50%	22%	28%
The faculty and staff at this option program keep me informed about my student's progress in school.	89%	0%	11%
My student has experienced educational opportunities that are not available in a traditional high school.	94%	0%	6%
I am satisfied with the education my student is receiving in this option program.	100%	0%	0%

Parents surveyed were asked two open-ended questions. The questions and responses are summarized below. The number in parenthesis indicates the number of similar responses.

- 1. How was the decision made for your student to attend The Arts and Humanities Focus Program?**
  - My child was interested in an Arts curriculum. (8)
  - My child was interested after hearing about the program through an orientation. (7)
  - The program provided a smaller school setting/alternate option/safer environment/social fit. (8)
  - My child made the decision to attend the program. (5)
  - My child was interested because of friends who were attending. (1)
  
- 2. What is the best thing about your student attending The Arts and Humanities Focus Program?**
  - The quality and focus of the classes/educational opportunities is strong. (11)
  - My child fits in at the school/sense of belonging. (7)
  - My child feels safe and comfortable there. (3)
  - The program has helped my child become more confident. (3)
  - The program has small class sizes. (3)
  
- 3. Is there anything about The Arts and Humanities Focus Program you would like changed?**
  - Provide stronger communication with the family about events, assignments, grades. (3)
  - No change. (3)
  - Improve the facilities. (1)
  - Provide more opportunities similar to the home schools/clubs or provide stronger connections to the home schools. (2)

## Arts & Humanities Focus Program Student Survey Results

Of the 67 students currently enrolled in Arts & Humanities Focus Program, 60 participated in the online survey conducted in October 2018. The student responses are summarized in Tables S01 – S04. Responses to open-ended questions are summarized at the end of this section.

Table S01: Student Survey Responses: What year are you?

Grade Level	Number of Students	Percent of Students
Freshman	17	28%
Sophomore	16	27%
Junior	16	27%
Senior	11	18%

Table S02: Student Survey Responses: What is your home high school?

High Schools	Number of Students	Percent of Students
Bryan Community	0	0%
East	5	8%
Lincoln High	29	48%
North Star	5	8%
Northeast	2	3%
Southeast	11	18%
Southwest	8	13%

Table S03: Student Survey Responses: What is your current plan after you graduate from high school?

Program	Number of Students	Percent of Students
Attend college or university	38	63%
Work to save money for college or university	8	13%
Don't know yet	8	13%
Get a job	2	3%
Start a business	2	3%
Attend college AND get a job	1	2%

Table S04: Arts & Humanities Focus Program Student Survey Responses to Likert-type Items

<b>Question</b>	<b>Agree or Somewhat Agree</b>	<b>No Opinion</b>	<b>Disagree or Somewhat Disagree</b>
I will graduate from high school.	100%	0%	0%
I would not be thinking about graduation had I not attended this option program.	18%	15%	67%
I am prepared for college.	62%	7%	28%
I like coming to school each day.	83%	3%	13%
I like coming to this option program more than my home school.	97%	2%	2%
My grades are better now that I attend this option program.	65%	20%	15%
In this option program, students have more opportunities for “hands-on” applications and connections to everyday life experiences than at my home school.	100%	0%	0%
Teachers in this option program have higher expectations for student work than at my home high school.	95%	5%	0%
I felt more connected to the teachers at my home high school than I do to the teachers in this option program.	18%	0%	82%
In this option program I have had more opportunities to be actively involved in my own learning.	100%	0%	0%
Since I have been attending this option program, my interest in learning about one or more fields of study related to this program has increased.	97%	0%	3%
Since I have been attending this option program, my motivation to learn has increased.	88%	3%	8%
I feel more connected to the students at my home high school than the students in this option program.	7%	7%	87%
I would recommend this option program to my friends.	93%	3%	2%
I am satisfied with the education I am receiving from this option program.	93%	3%	3%

Students surveyed were asked several open-ended questions. The questions and responses are summarized below. The number in parenthesis indicates the number of similar responses.

- 1. Describe how the decision was made for you to attend The Arts and Humanities Focus Program? Who was involved in the decision? What events lead up to the decision?**
  - I was interested in an Arts/Humanities curriculum (fits my passion/future plans). (38)
  - I was interested after hearing about the program through an orientation/presentation, shadowing, teacher, or counselor, etc. (23)
  - My child was interested because of friends/family/others who were attending or knew about it. (12)
  - The program provided a smaller school setting/alternate option/safer or less stressful environment. (18)
  - More opportunities for connections/close-knit community or better social fit due to others having similar interests. (8)
  - I made the decision to attend the program. (7)
  - Staff is caring and knowledgeable and ratio is good. (5)
  - Program has unique opportunities (engaging/hands-on) and more freedom/responsibility (treated as adults). (3)
  
- 2. What is the best thing about attending The Arts and Humanities Focus Program?**
  - Having a tight-knit community of support (from both teachers and students) and meeting great people who have same interest as me. (15)
  - The staff has clear, high expectations, but they are also caring and supportive (listen to you). (14)
  - The ability to focus on my interest of Arts and Humanities. (9)
  - I feel safe, comfortable, and fit in at school (can be myself). (8)
  - The hands-on/engaging curriculum has unique activities (field trips/speakers/involved with community), and good feedback. (10)
  - The opportunity to be more independent, challenged, and to grow and be prepared for the future. (10)
  - The program has small class sizes/smaller population and is less stressful. (5)
  
- 3. What makes The Arts and Humanities Focus Program a better match for you than your home high school?**
  - The program has small class sizes/smaller population and is less stressful than traditional high school. (24)
  - The ability to focus on my interest of Arts and Humanities. (11)
  - I feel safe, comfortable, and fit in at school (can be myself/openly express myself/get along with people better). (16)
  - Having a tight-knit community of support (from both teachers and students) and meeting great people/friends who have same interest as me. (16)
  - The hands-on/engaging curriculum has unique activities (field trips/speakers/involved with community), and good feedback. (11)
  - The opportunity to be more independent, challenged, and to grow and be prepared for the future. (14)
  - The staff has clear, high expectations, but they are also caring and supportive (listen to you and build relationships over years). (7)
  
- 4. Is there anything about The Arts and Humanities Focus Program you would like changed?**
  - No change. (27)
  - Feel like students have a political bias. (1)
  - Better meet the needs of differentiated students (left to work independently/need more rigor/bored, etc.) (3)
  - More funding (tablets, transportation (students drive themselves to events), field trips, etc). (7)
  - Protect the uniqueness of the program (not make like regular school/keep freedoms of expression/not institute more rules/not be overcrowded). (3)
  - Include the required classes (science, CTE), and/or expand classes offered for credit/make it full day. (8)
  - Increase opportunities to interact with community/express in new ways and increase art mediums offered (music/metalsmithing, etc.). (3)
  - Find ways to increase deep connections among students. (1)
  - Eliminate favoritism. (1)
  - Have teachers give options regarding sensitive content and better ways to handle it with students (can be triggering/harmful/depressing). (2)

- More explanation and time for homework and increase teacher organization/support for students who need it. (6)
- It is too loud there. (1)
- Make sure the non-arts classes are same quality as art-focused ones. (1)
- Have some projects have less an emphasis on art. (1)
- Change the acceptance process (believes wrong candidates are being included and others who should be are not). (1)

# SECTION 3

## INTERNATIONAL BACCALAUREATE (IB) PROGRAM

## International Baccalaureate (IB) Program – Summary of Reports

### Enrollment:

- Enrollment has fluctuated slightly over the last few years, with a low of 164 students and a high of 188. The capacity of this program is driven by staffing.
- All of the students participating in the program attend Lincoln High School where the program is housed.
- Enrollment includes a significant number of students who participate in the gifted program (71 to 82%). The percent of students who participate in the free/reduced lunch program (15 to 19%) is lower than the overall district percent (46%). There are almost no students who receive special education services (one student in the Fall of 2016) with no students receiving ELL services.
- The majority of students who participate in this program identify as white (70 to 75%), with the majority of the remaining students identifying as either Asian (6 to 10%) or Hispanic (9 to 11%).
- There are more female students participating in the program than male students (62 to 69%).

### Effectiveness:

- The retention information is slightly more complicated for this program. There are students who take pre-IB courses in grade 10 and of this group only 55% remained in the program as seniors. Of the students who committed to the IB program in grade 11, all remained in the program as seniors.
- Between 74 and 86 percent of the students participating in the program as seniors earned the IB diploma.
- PreACT mean scale scores are significantly above district means in all areas.
- ACT mean scale scores are also significantly above district means in all areas. The same pattern can be seen if you compare mean scale scores to a matched sample.
- The percent of students who are meeting state expectations on the NSCAS ACT, is higher than the district (98 to 100%). The same pattern can be seen if you compare the percent meeting expectations to a matched sample.
- The mean cumulative weighted GPA (end of school year) is higher than the district mean.
- The high school graduation rate for students in the program is 100%.
- The rate of college attendance is higher than the district rate.

# International Baccalaureate (IB) Enrollment and Outcome Data

## Enrollment and Demographics

Grade						
	Fall 2016		Fall 2017		Fall 2018	
	Number	Percent	Number	Percent	Number	Percent
<b>10</b>	76	46%	75	42%	78	41%
<b>11</b>	57	35%	47	26%	63	34%
<b>12</b>	31	19%	57	32%	47	25%
<b>Total</b>	164	100%	179	100%	188	100%

Program						
	Fall 2016		Fall 2017		Fall 2018	
	Number	Percent	Number	Percent	Number	Percent
<b>ELL</b>	0	0%	0	0%	0	0%
<b>Special Education</b>	1	1%	0	0%	0	0%
<b>Free/Reduced Lunch</b>	30	18%	27	15%	35	19%
<b>Gifted</b>	131	80%	146	82%	134	71%

Ethnicity						
	Fall 2016		Fall 2017		Fall 2018	
	Number	Percent	Number	Percent	Number	Percent
<b>American Indian/Alaska Native</b>	0	0%	0	0%	0	0%
<b>Asian</b>	17	10%	10	6%	15	8%
<b>Black or African American</b>	9	5%	8	4%	6	3%
<b>Hispanic</b>	15	9%	20	11%	17	9%
<b>Native Hawaiian/Pacific Islander</b>	0	0%	0	0%	0	0%
<b>Two or More</b>	9	5%	7	4%	9	5%
<b>White</b>	114	70%	134	75%	141	75%

Gender						
	Fall 2016		Fall 2017		Fall 2018	
	Number	Percent	Number	Percent	Number	Percent
<b>Female</b>	101	62%	118	66%	130	69%
<b>Male</b>	63	38%	61	34%	58	31%

Retention: How many students enrolled in ninth grade 2015-16 were enrolled fall 2018? How many students received the IB Diploma?

<b>IB Retention</b>			
	<b>Total</b>	<b>Enrolled 2017-18</b>	<b>Percent Retained</b>
<b>Pre-IB Courses in Grade 10 (Fall 2015)</b>	102	56	55%
<b>IB Program in Grade 11 (Fall 2016)</b>	57	57	100%

<b>Number of students enrolled in the IB program as 12<sup>th</sup> Graders who received an IB diploma</b>				
	<b>Spring 2017</b>		<b>Spring 2018</b>	
	<b>Number of Students</b>	<b>Percent</b>	<b>Number of Students</b>	<b>Percent</b>
<b>Received Diploma</b>	23	74%	49	86%

PreACT Results: Fall 2017 Mean PreACT Scale Scores

<b>IB Pre-ACT Fall 2017</b>		
	<b>Grade 10</b>	<b>Grade 11</b>
<b>IB</b>		
<b>Number of Students</b>	75	46.0
<b>LPS</b>		
<b>Number of Students</b>	2654	2587.0
<b>IB Composite</b>	24.5	27.7
<b>LPS Composite</b>	18.4	19.3
<b>IB English</b>	22.8	26.9
<b>LPS English</b>	16.2	17.4
<b>IB Reading</b>	27.5	30.4
<b>LPS Reading</b>	19.8	20.7
<b>IB Math</b>	23.1	26.1
<b>LPS Math</b>	18.4	19.3
<b>IB Science</b>	24	26.6
<b>LPS Science</b>	18.5	19.4
<b>IB STEM</b>	23.8	26.6
<b>LPS STEM</b>	18.7	19.6

## ACT Results: Mean Scale Scores on Statewide ACT 2016 to 2018, Including 2018 Matched Sample

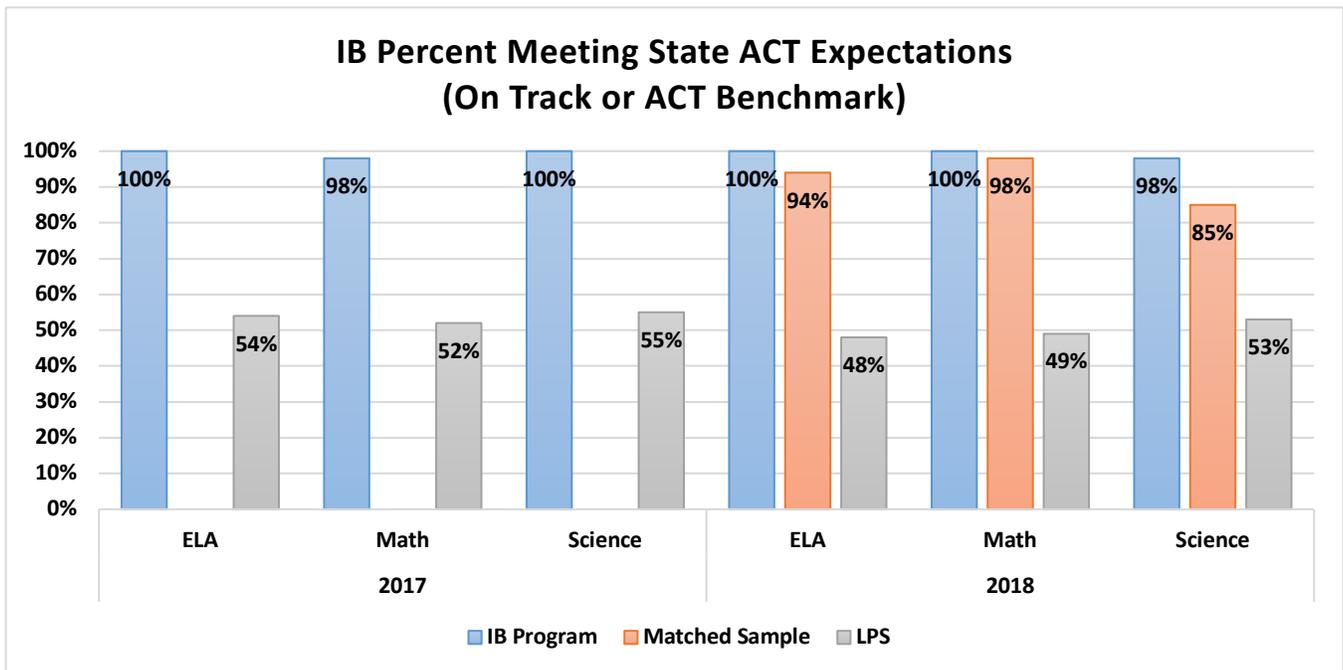
Note: A random matched sample of eleventh graders was selected to allow comparison of ACT scores and GPAs. The sample was matched as closely as possible with students in the program based on gender, ethnicity, 8th grade Reading and Math NeSA scores, participation in gifted and Special Education Programs, and (if NeSA scores were not available) primary high school.

IB ACT Scale Scores		
	Spring 2017	Spring 2018
<b>IB Number of Students</b>	57	47
<b>LPS Number of Students</b>	2700	2708
<b>IB Composite</b>	28.6	28.6
<b>LPS Composite</b>	19.9	19.5
<b>IB English</b>	28.9	29.3
<b>LPS English</b>	18.7	18.4
<b>IB Reading</b>	30.0	30.3
<b>LPS Reading</b>	20.3	19.8
<b>IB Writing</b>	8.8	8.3
<b>LPS Writing</b>	6.5	6.3
<b>IB ELA</b>	28.4	27.4
<b>LPS ELA</b>	19.0	18.2
<b>IB Math</b>	27.5	27.0
<b>LPS Math</b>	20.0	19.4
<b>IB Science</b>	27.6	27.3
<b>LPS Science</b>	20.0	19.8
<b>IB STEM</b>	27.8	27.4
<b>LPS STEM</b>	20.3	19.9

IB Spring 2018 ACT Scale Scores with Matched Sample									
	Students	Composite	English	Reading	Writing	ELA	Math	Science	STEM
<b>IB Program</b>	47	28.6	29.3	30.3	8.3	27.4	27.0	27.3	27.4
<b>Matched Sample</b>	47	25.1	25.7	25.9	7.6	24.0	24.7	24.1	24.7

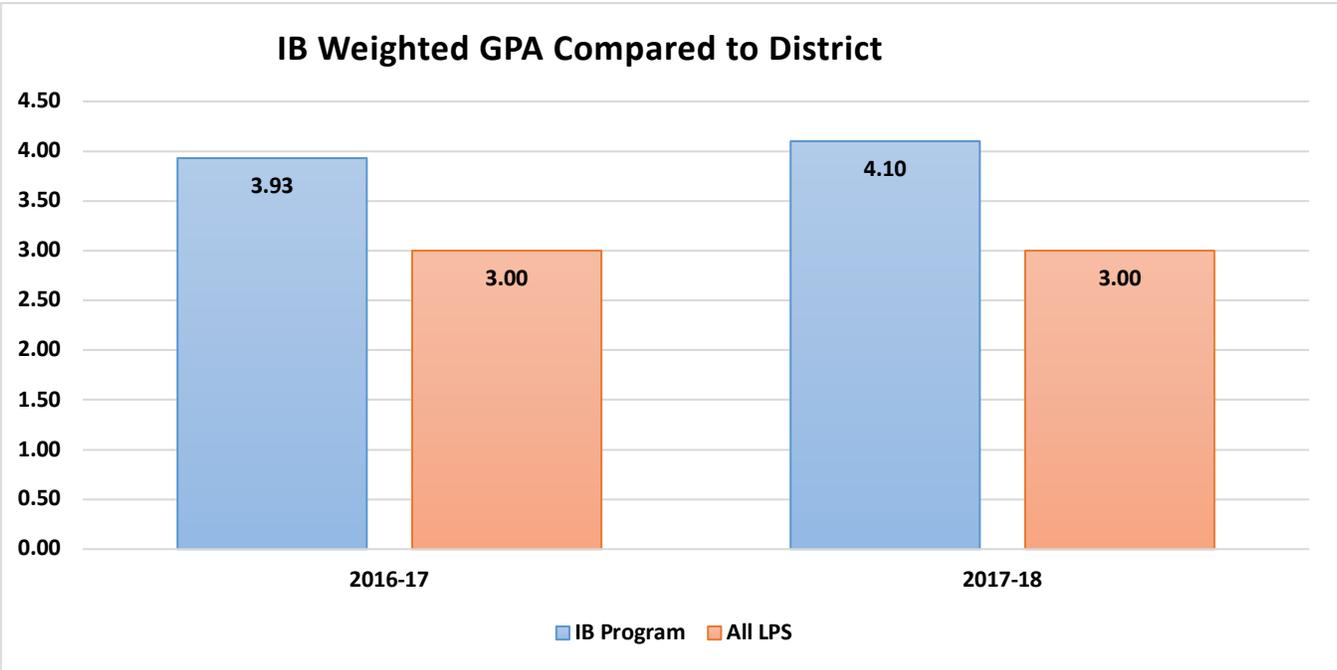
ACT Results: Percent Meeting State ACT Expectations (On Track or ACT Benchmark)

IB Percent Meeting State ACT Expectations (On Track or ACT Benchmark)						
	2017			2018		
	ELA	Math	Science	ELA	Math	Science
<b>IB Program</b>	100%	98%	100%	100%	100%	98%
<b>Matched Sample</b>				94%	98%	85%
<b>LPS</b>	54%	52%	55%	48%	49%	53%



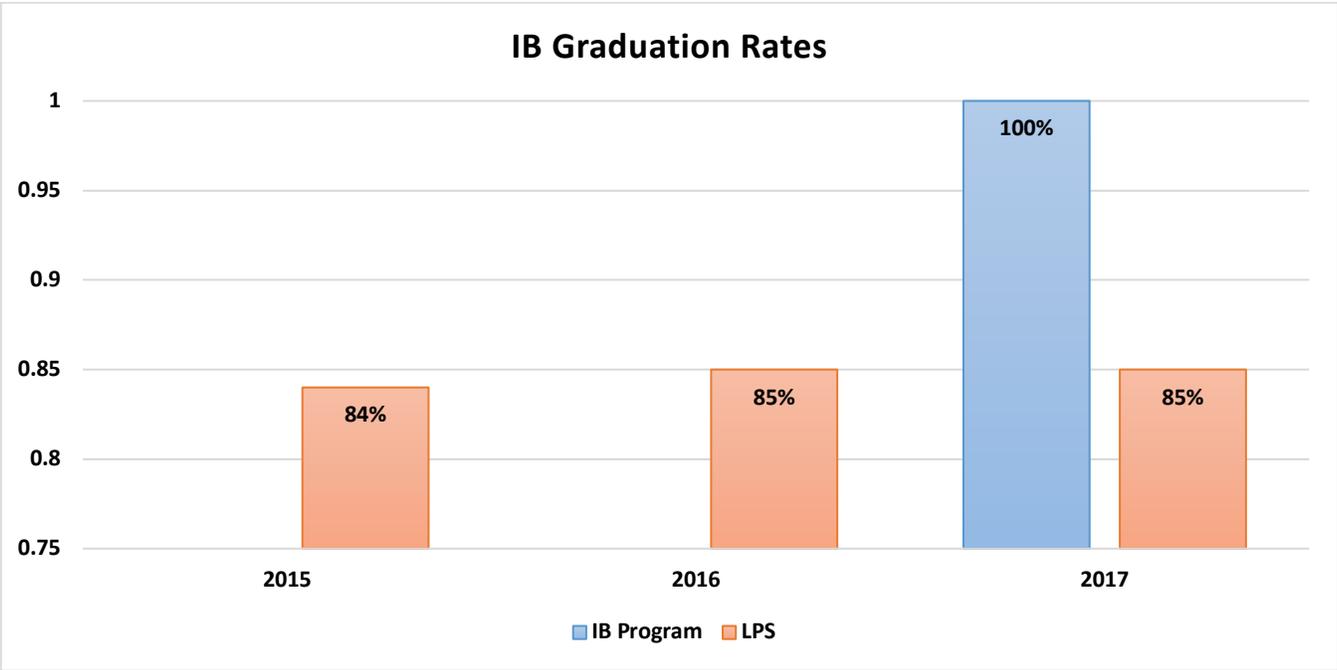
GPA: Cumulative Mean Weighted GPA at the end of the School Year

IB Weighted GPA Compared to District		
	2016-17	2017-18
IB Program	3.93	4.10
All LPS	3.00	3.00



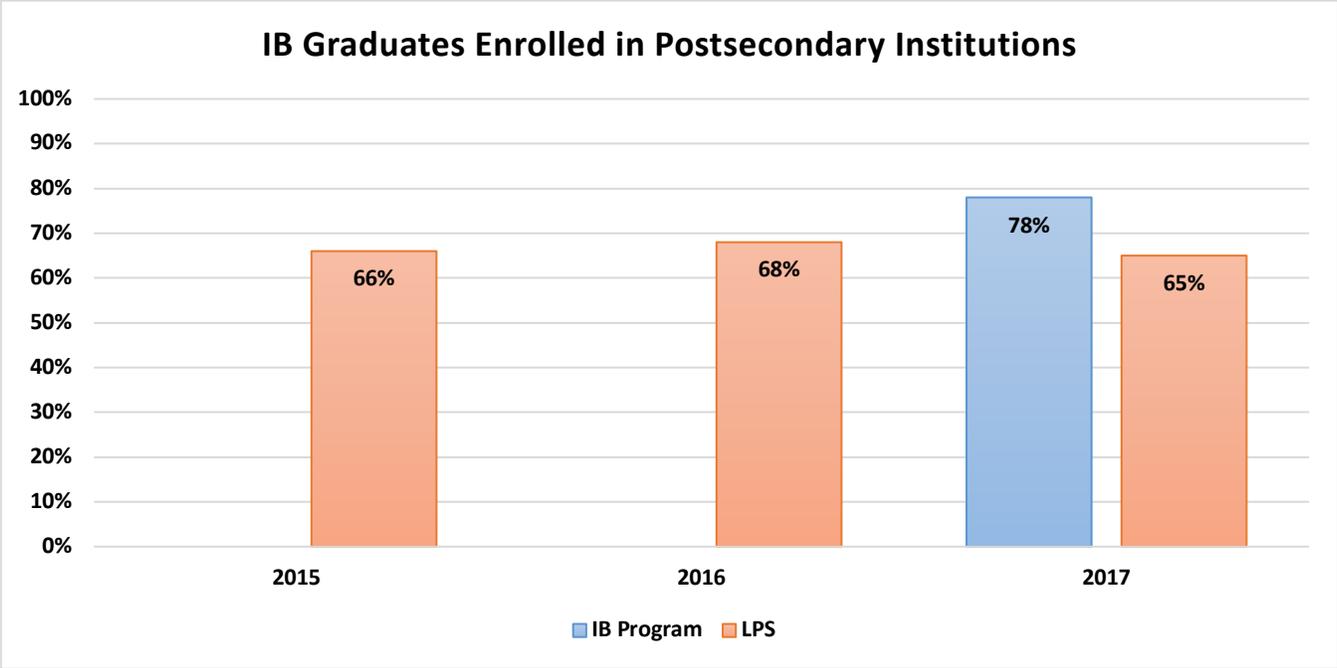
Graduation Rates for 12<sup>th</sup> Graders

IB Graduation Rates			
	2015	2016	2017
IB Program			100%
LPS	84%	85%	85%



College Participation: Information Reported to the Student Clearinghouse

IB Graduates Enrolled in Postsecondary Institutions			
	2015	2016	2017
IB Program			78%
LPS	66%	68%	65%



## The International Baccalaureate Program (IB) – Survey Results

### The International Baccalaureate Program Teacher Survey Results

Thirteen (13) International Baccalaureate Program teachers responded to the online survey. The teacher responses to individual items are detailed in Tables T01 – T03. Additionally, their responses to the open-ended items are summarized.

Table T01: International Baccalaureate Teacher Survey Question: How long have you been a teacher?

<b>Number of Years</b>	<b>Number of Teachers</b>	<b>Percent of Teachers</b>
1-5 years	1	8%
6-10 years	5	39%
11-15 years	5	39%
16-20 years	0	0%
21-25 years	1	8%
26 years +	1	8%

Table T02: International Baccalaureate Teacher Survey Question: How long have you taught in this option program?

<b>Number of Years</b>	<b>Number of Teachers</b>	<b>Percent of Teachers</b>
1-3 years	3	23%
4-6 years	3	23%
7-10 years	7	54%
More than 10 years	0	0%

Table T03: International Baccalaureate Teacher Survey Responses to Likert-type Items

Question	Agree or Somewhat Agree	No Opinion	Disagree or Somewhat Disagree
Teaching in this option program is more appealing to me than teaching in a traditional high school.	85%	8%	8%
I look forward to the time I can get back to a traditional high school.	15%	23%	62%
This program is better for my students than a traditional high school.	92%	8%	0%
Students in this option program are more motivated to learn than students I taught in traditional high schools.	92%	8%	0%
Students in this option program are more connected to school than students I taught in traditional high schools.	85%	8%	8%
Students in this option program have more opportunities to be actively involved in their own learning than students I taught in traditional high schools.	100%	0%	0%
I expect more from my students in this option program than students I taught in traditional high schools.	100%	0%	0%
I receive appropriate support from the administration of this option program.	77%	0%	23%
I am satisfied with how this administration handles discipline problems.	77%	0%	23%
The administration in this option program effectively helps me solve problems.	92%	0%	8%

Teachers at the International Baccalaureate Program were asked three open-ended questions. The questions and responses are summarized below. The number in parenthesis indicates the number of similar responses.

**1. Provide an example of a student or family (anonymously) you have taught or supported who otherwise might have dropped out of high school had it not been for the IB Program. Please describe the student's situation and how the program helped him or her.**

- While the IB program does not typically appeal to students who are in danger of high school, there have been numerous situations over the past few years where gifted students from difficult home settings have found the support they need within the IB program at LHS. One such instance was a student who had a very difficult time getting to school. Teachers within the IB program worked tirelessly with this student to ensure they had the supports they needed to keep going.
- I develop such close relationships with my students (because we work so hard on curriculum and move at such a fast pace) that I was able to recognize some suicidal tendencies before any other teacher. That student got help in a timely manner and the parents claim that I saved her because we spend so much time together and through this program I knew her so well- that's how I was able to see a chance.

**2. What do you like best about teaching in the IB Program?**

- I value the high standards and rigorous coursework (freedom of topics) that challenges students. (2)

- I value the small community and the resulting relationships with and among students and with other staff. (5)
- I appreciate teaching who are self-motivated and want to do their best (curious minds). (5)
- I appreciate the philosophical approach of IB. (excellence, metacognition, student choice, and global citizenship.) (5)
- I getting to know my students well over several years. (1)
- I like helping students prepare for the rigors of college. (1)
- I like being able to network with other teachers worldwide. (1)

**3. What recommendations do you have for improvement to the IB Program?**

- Broaden the class offerings (computer science). (1)
- Compacting so many requirements in 9th and 10th grades sometimes limits who can participate in the program, especially immigrant students, and raises student anxiety. (2)
- I would appreciate additional training to make me a stronger IB teacher. (1)
- We need to work on trying to reduce the amount of stress/anxiety students are feeling. (1)
- The program needs additional financial support to expand opportunities for students and to start a middle school program. (1)
- Provide paid leave for teachers during the IB exam season (demanding commentary expectations). (1)
- Provide additional administrative help for the program. (1)

## The International Baccalaureate Program Parent Survey Results

Twenty-one (21) parents of students enrolled in the IBP responded to the online survey. Their responses are detailed in Tables P01 and P02. Additionally, their responses to the open-ended items are summarized.

Table P01: International Baccalaureate Parent Survey Question: What year is your student?

Grade Level	Number of Students	Percent of Students
Freshman	0	0%
Sophomore	0	0%
Junior	0	0%
Senior	21	100%

Table P02: International Baccalaureate Parent Survey Responses to Likert-type Items

Question	Agree or Somewhat Agree	No Opinion	Disagree or Somewhat Disagree
My student seems to like school better now that he/she attends this option program.	76%	10%	10%
My student seems to be more connected to school now that he/she attends this option program.	76%	10%	10%
The teachers in this option program are more interested in my student than teachers at the home high school.	67%	14%	14%
My student will graduate from high school.	95%	0%	0%
My student has educational plans after high school.	95%	0%	0%
My student's grades have improved since attending this option program.	52%	10%	33%
The teachers in this option program have higher expectations of my student than the teachers in the home high school.	81%	10%	5%
The faculty and staff at this option program keep me informed about my student's progress in school.	81%	0%	14%
My student has experienced educational opportunities that are not available in a traditional high school.	91%	0%	5%
I am satisfied with the education my student is receiving in this option program.	91%	0%	5%

Parents surveyed were asked three open-ended questions. The questions and responses are summarized below. The number in parenthesis indicates the number of similar responses.

**1. How was the decision made for your student to attend the International Baccalaureate Program?**

- The program provides opportunities for college preparation and/or college credit. (5)
- The program provides a challenging/rigorous curriculum. (8)
- My child wanted a diverse school environment. (4)
- My child was interested based on earlier experiences/orientation. (5)
- My child made the decision. (3)
- The program has strong teachers/smaller learning environment. (4)
- My child had friends/family that were in the program. (2)

**2. What is the best thing about your student attending The International Baccalaureate Program?**

- The program has a challenging/rigorous curriculum (includes strong teachers). (15)
- The program provides strong foundational skills for post-secondary education (critical thinking and analysis skills, managing workload). (6)
- The program allows my child to develop stronger relationships with students and teachers. (4)
- The program is housed in a diverse school environment. (3)
- The program is a part of traditional high school with all the opportunities that provides instead of being in a separate location. (2)
- The program provides a smaller learning environment within a large school. (1)
- The program provides college credit opportunities. (1)

**3. Is there anything about The International Baccalaureate Program you would like changed?**

- Provide more scheduling options (early classes are hard, meeting LPS requirements are difficult to schedule in the first two years, hard to participate with the rest of the school because of the course demands). (4)
- The program needs to help students learn to manage the pressure/anxiety and fully understand the expectations of the program. (4)
- No change. (4)
- There needs to be more rigor in middle school or offer pre-IB in middle school (science was one area noted). (3)
- The program doesn't seem to support or encourage students once they've started as a freshman (child encouraged to drop IB after sophomore year). (1)
- The program itself could be more diverse/encourage more interaction with the rest of the student body. (2)
- The mentors for the extended essays are inconsistent in quality. (1)
- Students need more services to help them apply to universities outside Nebraska. (1)
- Staffing of classes needs to be more consistent/teachers need to be committed to the program (senior year especially). (1)

## The International Baccalaureate (IB) Program Student Survey Results

Eighty-six (86) students currently enrolled in the IB program participated in the online survey conducted in October 2018. Student responses are summarized in Tables S01 – S04. Responses to open-ended questions are summarized at the end of this section.

Table S01: Student Survey Responses: What year are you?

Grade Level	Number of Students	Percent of Students
Freshman	0	0%
Sophomore	0	0%
Junior	45	52%
Senior	40	47%

Table S02: Student Survey Responses: What is your home high school?

High Schools	Number of Students	Percent of Students
Bryan Community	0	0%
East	0	0%
Lincoln High	84	98%
North Star	1	1%
Northeast	0	0%
Southeast	0	0%
Southwest	0	0%

Table S03: Student Survey Responses: What is your current plan after you graduate from high school?

Program	Number of Students	Percent of Students
Attend college or university	79	92%
Attend college AND get a job	1	1%

Table S04: International Baccalaureate Student Survey Responses to Likert-type Items

Question	Agree or Somewhat	No Opinion	Disagree or Somewhat
	Agree	Opinion	Disagree
I will graduate from high school.	95%	0%	0%
I would not be thinking about graduation had I not attended this option program.	2%	7%	86%
I am prepared for college.	93%	0%	2%
I like coming to school each day.	72%	2%	21%
I like coming to this option program more than my home school.	65%	17%	13%
My grades are better now that I attend this option program.	34%	9%	52%
In this option program, students have more opportunities for “hands-on” applications and connections to everyday life experiences than at my home school.	67%	8%	20%
Teachers in this option program have higher expectations for student work than at my home high school.	95%	0%	0%
I felt more connected to the teachers at my home high school than I do to the teachers in this option program.	24%	19%	52%
In this option program I have had more opportunities to be actively involved in my own learning.	88%	2%	4%
Since I have been attending this option program, my interest in learning about one or more fields of study related to this program has increased.	73%	8%	14%
Since I have been attending this option program, my motivation to learn has increased.	67%	4%	22%
I feel more connected to the students at my home high school than the students in this option program.	21%	8%	66%
I would recommend this option program to my friends.	69%	6%	21%
I am satisfied with the education I am receiving from this option program.	90%	1%	5%

Students surveyed were asked several open-ended questions. The questions and responses are summarized below. The number in parenthesis indicates the number of similar responses.

- 1. Describe how the decision was made for you to attend this International Baccalaureate Program. Who was involved in the decision? What events lead up to the decision?**
  - The program provides a challenging/rigorous curriculum (including global perspective.) (48)
  - I was interested based on earlier orientation/presentation/experience (shadowing, teacher/counselor recommended/attended in another district.) (32)
  - I made the decision (ultimately/with parents' approval, etc.). (16)
  - I had friends/family that were in the program or encouraged me to attend. (23)
  - The program provides opportunities for college preparation and/or college credit and future goals. (8)
  - I wanted the ability to study abroad. (3)
  - Don't know why/spur of moment. (2)
  - I wanted a diverse school environment/ I have a diverse background. (1)
  
- 2. What is the best thing about attending The International Baccalaureate Program?**
  - The program has a challenging/rigorous curriculum (emphasis on global perspective/broadens views and strong/knowledgeable teachers). (36)
  - The program prepares me for post-secondary education (critical thinking and analysis skills, independence/choices, managing workload, etc.). (26)
  - The program allows me to develop stronger relationships/community with students and teachers (students have similar mindsets/goals, caring teachers). (28)
  - Nothing/don't know. (13)
  
- 3. Is there anything about The International Baccalaureate Program you would like changed to make it better for you?**
  - The program needs to help students learn to manage the pressure/anxiety (mental health) and fully understand the expectations of the program before beginning. (16)
  - Decrease homework/expectations and/or spread out deadlines for big projects/exams (teachers need to coordinate schedules). (14)
  - Increase the number of IB courses offered, HL courses, and more variety of teachers. (13)
  - Provide more resources/support or in-school time for the academic work/exams in the program. (7)
  - The program itself could be more diverse/encourage more interaction with the rest of the student body. (6)
  - Help students clearly understand the expectations and impact of IB before beginning (e.g. on their particular major/credits/big projects). (6)
  - Nothing/I don't know. (6)
  - These suggestions are likely part of the program's expectations and cannot be changed (make less bureaucratic, do IB testing both Jr and Sr year, change date of final testing, allow partial IB) (4)
  - Have more relevance for assignments (no busy work) and connections to life after high school. (4)
  - Remove scheduling conflicts so classes didn't need to be taken independently. (1)
  - Have smaller classes to increase sense of community. (1)
  - Teachers need to clearly communicate and have fair grading/homework practices (not move up deadlines/post homework on weekends, etc.) (2)
  - I believe there is bias on who is allowed to stay in program. (1)
  - Increase continuity of teaching and have the rigor increase more gradually. (1)
  - More challenge/opportunity for extended learning on a topic. (1)
  - More preparation for IB in middle school. (1)

# SECTION 4

## SCIENCE FOCUS PROGRAM

## Science Focus Program – Summary of Reports

### Enrollment:

- Enrollment has fluctuated slightly over the last few years, with a low of 94 students and a high of 104. The new facility can comfortably accommodate 160 to 170 students.
- Draws most heavily from Lincoln High School (39 to 47%), followed by Lincoln Southeast High School (16 to 25%) with the rest coming from various high schools across the city.
- Enrollment includes a significant number of students who participate in the gifted program (38 to 45%) compared to district numbers (12.6%). The percent of students who participate in the free/reduced lunch program (11 to 17%) is lower than the overall district percent (46). There are far fewer students who receive special education services (3 to 6%) with no students receiving ELL services.
- The majority of students who participate in this program identify as white (85 to 91%).
- There are more female students participating in the program than male students (51 to 57%).

### Effectiveness:

- Of students who began the program as grade 9 students in 2015-2016, only 48% remain in the program as seniors (Fall, 2018).
- PreACT mean scale scores are significantly above district means in all areas.
- ACT mean scale scores are also significantly above district means in all areas. When mean scale scores are compared to a matched sample, students in the program have higher means in English, Reading, ELA, Math, Science, and STEM with lower means only in Writing.
- The percent of students who are meeting state expectations on the NSCAS ACT, is higher than the district (85 to 100%). The same pattern can be seen when comparing the percent meeting expectations to a matched sample.
- The mean cumulative weighted GPA (end of school year) is higher than the district mean.
- The high school graduation rate for students in the program is 100%.
- The rate of college attendance is higher than the district rate.

# Science Focus Enrollment and Outcome Data

## Enrollment and Demographics

Grade										
	Fall 2014		Fall 2015		Fall 2016		Fall 2017		Fall 2018	
	Number	Percent								
<b>9</b>	23	24%	23	24%	24	25%	28	27%	24	26%
<b>10</b>	22	23%	26	27%	25	26%	25	24%	25	27%
<b>11</b>	28	29%	19	20%	28	29%	26	25%	27	29%
<b>12</b>	24	25%	27	28%	19	20%	25	24%	18	19%
<b>Total</b>	97	100%	95	100%	96	100%	104	100%	94	100%

School										
	Fall 2014		Fall 2015		Fall 2016		Fall 2017		Fall 2018	
	Number	Percent								
<b>Lincoln High</b>	39	40%	39	41%	45	47%	45	43%	37	39%
<b>East</b>	7	7%	6	6%	9	9%	15	14%	22	23%
<b>Northeast</b>	10	10%	9	9%	8	8%	6	6%	8	9%
<b>Southeast</b>	24	25%	21	22%	15	16%	20	19%	16	17%
<b>North Star</b>	5	5%	7	7%	9	9%	9	9%	7	7%
<b>Southwest</b>	12	12%	13	14%	10	10%	9	9%	4	4%

Note: These data do not include students at non-public schools enrolled in the program.

Program										
	Fall 2014		Fall 2015		Fall 2016		Fall 2017		Fall 2018	
	Number	Percent								
<b>ELL</b>	0	0%	0	0%	0	0%	0	0%	0	0%
<b>Special Education</b>	6	6%	5	5%	5	5%	5	5%	3	3%
<b>Free/Reduced Lunch</b>	14	14%	11	12%	16	17%	14	13%	10	11%
<b>Gifted</b>	44	45%	36	38%	38	40%	41	39%	38	40%

Ethnicity										
	Fall 2014		Fall 2015		Fall 2016		Fall 2017		Fall 2018	
	Number	Percent								
<b>American Indian/Alaska Native</b>	0	0%	0	0%	0	0%	0	0%	0	0%
<b>Asian</b>	3	3%	2	2%	2	2%	1	1%	1	1%
<b>Black or African American</b>	3	3%	0	0%	1	1%	2	2%	2	2%
<b>Hispanic</b>	3	3%	4	4%	2	2%	2	2%	5	5%
<b>Two or More</b>	6	6%	5	5%	5	5%	4	4%	4	4%
<b>White</b>	82	85%	84	88%	86	90%	95	91%	82	87%

Gender										
	Fall 2014		Fall 2015		Fall 2016		Fall 2017		Fall 2018	
	Number	Percent								
<b>Female</b>	50	52%	53	56%	49	51%	55	53%	54	57%
<b>Male</b>	47	48%	42	44%	47	49%	49	47%	40	43%

Retention: How many students enrolled in ninth grade 2015-16 were enrolled fall 2018?

Science Focus Retention	
Grade 9	23
Grade 12	11
Percent Retained	48%

PreACT Results: Fall 2017 Mean PreACT Scale Scores

Science Focus Pre-ACT Fall 2017		
	Grade 10	Grade 11
<b>Science Focus</b>		
Number of Students	24	26.0
<b>LPS</b>		
Number of Students	2654	2587.0
Science Focus Composite	22.5	24.5
LPS Composite	18.4	19.3
Science Focus English	20.7	22.8
LPS English	16.2	17.4
Science Focus Reading	24.6	27.6
LPS Reading	19.8	20.7
Science Focus Math	21.8	22.2
LPS Math	18.4	19.3
Science Focus Science	22.5	24.7
LPS Science	18.5	19.4
Science STEM	22.4	23.7
LPS STEM	18.7	19.6

## ACT Results: Mean Scale Scores on Statewide ACT 2016 to 2018, Including 2018 Matched Sample

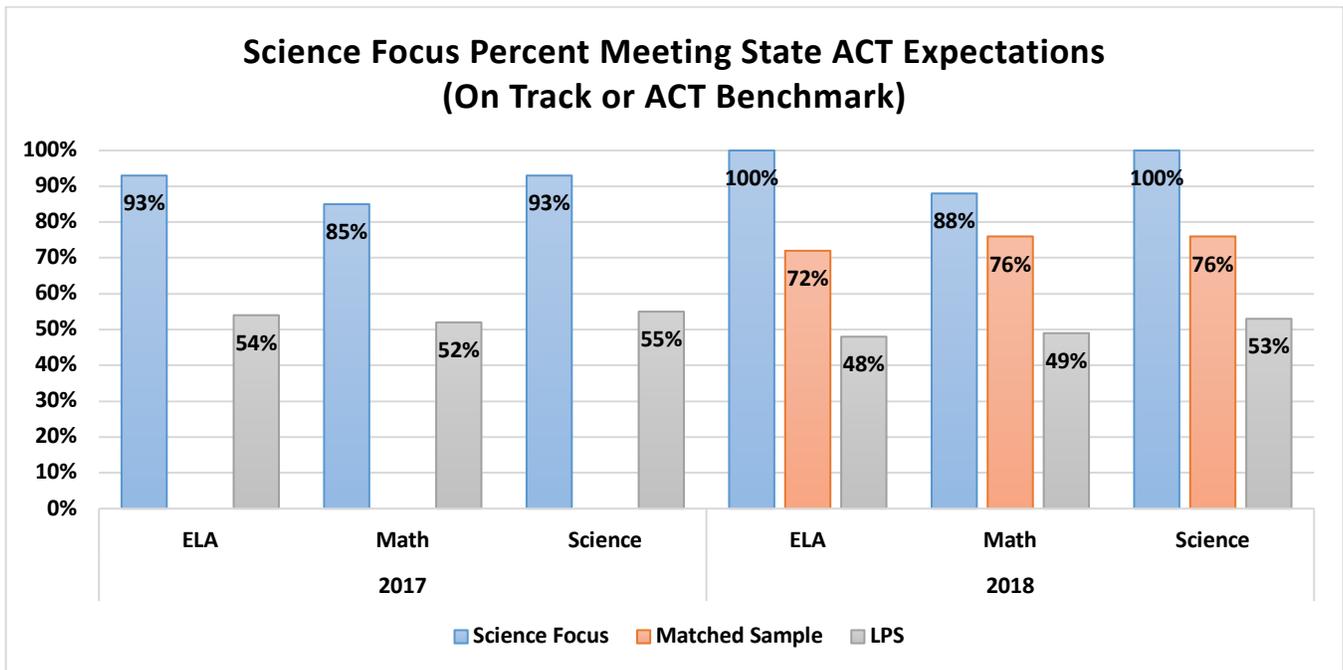
Note: A random matched sample of eleventh graders was selected to allow comparison of ACT scores and GPAs. The sample was matched as closely as possible with students in the program based on gender, ethnicity, 8th grade Reading and Math NeSA scores, participation in gifted and Special Education Programs, and (if NeSA scores were not available) primary high school.

Science Focus ACT Scale Scores			
	Spring 2016	Spring 2017	Spring 2018
Science Students	19	27	25
LPS Students	2307	2700	2708
Science Composite	25.3	25.8	24.7
LPS Composite	20.4	19.9	19.5
Science English	25.1	24.7	24.4
LPS English	19.0	18.7	18.4
Science Reading	25.9	28.3	25.0
LPS Reading	20.9	20.3	19.8
Science Writing	--	7.2	6.8
LPS Writing		6.5	6.3
Science ELA	--	24.6	22.4
LPS ELA		19.0	18.2
Science Math	23.6	24.3	23.2
LPS Math	20.4	20.0	19.4
Science Science	25.8	25.3	25.5
LPS Science	20.6	20.0	19.8
Science STEM	25.1	25.1	24.6
LPS STEM	20.7	20.3	19.9

Science Focus Spring 2018 ACT Scale Scores with Matched Sample									
	Students	Composite	English	Reading	Writing	ELA	Math	Science	STEM
Science	25	24.7	24.4	25.0	6.8	22.4	23.2	25.5	24.6
Matched Sample	25	23.0	21.6	23.8	7.0	21.2	22.7	23.0	23.2

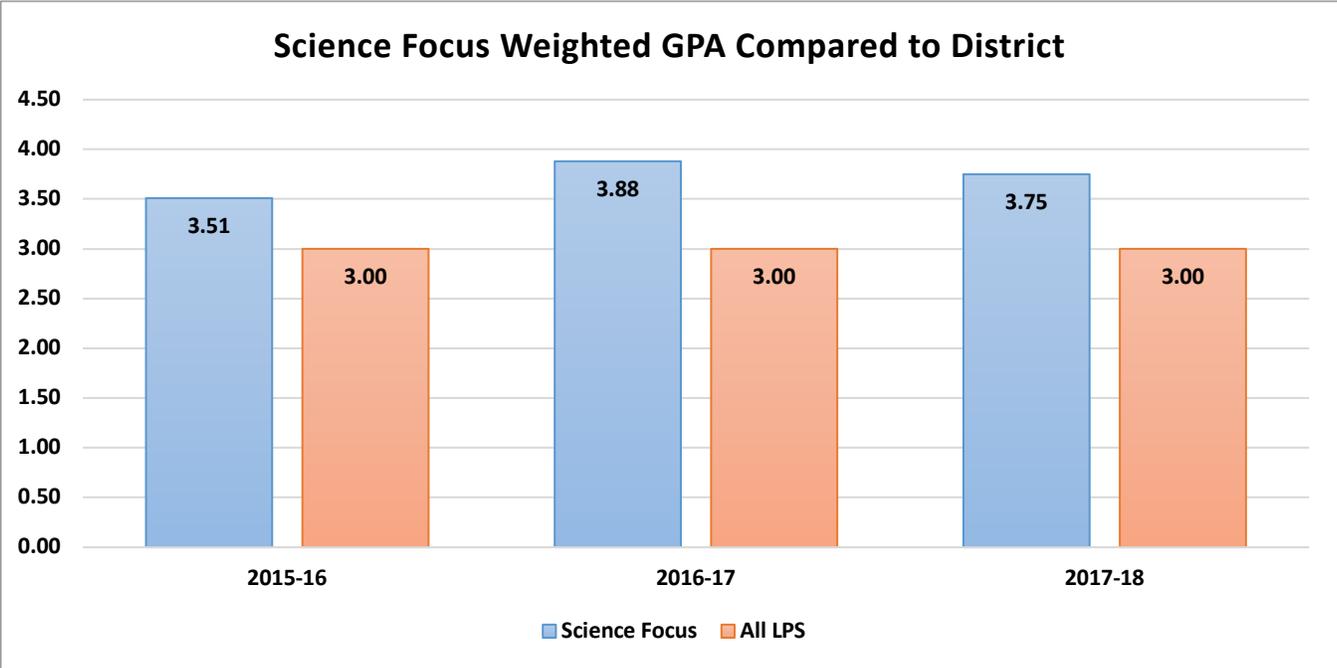
ACT Results: Percent Meeting State ACT Expectations (On Track or ACT Benchmark)

Science Focus Percent Meeting State ACT Expectations (On Track or ACT Benchmark)						
	2017			2018		
	ELA	Math	Science	ELA	Math	Science
Science Focus	93%	85%	93%	100%	88%	100%
Matched Sample				72%	76%	76%
LPS	54%	52%	55%	48%	49%	53%



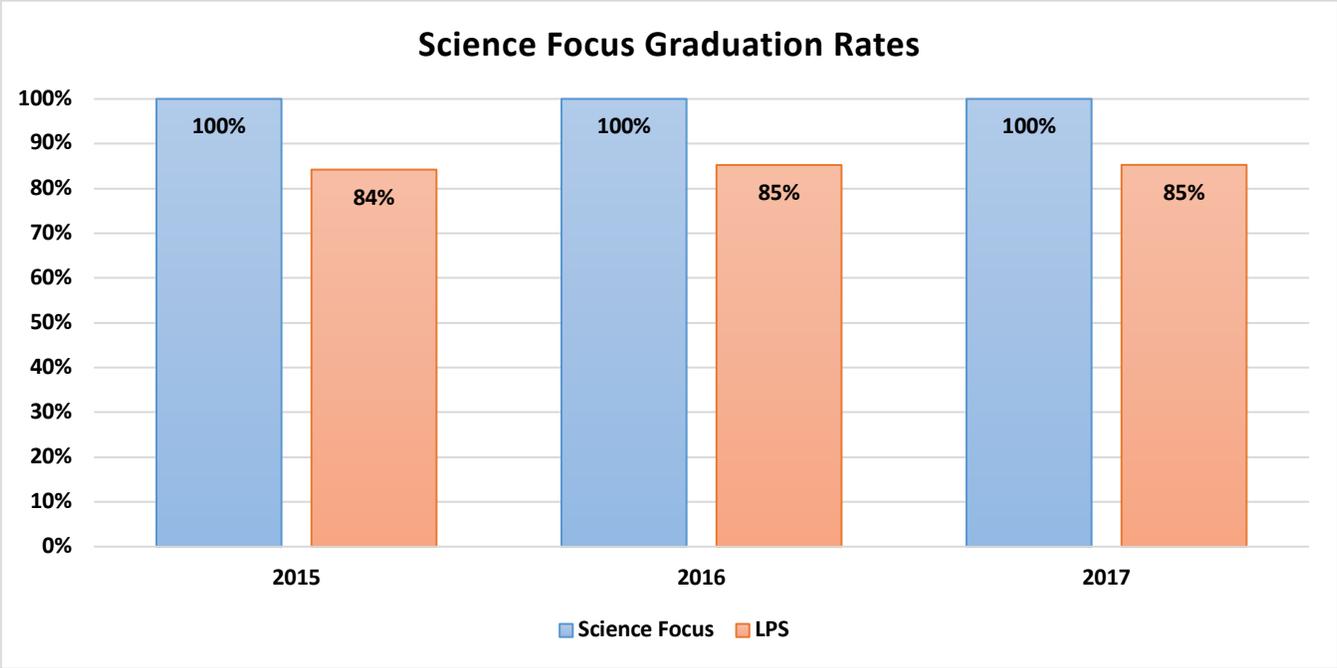
GPA: Cumulative Mean Weighted GPA at the end of the School Year

Science Focus Weighted GPA Compared to District			
	2015-16	2016-17	2017-18
Science Focus	3.51	3.88	3.75
All LPS	3.00	3.00	3.00



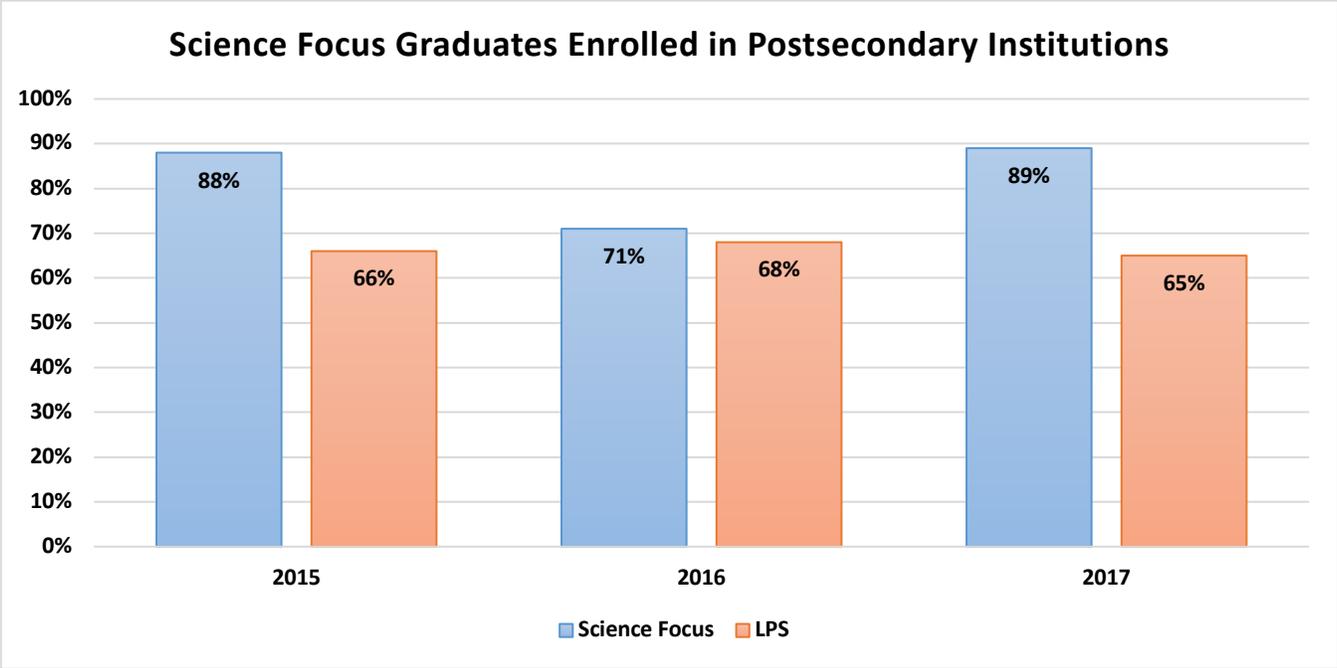
Graduation Status for 12<sup>th</sup> Graders

Science Focus Graduation Rates			
	2015	2016	2017
Science Focus	100%	100%	100%
LPS	84%	85%	85%



College Participation: Information Reported to the Student Clearinghouse

Science Focus Graduates Enrolled in Postsecondary Institutions			
	2015	2016	2017
Science Focus	88%	71%	89%
LPS	66%	68%	65%



## Science Focus Program – Survey Results

### Science Focus Program Teacher Survey Results

Four (4) Science Focus Program teachers responded to the online survey. The teacher responses to individual items are detailed in Tables T01 – T03. Additionally, their responses to the open-ended items are summarized.

Table T01: Science Focus Program Teacher Survey Question: How long have you been a teacher?

<b>Number of Years</b>	<b>Number of Teachers</b>	<b>Percent of Teachers</b>
1-5 years	0	0%
6-10 years	0	0%
11-15 years	2	50%
16-20 years	1	25%
21-25 years	0	0%
26 years +	1	25%

Table T02: Science Focus Program Teacher Survey Question: How long have you taught in this Option Program?

<b>Number of Years</b>	<b>Number of Teachers</b>	<b>Percent of Teachers</b>
1-3 years	2	50%
4-6 years	1	25%
7-10 years	0	0%
More than 10 years	1	25%

Table T03: Science Focus Program Teacher Survey Responses to Likert-type Items

<b>Question</b>	<b>Agree or Somewhat Agree</b>	<b>No Opinion</b>	<b>Disagree or Somewhat Disagree</b>
Teaching in this option program is more appealing to me than teaching in a traditional high school.	100%	0%	0%
I look forward to the time I can get back to a traditional high school.	0%	0%	100%
This program is better for my students than a traditional high school.	100%	0%	0%
Students in this option program are more motivated to learn than students I taught in traditional high schools.	100%	0%	0%
Students in this option program are more connected to school than students I taught in traditional high schools.	100%	0%	0%
Students in this option program have more opportunities to be actively involved in their own learning than students I taught in traditional high schools.	100%	0%	0%
I expect more from my students in this option program than students I taught in traditional high schools.	100%	0%	0%
I receive appropriate support from the administration of this option program.	50%	25%	25%
I am satisfied with how this administration handles discipline problems.	75%	25%	0%
The administration in this option program effectively helps me solve problems.	50%	25%	25%

The survey asked teachers three questions about offerings at the Science Focus Program. The questions and responses are summarized below. The number in parenthesis indicates the number of similar responses.

- 1. Provide an example of a student or family (anonymously) you have taught or supported who otherwise might have dropped out of high school had it not been for the Science Focus Program. Please describe the student's situation and how the program helped him or her.**
  - I can think of a recent graduate who probably would have graduated if he attended only his home high school; however, he would have had a harder time being as successful as he was at SFP. He was a very smart individual but had many personality quirks that would have made it harder for him at a big school. He found a friend group at SFP that supported and kept track of him. And his high school experience was better for it.
  - I have taught several students who were going through a gender identity crisis. This is a very difficult experience for teens. Because our community was so accepting, these students not only stayed in school, but some have remained friends even 8 years after graduating. We were clearly able to give these students a safe environment in which to go through this challenge.
  
- 2. What do you like best about teaching in the Science Focus Program?**
  - I like getting to know students well and over a long period of time (can individualize). (4)
  - I like providing unique learning opportunities and individualizing. (3)
  - I value that the students are motivated to work hard. (1)
  - I appreciate that students feel comfortable being themselves. (1)
  - I like the small learning environment (communicate easily with other staff). (1)
  
- 3. What recommendations do you have for improvement to the Science Focus Program?**
  - There needs to be a counselor as part of our faculty. (2)
  - We need an additional secretary or joint secretary/SEM. (1)
  - Carefully consider the decisions and potential consequences, long term and short term, that are made about the program. (1)

## Science Focus Program Parent Survey Results

Forty-three (43) parents of students in the Science Focus Program responded to the online survey. Their responses are detailed in Tables P01 and P02. Open-ended item responses are also summarized.

Table P01: Science Focus Program Parent Survey Question: What year is your student?

Grade Level	Number of Students	Percent of Students
Freshman	13	30%
Sophomore	8	19%
Junior	13	30%
Senior	9	21%

Table P02: Science Focus Program Parent Survey Responses to Likert-type Items

Question	Agree or Somewhat Agree	No Opinion	Disagree or Somewhat Disagree
My student seems to like school better now that he/she attends this option program.	79%	12%	7%
My student seems to be more connected to school now that he/she attends this option program.	74%	7%	16%
The teachers in this option program are more interested in my student than teachers at the home high school.	84%	7%	7%
My student will graduate from high school.	95%	2%	0%
My student has educational plans after high school.	93%	2%	0%
My student's grades have improved since attending this option program.	40%	23%	35%
The teachers in this option program have higher expectations of my student than the teachers in the home high school.	77%	14%	7%
The faculty and staff at this option program keep me informed about my student's progress in school.	86%	2%	9%
My student has experienced educational opportunities that are not available in a traditional high school.	93%	0%	5%
I am satisfied with the education my student is receiving in this option program.	91%	0%	7%

Parents surveyed were asked three open-ended questions. The questions and responses are summarized below. The number in parenthesis indicates the number of similar responses.

**1. How was the decision made for your student to attend The Science Focus Program?**

- My child was interested in a science-focused curriculum. (14)
- My child was interested after hearing about the program through an orientation/reviewing the website/visiting the site (visits during elementary were specifically mentioned 3 times). (12)
- My child was interested because of friends/family who attended. (10)
- The program provided a smaller school setting/alternate option/safer environment/social fit. (11)
- My child made the decision to attend the program. (8)
- My child was a zoo crew member, so already felt comfortable at the zoo/ability to interact, be hands-on with the animals. (4)
- The program has strong teachers. (1)

**2. What is the best thing about your student attending The Science Focus Program?**

- The program has small class sizes. (12)
- The program offers more individualized attention to my student. (13)
- The program allows my child to develop stronger relationships with students and teachers. (13)
- The program provides flexibility for individual learning styles/project-based learning/hands on learning. (12)
- The quality and focus of the classes on science/educational opportunities is strong. (10)
- My child fits in at the school/sense of belonging (feels like a family often mentioned). (7)
- My child is challenged to do his/her best. (3)
- My child feels safe and comfortable there. (1)
- The program has helped my child become more confident. (1)
- Teachers have strong communication with parents. (1)

**3. Is there anything about The Science Focus Program you would like changed?**

- Provide stronger communication with the family about expectations, assignments, grades, events (“communication is a 1 on a 10-point scale”, having enough parent-teacher conference opportunities for all students’ parents mentioned by 3 people). (5)
- Issues with teachers (too political, take more time to work with students missing work, need to follow the standard AP curriculum to help students meet the AP exam requirements, work at stronger relationships). (5)
- The program should offer more courses required for graduation (world language, health, technology, Take Charge). (4)
- Homework seems excessive/too much busy work. (4)
- The program needs to communicate more clearly with the home school. (1)
- Provide more opportunities similar to the home schools/clubs or provide stronger connections to the home schools. (2)
- Courses need to be more like college courses/more rigorous. (2)
- Coordinate with TCA so students can be involved with both programs. (1)
- Disappointed in the new principal. (1)
- Provide lockers for students/better facilities. (2)
- No change. (9)

## Science Focus Program Student Survey Results

Eighty-nine (89) students currently enrolled in the Science Focus Program participated in the online survey conducted in October 2018. Student responses are summarized in Tables S01 – S04. Responses to open-ended questions are summarized at the end of this section.

Table S01: Student Survey Responses: What year are you?

Grade Level	Number of Students	Percent of Students
Freshman	23	26%
Sophomore	24	27%
Junior	25	28%
Senior	17	19%

Table S02: Student Survey Responses: What is your home high school?

High Schools	Number of Students	Percent of Students
Bryan Community	0	0%
East	20	23%
Lincoln High	36	40%
North Star	7	8%
Northeast	8	9%
Southeast	13	15%
Southwest	5	6%

Table S03: Student Survey Responses: What is your current plan after you graduate from high school?

Program	Number of Students	Percent of Students
Attend college or university	69	78%
Don't know yet	9	10%
Work to save money for college or university	3	3%
Travel and then attend college	2	2%
Attend a trade school to get a skilled job	1	1%
Join the military	1	1%
Get a job	1	1%
Start a business	1	1%
Attend college AND join the military	1	1%

Table S04: Science Focus Program Student Survey Responses to Likert-type Items

Question	Agree or Somewhat	No	Disagree or Somewhat
	Agree	Opinion	Disagree
I will graduate from high school.	97%	3%	0%
I would not be thinking about graduation had I not attended this option program.	8%	9%	83%
I am prepared for college.	80%	0%	20%
I like coming to school each day.	78%	2%	20%
I like coming to this option program more than my home school.	88%	5%	7%
My grades are better now that I attend this option program.	53%	12%	35%
In this option program, students have more opportunities for “hands-on” applications and connections to everyday life experiences than at my home school.	94%	2%	3%
Teachers in this option program have higher expectations for student work than at my home high school.	92%	2%	6%
I felt more connected to the teachers at my home high school than I do to the teachers in this option program.	20%	5%	75%
In this option program I have had more opportunities to be actively involved in my own learning.	94%	2%	3%
Since I have been attending this option program, my interest in learning about one or more fields of study related to this program has increased.	83%	2%	15%
Since I have been attending this option program, my motivation to learn has increased.	80%	6%	15%
I feel more connected to the students at my home high school than the students in this option program.	17%	10%	73%
I would recommend this option program to my friends.	88%	5%	8%
I am satisfied with the education I am receiving from this option program.	97%	0%	3%

Students surveyed were asked four open-ended questions. The questions and responses are summarized below. The number in parenthesis indicates the number of similar responses.

**1. Describe how the decision was made for you to attend The Science Focus Program. Who was involved in the decision? What events lead up to the decision?**

- I was interested in a science-focused curriculum/working with animals. (34)
- I was interested after hearing about the program through an orientation/reviewing the website/visiting the site/talking with a counselor/being recommended by a teacher. (20)
- I was interested because of friends and/or family who attended or recommended the program. (36)
- The program provided a smaller school setting/alternate option/safer environment/social fit. (22)
- The program offered a different learning environment/different instructional methods/more hands-on. (13)
- I made the decision to attend the program. (8)
- I thought it would look good on my college application. (4)
- I wanted to try something new/different. (7)
- I was a zoo crew member, so already felt comfortable at the zoo/found out about it at the zoo/liked being able to interact with the animals. (5)

**2. What is the best thing about your student attending The Science Focus Program?**

- The program allows me to develop stronger relationships with students and teachers/sense of community. (42)
- The program provides flexibility for individual learning styles/project-based learning/research/hands on learning/student choice/. (28)
- The program is much smaller and has small class sizes. (24)
- The program offers me more individualized attention. (9)
- I appreciate learning in a relaxed atmosphere where there is a lot of freedom given to students. (5)
- The quality and focus of the classes on science/educational opportunities is strong. (4)
- I am challenged to do my best/classes are rigorous. (3)
- I feel safe and comfortable there. (2)
- I fit in at the school/sense of belonging. (3)
- I appreciate the setting at the zoo. (5)
- The program has helped me become more confident. (2)
- I like the varied/block schedule. (2)
- The students are more motivated and focused/fewer distracting behaviors. (3)
- The teachers are knowledgeable, have strong instructional skills, and care about the students. (19)

**3. What makes The Science Focus Program a better match for you than your home high school?**

- It is a smaller learning community. (45)
- There are stronger relationships with the other students and teachers/it feels like a community. (26)
- There is more active learning taking place/hands-on experiences/easier to demonstrate what I'm learning (portfolios). (14)
- You better know and understand your teachers because they are the same throughout your time at SFP/more one-on-one time with teachers. (12)
- It motivates me/I feel like I belong/it is less stressful. (10)
- The science content is strong. (10)
- The teachers are knowledgeable, motivated, and care more about me (several students noted Matt Johnson specifically). (8)
- Students are more involved in decisions about their learning/independent learning experiences/the freedom. (5)
- It is better preparing me for college and a career/more rigorous classes. (5)
- Students seem more motivated and excited about learning. (6)
- The learning environment is more open and tolerant. (6)
- I enjoy being in the zoo with the animals/the program's setting. (3)
- I like the A/B schedule. (2)
- I like both schools. (1)

**4. What could be changed about The Science Focus Program to make it better for you?**

- Sometimes I feel overwhelmed by all we are asked to do/less homework/reduce the workload. (12)
- Broaden the class choices (more specialized and different types)/offer more of the required classes for graduation. (11)
- No change. (11)
- Provide a better research schedule/rethink the research process so there is more structure (expectation for research changed this year and some students are finding it difficult). (7)
- Teachers and Administration need to improve communication with home schools and other option programs. (6)
- Create ways that we can be more involved with activities at our home schools. (4)
- Provide more opportunities to work with the animals/connect the animals to our projects. (2)
- Provide more hands-on learning experiences (fewer packets)/working in the community (job shadowing, working in labs)/personalize learning for different students. (4)
- Recognize that many students have outside of school commitments. (2)
- Hold students more accountable for their actions (classwork and what is said). (5)
- Keep the program small. (2)
- Make changes to the schedule (flexibility for traveling, more consistent schedule, more opportunity to be at the home school, be at SFP all day). (5)
- Longer lunches/provide a cafeteria or kitchen space/provide hot lunch/improve the physical environment. (5)
- The new administration seems to be disrupting a program that had been running smoothly. (2)
- Teachers need to grade assignments faster/be less harsh/provide more support/not change the system that had been working. (3)
- Safety concerns (bike path was mentioned once). (2)
- Help the public understand what happens at SFP/help home school teachers better understand the requirements at SFP. (4)
- Bring back the community days. (1)
- Increase the rigor of the classes. (1)

## SECTION 5

# THE CAREER ACADEMY (TCA) PROGRAM

## The Career Academy (TCA) – Summary of Reports

### Enrollment:

- Enrollment has fluctuated slightly over the last few years, with a low of 333 students and a high of 483. The facility can comfortably accommodate 500 to 525 students for each session (morning and afternoon).
- Draws most heavily from Lincoln Southeast High School (22 to 29%) with the rest coming from the remaining five high schools across the city.
- Enrollment includes a significant number of students who participate in the free/reduced lunch program (36 to 42%). The number of students who participate in the gifted program (12 to 17%) is similar to the pattern we see at the district level (16.7% in high school). There are fewer students who receive special education services (6 to 11%) and almost none receiving ELL services (0 to 2%).
- The majority of students who participate in this program identify as white (68 to 73%) with students who identify as Hispanic as the next largest group (13 to 15%).
- There are slightly more female students participating in the program than male students (45 to 54%).

### Effectiveness:

- Retention in the program ranges from 58% to 67%.
- Overall, ACT mean scale scores are fairly comparable to district means. When mean scale scores are compared to a matched sample, students at TCA have higher means in Reading, Writing, Math, Science and STEM with lower means in English and ELA.
- The percent of students who are meeting state expectations on the NSCAS ACT, is higher than the district. The same pattern can be seen when the percent meeting expectations is compared to a matched sample.
- The mean cumulative weighted GPA (end of school year) is higher than the district mean.
- The high school graduation rate for students in the program is higher than the district.
- The rate of college attendance has varied from higher than the district rate one year to lower than the district rate the next year.

# The Career Academy (TCA) Enrollment and Outcome Data

## Enrollment and Demographics

Grade								
	Fall 2015		Fall 2016		Fall 2017		Fall 2018	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
<b>11</b>	183	55%	241	64%	199	54%	265	55%
<b>12</b>	150	45%	137	36%	169	46%	218	45%
<b>Total</b>	333	100%	378	100%	368	100%	483	100%

School								
	Fall 2015		Fall 2016		Fall 2017		Fall 2018	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
<b>Lincoln High</b>	44	13%	62	16%	49	13%	73	15%
<b>East</b>	49	15%	49	13%	61	17%	87	18%
<b>Northeast</b>	52	16%	62	16%	51	14%	75	16%
<b>Southeast</b>	80	24%	90	24%	106	29%	107	22%
<b>North Star</b>	54	16%	65	17%	54	15%	81	17%
<b>Southwest</b>	54	16%	50	13%	47	13%	60	12%

Note: These data do not include students at non-public schools enrolled in the program.

Program								
	Fall 2015		Fall 2016		Fall 2017		Fall 2018	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
<b>ELL</b>	1	0%	3	1%	5	1%	11	2%
<b>Special Education</b>	36	11%	28	7%	23	6%	42	9%
<b>Free/Reduced Lunch</b>	119	36%	144	38%	154	42%	197	41%
<b>Gifted</b>	58	17%	54	14%	47	13%	56	12%

Ethnicity								
	Fall 2015		Fall 2016		Fall 2017		Fall 2018	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
<b>American Indian/Alaska Native</b>	3	1%	3	1%	0	0%	1	0%
<b>Asian</b>	9	3%	14	4%	12	3%	18	4%
<b>Black or African American</b>	25	8%	18	5%	19	5%	335	7%
<b>Hispanic</b>	43	13%	48	13%	54	15%	69	14%
<b>Two or More</b>	20	6%	19	5%	15	4%	32	7%
<b>White</b>	233	70%	276	73%	268	73%	328	68%

Gender								
	Fall 2015		Fall 2016		Fall 2017		Fall 2018	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
<b>Female</b>	170	51%	170	45%	183	50%	262	54%
<b>Male</b>	163	49%	208	55%	185	50%	221	46%

Retention: How many students enrolled as 11<sup>th</sup> graders were enrolled the following year as 12<sup>th</sup> graders?

<b>TCA Retention</b>		
	<b>Fall 2016 to Fall 2017</b>	<b>Fall 2017 to Fall 2018</b>
<b>Enrolled Grade 11</b>	241	199
<b>Enrolled Grade 12</b>	139	133
<b>Percent Retained</b>	58%	67%

PreACT Results: Fall 2017 Mean PreACT Scale Scores

<b>TCA Pre-ACT Fall 2017</b>	
	<b>Grade 11</b>
<b>TCA</b>	
<b>Number of Students</b>	183
<b>LPS</b>	
<b>Number of Students</b>	2587
<b>TCA Composite</b>	19.8
<b>LPS Composite</b>	19.3
<b>TCA English</b>	17.7
<b>LPS English</b>	17.4
<b>TCA Reading</b>	21.3
<b>LPS Reading</b>	20.7
<b>TCA Math</b>	19.8
<b>LPS Math</b>	19.3
<b>TCA Science</b>	20
<b>LPS Science</b>	19.4
<b>TCA STEM</b>	20.1
<b>LPS STEM</b>	19.6

## ACT Results: Mean Scale Scores on Statewide ACT 2016 to 2018, Including 2018 Matched Sample

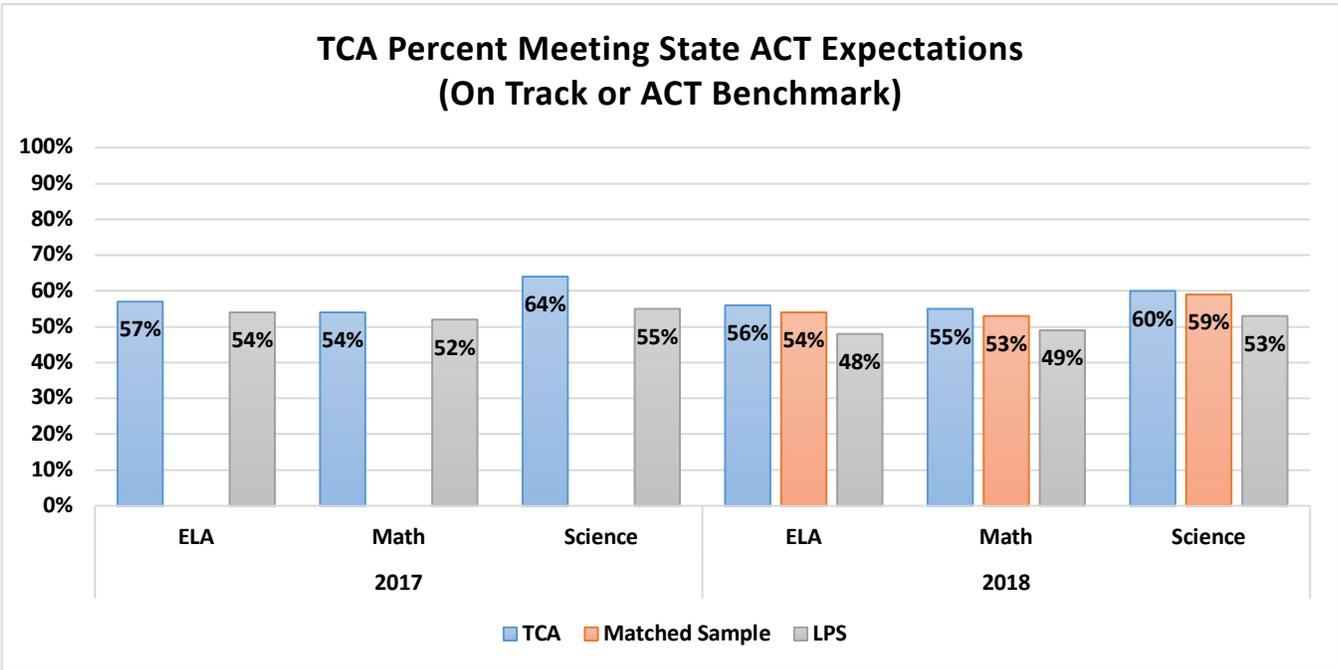
Note: A random matched sample of eleventh graders was selected to allow comparison of ACT scores and GPAs. The sample was matched as closely as possible with students in the program based on gender, ethnicity, 8th grade Reading and Math NeSA scores, participation in gifted and Special Education Programs, and (if NeSA scores were not available) primary high school.

TCA ACT Scale Scores		
	Spring 2017	Spring 2018
<b>TCA Number of Students</b>	233	194
<b>LPS Number of Students</b>	2700	2708
<b>TCA Composite</b>	19.8	19.7
<b>LPS Composite</b>	19.9	19.5
<b>TCA English</b>	18.2	18.4
<b>LPS English</b>	18.7	18.4
<b>TCA Reading</b>	20.3	20.3
<b>LPS Reading</b>	20.3	19.8
<b>TCA Writing</b>	6.5	6.4
<b>LPS Writing</b>	6.5	6.3
<b>TCA ELA</b>	18.8	18.3
<b>LPS ELA</b>	19.0	18.2
<b>TCA Math</b>	19.8	19.6
<b>LPS Math</b>	20.0	19.4
<b>TCA Science</b>	20.2	20.2
<b>LPS Science</b>	20.0	19.8
<b>TCA STEM</b>	20.2	20.1
<b>LPS STEM</b>	20.3	19.9

TCA Spring 2018 ACT Scale Scores with Matched Sample									
	Students	Composite	English	Reading	Writing	ELA	Math	Science	STEM
<b>TCA</b>	194	19.7	18.4	20.3	6.4	18.3	19.6	20.2	20.1
<b>Matched Sample</b>	193	19.6	18.6	20.1	6.3	18.4	19.1	20.1	19.8

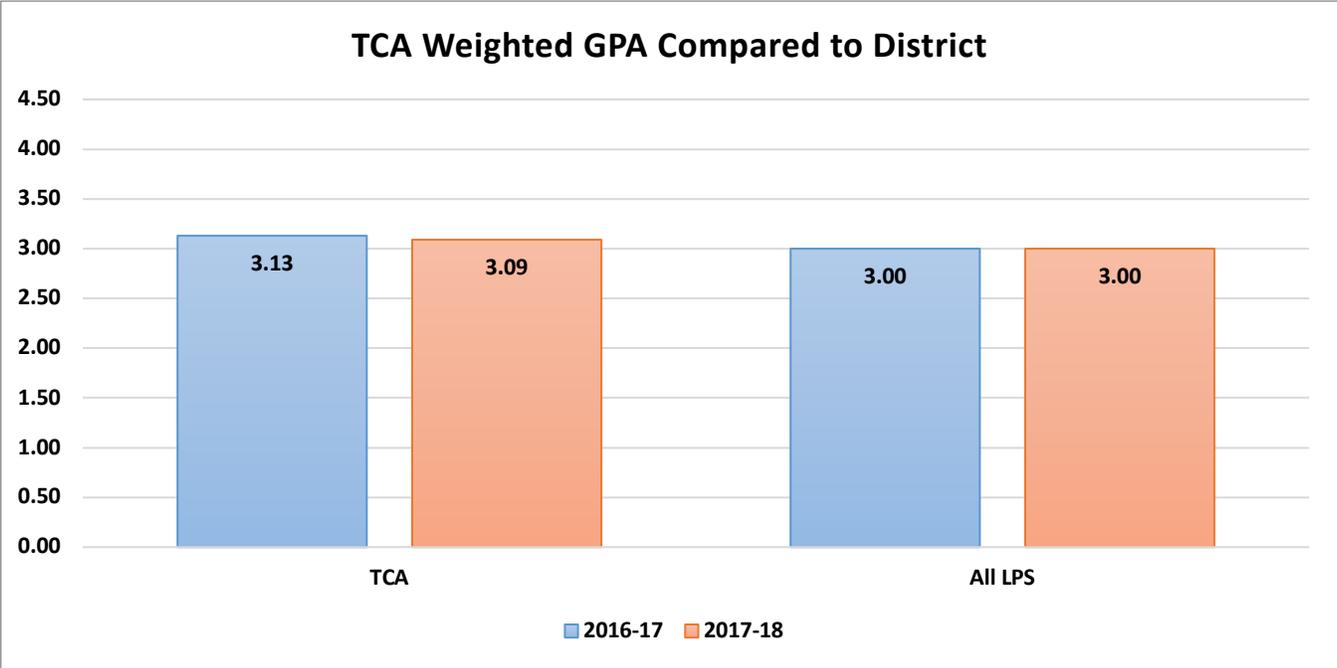
ACT Results: Percent Meeting State ACT Expectations (On Track or ACT Benchmark)

TCA Percent Meeting State ACT Expectations (On Track or ACT Benchmark)						
	2017			2018		
	ELA	Math	Science	ELA	Math	Science
<b>TCA</b>	57%	54%	64%	56%	55%	60%
<b>Matched Sample</b>				54%	53%	59%
<b>LPS</b>	54%	52%	55%	48%	49%	53%



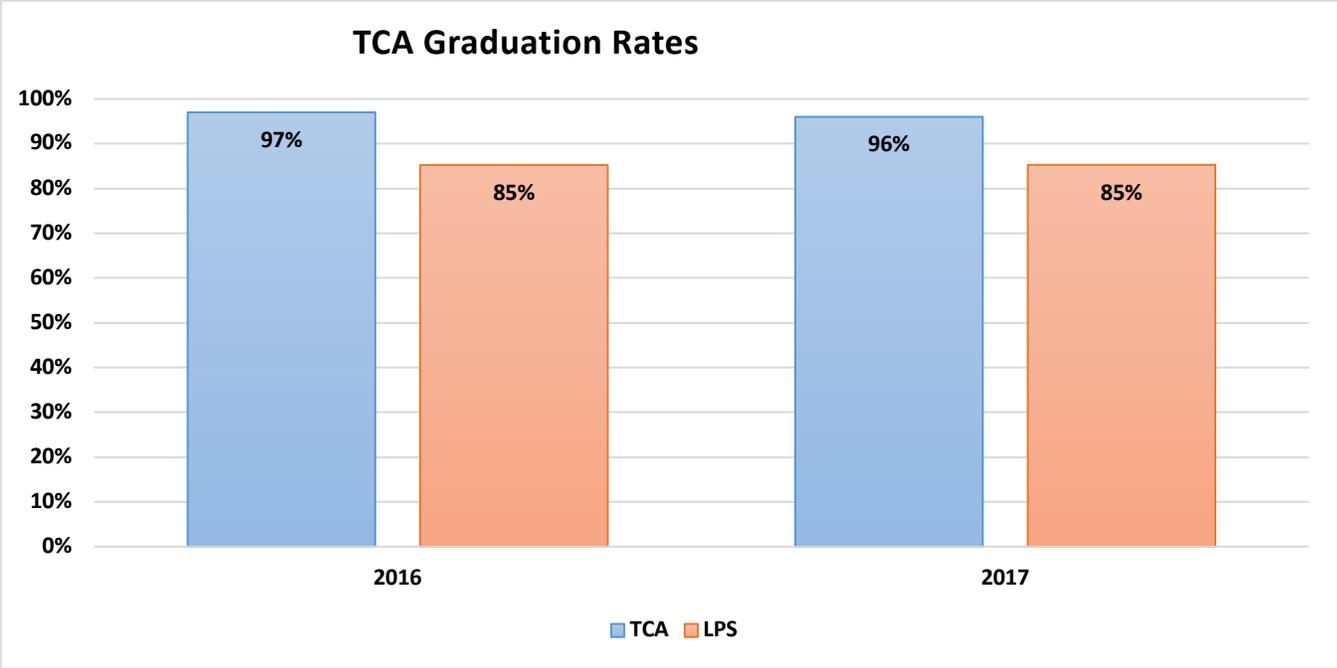
GPA: Cumulative Mean Weighted GPA at the end of the School Year

TCA Weighted GPA Compared to District		
	2016-17	2017-18
TCA	3.13	3.09
All LPS	3.00	3.00



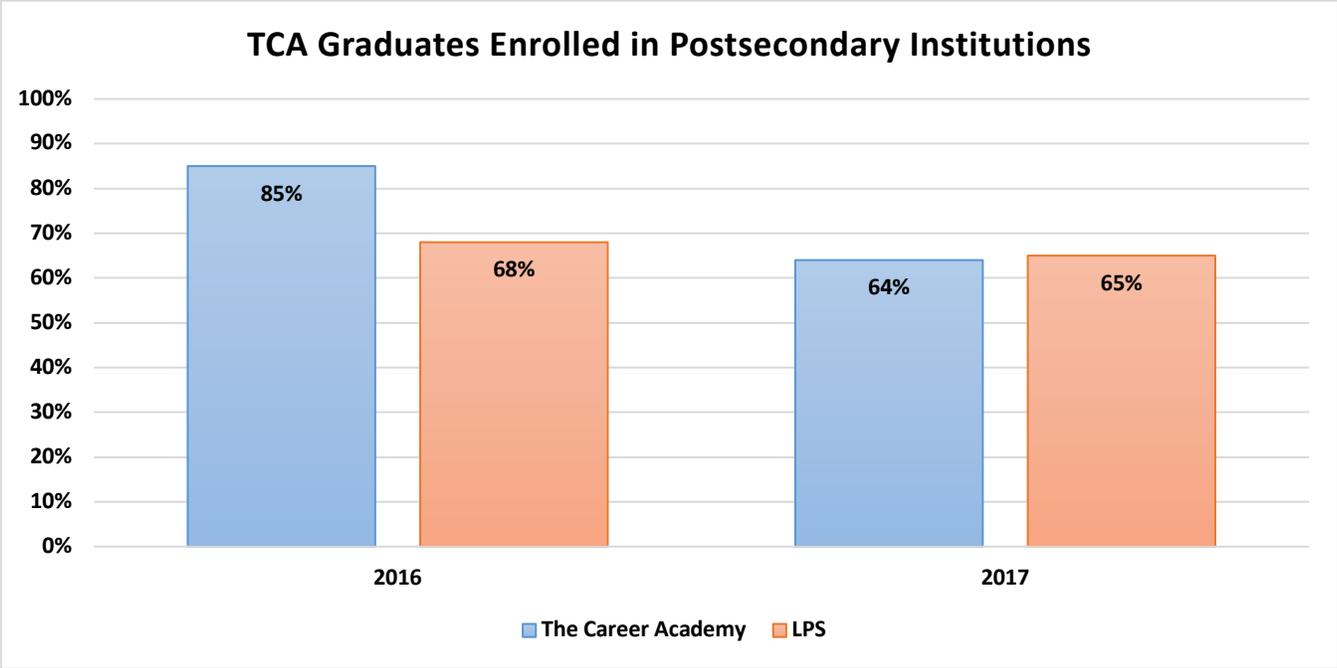
Graduation Status for 12<sup>th</sup> Graders

TCA Graduation Rates		
	2016	2017
TCA	97%	96%
LPS	85%	85%



College Participation: Information Reported to the Student Clearinghouse

TCA Graduates Enrolled in Postsecondary Institutions		
	2016	2017
TCA	85%	64%
LPS	68%	65%



## The Career Academy Program – Survey Results

### The Career Academy Teacher Survey Results

Sixteen (16) teachers at The Career Academy responded to the online survey. The Career Academy teacher responses are detailed in Tables T01 – T03. Open-ended item responses are summarized after the tables.

Table T01: Teacher Survey Question: How long have you been a teacher?

<b>Number of Years</b>	<b>Number of Teachers</b>	<b>Percent of Teachers</b>
1-5 years	5	31%
6-10 years	3	19%
11-15 years	4	25%
16-20 years	0	0%
21-25 years	0	0%
26 years +	4	25%

Table T02: Teacher Survey Question: How long have you taught in this Option Program?

<b>Number of Years</b>	<b>Number of Teachers</b>	<b>Percent of Teachers</b>
1-3 years	7	44%
4-6 years	9	56%
7-10 years	0	0%
More than 10 years	0	0%

Table T03: The Career Academy Teacher Survey Responses from Likert-type Items

<b>Question</b>	<b>Agree or Somewhat Agree</b>	<b>No Opinion</b>	<b>Disagree or Somewhat Disagree</b>
Teaching in this option program is more appealing to me than teaching in a traditional high school.	81%	19%	0%
I look forward to the time I can get back to a traditional high school.	0%	50%	50%
This program is better for my students than a traditional high school.	88%	6%	6%
Students in this option program are more motivated to learn than students I taught in traditional high schools.	56%	44%	0%
Students in this option program are more connected to school than students I taught in traditional high schools.	50%	50%	0%
Students in this option program have more opportunities to be actively involved in their own learning than students I taught in traditional high schools.	81%	19%	0%
I expect more from my students in this option program than students I taught in traditional high schools.	69%	31%	0%
I receive appropriate support from the administration of this option program.	88%	0%	13%
I am satisfied with how this administration handles discipline problems.	81%	0%	19%
The administration in this option program effectively helps me solve problems.	81%	0%	19%

The survey asked teachers three questions about offerings at The Career Academy. The questions and responses are summarized below. The number in parenthesis indicates the number of similar responses.

**1. Provide an example of a student or family (anonymously) you have taught or supported who otherwise might have dropped out of high school had it not been for The Career Academy. Please describe the student's situation and how the program helped him or her.**

- A student I have had was not successful in the traditional classroom. He is a hands-on learner and is very successful in a laboratory situation. He has learned how to learn and the importance of classroom type classes needed to graduate. This setting has helped him to succeed in school which he may have never learned in his traditional high school.
- I had a low-SES student from an immigrant family. He was towards the lower middle at his home high school. At TCA he demonstrated that he lacked many academic skills and quickly fell to failing. At this point he received individualized coaching and was able to get up to passing. I don't know if he would have failed out of LPS, but had he gone straight to a 4-year university he would almost certainly have failed out. However, at TCA he developed academic skills and became successful.

**2. What do you like best about teaching in The Career Academy?**

- I like providing unique learning opportunities and being able to individualize based on need and interest (hands-on, field trips, internships, etc.) (5)
- I like the smaller community that builds relationships among staff and with students over time. (4)
- I enjoy being able to focus on an area and teach to a deeper level and make career connections. (3)
- I appreciate that most of the students are motivated and want to do their best. (2)
- I appreciate this provides students a place to “fit in” and be comfortable. (1)
- I value the mission of TCA. (1)

**3. What recommendations do you have for improvement to The Career Academy?**

- Provide more jobs and internships for the students. (2)
- Move the focus away from being a high school program and have it be more a college program. (1)
- Establish stronger connections with the schools' CTE instructors, counselors and the pathway support members. (2)
- Encourage more students to attend who aren't able to find success in the traditional school setting. (1)
- Provide more options for classes and credit. (1)
- Provide meal opportunities at the program. (1)
- Provide charging stations in the classrooms or open area. (1)
- Be sure students are clear about the behavior expectations and work load TCA requires. (1)
- Students have different technology needs in TCA programs. Chromebooks are not compatible. (1)
- Establish a clearer set of rules that the school operates under. Currently there are LPS rules, SCC rules, and instructor rules. Ask for staff input when changing the rules. (1)
- Provide more elective social studies options that might better fit the pathways students are studying. (1)

## The Career Academy Parent Survey Results

Eighty-six (86) parents of students at The Career Academy responded to the online survey. Parent responses are detailed in Tables P01 and P02. Additionally, their responses to the open-ended items are summarized.

Table P01: The Career Academy Parent Survey Question: What year is your student?

Grade Level	Number of Students	Percent of Students
Freshman	0	0%
Sophomore	0	0%
Junior	53	62%
Senior	33	38%

Table P02: The Career Academy Parent Survey Responses from Likert-type Items

Question	Agree or Somewhat Agree	No Opinion	Disagree or Somewhat Disagree
My student seems to like school better now that he/she attends this option program.	90%	7%	4%
My student seems to be more connected to school now that he/she attends this option program.	72%	13%	15%
The teachers in this option program are more interested in my student than teachers at the home high school.	50%	24%	26%
My student will graduate from high school.	100%	0%	0%
My student has educational plans after high school.	95%	0%	5%
My student's grades have improved since attending this option program.	50%	17%	33%
The teachers in this option program have higher expectations of my student than the teachers in the home high school.	70%	12%	19%
The faculty and staff at this option program keep me informed about my student's progress in school.	48%	7%	45%
My student has experienced educational opportunities that are not available in a traditional high school.	99%	1%	0%
I am satisfied with the education my student is receiving in this option program.	97%	0%	4%

Parents surveyed were asked three open-ended questions. The questions and responses are summarized below. The number in parenthesis indicates the number of similar responses.

**1. How was the decision made for your student to attend The Career Academy?**

- My child was interested in a specific focus area curriculum/career path. (44)
- My child was interested after hearing about the program through an orientation/visit/e-mails, etc. (19)
- The ability to earn college credit in high school for reduced tuition/exposure to college classes. (13)
- My child was interested because family discussions or family/friends who were attending or encouraged them to attend. (12)
- My child made the decision to attend the program. (9)
- The program provided a smaller school setting/alternate option with unique opportunities/safer environment/social fit. (7)
- My child was interested in hands-on learning. (3)
- My child is challenged to do his/her best. (1)

**2. What is the best thing about your student attending The Career Academy?**

- The option to try out a particular career path/interest area while in high school. (31)
- The ability to experience college-level classes and earning college credit for a reasonable cost. (31)
- The quality and challenge of the classes and the unique, hands-on educational opportunities at class and with community (real life). (31)
- My child feels safe and comfortable there/few discipline problems. (1)
- My child fits in at the school/sense of belonging. (4)
- The program has helped my child become more confident and mature. (4)
- The program has small class sizes. (2)

**3. Is there anything about The Career Academy you would like changed?**

- Provide stronger communication with the family about events, assignments, grades (earlier/provide parent/teacher conferences, not able to track on Parent Vue). (25)
- No change. (16)
- Frustrated when low enrollment results in an area they are combined so students are not getting all the classes signed up for (need larger enrollment) (2)
- Frustrated with the bussing (poor driving, different routes, late, feels unsafe). (2)
- Students need to be held accountable for late work/retesting as they would in college. (1)
- The social studies and English classes that only meet once a week are difficult to stay caught up with/seem to be less relevant/would benefit from aligning with the same classes at the home schools (Go Po, add more ACE requirements integrated into program). (5)
- Student feels less connected to both the home school and TCA because of split time at each location. (1)
- Parents need to grant permission for students to be in the program. (1)
- There needs to be equity for all students (instead of favoritism). (1)
- Issues with teachers (more engaging activities, better instruction) (2)
- All programs need to be available junior year. (1)
- Need better schedules to coordinate with home school/provide morning and afternoon offerings at both junior and senior years. (2)
- Parent wishes the program was expanded to full day. (4)
- Parent wishes more TCA classes would count for more than electives. (1)

## The Career Academy Student Survey Results

Two-hundred thirteen (213) students currently enrolled in at The Career Academy participated in the online survey. Student responses are summarized in Tables S01 – S04. Additionally, their responses to the open-ended items are summarized.

Table S01: Student Survey Responses: What year are you?

Grade Level	Number of Students	Percent of Students
Freshman	0	0%
Sophomore	0	0%
Junior	119	56%
Senior	94	44%

Table S02: Student Survey Responses: What is your home high school?

High Schools	Number of Students	Percent of Students
Bryan Community	0	0%
East	47	22%
Lincoln High	24	11%
North Star	34	16%
Northeast	37	17%
Southeast	45	21%
Southwest	24	11%

Table S03: Student Survey: What is your current plan after you graduate from high school?

Program	Number of Students	Percent of Students
Attend college or university	168	79%
Don't know yet	8	4%
Work to save money for college or university	7	3%
Join the military	6	3%
Start a business	5	2%
Get a job	4	2%
Attend a trade school to get a skilled job	3	1%
Attend college AND get a job	3	1%
Attend college AND join the military	1	0.5%
Attend a trade school AND get a job	1	0.5%
Other – not specified	1	0.5%

Table S04: Student Survey Responses to Likert-type Items

<b>Question</b>	<b>Agree or Somewhat Agree</b>	<b>No Opinion</b>	<b>Disagree or Somewhat Disagree</b>
I will graduate from high school	99%	1%	0%
I would not be thinking about graduation had I not attended this option program.	9%	9%	82%
I am prepared for college.	88%	3%	8%
I like coming to school each day.	81%	3%	15%
I like coming to this option program more than my home school.	87%	5%	7%
My grades are better now that I attend this option program.	57%	10%	32%
In this option program, students have more opportunities for “hands-on” applications and connections to everyday life experiences than at my home school.	93%	2%	4%
Teachers in this option program have higher expectations for student work than at my home high school.	87%	4%	8%
I felt more connected to the teachers at my home high school than I do to the teachers in this option program.	26%	12%	60%
In this option program I have had more opportunities to be actively involved in my own learning.	92%	3%	4%
Since I have been attending this option program, my interest in learning about one or more fields of study related to this program has increased.	88%	4%	7%
Since I have been attending this option program, my motivation to learn has increased.	85%	5%	8%
I feel more connected to the students at my home high school than the students in this option program.	35%	12%	51%
I would recommend this option program to my friends.	92%	2%	4%
I am satisfied with the education I am receiving from this option program.	92%	1%	5%

Students surveyed were asked four open-ended questions. The questions and responses are summarized below. The number in parenthesis indicates the number of similar responses.

**1. Describe how the decision was made for you to attend The Career Academy. Who was involved in the decision? What events lead up to the decision?**

- I made the decision to attend the program. (21)
- I was interested in a specific focus area curriculum/career path. (82)
- I was interested in exploring different career possibilities. (17)
- I was interested after hearing about the program through an orientation/visit/email/counselor. (56)
- I was interested because of family discussions/family or friends who were attending or encouraged me to attend/teachers who encouraged me to attend. (46)
- The program provided an alternate school option with unique learning opportunities/regular high school wasn't working for me/I wanted to do high school differently. (28)
- The ability to earn college credit in high school for reduced tuition/exposure to college classes (opportunity to get ahead). (61)
- I was provided a scholarship which enabled me to attend. (3)
- I was interested in hands-on learning. (6)
- I am challenged to do my best/work harder. (7)

**2. What is the best thing about attending The Career Academy?**

- The option to try out a particular career path/interest area as well as learning new and interesting things. (80)
- The program allows for hands-on experiences. (47)
- The ability to experience college-level classes/prepare me for college and earning college credit for a reasonable cost. (43)
- The quality and challenges of the classes (more college-like), including relevant/real life opportunities in class and in the community (better learning opportunities, projects versus tests makes it less stressful, better resources, field trips). (35)
- I connect with new people with similar interests/from different schools. (26)
- The teachers/administrators are friendly, helpful, and knowledgeable. (18)
- The program provides me with some independence as a learner/it provides a change of routine (gets me out of my home school). (15)
- The program makes me (and others) more motivated. (9)
- The program has helped me become more confident/responsible/mature/grown my leadership skills. (8)
- The program has small class sizes. (6)
- The block schedule is better. (6)
- The program provides transportation. (1)
- I enjoy the competitions. (1)
- It allows for a longer lunch. (1)

**3. What makes the Career Academy a better match for you than your home high school?**

- The Pathways meet my interest, are more advanced, and are motivating/engaging/help me determine my future interests. (87)
- It is more hands-on. (26)
- There are stronger connections to my peers/peers have my same interests/being with students from all the high schools. (20)
- The teachers are knowledgeable/care about us/treat us like adults. (20)
- There are college classes we can get credit for taking/prepares me for college. (16)
- It provides real-life experiences/more varied learning opportunities/opportunities to meet people in the field (field trips). (11)
- The course work prepares us for real life experiences. (15)
- The students are more motivated, so there isn't wasted time. (10)
- I feel more responsible for myself/guiding my own learning/independent. (10)
- The classes are smaller. (5)
- The environment is more welcoming. (7)
- It's not better, just different. (8)

- The block schedule is a better schedule for me. (6)
- The work is more challenging/rigorous. (4)
- It has better resources. (3)

**4. What could be changed about The Career Academy to make it better for you?**

- No change. (49)
- Provide more time to complete assignments and projects/reduce the amount of work in the pathway classes/ease into expectations/help orient students to college classwork expectations. (21)
- The social studies and English classes that only meet once a week are difficult to stay caught up with/seem to be less relevant/would benefit from aligning with the same classes at the home schools/shouldn't be offered at TCA (add more ACE requirements integrated into program/make them online options, offer GoPo fair at beginning of summer). (13)
- Provide even more hands-on learning and additional field trips. (13)
- Issues with teachers (more engaging activities, better instruction, stronger relationships with students) (10)
- The program should be expanded to full day. (9)
- Online assignments are confusing (switch platforms 4 times during the week in different classes)/need clearer online access to expectations and missing work/clearer objectives. (8)
- Provide stronger consequences for students that misbehave/don't try. (8)
- Offer more classes for college credit (both in and out of the pathway). (7)
- Provide class options where students could explore a range of pathways/switch pathways more easily/broaden the options/experiences in the pathways, particularly the first year. (7)
- Tighten the acceptance expectations so students who are attending are fully aware of expectations and are focused. (6)
- More access to teachers outside of the class period. (2)
- Provide stronger connections with the home schools/coordinate schedules with home school/provide morning and afternoon offerings. (3)
- Expand the program to four years. (4)
- Have shorter class periods. (2)
- Provide classes that would transfer to more universities. (1)
- Credit costs are too high/increase financial aid. (2)
- Narrow the pathways so they are more specific (split AgBio into two pathways). (2)
- Provide online learning options. (2)
- Need a different computer for Engineering since Chromebooks don't support the necessary software. (1)
- Homework help/tutoring outside the TCA hours. (1)
- Work on scheduling for the Tuesday PLC days. (1)
- Share information about other events happening at SCC outside TCA. (1)

# High School Option Task Force Report

Lincoln Public Schools

Objectives 1 & 3

November 30, 2018

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## Purpose and Task Force Members

A 2018-2019 Board of Education goal for the superintendent is to “evaluate the effectiveness of existing focus programs and explore options for alternative instructional delivery methods” by April 1, 2019. In August 2018, in order to accomplish this goal, the superintendent formed the High School Option Task Force. The Option Task Force formed three subgroups with specific objectives.

Objective 1: Determine what, if any, new curricular themes should be implemented in existing and new high schools in LPS. This will involve thorough research of national trends and tendencies. This includes the potential for several site visits.

Team: Cindy Baum  
James Blake (Chair)  
Kurt Glathar  
Dan Hohensee  
Takako Olson  
Walter Powell  
Scott Wieskamp  
Jessilyn Vraspir

Objective 2:\* Evaluate the enrollment trends and effectiveness of current LPS focus programs: Arts and Humanities, The Career Academy, International Baccalaureate, ROTC, and Science Focus.

Team: Cindy Baum  
Leslie Eastman (Chair)  
Kurt Glathar  
Pat Hunter-Pirtle  
Matt Larson  
John Neal

Objective 3: Engage secondary principals, CTE teachers, parents, and students in discussions centered on Objectives 1 and 2.

Team: Kurt Glathar  
Dan Hohensee  
Pat Hunter-Pirtle (Chair)  
Takako Olson  
Walter Powell  
Liz Standish  
Jessilyn Vraspir

\*The evaluation of existing focus programs is found in a separate report.

## Meeting Dates

Over the course of the first semester the Task Force and subgroups met a number of times.

- Full Option Task Force meetings:
  - August 27, 2018 (Kick-off)
  - September 18, 2018
  - October 23, 2018
  - November 9, 2018
  - November 26, 2018 (Retreat)
  
- Subgroups met additional times.

## Data Gathered

The High School Option Task Force reviewed data from several sources, visited innovated high school programs across the country, and conducted focus groups and administered surveys with different stakeholder groups.

### *Initial Review of Existing National Focus Programs*

There are approximately 100,000 public elementary and secondary schools within approximately 18,000 public school districts in the United States. The Objective One subgroup was tasked with identifying top curricular themes and trends in the U.S. In order to accomplish this, the Objective One subgroup designed a process that considered scale to increase relevance to the Lincoln Public Schools context.

Members of the Task Force represented many professional roles, including principals, directors of operations and curriculum, career and technical education, science curriculum, career academies, focus programs, and engineering. As a result, members of the subgroup leveraged their professional connections, along with a review of the literature, to locate 36 schools well-known nationally as innovative leaders in delivering special and alternative curricular focus programs (see Appendix A for additional details). The identified schools were a primary source of the 47 curricular themes ultimately reviewed as potential curricular focus areas for the Lincoln Public Schools (Table 1).

Schools self-identify their curriculum focus area, so looking for exact labels or types is subjective. However, these self-identified school structures did have common patterns that emerged across the sample. Of the 36 schools considered, the most common type was an “academy” school (n=14), which could be either required of all students in the school (known as “wall to wall”) or a small group (known as a pocket, pathway or focus area), within a larger

comprehensive high school that was an optional choice for individual students. The second most common school type was a magnet school (n=12). The third type was identified as an Innovative School (n=7). Innovative Schools included the Denver Public Schools and the Dallas Independent School District. Innovative Schools tend to be very specialized and do not reflect a traditional comprehensive high school. The remainder of the sample was a mix of project-based (n=2), experiential (n=2), a program of study (n=2), and a gifted education school (n=1). Detailed information on schools in the sample, organized by curricular focus area, can be found in Appendix A. Curricular themes that appeared three or more times from the sample of schools are found in Table 2. Specific schools visited by members of the High School Option Task Force are listed in Table 3.

Table 1: Curricular themes that emerged from the 36 schools identified by the Objective One Task Force subgroup.

- |  |  |
|--|--|
| 1. Agribusiness                                  | 25. International Baccalaureate  |
| 2. Agricultural (or Urban Ag)                    | 26. Internet Development   |
| 3. Architectural & Engineering Design            | 27. Internships  |
| 4. Aviation/Flight                               | 28. Law/Law Enforcement  |
| 5. Biotechnology                                 | 29. Leadership   |
| 6. Business/Finance                              | 30. Manufacturing  |
| 7. Coding  | 31. Marketing  |
| 8. College Prep/Early College                    | 32. Math   |
| 9. Communications/ Broadcasting                  | 33. Mechatronics/Robotics  |
| 10. Construction                                 | 34. Military/JROTC   |
| 11. Cosmetology                                  | 35. Natural Resources  |
| 12. Culinary                                     | 36. Personal Computer Support  |
| 13. Cybersecurity                                | 37. Science  |
| 14. Dentistry                                    | 38. Skilled and Technical Sciences   |
| 15. Education                                    | 39. Social Studies   |
| 16. Electrical Systems Technology                | 40. STEM   |
| 17. Engineering                                  | 41. Technology   |
| 18. English                                      | 42. Transportation Technology/Mechanic<br>Training/Automotive Technology/Ag<br>Power |
| 19. Entrepreneurship                             | 43. Urban Planning   |
| 20. Environmental Studies                        | 44. Visual Arts  |
| 21. Fine Arts/Music                              | 45. Welding  |
| 22. Freshman Success                             | 46. World Language   |
| 23. Health Professions                           | 47. Zoo Academy  |
| 24. Hospitality/Tourism<br>Management Recreation |  |

Table 2: Curricular themes that appeared three or more times in the 36-school sample.

Curricular Theme	n=	%
Business/Finance	10	28
Health Professions	8	22
Technology	7	19
Visual Arts	7	19
Agricultural (or Urban Ag)	6	17
Engineering	6	17
Transportation Technology/Mechanic Training/Automotive Technology/Ag Power	6	17
Architectural & Engineering Design	4	11
College Prep	4	11
Communications/Broadcasting	4	11
Construction	4	11
Culinary	4	11
Education	4	11
Fine Arts/Music	4	11
Hospitality/Tourism Management/Recreation	3	8
Law/Law Enforcement	3	8
Marketing	3	8
Science	3	8
Skilled and Technical Sciences	3	8
STEM	3	8

Table 3: Number of schools and schools visited by state.

State In Sample	School(s) in Sample	School(s) Visited
Texas	7	6
Colorado	6	
Nebraska	6	2
Virginia	4	
Minnesota	2	
Washington	2	
Arkansas	1	
California	1	
Illinois	1	1
Iowa	1	
Kansas	1	
Oregon	1	
South Dakota	1	1
Tennessee	1	
Wisconsin	1	

Below is a brief summary of the specific districts/schools visited. An Observation Protocol was used to evaluate each program. A sample can be found in Appendix B.

**Academies of Grand Island Senior High, Grand Island, Nebraska**

Kurt Glathar and Cindy Baum visited Grand Island on October 15, 2018.

The Academies of Grand Island offer a curricular focus area requirement for all students within a large comprehensive high school. This program is in its first year and has a dedicated principal for each pathway. Freshman get to explore pathway options through the Academy of Freshman Exploration. Once in their sophomore year, students must declare which of the five pathways they will specialize in: Education, Law, and Environment; Engineering and Technology; Business and Communication; Technical Sciences; or Medical Sciences.

**New Tech High School, Sioux Falls, South Dakota**

James Blake, Kurt Glathar, and Scott Wieskamp visited New Tech High School in Sioux Falls on October 25, 2018.

The curricular theme at New Tech was based on curriculum delivery through problem-based learning. The stand-alone program housed within a community college served approximately 300 students in grades 9-12. New Tech is in its eighth year of existence, making it one of the older schools within the National New Tech Network composed of about 200 schools. Students and staff embrace the problem-based learning philosophy of the school. By their senior year, a typical student would have completed approximately 50 projects. Students are not heavily involved in extracurricular activities, which may in part be due to the additional time required to travel to a comprehensive high school to participate in extracurricular activities.

**Chicago High School of Agricultural Sciences, Chicago, Illinois**

Steve Joel, Scott Wieskamp, and James Blake visited the Chicago High School of Agricultural Sciences (CHSAS) on October 30, 2018.

The curriculum theme at CHSAS is urban agriculture. CHSAS opened in 1985 with a capacity of 600 students in grades 9-12. The school has grown to 800 students. The popularity of the school is evidenced by the number of students who apply for admittance through a lottery: approximately 3000 students applied for 180 spots in the fall of 2018. The six pathways are food science, ag finance, ag mechanics, biotechnology, animal science, and horticulture. Students rotate through all six pathways their sophomore year and then declare which pathway they want to focus on as juniors and seniors.

### **William Jennings Bryan Senior High School, Omaha, Nebraska**

Cindy Baum visited William Jennings Bryan Senior High School in Omaha, Nebraska, on November 8, 2018.

William Jennings Bryan Senior High School has a small, personalized learning community focused on agriculture within a comprehensive high school. The two curricular focus areas serve 106 students through their urban agriculture, transportation, distribution, and logistics pathways.

### **Dallas Independent School District, Dallas, Texas**

Jessilyn Vraspir, Walter Powell, James Blake, and Steve Joel visited Dallas Independent School District on November 6 and 7, 2018.

Dallas Independent School District has 156,832 students in grades K-12. The district has an Office of Transformation and Innovation, which is responsible for Magnet Schools, Transformation Schools, and Innovation Schools. Members of the Task Force visited the Science and Engineering Magnet High School, The Magnet School for the Talented and Gifted, City Lab High School, and The Innovation, Design, Entrepreneurship Academy at James W. Fannin. Members of the Task Force also visited two schools that are part of the P-TECH and Early College Programs: W.H. Adamson High School and Garza Early College High School. This wide range of programming allowed many choices for students to connect to their individual interest and future plans, including potentially having two-years of college completed before graduating from high school.

### *Community Presentations*

The High School Option Task Force received presentations from three different groups.

#### *Nebraska Department of Labor*

On September 20, 2018, the Option Task Force invited Jodie Meyer, a Research Analyst at the Nebraska Department of Labor, to present information on emerging career fields, labor market forecasts, and trends in Nebraska. Jodie provided a separate report for Lincoln job projections. Details can be found in Appendix C.

#### *G.W. Carver Global Impact Leadership Institute*

On October 23, 2018, the Option Task Force invited members of the Coalition for 21<sup>st</sup> Century Innovation in Education, who represent a collaborative of professionals in both the public and private sectors, to present on a robust education model that will prepare Lincoln students for successful careers in Nebraska. The Carver Institute is designed to be a school-within-a-school that gives students access to modern agricultural and STEM-based education that leverages community partnerships and Lincoln's unique

perspective on global issues surrounding innovative research, conservation, and geopolitical implications of global food production systems.

### *Duncan Aviation*

On November 26, 2018, the Option Task Force invited Duncan Aviation, the largest family-owned maintenance, repair and overhaul aircraft facility in the world, to present on a concept of a future Aviation Technology Education Focus Program. This program introduces high school students to the aviation industry and prepares local students for careers in their community.

### *Stakeholder Surveys*

The Objective 3 subgroup engaged secondary principals, CTE teachers, students, parents, and counselors in discussions centered on new curricular themes and trends, and sought stakeholder input on current LPS Focus Programs. Focus groups were conducted with all stakeholder groups listed above, while surveys were administered to students, parents, and counselors. The results of these surveys can be found in Appendix D. In general, the common themes encompassing feedback from all focus groups and survey results were 1) favorable perception of current focus programs; 2) the perceived need for additional focus program options; and 3) the desire for alternative instructional delivery methods.

Below are the key takeaways from each focus group:

#### *Principals*

A principal focus group was conducted at the monthly Secondary Principals' Council meeting on September 13, 2018. Principals outlined already-existing curricular themes within each high school and suggested curricular areas that could potentially be supported in each high school.

#### *CTE teachers*

A total of three focus groups were held with CTE teachers during September of 2018. Each of the focus groups surveyed a different group of CTE teachers: Family and Consumer Science (FCS); Business; and Skilled and Technical Sciences (STS). Feedback from CTE teachers suggested a need for flexible instructional delivery methods, including the students' environment, schedule, and space; an increased depth of course opportunities for students, including links to real-life, career-focused learning; and learning gained through internships, work study, and projects with local business and community partners; a desire to restructure current high school graduation requirements; and a desire for additional course work in human services and employability skills.

### *Students*

Several student focus groups were held from September through November of 2018 at North Star High School, East High School, and Northeast High School. Feedback from students indicated students would like to see focus programs in sports, aviation, physical therapy, broadcasting, politics, and world language.

### *Parents / Community*

A total of four focus groups were held with parents and community members at the Community Feedback Forums from September through October of 2018. Feedback from parents and community members suggested a desire for more LPS focus program offerings; enhanced partnerships with the University of Nebraska-Lincoln; alternative scheduling (evening school); social emotional teaching; and new focus programs in the areas of government, environmental science, and STEM.

### *Counselors*

Several counselor focus groups were held from September through November of 2018. Feedback from counselors indicated a need for more mental health options for students, including therapy services, recovery groups, substance abuse programs, and alternative ways for students to learn.

## **Future Directions**

Based on analysis of the data gathered above, the Task Force strongly recommends that any future high school(s) have an embedded curricular area of focus. In addition, the Task Force recommends that existing high schools consider the addition of an embedded curricular area of focus to provide greater personalization and choice to students.

Future high schools should continue to be comprehensive in nature to address equity concerns, but offer an innovative focus area of study within the comprehensive setting. The curricular area of focus should emphasize problem- and community-based learning in an environment that would provide both academic content in the focus area as well as extensive personalized learning experiences. The learning environment should be tailored to meet the needs and interests of individual students, and be connected to future career options.

Based on visits to existing innovative programs around the country, surveys and/or focus groups with stakeholders in the Lincoln community, potential community partners in Lincoln, and current labor market trends, the High School Option Task Force recommends the following

potential curricular areas of focus and possible pathways for Lincoln Public High schools, in order of priority:

1. *Global Business*

- Entrepreneurship
- Management and Marketing, including Sports
- Trade, Finance, and Sales, including Agriculture
- Advertising and Marketing
- Hospitality and Tourism
- World Languages

2. *Aeronautics (STEM)*

- Aviation Technician
- Aviation Engineer
- Aviation Business

3. *Health Sciences (STEM)*

- Biotechnology Research and Development
- Health Informatics
- Diagnostic Services

4. *Natural Resources and Agriculture (STEM)*

- Biotechnology
- Food Science and Processing
- Animal Science
- Environment and Natural Resources Systems
- Plant Systems

5. *Information and Technology Systems (STEM)*

- Cyber Security
- Robotics
- Coding
- Networking
- Data Analytics
- Web Design and Development
- Computer Science

## 6. *Construction and Manufacturing (STEM)*

- Construction
- Engineering
- Architecture
- Maintenance and Operations
- Logistics, Inventory, and Quality Assurance
- Transportation Systems and Operations

## 7. *Human Sciences*

- Education
- Law
- Social Services
- Leadership
- Political Science
- Public Safety

The High School Option Task Force recommends that once a decision is made concerning future high school facility plans that an appropriate curriculum task force(s) be formed to begin the process of designing the curricular program. The final selection of a curricular area of focus may be determined by the Board of Education, based on recommendations from the Superintendent's Facility Advisory Committee and staff.

Appendix A: Schools reviewed by subgroup one. **Highlighted** schools were visited. Curricular themes (left column) are ordered from most to least common within the identified schools.

State		Arkansas	California	Colorado						Illinois	Iowa	Kansas	Minnesota	
District		Charter/ Other	Charter/ Other	Denver Public Schools						Chicago Public Schools	XQ	Geary County Schools USD 475	St. Paul Public	
School	Total	Career Academy of Siloam Springs (Pocket Academy)	High Tech High	Denver Montessori Junior/Senior High	West Early College	West Leadership Academy	Denver School Of Innovation And Sustainable Design	Denver School Of The Arts	Judge Barefoot Sanders Law Magnet	Chicago High School for Agricultural Sciences	IowaBIG	Junction City High School	Saint Paul Public "Academy of Finance"	St. Paul Public Schools
Business/Finance	10										X	X	X	X
Health Professions	8													
Technology	7													X
Visual Arts	7							X						X
Agricultural (or Urban Ag)	6			X						X				
Engineering	6													X
Transportation Technology/Mechanic Training/Automotive Technology/Ag Power	6	X												
Architectural & Engineering Design	4													
College Prep	4				X		X							
Communications/Broadcasting	4													
Construction	4													
Culinary	4													
Education	4													
Fine Arts/Music	4											X		
Hospitality/Tourism Management/Recreation	3													
Law/Law Enforcement	3								X					
Marketing	3													
Science	3													
Skilled and Technical Sciences	3						X							
STEM	3						X					X		
Agribusiness	2									X				
Coding	2													
Cosmetology	2													
Environmental Studies	2													
Leadership	2					X								
Manufacturing	2													
Military/JROTC	2													
Welding	2													
Aviation/Flight	1													
Biotechnology	1													
Cybersecurity	1													
Dentistry	1													
Electrical Systems Technology	1													
English	1													
Entrepreneurship	1													
Freshman Success	1											X		
International Baccalaureate	1													
Internships	1						X							
Internet Development	1													
Math	1													
Mechatronics/Robotics	1													
Natural Resources	1													
Personal Computer Support	1													
Social Studies	1													
Urban Planning	1													
World Language	1													
Zoo Academy	1													
Total Focus Areas	131	1	Choice	1	1	1	4	1	1	2	1	4	1	4

Appendix A – continued

District	Total	Nebraska						Oregon	South Dakota	Tennessee	Texas			
		Grand Island Public Schools	Kearney Public Schools	Omaha Public Schools				Medford School District	Sioux Falls Public Schools	Metro Nashville Public Schools	Dallas ISD			
		Career Pathways Institute	Kearney High School	Career Center	Benson Magnet High School	Omaha Bryan Urban Ag	Omaha North Magnet High School	Medford Pathways Program	New Technology High School	Academies of Nashville (AON) - 12 High Schools	The School for the Talented and Gifted	Science and Engineering Magnet School	IDEA (Innovation, Design, Entrepreneurship Academy)	CityLab High School
Business/Finance	10	x	x					x		x				
Health Professions	8	x	x	x				x		x				
Technology	7	x						x	x	x				
Visual Arts	7	x		x				x		x				
Agricultural (or Urban Ag)	6		x		x	x				x				
Engineering	6						x	x			x			
Transportation Technology/Mechanic Training/Automotive Technology/Ag Power	6	x		x				x		x				
Architectural & Engineering Design	4	x								x				x
College Prep	4													
Communications/Broadcasting	4		x							x				
Construction	4	x		x				x		x				
Culinary	4			x				x		x				
Education	4	x	x					x		x				
Fine Arts/Music	4		x					x		x				
Hospitality/Tourism Management/Recreation	3	x								x				
Law/Law Enforcement	3							x		x				
Marketing	3	x								x				
Science	3							x		x		x		
Skilled and Technical Sciences	3		x											
STEM	3									x				
Agribusiness	2	x												
Coding	2									x				
Cosmetology	2									x				
Environmental Studies	2													x
Leadership	2							x						
Manufacturing	2	x						x						
Military/JROTC	2									x				
Welding	2	x		x										
Aviation/Flight	1	x								x				
Biotechnology	1									x				
Cybersecurity	1									x				
Dentistry	1													
Electrical Systems Technology	1			x										
English	1							x						
Entrepreneurship	1												x	
Freshman Success	1													
International Baccalaureate	1									x				
Internships	1													
Internet Development	1													
Math	1							x						
Mechatronics/Robotics	1									x				
Natural Resources	1							x						
Personal Computer Support	1													
Social Studies	1							x						
Urban Planning	1													x
World Language	1							x						
Zoo Academy	1			x										
<b>Total Focus Areas</b>	<b>131</b>	<b>14</b>	<b>7</b>	<b>7</b>	<b>1</b>	<b>1</b>	<b>17</b>	<b>1</b>	<b>25</b>	<b>0</b>	<b>2</b>	<b>1</b>	<b>2</b>	

Appendix A – continued

State		Texas			Virginia				Washington		Wisconsin
District		Dallas ISD		Grand Prairie ISD	Albemarle School District				Highline Public Schools	West Valley School District #208	Kenosha Unified School District
School	Total	Trinidad Garza Early College High School	W.H. Adamson High School	JOHN A DUBISKI CAREER HS	Environmental Studies Academy - Western Albemarle HS	Health and Medical Sciences Academy ROTC - Monticello HS	Math, Engineering & Science Academy - Albemarle HS	Albemarle Tech	Big Picture Learning	West Valley High School	Indian Trail High School
Business/Finance	10			x							x
Health Professions	8			x		x					x
Technology	7			x				x			
Visual Arts	7			x							
Agricultural (or Urban Ag)	6										
Engineering	6			x			x				
Transportation Technology/Mechanic Training/Automotive Technology/Ag Power	6			x							
Architectural & Engineering Design	4			x							
College Prep	4	x								x	
Communications/Broadcasting	4			x							x
Construction	4										
Culinary	4			x							
Education	4										
Fine Arts/Music	4										
Hospitality/Tourism Management/Recreation	3			x							
Law/Law Enforcement	3										
Marketing	3			x							
Science	3										
Skilled and Technical Sciences	3									x	
STEM	3										
Agribusiness	2										
Coding	2		x								
Cosmetology	2			x							
Environmental Studies	2				x						
Leadership	2										
Manufacturing	2										
Military/JROTC	2										x
Welding	2										
Aviation/Flight	1										
Biotechnology	1										
Cybersecurity	1										
Dentistry	1			x							
Electrical Systems Technology	1										
English	1										
Entrepreneurship	1										
Freshman Success	1										
International Baccalaureate	1										
Internships	1										
Internet Development	1		x								
Math	1										
Mechatronics/Robotics	1										
Natural Resources	1										
Personal Computer Support	1		x								
Social Studies	1										
Urban Planning	1										
World Language	1										
Zoo Academy	1										
<b>Total Focus Areas</b>	<b>131</b>	<b>1</b>	<b>3</b>	<b>13</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>Choice</b>	<b>2</b>	<b>4</b>

## Appendix B: Observation Protocol

The Objective One Task Force developed an Observation Protocol to frame the visits and gather data. Teams were required to complete one form for each visit. The Observation Protocol for the Chicago High School for Urban Agriculture is included as an illustration of the data collected.



# Observation Protocol

for

Chicago High School for Agricultural Sciences (CHSAS)

Option Task Force 2018-19

**Name:** Steve Joel, Scott Wieskamp, James Blake    **Location:** CHSAS    **Date:** Oct 30, 2018

Appendix B – Continued

## BACKGROUND INFORMATION

Prior to your visit, do your research. Fill out the questions below and use the reverse-side of this page for additional information.

QUESTION	NOTES
Why do you want to visit this program?	This program is high performing and has shown success over three decades. It is proven to prepare students to be both career and college ready and provides options for students.
What is the curricular theme?	Urban agriculture
What grades utilize the program?	9-12
Who is the program’s “typical” student? (demographics)	The demographics reflect the general subdistrict and district demographics. Of note- there are very high numbers of students with FRL in all categories (around 80%).
What part of the day are the students in the program?	This is a full day program.
What does a typical day look like for a student?	
What transportation is required / provided?	No transportation is provided. There are some vouchers to use city transportation - but students need to get themselves here.
What fees are charged?	\$200 student fee. If they cannot pay - the principal works it out with them to work off the debt at \$10/hr on the side.
How are students selected & removed from the program? (application or open)	Lottery based on ensuring certain percentages of neighborhood (50%) and then other demographic groups. Within each group - the lottery is completely random. If slots are up filled at the start of the year - the school will let more students in. This is typically about 10 students per year. Approximately 3000 students applied for 180 spots last fall.
Does the program support student organizations & activities?	The program has a wide variety of sports. FFA is not considered an extracurricular, but it is a huge part of the activities - with students needing to participate to a certain degree to get points each quarter -with goals set. Every student is by default a member of FFA.
How is the facility organized to accommodate the program?	Lots of land space - 78 acres - which allows a working farm within the city limits of Chicago.
How long has the program been in place?	It opened in 1985-86
How will the program meet future needs of students?	Providing a workforce for the agriculture industry.

How does this fit into national trends & tendencies?	<i>Reference the school website history page- that sums it up well</i>
Does the program have any rankings? (US Newsweek, etc.)	2017 America's Best high schools "silver" from U.S. News; 2017 Magnet Schools of Distinction; America's Best "gold" 2016; Best High School - Bronze, 2015; 2015 Award Winner "Excellence in Action" AFNR Career Cluster from National Association of State Directors of CTE Consortium.
What are other saying? (clearinghouse info/gov't research groups)	
What are the highlights in the school's annual report?	<i>Contact a member of the Option Task Force to see the full file.</i>

**ADDITIONAL BACKGROUND INFORMATION**



The four pictures (above) are from the 78 acre working farm. Therapeutic horse riding barn purchased with the regular school budget -which is around \$5000 per student (top left), one of the pigs being raised in Animal Science (top right), a goat that was purchased by a student grant in Animal Science pathway to be sold (bottom left), and a turkey being raised for the big Thanksgiving dinner they prepare (bottom right).



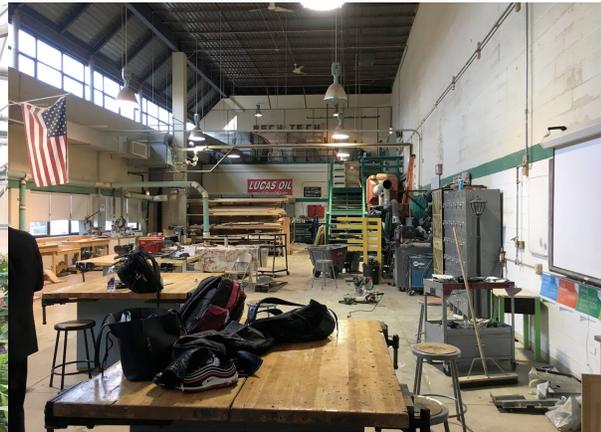
CHSAS has great sports teams in many areas.



Awards. 2017 America's Best high schools "silver" from U.S. News (top left) 2017 Magnet Schools of Distinction (top right), America's Best "gold" 2016 (Middle Left), Best High School - Bronze, 2015 (middle right), 2015 Award Winner "Excellence in Action" AFNR Career Cluster from National Association of State Directors of CTE Consortium (bottom)



Pathway signs (above 3 panels). Not shown: Biotechnology, Animal Science, Horticulture.



Horticulture pathway greenhouse being shown by a senior student (left). Ag Mechanics shop (right).



(Top Left) beehives in the commons between classes. Most of the honey is out further from the school. (Top right) typical hallway.



Entryway to the school.



Farm Stand store run by students in the Ag Finance Pathway as a “farm to store” option.

# CRITICAL CATEGORIES

During your visit, gather information on the (6) categories below. See guiding questions on the reverse-side of this page to aid with your notes. These categories are critical to “the big picture” and our proposal at the end. When finished note-taking, give each category an impression rating (see right).	Below	Meets	Exceeds
<b>RESOURCES</b>	1	2	3
Human resources: The teachers we talked to had 5 to 32 years experience. Physical resources: The facilities were functional, but could use an update.			
<b>CULTURE / CLIMATE</b>	1	2	3
You cannot build a physical space that would match the culture/climate of CHSAS. You could sense the family atmosphere, lead by Mr. Hook (Principal) and the assistant principal. Students knew the vision and felt valued and welcomed into this atmosphere and that their teachers expected much of them and they were able to meet those expectations. As one senior Food Science major said -if you are the type of student that retreats to himself in a corner - teachers will seek you out and pull you into the conversation. There was friendly competition between which pathway was “better” and all students seemed to appreciate and respect the other pathways.			
<b>RELATIONSHIPS</b>	1	2	3
<p><b>Internal relationships-</b> Students were comfortable - such as being able to go to the wood shop (Mech Pathway) and build things over lunch break. Because of the high level of student agency in these courses and the high demands of the day - it was cited they had a 12 hour day when you figure in other commitments and kids come home “tired” (according to one parent) - it was evident the relationships were strong.</p> <p><b>External relationships -</b> Parents, Alderman,, local business - all talked to us about the value. Parents had positive experiences and their kids excelled - saying “safety” and “good academics” as the main key - with Ag just providing the context. The business cited long term goals of employees - but in the short term, the program helps with their strategic goals to highlight this work. The local politician - name - was very clear that education was our future. He discussed his ability to reach out to the CPS superintendent - to cut through the bureaucracy if he was seeing similar issues in his 19th Ward across multiple schools.</p> <p>Their biggest communication with external sounds like the Thanksgiving dinner served as a farm to table meal to about 400 senior citizens. This gets big press, students, local politicians, and teachers show up by 4 a.m. and start preparing and they work until late into the night.</p>			
<b>FUTURE OUTCOMES</b>	1	2	3
The students on the panel all had very unique career goals related to a future ag career and going to further education. One of our tour guides - a senior - was going to the U.S. Air Force to get into intelligence. Data shows that there is a much higher college going rate at CHSAS than the district or state of Illinois.			
<b>CURRICULAR THEME</b>	1	2	3
Agriculture - this needs to be infused in every area - which they called “academic” (e.g. math, science, social studies) and “ag” - however everything was expected to revolve around ag. Teachers embraced this theme. Because of the haphazard nature of this needing to happen organically, I think it could still be increased in score should they have a more common language- e.g. Julie - the Biotechnology teacher was doing some major revisions to her curriculum to meet new NGSS science standards.			
<b>DIFFERENTIATION &amp; EQUITY</b>	1	2	3
This school uses a lottery system to ensure that the demographic groups match that of the entire district of CPS. The school is doing a good job matching diversity of the larger system.			
Total Score: <u>16</u> /18			

## CRITICAL CATEGORIES - GUIDING QUESTIONS

<b>RESOURCES</b>	<b>CULTURE / CLIMATE</b>
<p>Are the facilities growth ready? (e.g. enough land, space to grow, buildings constructed with future expansions in mind)</p> <p>Are the facilities/programs convertible when trends and needs change? (describe the space, how is it modifiable, e.g. science lab needing water and electrical, maker spaces needing special CTE equipment - saws, safety)</p> <p>What is unique about their economic/financial status/aid that supports the program?</p> <p>Do they have certified/qualified teachers? -Are your teachers brought into the conceptual model/vision?</p>	<p>How is the facility designed intentionally to influence climate?</p> <p>What is the quality of staff-student interaction? (might be observed in a classroom setting)</p> <p>If you taught in a comprehensive/traditional school before - are your interactions with students different now? -How about interactions with staff before/after?</p> <p>How are you promoting the program?</p> <p>How do the promotions align to what you are truly valuing?</p>
<b>RELATIONSHIPS</b>	<b>FUTURE OUTCOMES</b>
<p>How do you manage expectations with partners?</p> <p>Who initiates conversations - who initiates new initiatives?</p> <p>What kind(s) of community support do you have?</p>	<p>How will students be career ready?</p> <p>How will students be college ready?</p> <p>How will students become global citizens?</p>
<b>CURRICULAR THEME</b>	<b>DIFFERENTIATION &amp; EQUITY</b>
<p>How is professional learning supported and designed?</p> <p>Do you need to purchase curriculum or is it designed with teachers? Or is a combination of both?</p> <p>What other supports exist for educators and students in this theme?</p> <p>What character education/soft skills training to students and staff receive?</p> <p>What behavior supports are in place?</p>	<p>Are there any institutional barriers that make it more difficult for under-resourced students or students not of majority demographic to access this program?</p> <p>What common experiences are provided for all students?</p> <p>Do teachers demographics match that of the student population or that of the school district?</p>

ADDITIONAL QUESTIONS:

# INTERVIEWS

During your visit, ask to speak with key players. Record their comments in the corresponding spaces below. Use the guiding questions on the reverse-side of this page as a resource for your interviews.

## DISTRICT LEADERSHIP

This was not a strength of the CHSAS program according to Principal Hook. He was proud of their independence and felt as long as performance stayed high - they would be “left alone” from district leadership.

## BUILDING LEADERSHIP (PRINCIPAL)

Mr. Hook orchestrated the day - and takes very little credit. He talked about hiring the right people and getting out of the way. Even with the parent-board group, he speaks before the “blue coats” (e.g. CHSAS FFA students) who run the meeting - so he isn’t “overshadowed by these students.” Although Mr. Hook is a competent and engaging presenter- his comments and attitude show how he likes to lead from behind.

## TEACHER

They all have deep connection to this program:

- Krnjaca has been there 5 years and student taught here prior to that.
- Martin has been there 32 years - since one year after it opened - and was the teacher of many of the current teachers when they attended CHSAS.
- Reynolds has taught there 19 years, and was Martin’s first student 32 years ago.
- Coronado graduated from here in 2001 and returned as a teacher.
- Kujawa was also a grad, from 2002, and returned as a teacher.

Teachers are willing to be flexible and change large projects. For example, they talked about an “ARC-GIS” project on food deserts to incorporate Finance and other pathways. They spent 30 hours training to be proficient on this software-program before using it with students. It was stated that an ag-teacher needs to be ready to put in 12 hour days- when counting all of the extra hours working with students on projects. Each pathway has an “area” of the school they are responsible - such as the finance pathway having the Farmstead store - including all responsibilities with analyzing the financial and stock data. They mentioned an “ICE” curriculum in Ag. Julie Reynolds caught the eye of science curriculum- as she is attending the state conference for science teachers and working to integrate the Next Generation Science Standards concepts into her Ag curriculum.

## STUDENT

Each student on the panel talked about what prompted their decision, how they picked their path, and their future plans

- Eiffel was prompted as an immigrant from the Philippines - and wanted to go back and help grandpa with modern ag techniques. He ended up realizing his love for business and marketing - so he changed his original direction and picked the business side of Ag. He wants to get a degree in public policy and foreign diplomacy.
- Paola thought the idea was ridiculous, but upon entering CHSAS, she fell in love. She loves DNA- and wants to get into communication. She is going to an Ag Comm degree.
- Alexandra went to this as her “neighborhood school” - it was love at first site. She likes animal science, but still has an interest in finance. She is going to college for either business or urban planning.
- Lilliana picked the school because of the horses - and because it is science based. She liked the challenge of the biotechnology pathway and the hands on nature of the program.
- Darius was drawn here having had an older brother go through. He wants to be a chef with a school on the side- and he is in the food science path.
- Zach is only a freshman - and has had much extended family attend CHSAS. He was dreading the 2 week fresman connection course in the summer -because it cut into his summer - but ended up liking it. He doesn’t know what he wants yet and feels he has time - he likes many things.

## PARENT

- Mr. Neeson has had 3 children attend. He talked about his daughter being accepted to a good Catholic high school, but decided after seeing an ad to “check out CHSAS” last minute. She fell in love after getting a great tour from one of the teachers. One daughter has even attended the International Science Fair with her project on colon cancer that she completed over two summers working with a university connected to CHSAS.
- Mr. Shalabi was president of the Advisory Board from 2003-2017 and has had three students. He stressed the importance of two key elements of CHSAS: Quality Education and Safety
- Mr. Purdy had a grad from CHSAS and a sophomore daughter. His son- the grad- is now successfully in college on a full ride. He is studying urban forestry. He stressed the importance of the SAE experiences - such as dressing up as a “cheesecake” for a company in town - and then leading into very serious internships that lead to his college success.

**BUSINESS & INDUSTRY / COMMUNITY**

- Matt O’Shea - an Alderman for the 19th Ward - where CHSAS is located - about 60,000 people. Matt vigorously defended the importance of education as a local politician and is very involved in the schools - he has been serving in this role for eight years.
- A University of IL Recruiter - Rodriguez - talked about how often she is at the school for various reasons.
- Kelly from NuFarm gives to many activities and even has students design landscaping at their factory site She sees the “get” for her company - providing future employees and sharing the “future”of ag with students.
- Another business partner gives to science fairs and exit interviews - and she is also interested in the hire perspective- providing future employees for industry.
- The Engineer talked about “sustainability rewards” for his company by staying involved with the school.

CONTACT INFORMATION:

**INTERVIEWS - GUIDING QUESTIONS**

<b>DISTRICT LEADERSHIP</b>	<b>BUILDING LEADERSHIP (PRINCIPAL)</b>
<p>Why did you decide to implement this program?</p> <p>What measures do you use to review/revise/evaluate/eliminate programming?</p> <p>How do you combine the academic and future readiness skills into the needs of the student?</p> <p>How have you used your curriculum specialists to design and maintain the program?</p> <p>How do you connect with the industry leaders in the community regarding programming and input?</p> <p>How do you align your programming with industry certification requirements and timelines?</p> <p>How do you align your programming with board of education standards requirements?</p> <p>Is there something special about the district that makes it possible to support the program?</p> <p>How much staff development do you provide specific to this curricular theme?</p>	<p>Why did you choose, or were you chosen, to lead this program?</p> <p>How have you hired staff differently to match your program?</p> <p>How do you build and nurture your program culture?</p> <p>How do you connect with the industry leaders in the community regarding programming and input?</p> <p>Is there something special about the district that makes it possible to support the program?</p> <p>How much staff development do you provide specific to this curricular theme?</p> <p>What programs are in place outside of school that support student success? (wraparound service like CLC)</p> <p>How do students learn about the program? (communications, build awareness)</p> <p>How do you track student data?</p>
<b>TEACHER</b>	<b>STUDENT</b>
<p>What learning did you need to do to be successful in this program?</p> <p>How did you get your learning?</p> <p>What if anything, sets this program apart for students from their home high school or a traditional comprehensive high school?</p> <p>What types of students attend this program? (could be reworded)</p>	<p>Why did you choose to attend this program?</p> <p>Do you think this program helps prepare you for the future?</p> <p>How did you hear about the program?</p> <p>What if anything do you like?</p> <p>What if anything do you dislike?</p> <p>Would you like to see other programs available?</p> <p>Was there enough choice?</p> <p>Was the enrollment process easy?</p> <p>How has your experience been so far?</p> <p>(if not a full time program) How is it the same or different from your home high school?</p>
<b>PARENT</b>	<b>BUSINESS/INDUSTRY</b>

<p>What factors went into choosing this program?</p> <p>What are the benefits, if any, of your child attending this program?</p>	<p>Why are you involved?</p> <p>How does your company benefit from this program?</p> <p>What skills do you develop?</p> <p>How do you think the program is benefiting the community?</p> <p>How do you align your programming with industry certification requirements and timelines?</p>
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CONTACT INFORMATION: (name, position, email address, phone number)

# DEBRIEF

After your visit, reflect on the categories below. Write your own thoughts and then come to a collective consensus with your team.

## OVERALL PROGRAM EVALUATION

Based on the high performing school while serving an under-resourced demographic, shown by a 94% graduation rate (drops to 82% when you include the 80 cluster site students with special needs who never really graduate), we need to seriously consider this option for Lincoln students.

This school has six pathways - which at first glance seems like it might be beyond what we want to implement at first in LPS. We will utilize community support to further conceptualize and fund this project. FFA will need to be at the center of the CHSAS -like model as this drives the vision of learning for service. FFA is NOT the curriculum -so we need to involve all curricular areas- not just CTE, so we can follow the CHSAS model of "Ag is the center of everything" - we cannot let it be an "ag vs. academic" model. This will require curriculum specialists in many areas: CTE, Science, Math, Social Studies, Health, Computer Science, World Language, English Language Arts, Visual Arts, & Music to come together to develop these courses with Ag at the center - while supporting emerging language learners, gifted learners, and students in special education. We appreciated the thought that went into hiring the teachers. They need to be flexible and willing to put in long hours that FFA requires.

## KEY TAKEAWAYS FOR LPS FUTURE PROGRAMMING

### FIT FOR LPS:

- Good exploration model for students before they have to "declare" their pathway. Freshman focus on orientation to ag along with core classes. Sophomores get 30 day rotations in each of the six pathways. By Junior year - the students must declare their pathway. We thought this was a good model to allow some informed choice
- We want to see these skills in our students
- We want to see these relationships in our students
- We think there is a market for students with these skills and they would see the same value that students of CHSAS are seeing

### NOT A FIT FOR LPS:

- Facilities were adequate for space - with a large 78 acre lot- but would need an update from our perspective.
- We would not recommend starting "all in" on this concept - it would be suggested to be embedded within a larger school.

Appendix C: Lincoln Labor Market Data – H3 and Cluster Data

Career Cluster	H3 Rank	SOC Title	High Demand	High Skill	High Wage	H3	2016 Estimated Employment	2026 Projected Employment	Numeric Change	Avg Hourly Wage	Avg Annual Wage
Finance	5	Accountants and Auditors	1	1	1	1	2,084	2,361	277	\$31.32	\$65,157
Communication Arts		Actors		1			***	***	***	NA	NA
Finance	162	Actuaries	1	1	1	1	95	109	14	NA	NA
Manufacturing		Adhesive Bonding Machine Operators and Tenders			1		36	40	4	NA	NA
Law, Public Safety, Corrections & Security		Administrative Law Judges, Adjudicators, and Hearing Officers		1	1		70	75	5	NA	NA
Business Management & Administration	38	Administrative Services Managers	1	1	1	1	502	564	62	\$42.02	\$87,392
Education & Training		Adult Basic and Secondary Education and Literacy Teachers and Instructors		1			56	56	0	\$16.02	\$33,334
Marketing		Advertising and Promotions Managers		1	1		34	40	6	\$38.20	\$79,454
Marketing		Advertising Sales Agents	1		1		229	232	3	\$27.06	\$56,294
Energy & Engineering		Aerospace Engineers		1	1		51	57	6	NA	NA
Communication Arts		Agents and Business Managers of Artists, Performers, and Athletes		1			6	6	0	NA	NA
Agriculture, Food & Natural Resources		Agricultural and Food Science Technicians	1	1			129	152	23	\$16.62	\$34,570
Agriculture, Food & Natural Resources		Agricultural Engineers		1	1		***	***	***	NA	NA
Agriculture, Food & Natural Resources		Agricultural Equipment Operators	1				201	222	21	\$19.52	\$40,611
Government & Public Administration		Agricultural Inspectors		1	1		30	31	1	NA	NA
Education & Training	114	Agricultural Sciences Teachers, Postsecondary	1	1	1	1	164	182	18	NA	NA
Agriculture, Food & Natural Resources		Agricultural Workers, All Other					13	14	1	NA	NA
Transportation, Distribution & Logistics		Air Traffic Controllers		1	1		13	16	3	NA	NA
Transportation, Distribution & Logistics		Aircraft Cargo Handling Supervisors			1		***	***	***	NA	NA
Transportation, Distribution & Logistics	130	Aircraft Mechanics and Service Technicians	1	1	1	1	123	140	17	\$23.44	\$48,758
Manufacturing		Aircraft Structure, Surfaces, Rigging, and Systems Assemblers	1		1		229	255	26	NA	NA
Transportation, Distribution & Logistics		Airfield Operations Specialists		1	1		11	12	1	NA	NA
Transportation, Distribution & Logistics		Airline Pilots, Copilots, and Flight Engineers		1	1		16	19	3	NA	NA
Hospitality & Tourism		Amusement and Recreation Attendants	1				47	58	11	\$10.69	\$22,227
Health Science		Anesthesiologists		1	1		***	***	***	NA	NA
Agriculture, Food & Natural Resources		Animal Breeders	1		1		152	175	23	NA	NA
Law, Public Safety, Corrections & Security		Animal Control Workers			1		6	6	0	NA	NA
Agriculture, Food & Natural Resources		Animal Scientists		1	1		31	35	4	\$33.12	\$68,889
Hospitality & Tourism		Animal Trainers	1				158	178	20	\$14.85	\$30,887
Energy & Engineering		Anthropologists and Archeologists		1	1		18	22	4	NA	NA
Education & Training		Anthropology and Archeology Teachers, Postsecondary		1	1		***	***	***	NA	NA
Government & Public Administration	141	Appraisers and Assessors of Real Estate	1	1	1	1	107	124	17	\$35.93	\$74,729
Law, Public Safety, Corrections & Security		Arbitrators, Mediators, and Conciliators		1	1		13	15	2	NA	NA
Architecture & Construction	140	Architects, Except Landscape and Naval	1	1	1	1	149	161	12	\$38.61	\$80,303
Architecture & Construction	131	Architectural and Civil Drafters	1	1	1	1	150	163	13	\$23.75	\$49,387

Career Cluster	H3 Rank	SOC Title	High Demand	High Skill	High Wage	H3	2016 Estimated Employment	2026 Projected Employment	Numeric Change	Avg Hourly Wage	Avg Annual Wage
Energy & Engineering	158	Architectural and Engineering Managers	1	1	1	1	103	116	13	\$55.21	\$114,836
Education & Training		Architecture Teachers, Postsecondary		1	1		17	19	2	NA	NA
Education & Training		Archivists		1			8	9	1	NA	NA
Education & Training		Area, Ethnic, and Cultural Studies Teachers, Postsecondary		1	1		20	23	3	NA	NA
Communication Arts	125	Art Directors	1	1	1	1	175	188	13	\$37.09	\$77,147
Education & Training	109	Art, Drama, and Music Teachers, Postsecondary	1	1	1	1	179	199	20	NA	NA
Manufacturing		Assemblers and Fabricators, All Other	1				205	197	-8	\$14.42	\$29,996
Hospitality & Tourism		Athletes and Sports Competitors			1		11	13	2	NA	NA
Health Science		Athletic Trainers		1	1		76	88	12	NA	\$47,866
Energy & Engineering		Atmospheric and Space Scientists		1	1		8	8	0	NA	NA
Education & Training		Atmospheric, Earth, Marine, and Space Sciences Teachers, Postsecondary		1	1		25	28	3	NA	NA
Communication Arts	150	Audio and Video Equipment Technicians	1	1	1	1	98	110	12	\$20.04	\$41,691
Education & Training		Audio-Visual and Multimedia Collections Specialists		1	1		10	11	1	NA	NA
Health Science		Audiologists		1	1		13	16	3	NA	NA
Transportation, Distribution & Logistics		Automotive and Watercraft Service Attendants	1				40	48	8	\$12.42	\$25,834
Transportation, Distribution & Logistics	69	Automotive Body and Related Repairers	1	1	1	1	182	217	35	\$22.85	\$47,519
Transportation, Distribution & Logistics		Automotive Glass Installers and Repairers			1		40	49	9	NA	NA
Transportation, Distribution & Logistics	17	Automotive Service Technicians and Mechanics	1	1	1	1	730	834	104	\$20.19	\$42,005
Transportation, Distribution & Logistics	154	Avionics Technicians	1	1	1	1	116	127	11	NA	NA
Hospitality & Tourism		Baggage Porters and Bellhops					16	20	4	NA	NA
Law, Public Safety, Corrections & Security		Bailiffs			1		16	15	-1	NA	NA
Hospitality & Tourism		Bakers	1				312	363	51	\$11.69	\$24,311
Human Services		Barbers		1			***	***	***	NA	NA
Hospitality & Tourism		Bartenders	1				1,202	1,285	83	\$10.15	\$21,122
Transportation, Distribution & Logistics		Bicycle Repairers					11	16	5	NA	NA
Finance		Bill and Account Collectors	1				326	330	4	\$16.06	\$33,411
Transportation, Distribution & Logistics		Billing and Posting Clerks	1				505	587	82	\$16.98	\$35,312
Energy & Engineering		Biochemists and Biophysicists		1	1		59	69	10	NA	NA
Education & Training	116	Biological Science Teachers, Postsecondary	1	1	1	1	167	185	18	NA	\$93,332
Energy & Engineering		Biological Scientists, All Other		1	1		35	43	8	NA	NA
Agriculture, Food & Natural Resources	72	Biological Technicians	1	1	1	1	204	233	29	\$18.98	\$39,490
Health Science		Biomedical Engineers		1	1		26	30	4	NA	NA
Architecture & Construction	160	Boilermakers	1	1	1	1	81	90	9	NA	NA
Business Management & Administration		Bookkeeping, Accounting, and Auditing Clerks	1	1			2,568	2,640	72	\$17.70	\$36,820
Architecture & Construction	161	Brickmasons and Blockmasons	1	1	1	1	81	93	12	\$19.15	\$39,838

Career Cluster	H3 Rank	SOC Title	High Demand	High Skill	High Wage	H3	2016 Estimated Employment	2026 Projected Employment	Numeric Change	Avg Hourly Wage	Avg Annual Wage
Communication Arts		Broadcast Technicians		1	1		105	105	0	\$21.74	\$45,232
Finance		Brokerage Clerks			1		47	57	10	\$21.23	\$44,160
Finance	152	Budget Analysts	1	1	1	1	129	139	10	\$30.07	\$62,547
Hospitality & Tourism		Building Cleaning Workers, All Other					12	13	1	NA	NA
Transportation, Distribution & Logistics	30	Bus and Truck Mechanics and Diesel Engine Specialists	1	1	1	1	459	545	86	\$24.39	\$50,732
Transportation, Distribution & Logistics		Bus Drivers, School or Special Client	1		1		287	320	33	\$18.36	\$38,187
Transportation, Distribution & Logistics		Bus Drivers, Transit and Intercity			1		77	80	3	NA	NA
Business Management & Administration	9	Business Operations Specialists, All Other	1	1	1	1	1,159	1,325	166	\$39.77	\$82,722
Education & Training	73	Business Teachers, Postsecondary	1	1	1	1	267	296	29	NA	\$91,204
Manufacturing		Butchers and Meat Cutters	1				95	113	18	\$16.60	\$34,538
Agriculture, Food & Natural Resources		Buyers and Purchasing Agents, Farm Products		1	1		15	15	0	NA	NA
Manufacturing		Cabinetmakers and Bench Carpenters					51	51	0	\$17.56	\$36,521
Manufacturing		Camera and Photographic Equipment Repairers		1			***	***	***	NA	NA
Communication Arts		Camera Operators, Television, Video, and Motion Picture		1			63	64	1	\$16.35	\$34,021
Health Science	166	Cardiovascular Technologists and Technicians	1	1	1	1	135	144	9	NA	NA
Education & Training		Career/Technical Education Teachers, Middle School		1	1		15	17	2	NA	NA
Education & Training		Career/Technical Education Teachers, Secondary School		1	1		29	33	4	NA	\$63,718
Transportation, Distribution & Logistics		Cargo and Freight Agents			1		42	45	3	\$25.79	\$53,637
Architecture & Construction		Carpenters	1	1			2,124	2,477	353	\$18.58	\$38,635
Architecture & Construction		Carpet Installers					36	42	6	\$11.21	\$23,322
Energy & Engineering		Cartographers and Photogrammetrists		1	1		30	35	5	\$32.07	\$66,704
Marketing		Cashiers	1				4,420	4,683	263	\$10.69	\$22,240
Architecture & Construction		Cement Masons and Concrete Finishers	1		1		536	632	96	\$19.77	\$41,121
Hospitality & Tourism		Chefs and Head Cooks	1		1		78	96	18	\$24.50	\$50,948
Energy & Engineering		Chemical Engineers		1	1		9	11	2	NA	NA
Manufacturing		Chemical Equipment Operators and Tenders			1		***	***	***	NA	NA
Manufacturing	111	Chemical Technicians	1	1	1	1	114	136	22	NA	NA
Education & Training		Chemistry Teachers, Postsecondary		1	1		66	73	7	NA	\$93,284
Energy & Engineering	94	Chemists	1	1	1	1	123	153	30	\$38.02	\$79,082
Business Management & Administration	138	Chief Executives	1	1	1	1	227	232	5	\$115.22	\$239,657
Human Services	27	Child, Family, and School Social Workers	1	1	1	1	565	636	71	\$21.24	\$44,176
Human Services		Childcare Workers	1				2,764	3,127	363	\$11.02	\$22,936
Health Science		Chiropractors		1	1		95	105	10	\$55.81	\$116,098
Architecture & Construction	146	Civil Engineering Technicians	1	1	1	1	124	133	9	\$26.56	\$55,256
Architecture & Construction	47	Civil Engineers	1	1	1	1	443	490	47	\$41.44	\$86,181
Finance	37	Claims Adjusters, Examiners, and Investigators	1	1	1	1	1,028	1,029	1	\$32.27	\$67,115
Transportation, Distribution & Logistics		Cleaners of Vehicles and Equipment	1				525	641	116	\$12.57	\$26,135

Career Cluster	H3 Rank	SOC Title	High Demand	High Skill	High Wage	H3	2016 Estimated Employment	2026 Projected Employment	Numeric Change	Avg Hourly Wage	Avg Annual Wage
Manufacturing		Cleaning, Washing, and Metal Pickling Equipment Operators and Tenders			1		7	8	1	NA	NA
Human Services	159	Clergy	1	1	1	1	78	87	9	\$21.35	\$44,401
Human Services	122	Clinical, Counseling, and School Psychologists	1	1	1	1	144	165	21	\$34.33	\$71,408
Education & Training		Coaches and Scouts	1	1			336	374	38	NA	\$51,210
Manufacturing		Coating, Painting, and Spraying Machine Setters, Operators, and Tenders	1		1		98	114	16	\$19.11	\$39,745
Manufacturing		Coin, Vending, and Amusement Machine Servicers and Repairers			1		18	22	4	NA	NA
Hospitality & Tourism		Combined Food Preparation and Serving Workers, Including Fast Food	1				4,568	5,482	914	\$10.52	\$21,888
Communication Arts		Commercial and Industrial Designers		1	1		31	36	5	\$33.04	\$68,728
Transportation, Distribution & Logistics		Commercial Pilots	1		1		102	113	11	NA	\$82,260
Business Management & Administration		Communications Equipment Operators, All Other			1		15	16	1	NA	NA
Education & Training		Communications Teachers, Postsecondary		1	1		62	69	7	NA	\$73,740
Human Services	46	Community and Social Service Specialists, All Other	1	1	1	1	322	358	36	\$22.03	\$45,819
Human Services		Community Health Workers	1				202	246	44	\$14.58	\$30,342
Business Management & Administration		Compensation and Benefits Managers		1	1		27	29	2	\$50.57	\$105,189
Business Management & Administration	157	Compensation, Benefits, and Job Analysis Specialists	1	1	1	1	115	125	10	\$28.67	\$59,644
Government & Public Administration	8	Compliance Officers	1	1	1	1	1,170	1,381	211	\$32.56	\$67,726
Energy & Engineering		Computer and Information Research Scientists		1	1		14	20	6	NA	NA
Business Management & Administration	41	Computer and Information Systems Managers	1	1	1	1	422	489	67	\$56.08	\$116,639
Energy & Engineering		Computer Hardware Engineers		1	1		6	7	1	NA	NA
Information Technology	153	Computer Network Architects	1	1	1	1	126	139	13	\$35.37	\$73,559
Information Technology	34	Computer Network Support Specialists	1	1	1	1	580	652	72	\$27.28	\$56,753
Manufacturing		Computer Numerically Controlled Machine Tool Programmers, Metal and Plastic		1	1		21	30	9	\$23.52	\$48,932
Information Technology	68	Computer Occupations, All Other	1	1	1	1	247	289	42	\$35.73	\$74,323
Business Management & Administration		Computer Operators			1		224	191	-33	\$20.50	\$42,631
Information Technology	101	Computer Programmers	1	1	1	1	586	573	-13	\$35.34	\$73,493
Education & Training		Computer Science Teachers, Postsecondary		1	1		52	58	6	NA	\$102,601
Information Technology	40	Computer Systems Analysts	1	1	1	1	575	635	60	\$30.99	\$64,444
Information Technology	13	Computer User Support Specialists	1	1	1	1	1,021	1,176	155	\$20.19	\$41,995
Manufacturing		Computer-Controlled Machine Tool Operators, Metal and Plastic	1		1		72	82	10	\$19.10	\$39,727
Manufacturing		Computer, Automated Teller, and Office Machine Repairers		1	1		67	64	-3	\$22.56	\$46,940
Hospitality & Tourism		Concierges					***	***	***	NA	NA
Energy & Engineering		Conservation Scientists		1	1		25	29	4	\$33.73	\$70,154
Government & Public Administration		Construction and Building Inspectors	1		1		90	97	7	\$27.83	\$57,877
Architecture & Construction		Construction and Related Workers, All Other			1		48	52	4	\$28.25	\$58,761

Career Cluster	H3 Rank	SOC Title	High Demand	High Skill	High Wage	H3	2016 Estimated Employment	2026 Projected Employment	Numeric Change	Avg Hourly Wage	Avg Annual Wage
Architecture & Construction		Construction Laborers	1				614	717	103	\$15.92	\$33,105
Architecture & Construction	15	Construction Managers	1	1	1	1	873	1,027	154	\$41.95	\$87,237
Architecture & Construction		Continuous Mining Machine Operators					***	***	***	NA	NA
Architecture & Construction		Control and Valve Installers and Repairers, Except Mechanical Door	1				93	106	13	\$20.40	\$42,438
Architecture & Construction		Conveyor Operators and Tenders					77	75	-2	\$14.88	\$30,934
Hospitality & Tourism		Cooks, All Other					24	30	6	NA	NA
Hospitality & Tourism		Cooks, Fast Food	1				481	475	-6	\$10.48	\$21,787
Hospitality & Tourism		Cooks, Institution and Cafeteria	1				646	769	123	\$14.11	\$29,332
Hospitality & Tourism		Cooks, Private Household		1			10	11	1	NA	NA
Hospitality & Tourism		Cooks, Restaurant	1				1,076	1,252	176	\$11.60	\$24,130
Hospitality & Tourism		Cooks, Short Order	1				1,101	1,127	26	\$11.11	\$23,110
Law, Public Safety, Corrections & Security		Correctional Officers and Jailers	1		1		882	820	-62	NA	NA
Business Management & Administration		Correspondence Clerks					***	***	***	NA	NA
Architecture & Construction	42	Cost Estimators	1	1	1	1	345	407	62	\$30.69	\$63,829
Communication Arts		Costume Attendants			1		8	8	0	NA	NA
Human Services		Counselors, All Other		1	1		***	***	***	NA	NA
Marketing		Counter and Rental Clerks	1				690	763	73	\$13.22	\$27,490
Hospitality & Tourism		Counter Attendants, Cafeteria, Food Concession, and Coffee Shop	1				632	683	51	\$10.61	\$22,077
Transportation, Distribution & Logistics		Couriers and Messengers	1				275	307	32	\$12.79	\$26,604
Law, Public Safety, Corrections & Security		Court Reporters		1	1		22	21	-1	NA	NA
Government & Public Administration		Court, Municipal, and License Clerks			1		88	93	5	\$19.17	\$39,868
Communication Arts		Craft Artists			1		***	***	***	NA	NA
Architecture & Construction		Crane and Tower Operators			1		34	41	7	NA	NA
Finance	80	Credit Analysts	1	1	1	1	137	174	37	\$28.29	\$58,831
Finance		Credit Authorizers, Checkers, and Clerks					28	28	0	\$18.02	\$37,481
Human Services		Credit Counselors	1	1			1,042	1,442	400	NA	NA
Education & Training		Criminal Justice and Law Enforcement Teachers, Postsecondary		1	1		19	21	2	NA	\$52,993
Law, Public Safety, Corrections & Security		Crossing Guards					13	15	2	NA	NA
Manufacturing		Crushing, Grinding, and Polishing Machine Setters, Operators, and Tenders			1		24	25	1	\$19.44	\$40,446
Education & Training	155	Curators	1	1	1	1	64	78	14	\$24.72	\$51,421
Business Management & Administration		Customer Service Representatives	1				4,762	5,139	377	\$16.11	\$33,526
Manufacturing		Cutters and Trimmers, Hand			1		8	9	1	NA	NA
Manufacturing		Cutting and Slicing Machine Setters, Operators, and Tenders			1		48	54	6	\$19.90	\$41,385
Manufacturing		Cutting, Punching, and Press Machine Setters, Operators, and Tenders, Metal and Plastic			1		89	92	3	\$19.86	\$41,311
Communication Arts		Dancers	1				129	126	-3	NA	NA

Career Cluster	H3 Rank	SOC Title	High Demand	High Skill	High Wage	H3	2016 Estimated Employment	2026 Projected Employment	Numeric Change	Avg Hourly Wage	Avg Annual Wage
Business Management & Administration		Data Entry Keyers					306	248	-58	\$15.82	\$32,906
Information Technology	92	Database Administrators	1	1	1	1	217	244	27	\$33.32	\$69,307
Marketing		Demonstrators and Product Promoters					21	25	4	NA	NA
Health Science	32	Dental Assistants	1	1	1	1	420	490	70	\$19.47	\$40,508
Health Science	55	Dental Hygienists	1	1	1	1	335	393	58	\$32.32	\$67,238
Manufacturing		Dental Laboratory Technicians			1		45	49	4	NA	NA
Health Science		Dentists, All Other Specialists		1	1		***	***	***	NA	NA
Health Science	121	Dentists, General	1	1	1	1	179	208	29	\$101.26	\$210,620
Communication Arts		Designers, All Other		1	1		6	6	0	NA	NA
Communication Arts		Desktop Publishers		1	1		26	22	-4	\$18.66	\$38,802
Law, Public Safety, Corrections & Security		Detectives and Criminal Investigators			1		79	85	6	\$30.20	\$62,820
Health Science		Diagnostic Medical Sonographers		1	1		67	74	7	NA	NA
Health Science		Dietetic Technicians		1			57	61	4	\$15.23	\$31,677
Health Science	123	Dietitians and Nutritionists	1	1	1	1	139	160	21	\$23.82	\$49,544
Hospitality & Tourism		Dining Room and Cafeteria Attendants and Bartender Helpers	1				211	234	23	\$10.57	\$21,983
Human Services		Directors, Religious Activities and Education		1	1		48	52	4	NA	NA
Hospitality & Tourism		Dishwashers	1				362	400	38	\$10.70	\$22,245
Transportation, Distribution & Logistics		Dispatchers, Except Police, Fire, and Ambulance	1		1		212	214	2	\$18.94	\$39,386
Marketing		Door-to-Door Sales Workers, News and Street Vendors, and Related Workers	1				114	130	16	NA	NA
Manufacturing		Drafters, All Other		1	1		24	26	2	\$27.19	\$56,563
Architecture & Construction		Dredge Operators			1		7	7	0	NA	NA
Manufacturing		Drilling and Boring Machine Tool Setters, Operators, and Tenders, Metal and Plastic			1		9	8	-1	NA	NA
Marketing		Driver/Sales Workers	1				584	614	30	\$11.90	\$24,750
Architecture & Construction		Drywall and Ceiling Tile Installers	1		1		213	220	7	\$21.66	\$45,063
Architecture & Construction		Earth Drillers, Except Oil and Gas			1		10	12	2	NA	NA
Education & Training		Economics Teachers, Postsecondary		1	1		61	68	7	NA	NA
Energy & Engineering		Economists		1	1		21	22	1	\$31.78	\$66,104
Communication Arts	136	Editors	1	1	1	1	209	208	-1	\$31.95	\$66,454
Education & Training	139	Education Administrators, All Other	1	1	1	1	130	144	14	\$48.75	\$101,400
Education & Training	134	Education Administrators, Elementary and Secondary School	1	1	1	1	136	151	15	NA	\$98,216
Education & Training	62	Education Administrators, Postsecondary	1	1	1	1	323	359	36	\$53.92	\$112,145
Education & Training		Education Administrators, Preschool and Childcare Center/Program		1	1		18	20	2	\$32.30	\$67,178
Education & Training	115	Education Teachers, Postsecondary	1	1	1	1	164	182	18	NA	\$67,558
Education & Training		Education, Training, and Library Workers, All Other		1	1		70	77	7	\$23.52	\$48,927
Education & Training	48	Educational, Guidance, School, and Vocational Counselors	1	1	1	1	337	379	42	\$27.42	\$57,037

Career Cluster	H3 Rank	SOC Title	High Demand	High Skill	High Wage	H3	2016 Estimated Employment	2026 Projected Employment	Numeric Change	Avg Hourly Wage	Avg Annual Wage
Manufacturing		Electric Motor, Power Tool, and Related Repairers			1		12	13	1	\$22.44	\$46,682
Manufacturing		Electrical and Electronic Equipment Assemblers	1				257	232	-25	\$15.31	\$31,837
Manufacturing	172	Electrical and Electronics Drafters	1	1	1	1	69	79	10	\$26.56	\$55,258
Manufacturing	103	Electrical and Electronics Engineering Technicians	1	1	1	1	189	209	20	\$26.87	\$55,894
Transportation, Distribution & Logistics		Electrical and Electronics Installers and Repairers, Transportation Equipment		1	1		48	56	8	NA	NA
Manufacturing		Electrical and Electronics Repairers, Commercial and Industrial Equipment		1	1		16	20	4	NA	NA
Manufacturing		Electrical and Electronics Repairers, Powerhouse, Substation, and Relay		1	1		23	24	1	\$37.32	\$77,630
Energy & Engineering	58	Electrical Engineers	1	1	1	1	279	333	54	\$47.39	\$98,582
Architecture & Construction	106	Electrical Power-Line Installers and Repairers	1	1	1	1	180	200	20	\$33.06	\$68,762
Architecture & Construction	12	Electricians	1	1	1	1	932	1,062	130	\$24.13	\$50,191
Manufacturing		Electro-Mechanical Technicians		1	1		21	24	3	\$21.39	\$44,497
Manufacturing		Electromechanical Equipment Assemblers			1		***	***	***	NA	NA
Manufacturing		Electronic Home Entertainment Equipment Installers and Repairers		1	1		15	14	-1	\$22.22	\$46,220
Energy & Engineering		Electronics Engineers, Except Computer		1	1		97	102	5	\$37.78	\$78,602
Education & Training	7	Elementary School Teachers, Except Special Education	1	1	1	1	1,677	1,860	183	NA	\$54,556
Architecture & Construction		Elevator Installers and Repairers		1	1		***	***	***	NA	NA
Government & Public Administration		Eligibility Interviewers, Government Programs	1				147	156	9	NA	NA
Government & Public Administration		Emergency Management Directors		1	1		23	24	1	\$28.79	\$59,880
Law, Public Safety, Corrections & Security		Emergency Medical Technicians and Paramedics	1	1			154	176	22	\$15.53	\$32,301
Manufacturing		Engine and Other Machine Assemblers			1		10	9	-1	NA	NA
Education & Training		Engineering Teachers, Postsecondary		1	1		81	90	9	NA	NA
Manufacturing	145	Engineering Technicians, Except Drafters, All Other	1	1	1	1	77	92	15	NA	NA
Energy & Engineering	112	Engineers, All Other	1	1	1	1	138	162	24	\$33.46	\$69,585
Education & Training	143	English Language and Literature Teachers, Postsecondary	1	1	1	1	120	133	13	NA	\$76,902
Communication Arts		Entertainers and Performers, Sports and Related Workers, All Other					49	54	5	NA	NA
Hospitality & Tourism		Entertainment Attendants and Related Workers, All Other					22	26	4	NA	NA
Agriculture, Food & Natural Resources		Environmental Engineering Technicians		1	1		21	25	4	\$22.28	\$46,324
Agriculture, Food & Natural Resources	142	Environmental Engineers	1	1	1	1	117	132	15	\$38.40	\$79,885
Agriculture, Food & Natural Resources		Environmental Science and Protection Technicians, Including Health		1	1		30	33	3	\$28.32	\$58,920
Education & Training		Environmental Science Teachers, Postsecondary		1	1		***	***	***	NA	NA
Energy & Engineering	76	Environmental Scientists and Specialists, Including Health	1	1	1	1	264	286	22	\$29.74	\$61,858
Health Science		Epidemiologists		1	1		28	32	4	NA	NA
Manufacturing		Etchers and Engravers					19	20	1	\$15.30	\$31,826
Architecture & Construction		Excavating and Loading Machine and Dragline Operators	1		1		61	70	9	\$24.32	\$50,579

Career Cluster	H3 Rank	SOC Title	High Demand	High Skill	High Wage	H3	2016 Estimated Employment	2026 Projected Employment	Numeric Change	Avg Hourly Wage	Avg Annual Wage
Business Management & Administration		Executive Secretaries and Executive Administrative Assistants	1		1		1,510	1,405	-105	\$23.74	\$49,379
Health Science		Exercise Physiologists		1	1		9	12	3	NA	NA
Manufacturing		Extruding and Drawing Machine Setters, Operators, and Tenders, Metal and Plastic			1		65	67	2	\$23.02	\$47,889
Manufacturing		Extruding, Forming, Pressing, and Compacting Machine Setters, Operators, and Tenders	1		1		406	451	45	\$21.44	\$44,593
Manufacturing		Fabric Menders, Except Garment		1			10	11	1	NA	NA
Health Science	98	Family and General Practitioners	1	1	1	1	233	268	35	\$102.37	\$212,923
Education & Training		Farm and Home Management Advisors		1	1		19	21	2	NA	NA
Agriculture, Food & Natural Resources		Farm Equipment Mechanics and Service Technicians		1	1		60	68	8	\$20.07	\$41,738
Agriculture, Food & Natural Resources		Farm Labor Contractors			1		***	***	***	NA	NA
Agriculture, Food & Natural Resources		Farmers, Ranchers, and Other Agricultural Managers	1		1		613	663	50	NA	NA
Agriculture, Food & Natural Resources		Farmworkers and Laborers, Crop, Nursery, and Greenhouse	1				1,052	1,080	28	\$11.98	\$24,914
Agriculture, Food & Natural Resources		Farmworkers, Farm, Ranch, and Aquacultural Animals	1				515	534	19	NA	NA
Manufacturing		Fiberglass Laminators and Fabricators	1		1		129	150	21	NA	NA
Business Management & Administration		File Clerks					79	70	-9	\$13.78	\$28,662
Communication Arts		Film and Video Editors		1	1		13	14	1	\$36.69	\$76,324
Finance	74	Financial Analysts	1	1	1	1	166	202	36	\$36.09	\$75,081
Finance		Financial Clerks, All Other					7	8	1	NA	NA
Government & Public Administration		Financial Examiners		1	1		56	64	8	\$24.53	\$51,013
Finance	23	Financial Managers	1	1	1	1	482	600	118	\$65.76	\$136,777
Finance		Financial Specialists, All Other		1	1		62	71	9	NA	NA
Communication Arts		Fine Artists, Including Painters, Sculptors, and Illustrators		1			60	65	5	\$17.99	\$37,413
Law, Public Safety, Corrections & Security		Fire Inspectors and Investigators		1	1		51	55	4	NA	NA
Law, Public Safety, Corrections & Security	132	Firefighters	1	1	1	1	203	214	11	NA	NA
Architecture & Construction		First-Line Supervisors of Construction Trades and Extraction Workers	1		1		1,046	1,237	191	\$29.51	\$61,370
Law, Public Safety, Corrections & Security		First-Line Supervisors of Correctional Officers			1		164	150	-14	\$25.60	\$53,251
Agriculture, Food & Natural Resources		First-Line Supervisors of Farming, Fishing, and Forestry Workers			1		70	73	3	NA	NA
Law, Public Safety, Corrections & Security		First-Line Supervisors of Fire Fighting and Prevention Workers		1	1		54	56	2	\$30.50	\$63,426
Hospitality & Tourism		First-Line Supervisors of Food Preparation and Serving Workers	1				1,325	1,502	177	\$15.85	\$32,958
Transportation, Distribution & Logistics		First-Line Supervisors of Helpers, Laborers, and Material Movers, Hand	1		1		208	234	26	\$26.34	\$54,792
Hospitality & Tourism		First-Line Supervisors of Housekeeping and Janitorial Workers	1		1		400	451	51	\$19.17	\$39,871
Architecture & Construction		First-Line Supervisors of Landscaping, Lawn Service, and Groundskeeping Workers	1		1		188	212	24	\$25.07	\$52,149
Manufacturing		First-Line Supervisors of Mechanics, Installers, and Repairers	1		1		649	745	96	\$32.38	\$67,361
Marketing		First-Line Supervisors of Non-Retail Sales Workers	1		1		656	738	82	\$33.97	\$70,656

Career Cluster	H3 Rank	SOC Title	High Demand	High Skill	High Wage	H3	2016 Estimated Employment	2026 Projected Employment	Numeric Change	Avg Hourly Wage	Avg Annual Wage
Business Management & Administration		First-Line Supervisors of Office and Administrative Support Workers	1		1		2,386	2,599	213	\$24.69	\$51,350
Human Services		First-Line Supervisors of Personal Service Workers	1				245	290	45	\$18.22	\$37,882
Law, Public Safety, Corrections & Security		First-Line Supervisors of Police and Detectives			1		78	83	5	\$45.35	\$94,324
Manufacturing		First-Line Supervisors of Production and Operating Workers	1		1		787	868	81	\$30.49	\$63,419
Law, Public Safety, Corrections & Security		First-Line Supervisors of Protective Service Workers, All Other			1		79	82	3	\$22.39	\$46,577
Marketing		First-Line Supervisors of Retail Sales Workers	1				1,909	2,101	192	\$19.28	\$40,097
Transportation, Distribution & Logistics		First-Line Supervisors of Transportation and Material-Moving Machine and Vehicle Operators	1		1		180	196	16	\$27.42	\$57,040
Law, Public Safety, Corrections & Security		Fish and Game Wardens		1	1		19	20	1	NA	NA
Human Services		Fitness Trainers and Aerobics Instructors	1				668	816	148	\$16.13	\$33,555
Transportation, Distribution & Logistics		Flight Attendants					***	***	***	NA	NA
Communication Arts		Floral Designers					114	116	2	\$12.06	\$25,083
Manufacturing		Food and Tobacco Roasting, Baking, and Drying Machine Operators and Tenders					***	***	***	NA	NA
Manufacturing		Food Batchmakers	1				483	540	57	\$13.14	\$27,332
Manufacturing		Food Cooking Machine Operators and Tenders					27	29	2	\$16.02	\$33,309
Hospitality & Tourism		Food Preparation and Serving Related Workers, All Other					43	48	5	\$13.36	\$27,800
Hospitality & Tourism		Food Preparation Workers	1				723	824	101	\$11.25	\$23,409
Manufacturing		Food Processing Workers, All Other					22	26	4	\$12.78	\$26,598
Agriculture, Food & Natural Resources		Food Scientists and Technologists		1	1		10	11	1	NA	NA
Hospitality & Tourism		Food Servers, Nonrestaurant	1				334	420	86	\$11.18	\$23,259
Hospitality & Tourism		Food Service Managers	1		1		338	381	43	\$21.96	\$45,686
Education & Training		Foreign Language and Literature Teachers, Postsecondary		1	1		11	13	2	NA	NA
Law, Public Safety, Corrections & Security		Forensic Science Technicians		1	1		45	52	7	NA	NA
Agriculture, Food & Natural Resources		Forest and Conservation Technicians		1			9	10	1	NA	NA
Agriculture, Food & Natural Resources		Forest and Conservation Workers			1		10	10	0	NA	NA
Agriculture, Food & Natural Resources		Foresters		1	1		19	21	2	\$27.25	\$56,678
Education & Training		Forestry and Conservation Science Teachers, Postsecondary		1	1		32	36	4	NA	NA
Manufacturing		Forging Machine Setters, Operators, and Tenders, Metal and Plastic			1		***	***	***	NA	NA
Manufacturing		Foundry Mold and Coremakers					***	***	***	NA	NA
Business Management & Administration	60	Fundraisers	1	1	1	1	248	286	38	\$30.86	\$64,190
Human Services		Funeral Attendants					16	15	-1	NA	NA
Human Services		Funeral Service Managers		1	1		10	10	0	NA	NA
Manufacturing		Furnace, Kiln, Oven, Drier, and Kettle Operators and Tenders			1		33	35	2	\$22.19	\$46,156
Manufacturing		Furniture Finishers			1		36	39	3	NA	NA
Hospitality & Tourism		Gaming and Sports Book Writers and Runners	1				100	112	12	\$10.15	\$21,110
Hospitality & Tourism		Gaming Managers			1		***	***	***	NA	NA

Career Cluster	H3 Rank	SOC Title	High Demand	High Skill	High Wage	H3	2016 Estimated Employment	2026 Projected Employment	Numeric Change	Avg Hourly Wage	Avg Annual Wage
Hospitality & Tourism		Gaming Supervisors					14	16	2	NA	NA
Law, Public Safety, Corrections & Security		Gaming Surveillance Officers and Gaming Investigators			1		***	***	***	NA	NA
Manufacturing		Gas Plant Operators		1	1		51	52	1	\$31.29	\$65,077
Business Management & Administration	3	General and Operations Managers	1	1	1	1	2,610	2,976	366	\$52.35	\$108,879
Health Science		Genetic Counselors		1	1		***	***	***	NA	NA
Education & Training		Geography Teachers, Postsecondary		1	1		7	8	1	NA	NA
Energy & Engineering		Geoscientists, Except Hydrologists and Geographers		1	1		15	17	2	\$31.37	\$65,235
Architecture & Construction		Glaziers	1	1			154	172	18	\$16.47	\$34,264
Agriculture, Food & Natural Resources		Graders and Sorters, Agricultural Products					49	56	7	NA	NA
Education & Training		Graduate Teaching Assistants		1			68	76	8	NA	NA
Communication Arts	49	Graphic Designers	1	1	1	1	541	559	18	\$20.78	\$43,228
Manufacturing		Grinding and Polishing Workers, Hand					8	7	-1	NA	NA
Manufacturing		Grinding, Lapping, Polishing, and Buffing Machine Tool Setters, Operators, and Tenders, Metal and Plastic			1		21	21	0	NA	NA
Architecture & Construction		Grounds Maintenance Workers, All Other			1		***	***	***	NA	NA
Human Services		Hairdressers, Hairstylists, and Cosmetologists	1	1			656	698	42	\$13.80	\$28,712
Agriculture, Food & Natural Resources		Hazardous Materials Removal Workers					33	41	8	\$17.64	\$36,689
Energy & Engineering		Health and Safety Engineers, Except Mining Safety Engineers and Inspectors		1	1		21	25	4	\$37.34	\$77,664
Health Science		Health Diagnosing and Treating Practitioners, All Other		1			59	66	7	NA	NA
Human Services	78	Health Educators	1	1	1	1	154	182	28	\$23.75	\$49,384
Education & Training	66	Health Specialties Teachers, Postsecondary	1	1	1	1	311	345	34	NA	\$92,517
Health Science		Health Technologists and Technicians, All Other		1	1		65	72	7	\$19.91	\$41,405
Health Science		Healthcare Practitioners and Technical Workers, All Other		1			21	27	6	NA	NA
Human Services	61	Healthcare Social Workers	1	1	1	1	232	270	38	\$22.18	\$46,146
Health Science		Healthcare Support Workers, All Other	1				100	114	14	\$15.91	\$33,088
Health Science		Hearing Aid Specialists					7	9	2	NA	NA
Manufacturing		Heat Treating Equipment Setters, Operators, and Tenders, Metal and Plastic			1		***	***	***	NA	NA
Architecture & Construction	36	Heating, Air Conditioning, and Refrigeration Mechanics and Installers	1	1	1	1	365	441	76	\$29.27	\$60,881
Transportation, Distribution & Logistics	1	Heavy and Tractor-Trailer Truck Drivers	1	1	1	1	6,425	6,812	387	NA	NA
Architecture & Construction		Helpers--Brickmasons, Blockmasons, Stonemasons, and Tile and Marble Setters					20	24	4	\$12.74	\$26,491
Architecture & Construction		Helpers--Carpenters					29	30	1	NA	NA
Architecture & Construction		Helpers--Electricians					7	8	1	NA	NA
Architecture & Construction		Helpers--Installation, Maintenance, and Repair Workers			1		12	12	0	\$18.77	\$39,032
Architecture & Construction		Helpers--Painters, Paperhangers, Plasterers, and Stucco Masons					6	7	1	NA	NA

Career Cluster	H3 Rank	SOC Title	High Demand	High Skill	High Wage	H3	2016 Estimated Employment	2026 Projected Employment	Numeric Change	Avg Hourly Wage	Avg Annual Wage
Architecture & Construction		Helpers--Pipelayers, Plumbers, Pipefitters, and Steamfitters					32	38	6	NA	NA
Manufacturing		Helpers--Production Workers	1				458	549	91	\$13.51	\$28,110
Architecture & Construction		Helpers--Roofers					35	41	6	\$12.96	\$26,957
Architecture & Construction		Helpers, Construction Trades, All Other			1		6	7	1	NA	NA
Architecture & Construction		Highway Maintenance Workers	1				203	219	16	\$14.90	\$31,001
Energy & Engineering		Historians		1	1		11	12	1	NA	NA
Education & Training		History Teachers, Postsecondary		1	1		47	53	6	NA	NA
Architecture & Construction		Hoist and Winch Operators					***	***	***	NA	NA
Manufacturing		Home Appliance Repairers			1		34	36	2	\$24.46	\$50,869
Education & Training		Home Economics Teachers, Postsecondary		1	1		***	***	***	NA	NA
Health Science		Home Health Aides	1				447	652	205	\$12.57	\$26,164
Hospitality & Tourism		Hosts and Hostesses, Restaurant, Lounge, and Coffee Shop	1				345	385	40	\$10.48	\$21,786
Hospitality & Tourism		Hotel, Motel, and Resort Desk Clerks	1				285	348	63	\$11.32	\$23,541
Business Management & Administration	82	Human Resources Assistants, Except Payroll and Timekeeping	1	1	1	1	257	268	11	\$19.28	\$40,110
Business Management & Administration	124	Human Resources Managers	1	1	1	1	127	146	19	\$54.77	\$113,922
Business Management & Administration	24	Human Resources Specialists	1	1	1	1	665	732	67	\$26.70	\$55,525
Energy & Engineering		Hydrologists		1	1		54	61	7	\$33.01	\$68,657
Manufacturing	129	Industrial Engineering Technicians	1	1	1	1	94	113	19	\$29.96	\$62,304
Energy & Engineering	51	Industrial Engineers	1	1	1	1	246	315	69	\$40.67	\$84,602
Manufacturing	28	Industrial Machinery Mechanics	1	1	1	1	466	560	94	\$25.37	\$52,765
Business Management & Administration	88	Industrial Production Managers	1	1	1	1	211	239	28	\$47.28	\$98,342
Transportation, Distribution & Logistics		Industrial Truck and Tractor Operators	1		1		548	609	61	\$18.97	\$39,468
Business Management & Administration		Information and Record Clerks, All Other	1		1		187	225	38	NA	NA
Information Technology	59	Information Security Analysts	1	1	1	1	150	212	62	\$37.42	\$77,846
Manufacturing		Inspectors, Testers, Sorters, Samplers, and Weighers	1		1		654	643	-11	\$23.36	\$48,587
Manufacturing		Installation, Maintenance, and Repair Workers, All Other	1		1		82	96	14	\$20.19	\$42,004
Education & Training	117	Instructional Coordinators	1	1	1	1	144	161	17	\$26.88	\$55,912
Architecture & Construction		Insulation Workers, Floor, Ceiling, and Wall			1		67	71	4	\$18.36	\$38,185
Architecture & Construction		Insulation Workers, Mechanical		1	1		36	42	6	NA	NA
Finance		Insurance Appraisers, Auto Damage		1	1		40	40	0	NA	NA
Finance		Insurance Claims and Policy Processing Clerks	1		1		1,069	1,158	89	\$18.92	\$39,338
Finance		Insurance Sales Agents	1		1		907	975	68	\$33.78	\$70,270
Finance	149	Insurance Underwriters	1	1	1	1	559	514	-45	\$33.13	\$68,923
Architecture & Construction		Interior Designers	1	1			94	105	11	\$18.39	\$38,239
Health Science		Internists, General		1	1		15	17	2	NA	NA
Education & Training		Interpreters and Translators	1	1			187	232	45	\$19.62	\$40,810
Business Management & Administration		Interviewers, Except Eligibility and Loan	1				888	981	93	\$14.23	\$29,599

Career Cluster	H3 Rank	SOC Title	High Demand	High Skill	High Wage	H3	2016 Estimated Employment	2026 Projected Employment	Numeric Change	Avg Hourly Wage	Avg Annual Wage
Hospitality & Tourism		Janitors and Cleaners, Except Maids and Housekeeping Cleaners	1				2,456	2,720	264	\$12.34	\$25,669
Manufacturing		Jewelers and Precious Stone and Metal Workers	1	1			79	85	6	\$19.88	\$41,342
Law, Public Safety, Corrections & Security		Judges, Magistrate Judges, and Magistrates		1	1		***	***	***	NA	NA
Law, Public Safety, Corrections & Security		Judicial Law Clerks		1			12	13	1	NA	NA
Education & Training	86	Kindergarten Teachers, Except Special Education	1	1	1	1	198	221	23	NA	\$54,047
Business Management & Administration		Labor Relations Specialists	1	1			330	303	-27	\$21.32	\$44,341
Transportation, Distribution & Logistics		Laborers and Freight, Stock, and Material Movers, Hand	1				2,035	2,235	200	\$14.60	\$30,366
Architecture & Construction		Landscape Architects		1	1		27	30	3	\$32.21	\$67,005
Architecture & Construction		Landscaping and Groundskeeping Workers	1				1,012	1,134	122	\$15.03	\$31,263
Manufacturing		Lathe and Turning Machine Tool Setters, Operators, and Tenders, Metal and Plastic				1	11	10	-1	NA	NA
Human Services		Laundry and Dry-Cleaning Workers	1				205	211	6	\$11.49	\$23,897
Education & Training		Law Teachers, Postsecondary		1	1		42	46	4	NA	NA
Law, Public Safety, Corrections & Security	29	Lawyers	1	1	1	1	868	967	99	\$62.42	\$129,832
Law, Public Safety, Corrections & Security		Legal Secretaries				1	201	169	-32	\$18.99	\$39,503
Law, Public Safety, Corrections & Security		Legal Support Workers, All Other		1	1		18	21	3	\$21.94	\$45,635
Government & Public Administration		Legislators		1			68	71	3	NA	\$60,208
Education & Training	120	Librarians	1	1	1	1	159	173	14	\$26.40	\$54,913
Business Management & Administration		Library Assistants, Clerical					46	51	5	\$14.02	\$29,156
Education & Training		Library Science Teachers, Postsecondary		1	1		40	44	4	NA	NA
Education & Training	144	Library Technicians	1	1	1	1	98	105	7	\$18.65	\$38,776
Health Science	16	Licensed Practical and Licensed Vocational Nurses	1	1	1	1	734	885	151	\$19.79	\$41,157
Energy & Engineering		Life Scientists, All Other		1	1		***	***	***	NA	NA
Energy & Engineering	156	Life, Physical, and Social Science Technicians, All Other	1	1	1	1	66	78	12	\$22.47	\$46,738
Law, Public Safety, Corrections & Security		Lifeguards, Ski Patrol, and Other Recreational Protective Service Workers	1				45	56	11	NA	NA
Transportation, Distribution & Logistics		Light Truck or Delivery Services Drivers	1				776	854	78	\$16.08	\$33,450
Finance		Loan Interviewers and Clerks	1		1		274	361	87	\$19.91	\$41,418
Finance	20	Loan Officers	1	1	1	1	449	583	134	\$39.92	\$83,041
Human Services		Locker Room, Coatroom, and Dressing Room Attendants					12	14	2	\$12.51	\$26,012
Manufacturing		Locksmiths and Safe Repairers		1			57	57	0	\$16.49	\$34,301
Transportation, Distribution & Logistics		Locomotive Engineers	1		1		108	125	17	NA	NA
Hospitality & Tourism		Lodging Managers			1		18	21	3	\$48.22	\$100,296
Agriculture, Food & Natural Resources		Logging Equipment Operators			1		***	***	***	NA	NA
Transportation, Distribution & Logistics		Logisticians		1	1		61	68	7	\$34.56	\$71,884
Manufacturing		Machine Feeders and Offbearers	1		1		80	94	14	NA	NA
Manufacturing	18	Machinists	1	1	1	1	649	744	95	\$21.51	\$44,739

Career Cluster	H3 Rank	SOC Title	High Demand	High Skill	High Wage	H3	2016 Estimated Employment	2026 Projected Employment	Numeric Change	Avg Hourly Wage	Avg Annual Wage
Health Science		Magnetic Resonance Imaging Technologists		1	1		25	28	3	\$32.75	\$68,106
Hospitality & Tourism		Maids and Housekeeping Cleaners	1				2,171	2,474	303	\$10.80	\$22,466
Business Management & Administration		Mail Clerks and Mail Machine Operators, Except Postal Service	1				207	197	-10	\$13.96	\$29,045
Manufacturing		Maintenance and Repair Workers, General	1		1		1,514	1,700	186	\$19.11	\$39,745
Manufacturing	81	Maintenance Workers, Machinery	1	1	1	1	146	179	33	\$27.76	\$57,742
Business Management & Administration	25	Management Analysts	1	1	1	1	539	632	93	\$34.22	\$71,193
Business Management & Administration	26	Managers, All Other	1	1	1	1	644	738	94	\$44.74	\$93,066
Human Services		Manicurists and Pedicurists		1			39	41	2	NA	NA
Marketing	10	Market Research Analysts and Marketing Specialists	1	1	1	1	795	990	195	\$26.66	\$55,438
Marketing	71	Marketing Managers	1	1	1	1	220	254	34	\$46.51	\$96,745
Human Services		Marriage and Family Therapists		1	1		25	32	7	NA	NA
Human Services	165	Massage Therapists	1	1	1	1	51	64	13	NA	NA
Transportation, Distribution & Logistics		Material Moving Workers, All Other			1		35	39	4	NA	NA
Energy & Engineering		Materials Engineers		1	1		18	20	2	\$43.08	\$89,601
Energy & Engineering		Materials Scientists		1	1		11	12	1	NA	NA
Energy & Engineering		Mathematical Science Occupations, All Other		1	1		***	***	***	NA	NA
Education & Training		Mathematical Science Teachers, Postsecondary		1	1		65	72	7	NA	\$88,217
Manufacturing		Meat, Poultry, and Fish Cutters and Trimmers	1				186	209	23	\$14.33	\$29,805
Architecture & Construction		Mechanical Door Repairers			1		8	9	1	NA	NA
Manufacturing	151	Mechanical Drafters	1	1	1	1	102	114	12	\$22.20	\$46,181
Manufacturing		Mechanical Engineering Technicians		1	1		34	42	8	\$23.78	\$49,457
Energy & Engineering	56	Mechanical Engineers	1	1	1	1	259	317	58	\$40.28	\$83,783
Communication Arts		Media and Communication Equipment Workers, All Other			1		***	***	***	NA	NA
Communication Arts		Media and Communication Workers, All Other			1		13	14	1	NA	NA
Health Science		Medical and Clinical Laboratory Technicians	1	1			280	328	48	\$17.65	\$36,706
Health Science	89	Medical and Clinical Laboratory Technologists	1	1	1	1	263	289	26	\$27.26	\$56,714
Health Science	21	Medical and Health Services Managers	1	1	1	1	549	662	113	\$46.37	\$96,458
Health Science		Medical Assistants	1	1			686	900	214	\$15.98	\$33,254
Health Science		Medical Equipment Preparers	1				95	100	5	\$16.94	\$35,238
Manufacturing		Medical Equipment Repairers		1	1		12	12	0	NA	NA
Health Science		Medical Records and Health Information Technicians	1	1			302	342	40	\$18.45	\$38,380
Health Science		Medical Scientists, Except Epidemiologists		1	1		21	26	5	NA	NA
Health Science		Medical Secretaries	1				669	793	124	\$18.16	\$37,776
Health Science		Medical Transcriptionists	1	1			98	100	2	\$17.73	\$36,896
Business Management & Administration	83	Meeting, Convention, and Event Planners	1	1	1	1	188	208	20	\$21.93	\$45,618
Human Services	102	Mental Health and Substance Abuse Social Workers	1	1	1	1	157	175	18	\$19.83	\$41,240
Human Services	57	Mental Health Counselors	1	1	1	1	248	288	40	\$23.97	\$49,872

Career Cluster	H3 Rank	SOC Title	High Demand	High Skill	High Wage	H3	2016 Estimated Employment	2026 Projected Employment	Numeric Change	Avg Hourly Wage	Avg Annual Wage
Marketing		Merchandise Displayers and Window Trimmers	1				102	107	5	\$13.86	\$28,826
Manufacturing		Metal Workers and Plastic Workers, All Other					21	20	-1	NA	NA
Manufacturing		Metal-Refining Furnace Operators and Tenders					***	***	***	NA	NA
Business Management & Administration		Meter Readers, Utilities			1		49	48	-1	\$21.74	\$45,221
Energy & Engineering		Microbiologists		1	1		31	37	6	NA	NA
Education & Training	127	Middle School Teachers, Except Special and Career/Technical Education	1	1	1	1	143	159	16	NA	\$57,961
Manufacturing		Milling and Planing Machine Setters, Operators, and Tenders, Metal and Plastic			1		28	23	-5	NA	NA
Manufacturing		Mixing and Blending Machine Setters, Operators, and Tenders	1		1		115	125	10	\$19.85	\$41,287
Transportation, Distribution & Logistics	105	Mobile Heavy Equipment Mechanics, Except Engines	1	1	1	1	162	180	18	\$24.59	\$51,145
Manufacturing		Model Makers, Metal and Plastic			1		76	71	-5	NA	NA
Manufacturing		Molders, Shapers, and Casters, Except Metal and Plastic		1	1		106	108	2	NA	NA
Manufacturing		Molding, Coremaking, and Casting Machine Setters, Operators, and Tenders, Metal and Plastic	1		1		128	123	-5	\$21.26	\$44,211
Human Services		Morticians, Undertakers, and Funeral Directors		1	1		41	39	-2	NA	NA
Hospitality & Tourism		Motion Picture Projectionists					14	13	-1	NA	NA
Transportation, Distribution & Logistics		Motor Vehicle Operators, All Other	1				83	97	14	\$14.15	\$29,440
Transportation, Distribution & Logistics		Motorboat Mechanics and Service Technicians		1	1		22	23	1	NA	NA
Communication Arts		Multimedia Artists and Animators		1	1		66	70	4	\$21.60	\$44,916
Manufacturing		Multiple Machine Tool Setters, Operators, and Tenders, Metal and Plastic	1		1		108	125	17	\$20.21	\$42,054
Education & Training		Museum Technicians and Conservators		1	1		38	41	3	\$21.15	\$44,010
Communication Arts		Music Directors and Composers		1	1		26	28	2	\$30.12	\$62,645
Communication Arts		Musicians and Singers					62	63	1	\$12.29	NA
Agriculture, Food & Natural Resources	171	Natural Sciences Managers	1	1	1	1	57	69	12	\$51.39	\$106,897
Information Technology	35	Network and Computer Systems Administrators	1	1	1	1	585	666	81	\$33.90	\$70,516
Business Management & Administration		New Accounts Clerks	1				133	146	13	\$17.48	\$36,360
Agriculture, Food & Natural Resources		Nonfarm Animal Caretakers	1				415	512	97	\$11.67	\$24,270
Health Science		Nuclear Medicine Technologists		1	1		47	50	3	NA	NA
Manufacturing		Nuclear Technicians		1	1		***	***	***	NA	NA
Health Science		Nurse Anesthetists		1	1		***	***	***	NA	NA
Health Science		Nurse Midwives		1	1		10	13	3	NA	NA
Health Science	77	Nurse Practitioners	1	1	1	1	156	203	47	\$44.19	\$91,911
Health Science		Nursing Assistants	1	1			1,547	1,834	287	\$13.08	\$27,197
Education & Training		Nursing Instructors and Teachers, Postsecondary		1	1		66	73	7	NA	\$60,182
Health Science		Obstetricians and Gynecologists		1	1		25	28	3	NA	NA

Career Cluster	H3 Rank	SOC Title	High Demand	High Skill	High Wage	H3	2016 Estimated Employment	2026 Projected Employment	Numeric Change	Avg Hourly Wage	Avg Annual Wage
Government & Public Administration	164	Occupational Health and Safety Specialists	1	1	1	1	136	148	12	\$30.04	\$62,477
Government & Public Administration		Occupational Health and Safety Technicians					59	61	2	\$19.86	\$41,308
Health Science	100	Occupational Therapists	1	1	1	1	164	196	32	\$41.23	\$85,748
Health Science		Occupational Therapy Aides					***	***	***	NA	NA
Health Science		Occupational Therapy Assistants		1	1		11	14	3	\$33.97	\$70,650
Business Management & Administration		Office and Administrative Support Workers, All Other	1		1		253	266	13	\$21.81	\$45,380
Business Management & Administration		Office Clerks, General	1				5,177	5,431	254	\$14.02	\$29,153
Business Management & Administration		Office Machine Operators, Except Computer					44	35	-9	\$15.49	\$32,224
Architecture & Construction		Operating Engineers and Other Construction Equipment Operators	1		1		391	440	49	\$20.99	\$43,658
Business Management & Administration	84	Operations Research Analysts	1	1	1	1	120	164	44	\$31.98	\$66,538
Manufacturing		Ophthalmic Laboratory Technicians					20	24	4	\$17.00	\$35,361
Health Science		Ophthalmic Medical Technicians	1	1			165	194	29	\$15.80	\$32,868
Health Science		Opticians, Dispensing	1	1			191	219	28	\$17.97	\$37,382
Health Science		Optometrists		1	1		57	66	9	\$63.89	\$132,892
Health Science		Oral and Maxillofacial Surgeons		1	1		7	9	2	NA	NA
Business Management & Administration		Order Clerks	1				174	206	32	\$15.13	\$31,464
Health Science		Orderlies					35	38	3	NA	NA
Health Science		Orthotists and Prosthetists		1	1		***	***	***	NA	NA
Manufacturing		Outdoor Power Equipment and Other Small Engine Mechanics					24	26	2	\$12.81	\$26,655
Manufacturing		Packaging and Filling Machine Operators and Tenders	1				539	601	62	\$16.11	\$33,512
Transportation, Distribution & Logistics		Packers and Packers, Hand	1				382	374	-8	\$11.87	\$24,697
Architecture & Construction		Painters, Construction and Maintenance	1				500	544	44	\$16.99	\$35,344
Manufacturing		Painters, Transportation Equipment	1		1		122	137	15	\$21.98	\$45,705
Manufacturing		Painting, Coating, and Decorating Workers			1		***	***	***	NA	NA
Manufacturing		Paper Goods Machine Setters, Operators, and Tenders					39	34	-5	\$13.41	\$27,899
Law, Public Safety, Corrections & Security	43	Paralegals and Legal Assistants	1	1	1	1	305	363	58	\$21.84	\$45,435
Law, Public Safety, Corrections & Security		Parking Enforcement Workers					***	***	***	NA	NA
Transportation, Distribution & Logistics		Parking Lot Attendants	1				122	128	6	\$10.08	\$20,957
Marketing		Parts Salespersons	1				305	330	25	\$16.98	\$35,334
Architecture & Construction		Paving, Surfacing, and Tamping Equipment Operators			1		12	15	3	\$31.17	\$64,828
Business Management & Administration		Payroll and Timekeeping Clerks	1		1		178	183	5	\$21.01	\$43,709
Health Science		Pediatricians, General		1	1		31	37	6	NA	NA
Human Services		Personal Care Aides	1				1,425	1,909	484	\$11.97	\$24,882
Human Services		Personal Care and Service Workers, All Other					33	36	3	NA	NA
Finance	44	Personal Financial Advisors	1	1	1	1	235	308	73	\$59.91	\$124,621
Agriculture, Food & Natural Resources		Pest Control Workers	1				68	72	4	\$15.73	\$32,731
Agriculture, Food & Natural Resources		Pesticide Handlers, Sprayers, and Applicators, Vegetation			1		28	30	2	\$19.11	\$39,741

Career Cluster	H3 Rank	SOC Title	High Demand	High Skill	High Wage	H3	2016 Estimated Employment	2026 Projected Employment	Numeric Change	Avg Hourly Wage	Avg Annual Wage
Energy & Engineering		Petroleum Engineers		1	1		***	***	***	NA	NA
Manufacturing		Petroleum Pump System Operators, Refinery Operators, and Gaugers			1		***	***	***	NA	NA
Health Science	96	Pharmacists	1	1	1	1	395	418	23	\$57.53	\$119,674
Health Science		Pharmacy Aides					14	17	3	NA	NA
Health Science		Pharmacy Technicians	1				499	563	64	\$14.77	\$30,725
Education & Training		Philosophy and Religion Teachers, Postsecondary		1	1		50	55	5	NA	\$72,001
Health Science		Phlebotomists	1	1			242	277	35	\$14.83	\$30,833
Communication Arts		Photographers	1	1			287	285	-2	\$16.56	\$34,450
Manufacturing		Photographic Process Workers and Processing Machine Operators					13	12	-1	\$14.75	\$30,664
Energy & Engineering		Physical Scientists, All Other		1	1		8	10	2	NA	NA
Health Science		Physical Therapist Aides	1				86	111	25	\$11.92	\$24,795
Health Science	63	Physical Therapist Assistants	1	1	1	1	142	188	46	\$22.84	\$47,510
Health Science	39	Physical Therapists	1	1	1	1	353	457	104	\$37.24	\$77,449
Health Science	53	Physician Assistants	1	1	1	1	198	273	75	\$53.18	\$110,619
Health Science	104	Physicians and Surgeons, All Other	1	1	1	1	221	255	34	\$136.16	\$283,226
Energy & Engineering		Physicists		1	1		7	7	0	NA	NA
Education & Training		Physics Teachers, Postsecondary		1	1		47	53	6	NA	\$90,275
Architecture & Construction		Pipelayers			1		25	29	4	\$18.85	\$39,214
Manufacturing		Plating and Coating Machine Setters, Operators, and Tenders, Metal and Plastic	1				352	336	-16	\$17.47	\$36,337
Architecture & Construction	14	Plumbers, Pipefitters, and Steamfitters	1	1	1	1	903	1,020	117	\$28.94	\$60,192
Health Science		Podiatrists		1	1		18	21	3	NA	NA
Law, Public Safety, Corrections & Security		Police and Sheriff's Patrol Officers	1		1		396	420	24	\$32.00	\$66,558
Law, Public Safety, Corrections & Security		Police, Fire, and Ambulance Dispatchers			1		69	73	4	\$19.90	\$41,394
Education & Training		Political Science Teachers, Postsecondary		1	1		26	29	3	NA	\$76,952
Business Management & Administration		Postal Service Clerks			1		70	77	7	\$23.94	\$49,791
Business Management & Administration		Postal Service Mail Carriers	1		1		317	350	33	\$25.06	\$52,136
Business Management & Administration		Postal Service Mail Sorters, Processors, and Processing Machine Operators			1		110	115	5	\$24.87	\$51,726
Government & Public Administration		Postmasters and Mail Superintendents			1		6	6	0	NA	NA
Education & Training	11	Postsecondary Teachers, All Other	1	1	1	1	1,350	1,498	148	NA	\$60,459
Manufacturing		Pourers and Casters, Metal					***	***	***	NA	NA
Manufacturing		Power Distributors and Dispatchers		1	1		14	15	1	NA	NA
Manufacturing		Power Plant Operators		1	1		89	89	0	\$34.48	\$71,716
Manufacturing	118	Precision Instrument and Equipment Repairers, All Other	1	1	1	1	115	135	20	\$22.13	\$46,016
Communication Arts		Prepress Technicians and Workers		1	1		56	53	-3	\$17.68	\$36,770
Education & Training		Preschool Teachers, Except Special Education	1	1			169	188	19	\$19.18	\$39,888

Career Cluster	H3 Rank	SOC Title	High Demand	High Skill	High Wage	H3	2016 Estimated Employment	2026 Projected Employment	Numeric Change	Avg Hourly Wage	Avg Annual Wage
Human Services		Pressers, Textile, Garment, and Related Materials					33	29	-4	NA	NA
Communication Arts		Print Binding and Finishing Workers	1				113	112	-1	\$15.29	\$31,798
Communication Arts		Printing Press Operators			1		221	201	-20	\$19.46	\$40,475
Law, Public Safety, Corrections & Security		Private Detectives and Investigators					6	6	0	NA	NA
Law, Public Safety, Corrections & Security	90	Probation Officers and Correctional Treatment Specialists	1	1	1	1	249	265	16	NA	NA
Business Management & Administration		Procurement Clerks	1				140	137	-3	\$17.29	\$35,950
Communication Arts	128	Producers and Directors	1	1	1	1	137	151	14	\$23.62	\$49,126
Manufacturing		Production Workers, All Other	1				232	237	5	\$12.17	\$25,306
Manufacturing		Production, Planning, and Expediting Clerks	1		1		312	360	48	\$24.48	\$50,929
Communication Arts		Proofreaders and Copy Markers		1			32	32	0	\$16.47	\$34,251
Marketing		Property, Real Estate, and Community Association Managers	1		1		173	195	22	\$23.93	\$49,782
Law, Public Safety, Corrections & Security		Protective Service Workers, All Other					29	35	6	\$15.19	\$31,590
Health Science		Psychiatric Aides	1				588	621	33	NA	NA
Health Science		Psychiatric Technicians		1			33	41	8	NA	NA
Health Science		Psychiatrists		1	1		15	16	1	\$89.80	\$186,784
Human Services		Psychologists, All Other		1	1		12	16	4	NA	NA
Education & Training		Psychology Teachers, Postsecondary		1	1		58	65	7	NA	\$98,384
Communication Arts		Public Address System and Other Announcers					***	***	***	NA	NA
Marketing	45	Public Relations and Fundraising Managers	1	1	1	1	388	439	51	\$46.47	\$96,659
Marketing	22	Public Relations Specialists	1	1	1	1	681	752	71	\$26.28	\$54,647
Transportation, Distribution & Logistics		Pump Operators, Except Wellhead Pumpers			1		***	***	***	NA	NA
Manufacturing	85	Purchasing Agents, Except Wholesale, Retail, and Farm Products	1	1	1	1	351	357	6	\$28.38	\$59,038
Business Management & Administration		Purchasing Managers		1	1		66	72	6	\$50.25	\$104,515
Health Science		Radiation Therapists		1	1		32	34	2	\$37.40	\$77,798
Communication Arts		Radio and Television Announcers		1			80	72	-8	\$17.38	\$36,147
Manufacturing		Radio, Cellular, and Tower Equipment Installers and Repairs		1	1		29	32	3	\$20.65	\$42,958
Health Science	79	Radiologic Technologists	1	1	1	1	330	361	31	\$24.62	\$51,205
Transportation, Distribution & Logistics	148	Rail Car Repairers	1	1	1	1	77	91	14	NA	NA
Transportation, Distribution & Logistics		Rail Yard Engineers, Dinkey Operators, and Hostlers			1		13	15	2	NA	NA
Transportation, Distribution & Logistics		Rail-Track Laying and Maintenance Equipment Operators			1		14	17	3	NA	NA
Transportation, Distribution & Logistics		Railroad Brake, Signal, and Switch Operators			1		49	58	9	NA	NA
Transportation, Distribution & Logistics		Railroad Conductors and Yardmasters	1		1		97	114	17	NA	NA
Marketing		Real Estate Brokers			1		83	89	6	\$26.30	\$54,698
Marketing		Real Estate Sales Agents	1		1		326	345	19	\$21.53	\$44,777
Business Management & Administration		Receptionists and Information Clerks	1				1,297	1,420	123	\$13.25	\$27,553
Education & Training		Recreation and Fitness Studies Teachers, Postsecondary		1	1		16	17	1	NA	NA
Hospitality & Tourism		Recreation Workers	1				253	292	39	\$13.86	\$28,831

Career Cluster	H3 Rank	SOC Title	High Demand	High Skill	High Wage	H3	2016 Estimated Employment	2026 Projected Employment	Numeric Change	Avg Hourly Wage	Avg Annual Wage
Health Science		Recreational Therapists		1	1		41	43	2	\$18.14	\$37,742
Transportation, Distribution & Logistics		Recreational Vehicle Service Technicians		1			38	39	1	\$16.00	\$33,287
Agriculture, Food & Natural Resources		Refuse and Recyclable Material Collectors	1				379	450	71	\$15.50	\$32,222
Health Science	2	Registered Nurses	1	1	1	1	4,702	5,218	516	\$29.14	\$60,603
Human Services		Rehabilitation Counselors	1	1			198	228	30	\$21.19	\$44,071
Architecture & Construction	147	Reinforcing Iron and Rebar Workers	1	1	1	1	73	87	14	NA	NA
Communication Arts		Reporters and Correspondents		1			144	110	-34	NA	NA
Hospitality & Tourism		Reservation and Transportation Ticket Agents and Travel Clerks			1		***	***	***	NA	NA
Human Services		Residential Advisors	1		1		83	96	13	\$18.38	\$38,245
Health Science	126	Respiratory Therapists	1	1	1	1	245	260	15	\$26.43	\$54,972
Health Science		Respiratory Therapy Technicians		1	1		10	11	1	NA	NA
Marketing		Retail Salespersons	1				5,229	5,616	387	\$13.15	\$27,361
Architecture & Construction		Riggers			1		10	10	0	NA	NA
Architecture & Construction		Rock Splitters, Quarry					11	13	2	NA	NA
Manufacturing		Rolling Machine Setters, Operators, and Tenders, Metal and Plastic					66	66	0	NA	NA
Architecture & Construction		Roofers	1				311	360	49	\$18.08	\$37,615
Marketing		Sales and Related Workers, All Other			1		49	56	7	\$28.56	\$59,404
Marketing		Sales Engineers		1	1		16	18	2	\$44.48	\$92,513
Marketing	54	Sales Managers	1	1	1	1	281	331	50	\$58.77	\$122,239
Marketing		Sales Representatives, Services, All Other	1		1		916	1,057	141	\$25.44	\$52,924
Marketing		Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	1		1		1,663	1,839	176	\$27.23	\$56,639
Marketing	50	Sales Representatives, Wholesale and Manufacturing, Technical and Scientific Products	1	1	1	1	299	343	44	\$36.28	\$75,446
Manufacturing		Sawing Machine Setters, Operators, and Tenders, Wood					***	***	***	NA	NA
Education & Training	6	Secondary School Teachers, Except Special and Career/Technical Education	1	1	1	1	1,844	2,045	201	NA	\$55,065
Business Management & Administration		Secretaries and Administrative Assistants, Except Legal, Medical, and Executive	1				2,939	2,950	11	\$17.27	\$35,906
Finance	33	Securities, Commodities, and Financial Services Sales Agents	1	1	1	1	430	505	75	\$34.10	\$70,924
Manufacturing		Security and Fire Alarm Systems Installers					33	37	4	NA	NA
Law, Public Safety, Corrections & Security		Security Guards	1				795	828	33	\$13.53	\$28,134
Education & Training		Self-Enrichment Education Teachers	1				793	893	100	\$16.39	\$34,108
Manufacturing		Semiconductor Processors					***	***	***	NA	NA
Manufacturing		Separating, Filtering, Clarifying, Precipitating, and Still Machine Setters, Operators, and Tenders					25	28	3	\$17.32	\$36,034
Architecture & Construction		Septic Tank Servicers and Sewer Pipe Cleaners			1		28	34	6	NA	NA
Communication Arts		Set and Exhibit Designers		1	1		12	13	1	NA	NA

Career Cluster	H3 Rank	SOC Title	High Demand	High Skill	High Wage	H3	2016 Estimated Employment	2026 Projected Employment	Numeric Change	Avg Hourly Wage	Avg Annual Wage
Manufacturing		Sewing Machine Operators					24	24	0	\$18.48	\$38,445
Architecture & Construction	75	Sheet Metal Workers	1	1	1	1	180	210	30	\$21.80	\$45,339
Business Management & Administration		Shipping, Receiving, and Traffic Clerks	1				405	421	16	\$17.40	\$36,188
Manufacturing		Shoe and Leather Workers and Repairers					***	***	***	NA	NA
Transportation, Distribution & Logistics		Signal and Track Switch Repairers			1		32	38	6	NA	NA
Human Services		Skincare Specialists		1			69	73	4	\$9.92	\$20,641
Manufacturing		Slaughterers and Meat Packers					30	37	7	NA	NA
Human Services	52	Social and Community Service Managers	1	1	1	1	316	364	48	\$33.17	\$68,999
Human Services		Social and Human Service Assistants	1				1,503	1,809	306	\$12.38	\$25,751
Energy & Engineering	64	Social Science Research Assistants	1	1	1	1	246	274	28	\$23.24	\$48,352
Education & Training		Social Sciences Teachers, Postsecondary, All Other		1	1		7	8	1	NA	NA
Energy & Engineering		Social Scientists and Related Workers, All Other		1	1		24	30	6	NA	NA
Education & Training		Social Work Teachers, Postsecondary		1	1		19	21	2	NA	\$59,049
Human Services	170	Social Workers, All Other	1	1	1	1	76	84	8	\$27.97	\$58,186
Energy & Engineering		Sociologists		1	1		17	17	0	NA	NA
Education & Training		Sociology Teachers, Postsecondary		1	1		57	64	7	NA	\$74,145
Information Technology	4	Software Developers, Applications	1	1	1	1	1,413	1,880	467	\$35.89	\$74,652
Information Technology	31	Software Developers, Systems Software	1	1	1	1	541	632	91	\$35.74	\$74,329
Agriculture, Food & Natural Resources	163	Soil and Plant Scientists	1	1	1	1	81	91	10	\$27.89	\$58,012
Communication Arts		Sound Engineering Technicians		1	1		***	***	***	NA	NA
Education & Training		Special Education Teachers, All Other		1	1		52	58	6	NA	NA
Education & Training	97	Special Education Teachers, Kindergarten and Elementary School	1	1	1	1	219	243	24	NA	\$51,084
Education & Training	135	Special Education Teachers, Middle School	1	1	1	1	137	152	15	NA	\$51,742
Education & Training		Special Education Teachers, Preschool		1	1		50	55	5	NA	NA
Education & Training	119	Special Education Teachers, Secondary School	1	1	1	1	168	186	18	NA	\$54,271
Health Science	95	Speech-Language Pathologists	1	1	1	1	194	228	34	\$31.01	\$64,495
Architecture & Construction		Stationary Engineers and Boiler Operators		1	1		85	90	5	\$23.47	\$48,825
Government & Public Administration		Statistical Assistants		1	1		39	42	3	\$19.30	\$40,153
Energy & Engineering	107	Statisticians	1	1	1	1	94	125	31	\$30.12	\$62,653
Business Management & Administration		Stock Clerks and Order Fillers	1				2,283	2,582	299	\$12.53	\$26,074
Architecture & Construction	91	Structural Iron and Steel Workers	1	1	1	1	128	155	27	\$22.17	\$46,120
Architecture & Construction		Structural Metal Fabricators and Fitters	1		1		225	208	-17	\$19.01	\$39,555
Human Services	65	Substance Abuse and Behavioral Disorder Counselors	1	1	1	1	208	245	37	\$20.18	\$41,974
Education & Training		Substitute Teachers	1	1			114	127	13	\$17.50	\$36,419
Health Science		Surgeons		1	1		81	92	11	\$149.33	\$310,600
Health Science	99	Surgical Technologists	1	1	1	1	214	233	19	\$21.72	\$45,184
Energy & Engineering	133	Survey Researchers	1	1	1	1	127	141	14	\$25.83	\$53,740

Career Cluster	H3 Rank	SOC Title	High Demand	High Skill	High Wage	H3	2016 Estimated Employment	2026 Projected Employment	Numeric Change	Avg Hourly Wage	Avg Annual Wage
Architecture & Construction		Surveying and Mapping Technicians	1		1		216	232	16	\$20.55	\$42,737
Architecture & Construction	169	Surveyors	1	1	1	1	85	95	10	\$28.74	\$59,782
Business Management & Administration		Switchboard Operators, Including Answering Service	1				222	201	-21	\$12.98	\$27,003
Human Services		Tailors, Dressmakers, and Custom Sewers					10	12	2	NA	NA
Transportation, Distribution & Logistics		Tank Car, Truck, and Ship Loaders			1		17	18	1	NA	NA
Government & Public Administration	167	Tax Examiners and Collectors, and Revenue Agents	1	1	1	1	122	129	7	NA	NA
Finance		Tax Preparers			1		48	53	5	\$19.30	\$40,134
Transportation, Distribution & Logistics		Taxi Drivers and Chauffeurs	1				154	188	34	\$12.47	\$25,937
Education & Training		Teacher Assistants	1	1			1,745	1,943	198	NA	\$26,543
Education & Training	113	Teachers and Instructors, All Other, Except Substitute Teachers	1	1	1	1	116	132	16	NA	\$48,669
Manufacturing		Team Assemblers	1		1		1,596	1,585	-11	\$18.34	\$38,130
Communication Arts	137	Technical Writers	1	1	1	1	91	106	15	\$25.99	\$54,058
Communication Arts		Telecommunications Equipment Installers and Repairers, Except Line Installers	1	1			358	399	41	\$19.41	\$40,386
Communication Arts	70	Telecommunications Line Installers and Repairers	1	1	1	1	156	192	36	\$23.24	\$48,332
Marketing		Telemarketers	1				188	178	-10	\$11.54	\$24,014
Finance		Tellers	1				684	751	67	\$13.03	\$27,114
Manufacturing		Textile Winding, Twisting, and Drawing Out Machine Setters, Operators, and Tenders					6	7	1	NA	NA
Architecture & Construction		Tile and Marble Setters	1				117	134	17	\$17.76	\$36,931
Transportation, Distribution & Logistics		Tire Repairers and Changers	1				89	94	5	\$12.58	\$26,169
Law, Public Safety, Corrections & Security		Title Examiners, Abstractors, and Searchers			1		82	89	7	\$19.64	\$40,862
Manufacturing	110	Tool and Die Makers	1	1	1	1	147	165	18	\$29.53	\$61,437
Hospitality & Tourism		Tour Guides and Escorts					***	***	***	NA	NA
Transportation, Distribution & Logistics		Traffic Technicians					8	8	0	NA	NA
Business Management & Administration		Training and Development Managers		1	1		34	37	3	\$44.95	\$93,488
Business Management & Administration	19	Training and Development Specialists	1	1	1	1	653	745	92	\$24.67	\$51,325
Law, Public Safety, Corrections & Security		Transit and Railroad Police			1		***	***	***	NA	NA
Government & Public Administration		Transportation Inspectors			1		47	56	9	NA	NA
Government & Public Administration		Transportation Security Screeners			1		19	23	4	\$20.29	\$42,211
Transportation, Distribution & Logistics		Transportation Workers, All Other	1				147	163	16	NA	NA
Transportation, Distribution & Logistics		Transportation, Storage, and Distribution Managers	1		1		239	271	32	\$38.98	\$81,076
Hospitality & Tourism		Travel Agents			1		48	44	-4	\$22.95	\$47,735
Agriculture, Food & Natural Resources		Tree Trimmers and Pruners					6	6	0	NA	NA
Hospitality & Tourism		Umpires, Referees, and Other Sports Officials					10	10	0	NA	NA
Manufacturing		Upholsterers			1		52	56	4	NA	NA
Government & Public Administration	168	Urban and Regional Planners	1	1	1	1	68	80	12	\$35.74	\$74,332

Career Cluster	H3 Rank	SOC Title	High Demand	High Skill	High Wage	H3	2016 Estimated Employment	2026 Projected Employment	Numeric Change	Avg Hourly Wage	Avg Annual Wage
Hospitality & Tourism		Ushers, Lobby Attendants, and Ticket Takers	1				128	138	10	\$10.56	\$21,971
Health Science	108	Veterinarians	1	1	1	1	148	182	34	\$34.40	\$71,559
Health Science		Veterinary Assistants and Laboratory Animal Caretakers	1				36	45	9	\$12.93	\$26,888
Health Science		Veterinary Technologists and Technicians	1	1			142	178	36	\$16.25	\$33,788
Education & Training		Vocational Education Teachers, Postsecondary		1	1		73	81	8	\$25.11	\$52,229
Hospitality & Tourism		Waiters and Waitresses	1				2,900	3,249	349	\$10.19	\$21,199
Manufacturing		Watch Repairers		1	1		12	9	-3	NA	NA
Agriculture, Food & Natural Resources		Water and Wastewater Treatment Plant and System Operators		1	1		52	50	-2	\$25.19	\$52,393
Information Technology	67	Web Developers	1	1	1	1	253	292	39	\$22.64	\$47,087
Manufacturing		Weighers, Measurers, Checkers, and Samplers, Recordkeeping	1		1		110	130	20	\$20.39	\$42,421
Manufacturing		Welders, Cutters, Solderers, and Brazers	1		1		658	773	115	\$21.39	\$44,507
Manufacturing		Welding, Soldering, and Brazing Machine Setters, Operators, and Tenders					49	46	-3	\$17.78	\$36,988
Marketing	87	Wholesale and Retail Buyers, Except Farm Products	1	1	1	1	242	251	9	\$30.17	\$62,761
Manufacturing		Woodworkers, All Other					***	***	***	NA	NA
Manufacturing		Woodworking Machine Setters, Operators, and Tenders, Except Sawing					20	22	2	NA	NA
Business Management & Administration		Word Processors and Typists					67	50	-17	\$16.54	\$34,407
Communication Arts	93	Writers and Authors	1	1	1	1	284	297	13	\$25.22	\$52,442
Agriculture, Food & Natural Resources		Zoologists and Wildlife Biologists		1	1		67	74	7	\$30.10	\$62,612

Appendix D: Key Stakeholder Surveys

**Students**

<b>Do you think that it is important for LPS to continue to offer focus and/or option programs? Current programs include A&amp;H, Science Focus, TCA, IB, and ROTC.</b>		
	<b>Frequency</b>	<b>Percentage</b>
<b>Yes</b>	10	100%
<b>No</b>	0	0%
<b>Not sure</b>	0	0%
<b>Total</b>	10	

**Comments:**

- Send high-schoolers to elementary schools to teach.
- This gives students ability to learn things outside of school and in a college area.
- The programs we have now are cool but you can add more.
- Nice opportunities than just high school.
- A variety of options is good.
- These programs give students an experience not provided in school to get them started on their careers.

Appendix D – Continued

As we think about expanding our focus and/or option programs, do you think that they should be located within a comprehensive high school or at a separate facility?		
	Frequency	Percentage
Within a comprehensive high school	3	30%
Separate facility	6	60%
Not sure	1	10%
<b>Total</b>	<b>10</b>	

**Comments:**

- Airpark has so much room to build a new school.
- I think a separate and central location would be best.
- It's nice to get out of regular schools sometimes.
- Being in school all the time is not fun - a change of environment is good.
- Nice to get different experiences.
- Schools are becoming cluttered so if you could learn elsewhere that would be cool.
- Should be within a comprehensive high school for the sake of accessibility, but reasons to put things at more specialized facilities would be abilities to more things.

**If we were to expand focus and/or option programs at LPS what type of additional programs should LPS consider? Check all that apply.**

	<b>Yes</b>	<b>Percentage</b>	<b>No Response</b>	<b>Percentage</b>
<b>Agricultural</b>	3	30%	7	70%
<b>Engineering</b>	6	60%	4	40%
<b>Aeronautics</b>	2	20%	8	80%
<b>International Studies</b>	2	20%	8	80%
<b>Performing Arts</b>	3	30%	7	70%
<b>Law</b>	7	70%	3	30%
<b>Health Professions</b>	7	70%	3	30%
<b>Social Services</b>	1	10%	9	90%
<b>Technology, including coding</b>	6	60%	4	40%
<b>World Languages</b>	4	40%	6	60%

**Other / Comments:**

- Teaching
- Sports like IMG Academy
- Anything with planes
- Physical therapy
- Sign language
- Creativity & Innovation
- Broadcasting
- Politics
- \*Sign language should be included with world language
- Parents / Community

Appendix D – Continued

**Parents & Community Members**

<b>As LPS plans for new high school space because of continued growth in enrollment, should this new space be another comprehensive high school (East, Lincoln High, North Star High, Northeast High, Southeast High, and Southwest High)?</b>		
	<b>Frequency</b>	<b>Percentage</b>
<b>Yes</b>	26	63%
<b>No</b>	4	10%
<b>Not sure</b>	10	24%
<b>Total</b>	41	

<b>Do you think that it is important for LPS to continue to offer focus and/or option programs? Current programs include Arts and Humanities Focus Program, Science Focus Program, The Career Academy at Southeast Community College, International Baccalaureate at Lincoln High School, and ROTC at Northeast High School.</b>		
	<b>Frequency</b>	<b>Percentage</b>
<b>Yes</b>	40	98%
<b>No</b>	0	0%
<b>Not sure</b>	1	2%
<b>Total</b>	41	

**As we think about expanding our focus and/or option programs, do you think that they should be located within a comprehensive high school or at a separate facility?**

	<b>Frequency</b>	<b>Percentage</b>
<b>Within a comprehensive high school</b>	22	54%
<b>Separate facility</b>	9	22%
<b>Not sure</b>	10	24%
<b>Total</b>	41	

If we were to expand focus and/or option programs at LPS what type of additional programs should LPS consider? Check all that apply.				
	Yes	Percentage	No	Percentage
Agricultural	19	46%	22	54%
Engineering	21	51%	20	49%
Aeronautics	8	20%	33	80%
International Studies	11	27%	30	73%
Performing Arts	20	49%	21	51%
Law	12	29%	29	71%
Health Professions	29	71%	12	29%
Social Services	15	37%	26	63%
Technology, including coding	29	71%	12	29%
World Languages	20	49%	21	51%

**Other / Comments:**

- Musician, medical field
- More partnership with UNL?
- Environmental science
- Business
- Trades (mechanic, electrician, plumber, ect...)
- Alternative schools-evening classes, etc.
- Online curriculum/blended & distance learning
- Engineering-TCA
- Offer a course that teaches students to be kinder human beings to prevent less cruelty in schools. Hence less crime, less doctor bills (counselor and medical) less everything. Like a humanity course or ethics.
- Increased language studies beginning in elementary school
- Government
- Trades
- Another school like Bryan
- Automotive, welding, HVAC
- Education
- ROTC for sure
- STEM
- Electricians, plumbers, HVAC, careers that don't require 4 yr college

**Additional Comments**

As LPS plans for new high school space because of continued growth in enrollment, should this new space be another comprehensive high school (East, Lincoln High, North Star High, Northeast High, Southeast High, and Southwest High)?	Number of Responses
1- Comprehensive high school expansion	7
2- Option program (focus) expansion	6
3- Both option and comprehensive need expansion	4
4- Off topic but worth noting	4

**Comments:**

- I think the new high school needs to be comprehensive to address the number of students who will be attending high school rather than the smaller numbers who may attend a focus program.
- Comp H. S. would serve majority best. Is there any "Keller Plan" courses?
- With the projected numbers and the location of growth in Lincoln, a new building is necessary.
- Our High schools are so full (even some middle schools) that enrollment relief is very much needed
- I believe 2 new schools should open--1 for NW, 1 for SE. The schools are currently overcrowded and need to get relief.
- I am a firm believer that a school system can never have too many resources, and I also believe in equal access to students. Comprehensive high schools are a strength of LPS.
- Yes--would prefer a new building to house all the students versus adding more students to existing classrooms.
- I think it depends on if you expand the focus programs
- I feel the focus programs are very beneficial.
- I think it would be interesting to have a trade related school. I'm sure there are many variations on specialized schools but I think it could be an amazing addition to LPS.
- I think more focus programs based in project-based learning would be beneficial for LPS.
- I would love to see more of the specialized programs- focus schools.
- If the current career academy is full make them build another. Also a trade school for those who don't want college or can't afford it. Electricians, plumbers, HVAC, farmers, coding
- I think comprehensive programs are important for addressing the large population boom. If there's a possibility of more than 1 H.S. could consider a comprehensive & focus program
- more option programs; we need both
- Reg HS & more focus programs
- I think as a city, we could use another high school to " fill in the gaps" geographically but I also love the idea of offering more specialized programs to help kids succeed.

Do you think that it is important for LPS to continue to offer focus and/or option programs? Current programs include Arts and Humanities Focus Program, Science Focus Program, The Career Academy at Southeast Community College, International Baccalaureate at Lincoln High School, and ROTC at Northeast High School.	Number of Responses
1- More types of option programs to choose from	2
2- Transportation	3
3- Expand career academy programs	2
4- Valuable learning environments	7
5- Off topic but worth noting	1

**Comments:**

- I wish LPS would provide ROTC in all the schools. My daughter wanted to join but it was not convenient for her to travel to LNE from East to attend, especially at 7:00 am -she was already in band at that time
- I would like to an increase in STEM and computer programming studies in LPS
- My son loves the ROTC but since no transportation by District is provided it limits what students can attend.
- More transportation options!!
- Yes allows kids to get additional info on career option before starting college and changing programs. Challenge is transportation, must be addressed to make available to all students. Finances should not hinder attendance.
- Believe the Career Academy is a great option too-- way to make more "space" for kids to choose this option?
- I think schools should expose students to different career options for them to explore
- I think the small settings would work well for the kids who feel lost in a crowd.
- These are wonderful programs and should continue to be options.
- As big a fan as I am of the comprehensive high schools, there will always be students with needs or motivations that fall outside the standard. Providing alternatives for these students is worth the effort.
- Yes--important to offer a diverse range of programs to our diverse student population ( as needed)
- Every kid is so different and we need to meet these needs.
- Each student learns differently. It is more "fun"!
- The more options our students have, the more we are able to see individual teaching opportunities.
- I would like to know the numbers of students who went thru these schools are working in these areas over 5, 10, 15 years.

As we think about expanding our focus and/or option programs, do you think that they should be located within a comprehensive high school or at a separate facility?	Number of Responses
<b>1-Within a comprehensive high school</b>	4
<b>2-Separate facilities/Next to the high school</b>	6
<b>3-Transportation needs</b>	4
<b>4-Off topic but worth noting</b>	3
<b>5-Undecided</b>	2

**Comments:**

- Ideally-within the schools- but they are so full there is no space! If new schools relieve some of the crowding maybe there is more space?
- If build new schools, could incorporate focus learning in space cleared out
- Bring classes like Auto mechanics & more Industrial Tech into comprehensive high schools as crowding decreases if new schools open.
- Socialization is an important component of public education. Placing focus/options programs within comprehensive high schools could provide larger community anchors for those socialization opportunities.
- next to the comprehensive high school.
- I feel it is important that they are in separate facilities because it allows for the students to focus on their areas of interest
- kids who want to attend a focus program don't necessarily want to go to a comprehensive school so I think they need their own space- separate facility-maybe near a school- like the arts program near Lincoln High.
- This would require more in depth discussion/planning, but I would lean to a separate facility
- Maybe a separate facility to allow for more focus for the students. This might allow for a better community
- In my opinion LPS needs the space of a comprehensive high school to alleviate over-crowding. A separate focus program would be a benefit to the entire district if centrally located.
- Less cost on busing students and/or students driving to/from
- If transportation is provided. Separate facility could be an existing bldg?
- more access for students who don't have transportation options.
- Not every child can go between two buildings.
- Depends on Need and if could be done elsewhere.
- I can see the benefits of both. I think it is important for kids to be connected to people with varying interest but Focusing on one area of study can be great as well.
- I would worry that a group like ROTC would feel or even have the appearance of being segregated.
- Indifferent about it.
- Need more information on both sides

Additional survey comments	Number of Responses
1-Change to graduation Requirements	3
2-Transportation	1
3-Expand Option Programs	2

**Comments:**

- I think the graduation requirements need to be changed. Currently, there are PE, business & computer requirements. I think these requirements need to be removed- make them electives instead of requirements. If students aren't interested in athletics or business for example, shouldn't be required to take those classes. Kids are so exposed to computers already from kindergarten on that requiring students to take additional computer classes is unnecessary. Or, if you don't want to change the requirements then lengthen the day to get more opportunities in.
- consider lowering credit requirement go for civic readiness as well as college readiness
- Graduation Requirements. Need to be looked at. Some kids cannot do TCA with current graduation requirements and prerequisite they require Grad requirements are intended for students who need to and want to go to a 4 year college.
- Please find transportation b/t the focus program schools, otherwise it's a total bias to those schools.
- I am interested in participating with the community council on developing cultural curriculum, especially in history, language, and human relations.
- With LPS located within Nebraska's capitol city, I would think there could be tremendous potential to tie a program into civics and government functions.

Appendix D – Continued

**Counselors - High School**

<b>Do you think that it is important for LPS to continue to offer focus and/or option programs? Current programs include A&amp;H, Science Focus, TCA, IB, and ROTC.</b>		
	<b>Frequency</b>	<b>Percentage</b>
<b>Yes</b>	6	100%
<b>No</b>	0	0%
<b>Not sure</b>	0	0%
<b>Total</b>	6	

**Comments:**

- Each high school should have a focus program that fits well with that school offerings & location
- My interactions with students who participate in these programs has proven their value - we need to continue to expand this type of programing to embrace and encourage the unique strengths of our students in LPS.

**As we think about expanding our focus and/or option programs, do you think that they should be located within a comprehensive high school or at a separate facility?**

	<b>Frequency</b>	<b>Percentage</b>
<b>Within a comprehensive high school</b>	3	50%
<b>Separate facility</b>	3	50%
<b>Not sure</b>	0	0%
<b>Total</b>	6	

**Comments:**

- Depends on program - such as Pershing or Youngkers - to have programs related to those spaces. Such as marketing / fashion merchandising, etc at Gateway or high school version of innovation campus at the pershing.
- Comprehensive meets needs for comprehensive high school
- We should open up 2 high schools at the same time - 1 comprehensive & 1 technical - with a mixture of comprehension classes offered
- Comprehensive high schools offers the most opportunities for students to participate - more people can be involved and flexible scheduling

**If we were to expand focus and/or option programs at LPS what type of additional programs should LPS consider? Check all that apply.**

	<b>Yes</b>	<b>Percentage</b>	<b>No Response</b>	<b>Percentage</b>
<b>Agricultural</b>	4	67%	2	33%
<b>Engineering</b>	3	50%	3	50%
<b>Aeronautics</b>	1	17%	5	83%
<b>International Studies</b>	1	17%	5	83%
<b>Performing Arts</b>	1	17%	5	83%
<b>Law</b>	2	33%	4	67%
<b>Health Professions</b>	2	33%	4	67%
<b>Social Services</b>	4	67%	2	33%
<b>Technology, including coding</b>	1	17%	5	83%
<b>World Languages</b>	2	33%	4	67%

**Other / Comments:**

- A program that ties in international law, social justice, and world languages
- Program for students returning from Rule 18 that would offer built in therapy services, teaching a trade, meeting grad requirements, etc.
- Program for students working through substance abuse or major mental health concerns that would offer built in therapy services, recovery groups, etc.
- Vocational / trade school without dual credit for struggling students to learn job skills.
- We need to offer applied math, science, and english courses to hands on learners (not all students are 4 year college students) - instead they are the technical students

**Counselors – Middle Level**

Do you think that it is important for LPS to continue to offer focus and/or option programs? Current programs include A&H, Science Focus, TCA, IB, and ROTC.		
	Frequency	Percentage
<b>Yes</b>	14	88%
<b>No</b>	0	0%
<b>Not sure</b>	2	12%
<b>Total</b>	16	

**Comments:**

- Education & “on the job training: is changing and we need to adapt to match the needs of our society and future.
- I believe that public education is headed towards choice with charters & focus programs. I also think this increases innovation and keeps schools from not innovating and trying new things.
- Choices
- I like the idea of focus/magnet schools. I get the impression that TCA and IB have LPS supports in place - (PBIS, etc.)
- Some are ran very well, and some need some more direction.
- Focus programs offer HS students options and allow them to explore interests before college.

**As we think about expanding our focus and/or option programs, do you think that they should be located within a comprehensive high school or at a separate facility?**

	<b>Frequency</b>	<b>Percentage</b>
<b>Within a comprehensive high school</b>	3	18%
<b>Separate facility</b>	6	38%
<b>Not sure</b>	7	44%
<b>Total</b>	16	

**Comments:**

- The draw & connection for some students is the offsite experience. It would be great to add sites like Hudl (business) or PBA (events) or Devaney (sports) - there is so much money in the sporting event/training/medical to tap into & high school interest
- More technology and science opportunities for kids. Would like to see more kids take advantage of programs, they need to expand their view of what is out there.
- Transportation would be an issue.
- Think these focus programs should be as a part of our comprehensive high schools for identity purposes. These programs should also be equitable and accessible by all students.
- If the new program was in a comprehensive high school that could be helpful for those that have the barrier to transportation.
- More ownership for the kids and their programs.
- Depends on availability of transportation. If available, then separate facility; not available, then comprehensive would provide choice and be cost effective.
- Location depends on the type of program it is.
- Consistency with other buildings is needed - admin, social workers, counselors, etc.
- This way there can be more consistency w/systems within other high schools.

**If we were to expand focus and/or option programs at LPS what type of additional programs should LPS consider? Check all that apply.**

	<b>Yes</b>	<b>Percentage</b>	<b>No Response</b>	<b>Percentage</b>
<b>Agricultural</b>	7	44%	9	56%
<b>Engineering</b>	6	38%	10	62%
<b>Aeronautics</b>	5	31%	11	69%
<b>International Studies</b>	4	25%	12	75%
<b>Performing Arts</b>	6	38%	10	62%
<b>Law</b>	2	13%	14	87%
<b>Health Professions</b>	6	38%	10	62%
<b>Social Services</b>	7	44%	9	56%
<b>Technology, including coding</b>	8	50%	8	50%
<b>World Languages</b>	3	19%	13	81%

**Other / Comments:**

- Business
- Technology
- Engineering
- Agriculture

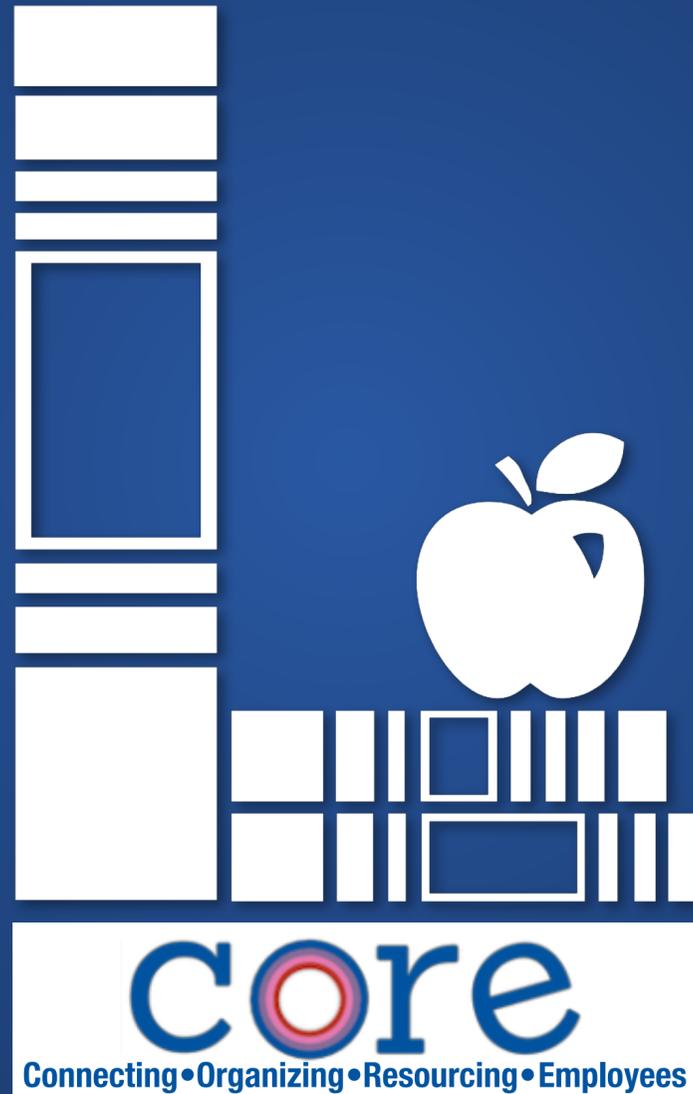
(general)

- Make it a Class B High School
- Build on north side of Lincoln
- Middle school focus program that feeds into a high school focus program
- Tie community focused service learning into all areas of curriculum
- Most of these are offered at TCA
- I would be in favor of whatever TCA doesn't offer
- I would love to see a therapeutic school for students with mental health/emotional health diagnosis (trauma, attachment, anxiety, etc).

(emotional needs)

- Design new school for students that struggle in a traditional school - wouldn't need to be like a Bryan but there is a need for students who would be successful in a hands on / project-based program.

- Therapeutic environment for learning
- Alternative middle school that uses Boys Town model, classes with SAIG language topics, ideal for students with mental health needs and profound anxiety
- How can we serve and educate students with severe mental health needs and still keep safety of all in mind?
- New school should be restorative practice focused
- Alternative program for those who are disenfranchised - not interested in school and those with mental health needs. We have a number of students with extensive anxiety and depression with the rigors of traditional schooling

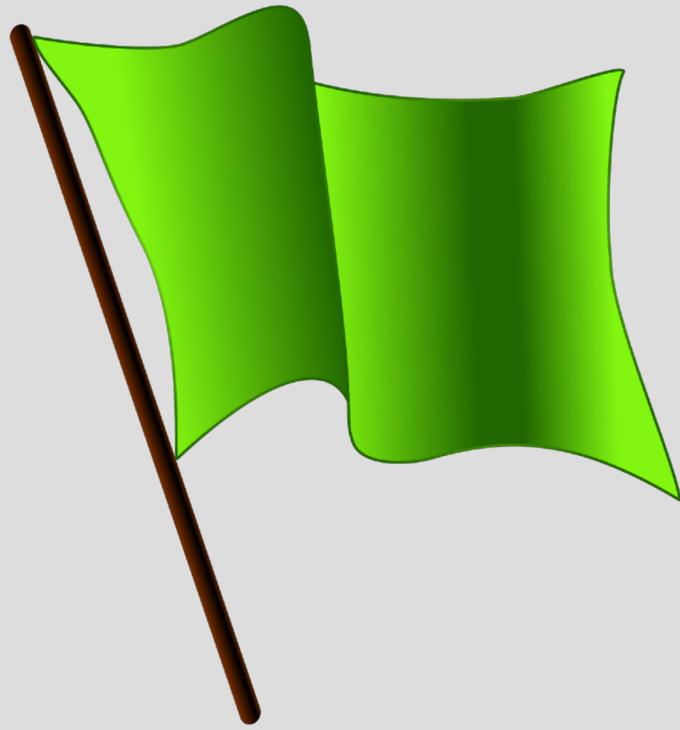


## CORE Project Update

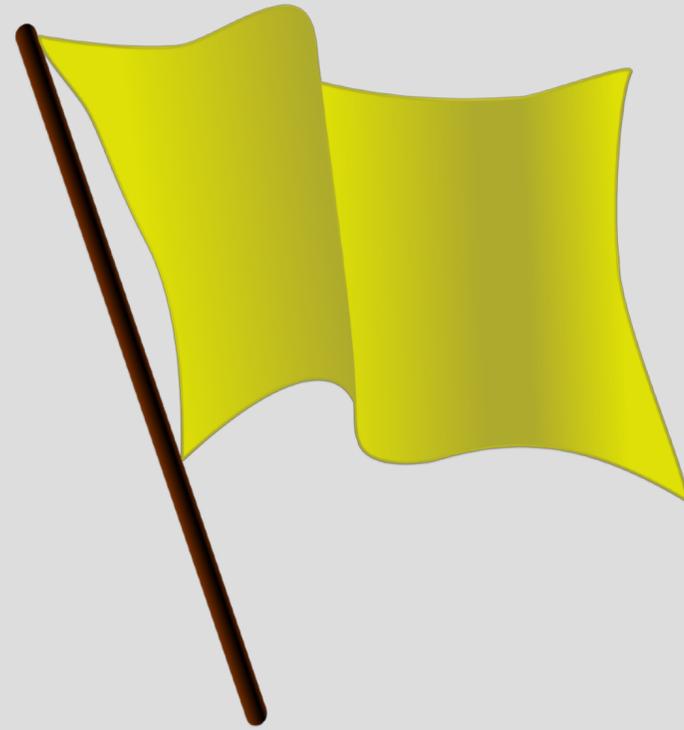
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**Implement a 21st Century Human Resources and Business System, with a status update by April 1, 2019.**

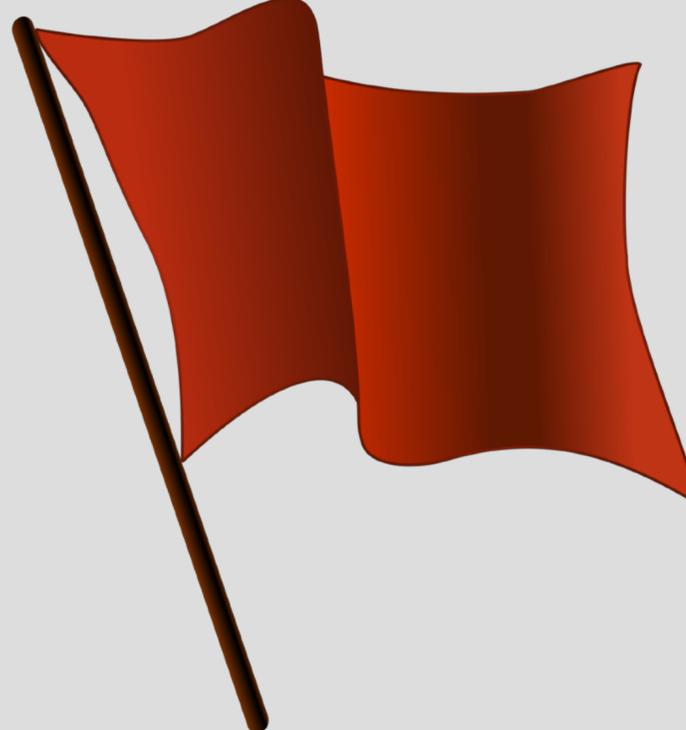
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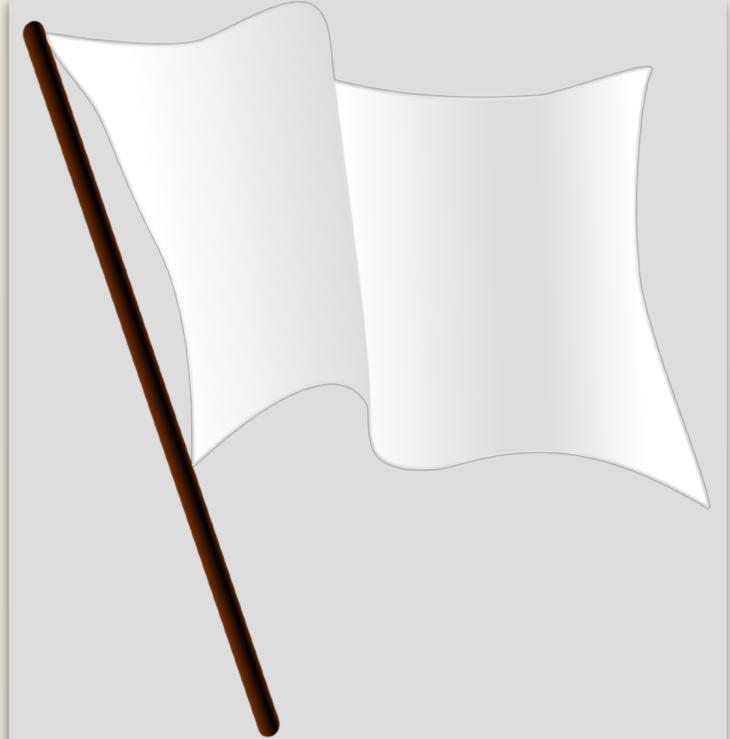
**Good to Go**



**Correction  
Needed**



**Serious  
Problems**



**Surrender**

# The CORE Team

## Executive Leadership



**Dr. Eric Weber**  
Human Resources Executive



**Dr. Liz Standish**  
Business Affairs Executive



**Kirk Langer**  
Technology Services Executive

## Project Leadership



**Patty Hammond**  
Project Manager  
*Computing Services*



**Kelli Ackerman**  
Accounting & Payroll Lead  
*Business Affairs*



**Matt Bellamy**  
Purchasing Lead  
*Business Affairs*



**Mike Flanagin**  
Technical Lead  
*Computing Services*



**Nancy Hoppe**  
Human Resources Lead  
*Human Resources*



**Drew Ramaekers**  
Change Management Lead  
*Computing Services*



**Seth Ristow**  
Information Security Lead  
*Computing Services*



**Kim Schmidt**  
Budget & Finance Lead  
*Business Affairs*

## Subject Matter Experts



**Jamie Berens**  
Accounting  
*Business Affairs*



**Vicki Cotton**  
Data Integration & Configuration  
*Computing Services*



**Jess Jefferson**  
Finance  
*Business Affairs*



**Jill Maxfield**  
Payroll  
*Business Affairs*



**Amy Newburn**  
Business System Training  
*Computing Services*



**Sven Noe**  
System Integration  
*Computing Services*



**Ann Schlange**  
Data Integration & Configuration  
*Computing Services*

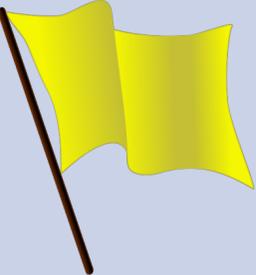
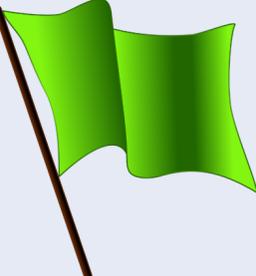
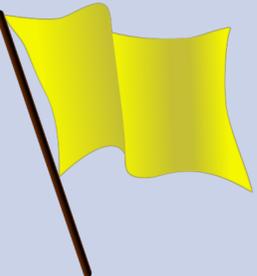


**Brittany Schuster**  
Talent Acquisition  
*Human Resources*

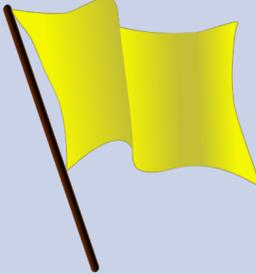
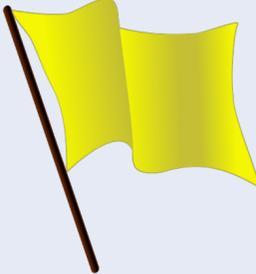
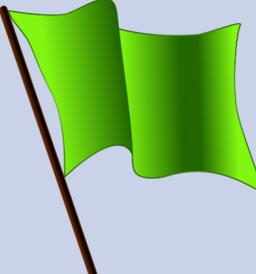


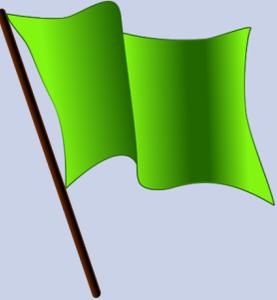
**Jessi Stilwagon**  
HR System Training  
*Computing Services*

# How are things overall? Are we sticking to the initial plan? Are we within budget?

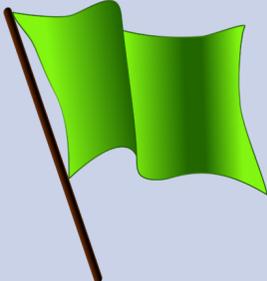
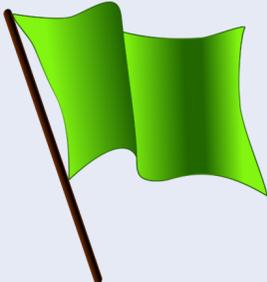
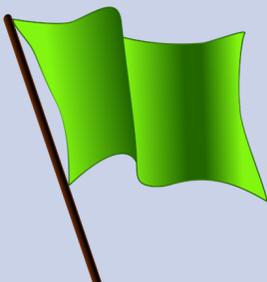
Category	Status	Comments
Overall Project		<ul style="list-style-type: none"> <li>▶ LPS staff still has concerns about the availability of their time to execute the SIT testing plan.</li> <li>▶ Finance and Procurement have both accomplished all of their key testing goals during Unit Test.</li> <li>▶ There are a number of outstanding decisions that must be made quickly in order to avoid delays to the project.</li> </ul>
Scope		<ul style="list-style-type: none"> <li>▶ Workforce Management (Time &amp; Attendance) build is progressing. Infor has identified one potential customization that may be required to meet required functionality.</li> <li>▶ Scheduling time for key process discussions, system integration considerations, and functionality/design confirmation.               <ul style="list-style-type: none"> <li>- Overall time worked vs. accounting assignment, etc.</li> <li>- SmartFind Express, Xerox, Edulog (time &amp; Attendance data)</li> </ul> </li> </ul>
Budget		<ul style="list-style-type: none"> <li>▶ Project is over budget with respect to consulting hours and projected hardware cost:               <ul style="list-style-type: none"> <li>- The number of consultant changes in the first year of the project.</li> <li>- Implementation of new versions of key components reduces the agility of consultants who are implementing some features for the first time.                   <ul style="list-style-type: none"> <li>* Infor is providing agreed upon compensatory hours at no cost.</li> </ul> </li> <li>- Additional server hardware is needed to meet the resource demands associated with the decision to implement a newer version of a key component of the solution.                   <ul style="list-style-type: none"> <li>* While the overall 5-year project cost will be greater than projected, at this point the additional cost can be absorbed within the operational budget for the project.</li> </ul> </li> </ul> </li> </ul>

# Is the project “on time?” Are there sufficient resources? What are the risks to the project?

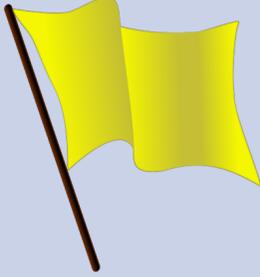
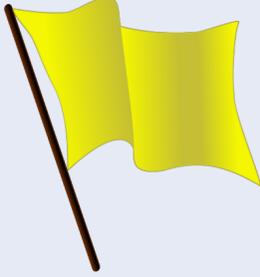
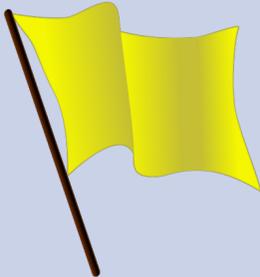
Category	Status	Comments
<p><b>Schedule</b></p>		<ul style="list-style-type: none"> <li>▶ The LPS Project Manager and Projects Leads completed a more detailed project plan designed to overcome the scheduling challenges related to the delayed start of work on the General HR environment.</li> <li>▶ The plan is predicated on addressing key outstanding issues and on LPS’s ability to execute System Integration Testing (SIT) semi-independently. The plan combines Performance Testing with SIT testing in the Production environment. This will provide additional time for User Acceptance Testing/Training/Cutover.</li> </ul>
<p><b>Resources &amp; Staffing</b></p>		<ul style="list-style-type: none"> <li>▶ A project with this depth and breadth places significant additional time demands on LPS staff to perform testing and work through integration decisions while completing the day-to-day tasks associated with their position.</li> <li>▶ Project Management processes have been put into place to improve communication of key decisions, discussion items and homework. While it is too early to ascertain the impact of these changes on overall efficiency and effectiveness, staff response is positive.</li> <li>▶ Significant improvement in the experience and expertise of Infor consultants, along with their retention on the project, has increased staff confidence and sense of collective efficacy.</li> </ul>
<p><b>Risks</b></p>		<ul style="list-style-type: none"> <li>▶ Progress on the Work Force Management (Time &amp; Attendance) component has improved staff confidence in its ability to meet key business requirements. Despite slower than expected progress in other areas, staff has collectively reported their greatest concern with the Work Force Management component. This is related to both the complexity of the rule sets necessary to address the many variations in staff assignment and the impact of this component on Payroll.</li> </ul>

Category	Status	Comments
<b>Project Validation, Verification and Documentation</b>		<ul style="list-style-type: none"><li>▶ All areas have been working on the RICE document (Reports Integrations Customizations Extensions) reducing uncertainty about “what we don’t know.”</li><li>▶ Staff has done significant work to provide Infor consultants with detailed specifications for process automation configurations that must be completed for System Integration Testing (SIT). Also included are configuration changes that allow screen modifications/menus/new custom fields etc. This process, along with the migration of LPS data into the environment, begins to make it feel more like an LPS system thereby increasing the confidence of staff to take ownership.</li><li>▶ Interface work documenting the requirements and process for how data will be shared and used between Infor and other systems such as Docushare, Smartfind, Edulog and Heartland.</li><li>▶ Ongoing gap analysis to determine how to provide the functionality in current custom applications when there is no similar functionality in Infor.</li><li>▶ MoSoCoW (Must have Should have Could have Won’t have) reviewing functional specifications defined in RFP items and checking for missing testing scripts/scenarios. In essence, what did we miss in testing that we initially said should be included in our system.</li></ul>

# Specific functional areas – Finance & Procurement

Category	Status	Comments
<b>Cloud Suite Financial Finance (Accounts Payable/Receivable, General Ledger)</b>		<ul style="list-style-type: none"><li>▶ Unit Testing Complete</li><li>▶ Working on Pristine Setup of codes. These are data that won't change and can be copied from one environment to another to facilitate testing.</li><li>▶ Identification of report requirements and design documentation for custom reports</li><li>▶ Preparation of additional scenarios for upcoming System Integration Testing (SIT)</li><li>▶ Infor Business Intelligence (BI) - Technical setup issues have precluded any review of capabilities associated with this type of reporting</li></ul>
<b>Cloud Suite Financial Supply Chain Management and Procurement</b>		<ul style="list-style-type: none"><li>▶ Unit Testing Complete</li><li>▶ Working on Pristine Setup of codes. These are data that won't change and can be copied from one environment to another to facilitate testing.</li><li>▶ Identification of report requirements and design documentation for custom reports</li><li>▶ Preparation of additional scenarios for upcoming System Integration Testing (SIT)</li><li>▶ Started work on EDI testing for electronic exchange of data with "punchout" vendors such as Office Depot and Supply Works</li></ul>
<b>Expense Management</b>		<ul style="list-style-type: none"><li>▶ Work on this component began this week and it is judged to hold considerable promise for improving processes to track district travel expenses.</li></ul>

# Specific functional areas – Human Resources & Payroll

Category	Status	Comments
<p><b>Payroll</b></p>		<ul style="list-style-type: none"> <li>▶ Direct Deposit and Deduction conversion files are loaded and all HR changes for 11/30/2018 contract scenarios are processed and validated. Data conversion validation is ongoing.</li> <li>▶ The 11/30/2018 payroll was processed and the December 31 payroll was run to process the remaining HR scenarios. Currently preparing for a small test of overtime.</li> <li>▶ First draft of cutover plan with dates has been established for all areas. This will continue to be refined with more details over the next several months.</li> </ul>
<p><b>Global Human Resources &amp; Talent Acquisition</b></p>		<ul style="list-style-type: none"> <li>▶ Delays due to Infor consultant resources impacted the setup and configuration of the GHR component. Additionally, delays related to key decision points impact data conversion that, in turn, impacts the ability to test decisions.</li> <li>▶ The execution of scenarios/scripts for payroll have been completed and screen design changes have been identified.</li> <li>▶ Supply Chain Management and Finance approvals using GHR data were documented with the assistance of an Infor Process Automation consultant.</li> <li>▶ Benefits, while not going live with open enrollment until 2020, needs to have setup complete to allow data to go through the system to payroll and enroll new employees.</li> <li>▶ Talent Acquisition - Initial Setup has begun. Full implementation of this module will not occur until after go-live of GHR.</li> <li>▶ Data requirements for the Global Human Resources interface to the Work Force Management (Time &amp; Attendance) component have been documented.</li> </ul>
<p><b>WorkForce Management (Time &amp; Attendance)</b></p>		<ul style="list-style-type: none"> <li>▶ WFM was recently installed giving LPS team access to the environment.</li> <li>▶ Test scenarios and scripts have been organized.</li> <li>▶ Testing includes adding time, pay codes, and leave balance cascades.</li> <li>▶ Supervisor structure in GHR and impact of time-keepers in WFM refined with more details over the next several months.</li> </ul>

# Project Timeline

## Finance & Procurement

## Human Resources & Payroll

	18-OCT	18-NOV	18-DEC	19-JAN	19-FEB	19-MAR	19-APR	19-MAY	19-JUN	19-JUL	19-AUG	19-SEP	19-OCT
<b>CONSTRUCTION</b>													
Data Conversion	Green					Blue	Red		Red				
Develop IPA Functional Specs	Green	Blue		Grey		Grey	Red		Red				
Develop IPA processes	Green	Blue			Grey		Grey	Red		Red			
Develop Test Scenarios	Green	Blue		Grey		Grey	Red		Red				
Establish Testing Environment	Green	Grey	Blue		Grey		Grey	Red		Red			
Conduct System Test	Grey	Green			Blue		Grey	Red		Red			
System Test Support	Grey	Green		Blue		Grey	Red		Red				
Reconfiguration / Pristine	Grey	Grey	Green		Blue		Grey	Red		Red			
System Integration Testing Preparation	Grey	Grey	Grey	Grey	Grey	Green	Blue	Red		Red			
System Integration Testing	Grey	Grey	Grey	Grey	Grey	Grey	Green	Blue	Red		Red		
<b>TRANSITION</b>	Grey					Grey	Red		Red				
User Acceptance Test Preparation	Grey	Grey	Grey	Grey	Grey	Grey	Red	Green	Blue	Red			
User Acceptance Testing	Grey	Grey	Grey	Grey	Grey	Grey	Red	Red	Green		Blue		
Cutover Plan Development	Grey	Grey	Grey	Grey	Grey	Green	Blue	Red		Red			
Finalize Cutover Plan	Grey	Grey	Grey	Grey	Grey	Grey	Red	Red	Green		Blue		
<b>OPTIMIZE</b>	Grey					Grey	Red		Red				
Go-Live Preparation	Grey	Grey	Grey	Grey	Grey	Grey	Red	Red	Grey	Grey	Green		Blue
Go-Live/Cutover	Grey	Grey	Grey	Grey	Grey	Grey	Red	Red	Grey	Grey	Grey	Green	Blue
Production Support	Grey	Grey	Grey	Grey	Grey	Grey	Red	Red	Grey	Grey	Grey	Grey	Green
	Grey	Grey	Grey	Grey	Grey	Grey	Red	Red	Grey	Grey	Grey	Grey	Blue



# Dialogue