Budget

Newark City (044453) - Licking County - 2016 - Straight A Fund - Rev 0 - Straight A Fund - Application Number (18)

U.S.A.S. Fund #: 466

Plus/Minus Sheet (opens new window)

Object Code / Purpose Code	Salaries 100	Retirement Fringe Benefits 200	Purchased Services 400	Supplies 500	Capital Outlay 600	Other 800	Total
Instruction	6,900.00	0.00	0.00	536,172.60	0.00	0.00	543,072.60
Support Services	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Governance/Admin	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Prof Development	0.00	0.00	3,322.00	0.00	0.00	0.00	3,322.00
Family/Community	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Safety	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Facilities	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Transportation	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Indirect Cost						0.00	0.00
Total	6,900.00	0.00	3,322.00	536,172.60	0.00	0.00	546,394.60
						Adjusted Allocation	0.00
						Remaining	-546,394.60

Application

Newark City (044453) - Licking County - 2016 - Straight A Fund - Rev 0 - Straight A Fund - Application Number (18)

Please respond to the prompts or questions in the areas listed below in a narrative form.

A) APPLICANT INFORMATION - General Information

1. Project Title:
Full STEM Ahead

2. Project Summary: Please limit your responses to no more than three sentences.
Increase the amount of time science students will learn using hands-on experiments as well as to expand the STEM curriculum and class choice

This is an ultra-concise description of the overall project. It should only include a brief description of the project and the goals it hopes to achieve.

3. Estimate of total students at each grade level to be directly impacted each year.

*This is the number of students that will receive services or other benefits as a **direct result** of implementing this project. This does not include students that may be impacted if the project is replicated or scaled up in the future. It excludes students who have merely a tangential or indirect benefit (such as students having use of improved facilities, equipment etc. for other uses than those intended as a part of the project). The Grant Year is the year in which funds are received from the Ohio Department of Education. Years 1 through 5 are the sustainability years during which the project must be fiscally and programmatically sustained.*

Grant Year

Pre-K Special Education	K	1	2	3
4	5	300 6	400 7	400 8
25 9	25 10	11	12	

Year 1

Pre-K Special Education	K	1	2	3
4	5	300 6	420 7	450 8
30 9	30 10	25 11	12	

Year 2

Pre-K Special Education	K	1	2	3
4	5	300 6	450 7	450 8
35 9	35 10	25 11	25 12	

Year 3

Pre-K Special Education	K	1	2	3
4	5	300 6	475 7	475 8
40 9	40 10	25 11	25 12	

Year 4

Pre-K Special Education	K	1	2	3
4	5	300 6	500 7	500 8
55 9	55 10	25 11	25 12	

Year 5

Pre-K Special Education	K	1	2	3
4	5	300 6	525 7	525 8

60 9	60 10	25 11	25 12

4. Explanation of any additional students to be impacted throughout the life of the project.
This includes any students impacted or estimates of students who might be impacted through future scale-ups or replications that go beyond the scope of this project.

The project will begin by impacting all of the students who take science class in grades 6-8 as well as the students in the grade 7-8 pre-engineering and robotics classes and the grades 9-10 engineering and computer coding classes. The expectation for the following 5 years is that the number of students in grades 7-10 pre-engineering, engineering, robotics, and computer coding classes will grow at a rate of 5% per year. In Year 2 we hope to add Advanced Placement Statistics to the high school curriculum as we feel the students who have taken some of the courses we will implement will be ready for that challenge. In Year 3 we hope to add Advanced Placement Computer Science to enhance the choices that students who have taken the engineering and/or computer coding course.

5. Lead applicant primary contact: - Provide the following information:

First and last name of contact for lead applicant
Tara Boyer

Organizational name of lead applicant
Newark City Schools

Address of lead applicant
314 Granville Street

Phone Number of lead applicant
7406707452

Email Address of lead applicant
tboyer@laca.org

Community School Applicants: After your application has been submitted and is in Authorized Representative Approved status an email will be sent to your sponsoring entity automatically informing the sponsor of your application.

6. Are you submitting your application as a consortium? - Select one checkbox below

☐ Yes

☑ No

If you are applying as consortium, please list all consortium members by name on the "Consortium Member" page by clicking on the link below. If an educational service center is applying as the lead applicant for a consortium, the first consortium member entered must be a client district of the educational service center.

Add Consortium Members

7. Are you partnering with anyone to plan, implement, or evaluate your project? - Select one checkbox below

☐ Yes

☑ No

If you are partnering with anyone, please list all partners (vendors, service providers, sponsors, management companies, schools, districts, ESCs, IHEs) by name on the "Partnering Member" page by clicking on the link below.

Add Partnering Members

B) PROJECT DESCRIPTION - Overall description of project and alignment with goals

8. Describe the innovative project: - Provide the following information

The response should provide a clear and concise description of the project and its major components. The following questions will address specific outcomes and measures of success.

a. The current state or problem to be solved; and

Newark City Schools is a K-12 district in Licking County with a 61% economically disadvantaged population. Currently our middle school science teachers have few materials available to them to allow our students to conduct sophisticated hands-on experiments. Consequently the type of critical thinking that can originate through using the scientific method in realistic experimental activities is limited. Students in the district have struggled in the sciences. The middle school teachers have little to no access to supplies that are industry-related and through which the students could begin to explore future STEM job options or begin to cultivate a feeling of self-confidence in regard to their abilities to be successful in the STEM arena. In addition, Newark City Schools has few elective STEM courses available to students at the middle or high schools. This year the district instituted pre-engineering and robotics electives at grades 7-8 and engineering and computer coding at the high school. However these classes are limited in the students who can take them because many of the students need a better base in the STEM courses so that they can be successful. To increase the number of students who can sign up for STEM courses because they feel confident that they can be successful in a course with critical thinking, and project-based STEM assignments NCS needs to integrate more

hands-on science experiments with real-world implications into the middle school science classes. As students become more successful in the required STEM courses Newark City Schools will need to expand the capacity for students to sign up for the pre-engineering, robotics, engineering, and computer coding courses.

b. The proposed innovation and how it relates to solving the problem or improving on the current state.

The primary objectives to accomplish are to 1. provide more hands-on and sophisticated experiments in science in grades 6-8, 2. increase the amount and quality of critical thinking that students do in science; 3. allow the students to begin to understand the real-world connections of STEM and the opportunities that STEM offers for careers in the future; 4. increase the number of students, including those who are often underrepresented, who have STEM ability and background knowledge to participate in the electives of pre-engineering, robotics, engineering, and computer coding in grades 7-10; 5. introduce Advanced Placement Statistics and Advanced Placement Computer Science courses to high school students who will have the background to be successful in those classes; and 6. prepare teachers through professional development and collaboration with the skills they will need to facilitate an increase in critical thinking and preparation for more challenging STEM experiences. How will our program help us to achieve our objectives? -Through the supporting materials added to our current science courses at the middle school and the electives at grades 7-10 we are providing a pathway for students to excel at solving open-ended problems and making connections to future career choices. Having access to the latest equipment and resources will enable our students to conduct hands-on experiments that truly encompass the spirit and the letter of the Ohio Science Learning Standards. -Increasing hands-on experiments to address real-world situations will increase the opportunities for teachers to facilitate student critical thinking and the opportunities for students to come up with original and creative solutions to problems or answers to questions. The idea of making a better world becomes a reality when students are exposed to opportunities that address real life experimentation and application. The addition of 3D scanners and printers, Raspberry Pi computing, along with our robotics add a new dimension to the idea of advanced manufacturing that students can unfold in a classroom lab setting. Realizing the possibilities that exist for the future could be the spark for this generation of learners. -As students become more knowledgeable and comfortable with STEM content and the process of experimentation they will become more open to the opportunities that are available in the economic and university communities. For example, it's a powerful learning opportunity that Optical Heart Rate Monitors, once constructed by students, can be sent around the world to help train others. -Through giving students a deeper base of knowledge built on their opportunities to conduct real-world experiments, and by heightening interest in the sciences through more student-centered instruction, we will increase the number of students who sign up to take STEM electives. We feel that this change in instruction will lead to more students who are often underrepresented in the sciences, such as females, students of color, and low socio-economic students, feeling interested and self-confident enough to sign up for elective science courses such as pre-engineering, robotics, engineering, and computer coding. -Through the improved STEM foundation that students can hone in the regular science classes and in the various STEM electives we believe that students will be better prepared and more willing to choose Advanced Placement Statistics and Advanced Placement Computer Science. Consequently we will be adding those classes to the high school electives. -Professional Development for teachers will emphasize use of scientific inquiry with a real-world focus through labs and experimentation. The expectations for instruction of students with an emphasis on discovery learning will be a major focus in the professional development. Forensic camps, field trips to local universities

9. Select which (up to four) of the goals your project will address. For each of the selected goals, please provide the requested information to demonstrate your innovative project. - (Check all that apply)

☑ a. Student achievement

i. List the desired outcomes.
Examples: fewer students retained at 3rd grade, increase in graduation rate, increased proficiency rate in a content area, etc.

Through our program we hope to: --increase the number of students who pass the state science tests at grades 8 and10 by 2% beginning the second year after implementation --increase the percentage of students who choose to take elective courses in STEM by 5% each year after implementation of the grant --increase the number of hands-on, real-world experiments in all science classes for students in grades 6-8 --have more students better prepared for STEM electives and science classes --increase the number of students who begin to see STEM as interesting, fun, and accessible --add Advanced Placement Statistics and Advanced Placement Computer Science at the high school level --improve the critical thinking of students --increase the number of students who will choose a job relating to a STEM area or post-graduation education in a STEM area after graduation

ii. What assumptions must be true for this outcome to be realized?
Examples: early diagnosis and intervention are needed to support all children learning to read on grade level; project-based learning results in higher levels of student engagement and learning, etc.

Assumptions for success are: 1. an increase in hands-on experiments will improve student knowledge and critical thinking 2. the increase in student knowledge and critical thinking in science will translate into an increase in the number of students who choose to take a STEM elective 3. student interest in the curriculum and instruction will help to promote achievement 4. the increase in knowledge and in student participation in the STEM electives will translate into students who choose to take the new courses in Advanced Placement Statistics and Advanced Placement Computer Science 5. professional development can assist teachers in changing their instructional paradigm

iii. Describe any early efforts you have made to test these assumptions (pilot implementation, etc), or how these are well-supported by the literature.

Are most students college and career ready in STEM when they graduate from high school? "Only 20 percent of high school students who took the ACT are academically ready for the rigor of the first-year college courses they'll likely have to take if they're planning to major in science, technology, engineering or math, according to . . . the 'Condition of STEM" report.'" Gewertz, C. High School and Beyond Blog. Education Week. Found at http://mobile.edweek.org/c.jsp?cid=25920011&item=http%3A%2F%2Fapi.edweek.org%2Fv1%2Fblog%2F179%2F%3Fuuid%3D55357&cmp=SOC-SHR-TW What is the impact of STEM as a future career? "BLS [U.S. Bureau of Labor Statistics] projects overall STEM employment, as defined in this article, to grow about 13 percent between 2012 and 2022. This is faster than the 11-percent rate of growth projected for all occupations over the decade." Vilorio, D. "STEM 101: Intro to tomorrow's jobs." Occupational Outlook Quarterly. Found at http://www.stemedcoalition.org/wp-content/uploads/2010/05/BLS-STEM-Jobs-report-spring-2014.pdf. p 6. "The idea that STEM skills are essential for students, regardless of their future career aspirations, is a fact of life. Yet research shows that more than half of graduating students are not prepared for the STEM workforce-or to start training as rocket scientists." Brown, J. "Maybe it's not rocket science?" Inside ALEC. Found at http://www.alec.org/wp-content/uploads/InsideALEC-JanFeb2014-webres.pdf. p 11. "If the United States

is to retain its edge in the technology-based industries that generate innovation, quality jobs, and high wages, we must act to broker a new, collaborative understanding among the sectors that sustain our knowledge-based economy-industry, academe, and government-and we must do so promptly." Rising Above the Gathering Storm: Energizing and Employing America for a Brighter Economic Future http://www.nap.edu/catalog/11463.html. p 106. How can students be motivated and interest cultivated for STEM subjects, particularly among underrepresented groups such as the low socio-economic population at Newark City Schools? "One part of the solution is getting all American youngsters off to a stronger start in mathematics and science. Viewed broadly, the math and science education now being delivered in the years between pre-kindergarten and 12th grade, like a sterile vaccine, is not 'taking' in enough American classrooms. Our students are not learning enough of what they need to know to move into scientific and technical fields where this knowledge is foundational." Building Engineering and Science Talent. (2004). What it takes: PreK-12 design principles to broaden participation in science, technology, engineering, and mathematics. Retrieved November 6, 2015 from http://www.bestworkforce.org "Recommendation 4: Create a classroom environment that sparks initial curiosity and fosters long-term interest in math and science." http://nrs.harvard.edu/urn-3:HUL.InstRepos:4889482 . . . [E]ffective instruction capitalizes on students' early interest and experiences, identifies and builds on what they know, and provides them with experiences to engage them in the practices of science and sustain their interest. Successful K-12 STEM education: Identifying effective approaches in science, technology, engineering, and mathematics. Found at http://www.stemreports.com/wp-content/uploads/2011/06/NRC_STEM_2.pdf. p 18.

iv. List the specific indicators that you will use to measure progress toward your desired outcome.
These should be measurable changes, not merely the accomplishment of tasks. Example: Teachers will each implement one new project using new collaborative instructional skills, (indicates a change in the classroom) NOT; teachers will be trained in collaborative instruction (which may or may not result in change).

1. The state science tests will be compared. We will expect to see a 2% gain in the various state science tests at grades 8 and in Biology (grade 10 in the past) every year after the implementation year. 2. Grades 6-8 science teachers who receive the tools, materials, and training will turn in a description of the hands-on experiments that are conducted in their class every month. Teachers will have a template that they will all use to describe the experiment. The implementation year there will be an expectation of at least 4 hands-on experiments per month. The teachers will then meet during the summer after the implementation year to determine what the expectations will be for the following year. 3. There will be an expectation of 5% growth of student participation in STEM electives each year beginning after the implementation year.

v. List and describe pertinent data points that you will use to measure student achievement, providing baseline data to be used for future comparison.

The state science tests will be compared. We will expect to see a 2% gain in the various state science tests at grades 8 and in Biology (grade 10 in the past) every year after the implementation year. Building 2012-13 2013-14 2014-15 2015-16 Heritage 76.2 76.7 Liberty 83.9 73 Wilson 70.7 70.5 Newark High School 71 75 We will also expect to see a 5% gain yearly in the number of students who choose to take the STEM electives. We will also collect from the 6-8 science teacher an accounting of the weekly hands-on experiments that their students are conducting.

vi. How are you prepared to alter the course of your project if assumptions prove false or outcomes are not realized?

We are willing to adjust the program as needed based on research and results. We will examine all of the data and determine whether different strategies are successful. If the hands-on experiments do not result in increased state test scores then we will work together to re-examine the experiments and how they tie-in to the state standards. We will also continue to search out professional development in STEM so that the teachers can implement new research and best practices teaching strategies. As for growth in STEM electives, if the expected growth does not occur but the improvement in science knowledge does occur, then we will try to determine what is keeping students from choosing STEM electives other than ability. When we determine what that factor is then we will work to remove it as an obstacle.

☐ b. Spending reductions in the 5 year forecast

i. List the desired outcomes.
Examples: lowered facility cost as a result of transition to more efficient systems of heating and lighting, etc.; or cost savings due to transition from textbook to digital resources for teaching.

ii. What assumptions must be true for this outcome to be realized?
Example: transition to "green energy" solutions produce financial efficiencies, etc.; or available digital resources are equivalent to or better than previously purchased textbooks.

iii. Describe any early efforts you have made to test these assumptions (pilot implementation, etc), or how these are well-supported by the literature.

iv. List the specific indicators that you will use to monitor progress toward your desired outcome.
These should be specific dollar savings amounts. THESE MUST MATCH THE COST SAVINGS AS PROJECTED IN THE FINANCIAL IMPACT TABLE (FIT).

v. List and describe pertinent data points that you will use to measure spending reductions, providing baseline data to be used for future comparison.

vi. How are you prepared to alter the course of your project if assumptions prove false or outcomes are not realized?

☐ c. Utilization of a greater share of resources in the classroom

i. List the desired outcomes.
Example: change the ratio of leadership time spent in response to discipline issues to the time available for curricular leadership.

ii. What assumptions must be true for this outcome to be realized?
Examples: improvements to school and classroom climate will result in fewer disciplinary instances allowing leadership to devote more time to curricular oversight.

iii. Describe any early efforts you have made to test these assumptions (pilot implementation, etc), or how these are well-supported by the literature.

iv. Please provide the most recent instructional spending percentage (from the annual Ohio School Report Card) and discuss any impact you anticipate as a result of this project.
Note: this is the preferred indictor for this goal.

v. List any additional indicators that you will use to monitor progress toward your desired outcome. Provide baseline data if available.
These should be specific outcomes, not just the accomplishment of tasks. Example: fewer instances of playground fighting.

vi. How are you prepared to alter the course of your project if assumptions prove false or outcomes are not realized?

☐ d. Implementing a shared services delivery model

i. List the desired outcomes.
Examples: increase in quality and quantity of employment applications to districts; greater efficiency in delivery of transportation services, etc.

ii. What assumptions must be true for this outcome to be realized?
Example: neighboring districts have overlapping needs in administrative areas that can be combined to create efficiencies.

iii. Describe any early efforts you have made to test these assumptions (pilot implementation, data analysis etc), or how these are well-supported by the literature.

iv. List the specific indicators that you will use to monitor progress toward your desired outcomes.
These should be measureable changes, not the accomplishment of tasks.
Example: consolidation of transportation services between two districts.

v. List and describe pertinent data points that you will use to evaluate the success of your efforts, providing baseline data to be used for future comparison.
Example: change in the number of school buses or miles travelled.

vi. How are you prepared to alter the course of your project if assumptions prove false or outcomes are not realized?

10. Which of the following best describes the proposed project? - (Select one)

☐ a. New - Never before implemented

☐ b. Existing - Never implemented in your community school or school district but proven successful in other educational environments

☐ c. Replication - Expansion or new implementation of a previous Straight A Project

☑ d. Mixed Concept - Incorporates new and existing elements

☐ e. Established - Elevating or expanding an effective program that is already implemented in your district, school or consortia partnership

C) BUDGET AND SUSTAINABILITY

11. Financial Information: - All applicants must enter or upload the following supporting information. The information in these documents must correspond to your responses in questions 12-19.

a. Enter a project budget in CCIP (by clicking the link below)

Enter Budget

b. If applicable, upload the Consortium Budget Worksheet (by clicking the Upload Documents link below)

c. Upload the Financial Impact Table (by clicking the Upload Documents link below)

Upload Documents

The project budget is entered directly in CCIP. For consortia, this project budget must reflect the information provided by the applicant in the Consortium Budget Worksheet. Directions for the Financial Impact Table are located on the first tab of the workbook. Applicants must submit one Financial Impact Table with each application. For consortium applications, please add additional sheets instead of submitting separate Financial Impact Tables.

546,394.60 12. What is the amount of this grant request?

13. Provide a brief narrative explanation of the overall budget.
Responses should provide a rationale and evidence for each of the budget items and associated costs outlined in the project budget. In no case should the total projected expenses in the budget narrative exceed the total project costs in the budget grid.

The majority of the budget is for real world technology, equipment, and supplies to allow middle school science teachers to incorporate more hands-on experiments in their classroom. Along with the middle school science classes materials and machines are also slated to be purchased for the pre-engineering, engineering, robotics, and computer coding electives in the middles and high schools. An example of some of the equipment and materials for elective classes are: 1. Laser Cutter/ Engraver (1) $3,500/each a. Full Spectrum H-Series 20 x 12 Desktop CO2 Laser 2. 3D Printer pen (10) $90/each a. Joyluxy Intelligent 3D pen b. 3D Filament Fun Pack - The original #1 Best Seller - BONUS GLOW IN THE DARK COLOR INCLUDED - 1.75mm ABS - 240 Linear Feet Total of 12 Different Colors in 20 Foot Lengths (30) $25/each . 3D Printer (10) $ 6,400/each a. MakerBot Replicator Z18 3D Printer 4. 3D Printer filament (50) $ 40/ each 5. Raspberry Pi Computer and accessories (30) $200/each a. Screens, Wifi adapters, power supply, mouse and keyboard b. sensors, wires, breadboards (30) $100/each set 6. Cordless Soldering Kit (10) $ 99/each 7. Matter and Form MFS1V1 3D Scanner (3) $600/each 8. Building Materials $3000 a. Sheet metal, wood 9. Swivl Robotic Platform for Video (3) $400 a. outreach with industry professionals (video conference) Examples of materials for middle school science classes are: SCIENTIFIC METHOD PROBLEM SOLVING LAB 90 79.95 6TH 7,195.50 POCKET PUNNET SQUARES MANIPULATIVE 3 PER BUILDING 69.00 8TH 621.00 GROUNDWATER SIMULATION SYSTEM 21 TOTAL 745.00 7TH 15645.00 INTRO TO SCIENTIFIC METHOD LAB 90 96.50 6TH 8,685.00 There is also money budgeted for professional development for the teachers. $3322.00 is budgeted for a 2 day training at COSI for up to 30 teachers. There is also money budgeted to pay for subs to cover the teachers. That is part of the $6900.00 in salaries. The remaining money in salaries is to pay for sub coverage during the 2016-2017 school year for teachers to plan once per quarter. There is also money in this budget to pay teachers a stipend for 4 summer days during the summer of 1916 to get together and plan to implement the new equipment and materials into the science and STEM elective classes.

14. Please provide an estimate of the total costs associated with maintaining this program through each of the five years following the initial grant implementation year (sustainability costs). This is the sum of expenditures from Section A of the Financial Impact Table.

5,900.00 a. Sustainability Year 1

5,900.00 b. Sustainability Year 2

6,900.00 c. Sustainability Year 3

6,900.00 d. Sustainability Year 4

7,900.00 e. Sustainability Year 5

15. Please provide a narrative explanation of sustainability costs.
Sustainability costs include any ongoing spending related to the grant project after June 30, 2017. Examples of sustainability costs include annual professional development, staffing costs, equipment maintenance, and software license agreements. To every extent possible, rationale for the specific amounts given should be outlined. The costs outlined in this narrative section should be consistent and verified by the financial documentation submitted and explained in the Financial Impact Table. If the project does not have sustainability costs, applicants should explain why.

The first and second year money is budgeted to continue the planning sessions for teachers during the school year. Thus subs will be needed. There is also $2000.00 budget for replacement supplies. The third and fourth year money is budgeted to continue the planning sessions for teachers during the school year. Thus subs will be needed. There is also $3000.00 budget for replacement supplies. The fifth year money is budgeted to continue the planning sessions for teachers during the school year. Thus subs will be needed. There is also $3000.00 budget for replacement supplies.

0 16. What percentage of these costs will be met through cost savings achieved through implementation of the program?

Total cost savings from section B of the Financial Impact Table divided by total sustainability cost from section A of the Financial Impact Table. If the calculated amount is greater than 100, enter 100 here.

17. Please explain how these cost savings will be derived from the program.
Applicants who selected spending reductions in the five-year forecast as a goal must identify those expected savings in questions 16 and 17. All spending reductions must be verifiable, permanent, and credible. Explanation of savings must be specific as to staff counts; salary/benefits; equipment

costs, etc.

100 18. What percentage of sustainability costs will be met through reallocation of savings from elsewhere in the general budget?

Total reallocation from section C of the Financial Impact Table divided by total sustainability cost from section A of the Financial Impact Table
Note: the responses to questions 16 and 18 must total 100%

19. Please explain the source of these reallocated funds.
Reallocation of funds implies that a reduction has been made elsewhere in the budget. Straight A encourages projects to determine up front what can be replaced in order to ensure the life of the innovative project.

The reallocation of funds will be from curriculum supplies and materials.

D) IMPLEMENTATION

20. Please provide a brief description of the team or individuals responsible for the implementation of this project, including other consortium members or partners.

This response should include a list of qualifications for the applicant and others associated with the grant. Please list key personnel only. If the application is for a consortium or a partnership, the lead should provide information on its ability to manage the grant in an effective and efficient manner. Include the partner/consortium members' qualifications, skills and experience with innovative project implementation and projects of similar scope.

Enter Implementation Key Personnel information by clicking the link below:

Add Implementation - Key Personnel

For Questions 21-23 please describe each phase of your project including its timeline, and scope of work.

A complete response to these questions will demonstrate awareness of the context in which the project will be implemented and the time it will take to implement the project with fidelity. A strong plan for implementing, communicating and coordinating the project should be apparent, including coordination and communication in and amongst members of the consortium or partnership (if applicable). Not every specific action step need be included, but the outline of the major steps should demonstrate a thoughtful plan for achieving the goals of the project. The timeline should reflect significant and important milestones in an appropriate time frame.

21. Planning

a. Date RangeSeptember 14, 2015 through November 19, 2015

b. Scope of activities - include all specific completion benchmarks.

September 14-meeting to discuss what the focus of the grant would be. November 4-meeting to finalize what area of achievement would be the focus for STEM grant for middles and high schools. . November 17-meeting to determine what research impacts the project. It was determined that building up the middle school science to provide more real world experiences and hands-on experiments was essential to help students be ready for the STEM electives. November 19-meeting to detail out the supplies and materials that would be needed to help to make the middle school science experience more real world and hands on as well as what would be needed to help include more STEM electives.

22. Implementation(grant funded start-up activities)

a. Date RangeMarch 1, 2016 through June 30, 2017

b. Scope of activities - include all specific completion benchmarks

June-August, 2016--professional development for hands-on instruction June-August, 2016--team grade level and course specific planning sessions for more hands-on instruction September 2016-May, 2017--1 per semester team grade level and course specific planning sessions for more hands-on instruction June, 2017--Team analyzes test data and discusses adjustments for coming school year

23. Programmatic Sustainability (years following implementation, including institutionalization of program, evaluation and communication of program outcomes)

a. Date RangeJuly 1, 2017-June 30.2022

b. Scope of activities - include all specific completion benchmarks

July 2017-August, 2018--teachers will meet to plan 3 times a year. They will also meet 4 times in the summer to analyze the state test data and examine the data for students who choose to take elective courses. July 2018-August, 2019--teachers will meet to plan 3 times a year. They will also meet 4 times in the summer to analyze the state test data and examine the data for students who choose to take elective courses. July 2019-August, 2020--teachers will meet to plan 3 times a year. They will also meet 4 times in the summer to analyze the state test data and examine the data for students who choose to take elective courses. July 2020-August, 2021--teachers will meet to plan 3 times a year. They will also meet 4 times in the summer to analyze the state test data and examine the data for students who choose to take elective courses. July 2021-August, 2022--teachers will meet to plan 3 times a year. They will also meet 4 times in the summer to analyze the state test data and examine the data for students who choose to take elective courses.

E) SUBSTANTIAL IMPACT AND LASTING VALUE

24. Describe the expected changes to the instructional and/or organizational practices in your institution.

The response should illustrate the critical instructional and/or organizational changes that will result from implementation of the grant and the impact of these changes. These changes can include permanent changes to current district processes, new processes that will be incorporated or the removal of redundant processes. The response may also outline the expected change in behaviors of individuals (changes to classroom practice, collaboration across district boundaries, changes to a typical work day for specific staff members, etc.). The expected changes should be realistic and significant in moving the institution forward.

Please enter your response below:

The project is expected to bring about a lasting change in the grade 6-8 science instruction in all district buildings. Teachers will be expected to plan and execute a weekly hands-on experiment with their students that uses real world problems and equipment and that stimulates critical thinking. The first year will include professional development as well as planning time and time for the teachers to evaluate the data to determine whether changes need to be made. The project also will assist the district in increasing the number of students who have an opportunity to take the STEM electives. The solid base that students will be getting in the middle school science classes will help students feel more confident in their ability to complete STEM courses. The STEM courses will continue to grow and the curriculum broaden as more and more students at various grade levels participate in the STEM elective offereings.

25. Please provide the name and contact information for the person and/or organization who will oversee the evaluation of this project.

Projects may be evaluated either internally or externally. However, evaluation must be ongoing throughout the entire period of sustainability and have the capacity to provide the Ohio Department of Education with clear metrics related to each selected goal.

Please enter your response below:

Tara Boyer; Assistant Curriculum Director; 621 Mount Vernon Road, Newark, Ohio 43055; 740-670-7051

26. Describe the overall plan for evaluation, including plans for data collection, underlying research rationale, measurement timelines and methods of analysis.

This plan should include the methodology for measuring all of the project outcomes. Applicants should make sure to outline quantitative approaches to assess progress and measure the overall impact of the project proposal. The response should provide a clear outline of the methods, process, timelines and data requirements for the final analysis of the project's progress, success or shortfall. The applicant should provide information on how the lessons learned from the project can and will be shared with other education providers in Ohio. Note: A complete and comprehensive version of the evaluation plan must be submitted to ODE by all selected projects.

At the end of each year of the project the middle school and high school state science tests will be analyzed to determine if the improved instruction is paying dividends in higher scores and more critical thinking. Also, the number of students who are choosing to sign up for elective STEM courses will be calculated to determine if the increased percentage is meeting the project goal. If not, an analysis to determine what changes need to be made to attrack more students into those electives will be made. Teachers will share the records that they are keeping of the hands-on experiments that they are expecting students to do every week. The group will work together to determine which experiments work best to give students real world experiences and to cultivate critical thinking.

27. Please describe the likelihood that this project, if successful, can be scaled-up, expanded and/or replicated. Include a description of potential replications both within the district or collaborative group, as well as an estimation of the probability that this solution will prove useful to others. Discuss the possibility of publications, etc., to make others aware of what has been learned in this project.

The response should provide an explanation of the time and effort it would take to implement the project in another district, as well as any plans to share lessons learned with other districts. To every extent possible, applicants should outline how this project can become part of a model so that other districts across the state can take advantage of the learnings from this proposed innovative project. If there is a plan to increase the scale and scope of the project within the district or consortium, it should be noted here.

This project will successfully provide everything necessary for the middle school science teachers to incorporate more real world and hands on experiements. The district will simply have to replace the disposable materials and equipment as it ages or breaks. This will not be something that has to be spread as it encompasses the entire 6-8 grade levels. The expected growth in the STEM elective classes, on the other hand, will reach a tipping point at some time based on the ability to staff and house the electives. This might be ameliorated by the replacement of existing non-STEM electives with the STEM electives. As for moving to another district, that would be very possible if the district was able to purchase the necessary equipment and materials as well as provided professional development for the teachers.

By virtue of applying for the Straight A Fund, all applicants agree to participate in the overall evaluation of the Straight A Fund for the duration of the evaluation time frame. The Governing Board of the Straight A Fund reserves the right to conduct an evaluation of the project and request additional information in the form of data, surveys, interviews, focus groups and other related data on behalf of the General Assembly, Governor and other interested parties for an overall evaluation of the Straight A Fund.

PROGRAM ASSURANCES: I agree, on behalf of this applicant, and any or all identified consortium members or partners, that all supporting documents contain information approved by a relevant executive board or its equivalent and to abide by all assurances outlined in the Straight A Assurances (available in the document library section of the CCIP).

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Consortium

Newark City (044453) - Licking County - 2016 - Straight A Fund - Rev 0 - Straight A Fund

Sections

Consortium Contacts

No consortium contacts added yet. Please add a new consortium contact using the form below.

Newark City (044453) - Licking County - 2016 - Straight A Fund - Rev 0 - Straight A Fund

Sections

Partnerships

No partners added yet. Please add a new partner by using the form below.

Implementation Team

Newark City (044453) - Licking County - 2016 - Straight A Fund - Rev 0 - Straight A Fund

Sections

Implementation Team								
First Name	Last Name	Title	Responsibilities	Qualifications	Prior Relevant Experience	Education	% FTE	Delete Contact
Alex	Kovach	Technology Integration Specialist	computer coding teacher	Computer Tech Endorsement Tech Integration Specialist for 4 years Science teacher 3 years	Computer Tech Endorsement Tech Integration Specialist for 4 years Science teacher 3 years	Bachelors in Physics Masters in Education	20	
Kimberly	Hudson	teacher	middle school science teacher middle school pre-engineering	20 years teaching Dow in Excellence Award CTE Middle School validation Lego robotics coach Licking County Foundation Award in Education	20 years teaching Lego robotics coach	Bachelors Degree 1-8 Education	80	
Megan	Martin	teacher	middle school pre-engineering class	Career Technical Education Validation Middle School Lego Robotics coach 3 years teaching Math/Algebra	Lego Robotics coach 3 years teaching Math/Algebra	Bachelors degree business masters in education	30	
Meaghan	McDede	teacher	middle school science teacher	3 years in education	lego robotics coach	Bachelors and Masters in Education	50	
David	Clark	teacher	pre-engineering class	3 years in education	Lego robotics coach Stem Coach	Bachelors in Education	30	
Melissa	Sanders	Secondary Science/Math Coach	collection of data analysis of data professional development	34 years in education Science/Math Coach 4 years Career Tech Education Validation	Science/Math Coach 4 years	BS Education and MS Education	5	
Tara	Boyer	Assistant Curriculum Director	budget, evaluation	27 years in education; budget and supervision of ARRA technology grant; budget Title and 21st Century grants	budget and supervision of ARRA technology grant; budget Title and 21st Century grants	Bachelors in Pol Sci & Secondary Ed; Masters in Admin & Computer Ed. & Technology; Ph.D. in Curriculum and Instruction	5	
Ashley	Schultz	teacher	middle school science teacher	6 years in education STEMfest coach Lego robotics coach	STEMfest coach Lego robotics coach Dow Excellence in Education Award	Bachelors in Education Masters in Educational Technology	60	
Rebecca	Holloway	teacher	middle school science teacher	CTE middle school validation lego robotics coach STEM coach	lego robotics coach STEM coach	Masters of Education	60	