

Budget

Youngstown Community School (134072) - Mahoning County - 2014 - Straight A Fund - Rev 0 - Straight A Fund - Application Number (321)

U.S.A.S. Fund #:

[Plus/Minus Sheet \(opens new window\)](#)

Purpose Code	Object Code	Salaries 100	Retirement Fringe Benefits 200	Purchased Services 400	Supplies 500	Capital Outlay 600	Other 800	Total
Instruction		0.00	0.00	0.00	72,729.00	111,000.00	15,000.00	198,729.00
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	2,000.00	0.00	0.00	0.00	2,000.00
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	10,000.00	0.00	0.00	0.00	10,000.00
Transportation		0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total		0.00	0.00	12,000.00	72,729.00	111,000.00	15,000.00	210,729.00
Adjusted Allocation								0.00
Remaining								-210,729.00

Application

Youngstown Community School (134072) - Mahoning County - 2014 - Straight A Fund - Rev 0 - Straight A Fund - Application Number (321)

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

A) APPLICANT INFORMATION - General Information, Experience and Capacity

1. Project Title:STEM Lab

2.Executive summary: Provide an executive summary of your project proposal and which goal(s) in question 9 you seek to achieve. Please limit your responses to no more than three sentences.

We would like to provide and implement a STEM (Science, Technology, Engineering, Math) lab that would give the at risk students at Youngstown Community School the opportunity to experience project based modules to encourage higher level thinking and reasoning skills . The lab will include 10 standard based modules which will coordinate with math and/or science standards. Each module will take students up to 4 weeks to complete including hands on investigation and final assessment.

125 3. Total Students Impacted:

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

First Name, last Name of contact for lead applicant: Billie Jo Johnson

Organizational name of lead applicant: Youngstown Community School

Unique Identifier (IRN/Fed Tax ID): 134072

Address of lead applicant: 50 Essex Street Youngstown, Ohio 44502

Phone Number of lead applicant: 330-746-6272

Email Address of lead applicant: bjohnson@yics.k12.oh.us

5. Secondary applicant contact: - Provide the following information, if applicable:

First Name, last Name of contact for secondary applicant: N/A

Organizational name of secondary applicant: N/A

Unique Identifier (IRN/Fed Tax ID): N/A

Address of secondary applicant: N/A

Phone number of secondary applicant: N/A

Email address of secondary applicant: N/A

6. List all other participating entities by name: Provide the following information for each additional participating entity, if applicable: Mention First Name, Last Name, Organizational Name, Unique Identifier (IRN/Fed Tax ID), Address, Phone Number, Email Address of Contact for All Secondary Applicants in the box below.

Not Applicable

7. Partnership and consortia agreements and letters of support: - (Click on the link below to upload necessary documents).

* Letters of support are for districts in academic or fiscal distress only. If school or district is in academic or fiscal distress and has a commission assigned, please include a resolution from the commission in support of the project.

* If a partnership or consortium will be established, please include the signed Straight A Description of Nature of Partnership or Description of Nature of Consortium Agreement.

[UploadGrantApplicationAttachment.aspx](#)

8. Please provide a brief description of the team or individuals responsible for the implementation of this project including relevant experience in other innovative projects. You should also include descriptions and experiences of partnering entities.

Billie Jo Johnson-Assistant Principal - Started Horizon Science Academy-Youngstown 2010 Start up Team-Lead Science Committee for implementation of innovative science lab and judged Consef science & technology fair. math and science teacher Jodi Walker-science & math coach at Youngstown Community School, lead science and math teacher at Horizon Science Academy two years, six year experience as a math and science teacher Mary Kay Gordon-technology teacher at Youngstown Community School Dennis Rice-Superintendent/Principal - 39 years experience in Austintown

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

9. Which of the stated Straight A Fund goals does the proposal aim to achieve? - (Check all that apply)

Student achievement

Spending reductions in the five-year fiscal forecast

Utilization of a greater share of resources in the classroom

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

New - never before implemented

Existing and researched-based - never implemented in your district or community school but proven successful in other educational environments

Mixed Concept - incorporates new and existing elements

Enhancing/Scale Up - elevating or expanding an effective program that is already implemented in your district, school, or consortia partnership

11. Describe the innovative project.

We would like to provide and implement a STEM (Science, Technology, Engineering, Math) lab that would give the at risk students at Youngstown Community School the opportunity to experience project based modules to encourage higher level thinking and reasoning skills . The lab will include 10 standard based modules which will coordinate with math and/or science standards. Each module will take students up to 4 weeks to complete including hands on investigation and final assessment. Students will complete approximately 6 modules during the school year. These modules have been chosen to target the inquiry and reasoning standards which have previously affected the math & science OAA scores. The modules and standards they target are listed below: Module 1A - (Aeronautics) Flight Simulator-The students will use logical thinking and reasoning skills to address the standard of mathematical practices which ranges from kindergarten through twelfth grade and incorporates logical thinking and reasoning skills. Module 1B - (K-Nex Education Energy, Motion and Aeronautics) -The students will use the scientific inquiry, problem solving, critical thinking and the engineering design processes extensively throughout the lessons which relate to Newton's law in aeronautics. Module 2 - (Forensics Science) The cookie jar mystery-The students will use the scientific inquiry, problem solving, critical thinking as well as incorporate the sixth grade life science standards by solving a mystery using DNA profiling. Module 3 - (Advanced Mathematics) The Mango (Math Pre-Algebra)-The students will solve 25 higher level thinking hands on lessons which covers measurement, number sense, algebraic thinking, geometry, data collecting and probability standards. Module 4 - (Mathematics & Robotics) LEGO Robotics- The students will use the scientific inquiry, problem solving, critical thinking and engineering design processes to construct a robot with specific criteria. Module 5 - (Electricity) Snap Circuits SC-750- The students will grasp basic principles of electronics and electricity standards through real world applications of electrical circuits. Module 6 - (Engineering) K-Nex Education Amusement Park Experience-The students will construct their own amusement park rides by using hands on inquiry based learning by interacting and collaborating with other students. Module 7 - (Robotics) BIOLOID STEM Kit- The students can build 7 different pre-designed robots or choose to build their own robot. Students will load preprogrammed behaviors to their robots or rewrite or load their own custom behaviors. This project will incorporate open scientific inquiry exploration. This project will also incorporate open scientific inquiry, exploration, mathematical practices standards and ratio proportional reasoning. Module 8 - (Robotics and Mechanical Engineering) - Elementary Robotics Summer Camp-The students will learn scientific principles for better understanding of the engineering process. This project will also incorporate scientific inquiry through mathematical practices. Module 9 - (Mechanical Engineering)- Engino Mechanical Kit: Simple Machines- The students can build up to 60 working models of different types of machines using the 2010 physical science standards and is inquiry based, as well as the next generation science standards. Module 10- CAD (Computer Aided Design) - The students will incorporate all mathematical standards while developing ideas and creating solutions through solving design challenges by using CAD software.

12. Describe how it will meet the goal(s) selected above. - If school/district receives school improvement funds/support, include a brief explanation of how this project will advance the improvement plan.

This program will provide the inner city students at Youngstown Community School the ability to become more proficient with reasoning skills and expose them to self-directed problem solving

opportunities. These modules will provide our students with a greater depth of knowledge to the inquiry standards to help increase the Ohio Achievement Science scores. Over the past few years, science has been our lowest tested area on the OAA and science inquiry was our weakest strand within the science standard.

C) SUSTAINABILITY - Planning for ongoing funding of the project, cost breakdown

13. Financial Documentation - All applicants must enter or upload the following supporting information. Responses should refer to specific information in the financial documents when applicable:

a. Enter a project budget

b. Upload the Straight A Financial Impact Template forecasting the expected changes to the five-year forecast resulting from implementation of this project. If applying as a consortia or partnership, please include the five-year forecasts of each school district, community school or STEM school member for review.

c. If subsection (b) is not applicable, please explain why, in addition to how the project will demonstrate sustainability and impact.

2 Flight Simulators Module 1A \$1,000.00 Energy, Motion & Aeronautics Module 1 B \$180.00 The Cookie Jar Mystery Module 2 \$1,500.00 Module 2 Supplies \$3,720.00 Mango Mar: Pre-Algebra kit Module 3 \$419.00 Lego Robotics Kit Module 4 \$350.00 Snap Circuit SC-750 Module 5 \$200.00 Amusement Park Express Module 6 \$275.00 Biolooid STEM-Module 7 \$350.00 Elementary Robotics Summer Camp Module 8 \$1,600.00 Engine Mechanical Kit: Simple Machines Module 9 \$85.00 CAD Program Module 10 \$1,250.00 Knex Renewable Energy Set \$200.00 Knex Discover Control Center \$500.00 Knex Computer Control Set \$500.00 Field trip (3 field experiences) \$15,000.00 3D printer \$3,000.00 Computers for stations \$37,000.00 Lab furniture \$10,000.00 Teachers' Professional Development \$2,000.00 Digital Still Camera \$9,000.00 2 Electronic Microscope \$2,000.00 125 Tablets \$100,000.00 6 Hear Assessment Recorders \$600.00 Data Network Cable \$10,000.00 Electric Wiring for lab \$10,000.00 Total Budget \$210,729.00

14. What is the total cost for implementing the innovative project?

267,773.33 * Total project cost

* Provide a brief narrative explanation of the overall budget. The narrative should include the source and amount of other funds that may be used to support this concept (e.g., Title I funding, RtT money, local funding, foundation support, etc.), and provide details on the cost of items included in the budget (i.e. staff counts and salary/benefits, equipment to be purchased and cost, etc).

The STEM lab will cost \$210,729. The technology teachers' salaries and fringes are \$56,300.33 (which have been and will continue to be paid out of the general fund). Cost to replenish the modules is \$744 per year (which will be paid out of the general fund each year). The estimated cost of repairing/maintaining the equipment each year is \$1,000.00 (which will be paid out of the general fund).

15. What **new/recurring costs** of your innovative project will continue once the grant has expired? If there are no new/recurring costs, please explain why.

1,744.00 * Specific amount of new/recurring cost (annual cost after project is implemented)

* Narrative explanation/rationale: Provide details on the cost of items included in the budget (i.e. staff counts and salary/benefits, equipment to be purchased and cost, etc.). If there are no new/recurring costs, please explain why.

Yearly resupply for the modules \$744 Estimated equipment repair/maintenance \$1,000

16. Are there **expected savings** that may result from the implementation of the innovative project?

210,729.00 * Specific amount of expected savings (annual)

* Narrative explanation/rationale: Provide details on the anticipated savings (i.e. staff counts and salary/benefits, equipment to be purchased and cost, etc.)

Our STEM Project was a goal for Youngstown Community School to complete in the next 3 years. Our plans were to purchase equipment in 3 phases (each year) until the lab was complete. This is a projected savings of \$210,729.00.

17. Provide a brief explanation of how the project is self-sustaining. If there are ongoing costs associated with the project after the term of the grant, this explanation should provide details on the cost reductions that will be made that are at least equal to the amount of new/recurring costs detailed above. If there are no new/recurring costs, explain in detail how this project will sustain itself beyond the life of the grant.

The project is self-sustaining with estimated yearly cost of \$1,744 per year after the implementation of the project. It will not be necessary to make any cost reductions.

D) IMPLEMENTATION - Timeline, communication and contingency planning

18. Fill in the appropriate dates and an explanation of the timeline for the successful implementation of this project. In each explanation, be sure to briefly describe the largest barriers that could derail your concept or timeline for implementation and your plan to proactively mitigate such barriers. In addition, the narrative should list the stakeholders that will be engaged during that stage of the project and describe the communication that occurred as the application was developed.

Describe the ongoing communication plan with the stakeholders as the project is implemented. (Stakeholders can include parents, community leaders, foundation support and businesses, as well as educational personnel in the affected entities.)

* Proposal Timeline Dates

Plan (MM/DD/YYYY): 06/01/2013

* Narrative explanation

Administrators will meet with the leadership team and stakeholders to plan for the lab set up and structure. We will begin ordering equipment needed for the lab and STEM modules. Staff, parents and community members will be invited to help with setting up the lab throughout the summer and monitor the lab throughout the year. The STEM lab coordinator will be trained on the STEM modules and lab equipment to ensure that the lab is used effectively.

Implement (MM/DD/YYYY): 09/01/2013

* Narrative explanation

The lab coordinator and science/math coach will begin to pretest students to identify the individual strengths and weaknesses in the areas of science & math. They will then take the first few classes to explain the rules and procedures of the STEM lab and review the expected end of the year outcomes.

Summative evaluation (MM/DD/YYYY): 01/06/2014-05/30/2014

* Narrative explanation

01/06/2014-Students will begin a mid-year assessment in math & science to monitor their progress. The STEM lab coordinator will review the module units with the students and discuss the results of the end of module test and mid-year assessments with them individually. Students will then set a goal for their end of year assessment in science & math. 05/30/2014- Students will be given an end of year assessment in math and science to measure their progress. The STEM lab coordinator, science/math coach, administrators, leadership team and other stakeholders will discuss the overall outcomes in growths resulting from the implementation of the STEM lab. The will also evaluate the successes of each individual module and discuss any changes that will need to be made for the next year.

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

The changes we are expecting to see as an outcome of the STEM lab due to a more individualized instructional program are less discipline referrals, an increase in student reasoning skills and higher level self-directed children.

E) SUBSTANTIAL IMPACT AND LASTING VALUE - Impact, evaluation and replication

20. Describe the rationale, research or past success that supports the innovative project and its impact on student achievement, spending reduction in the five-year fiscal forecast or utilization of a greater share of resources in the classroom.

We feel that the STEM program is important to establish in our school because students are not used to being independent critical thinkers. These modules challenge students to make decisions using a higher depth of knowledge than in previously experienced curriculum. Our school wants to ensure that our students are college and career ready. It is also important for the students to see that there are real life opportunities that relate to the science, technology, engineering mathematical fields. Students from the inner city do not realize the opportunities that are out there for them and this gives them a goal to work towards for their futures.

21. Is this project able to be replicated in other districts in Ohio?

Yes

No

22. If so, how?

Other schools will be able to replicate the STEM lab and modules based on identified individual student weaknesses within their mathematical and science curriculum.

23. Describe the substantial value and lasting impact that the project hopes to achieve.

We expect an increase in math & science scores on the Ohio Achievement Assessment and on future PARCC tests. We will develop our students to become more independent problem solvers. Our STEM lab will promote higher level critical thinking skills. We will reinforce the many opportunities in the science and mathematical fields for minorities.

24. What are the specific benchmarks related to the fund goals identified in question 9 that the project aims to achieve in five years? Include any other anticipated outcomes of the project that you hope to achieve that may not be easily benchmarked.

We expect an increase in math & science scores on the Ohio Achievement Assessment and on future PARCC tests. We will develop our students to become more independent problem solvers. Our STEM lab will promote higher level critical thinking skills. We will reinforce the many opportunities in the science and mathematical fields for minorities.

25. Describe the plan to evaluate the impact of the concept, strategy or approaches used.

* Include the method by which progress toward short- and long-term objectives will be measured. (This section should include the types of data to be collected, the formative outputs and outcomes and the systems in place to track the program's progress).

* Include the method, process and/or procedure by which the program will modify or change the program plan if measured progress is insufficient to meet program objectives.

We will monitor student progress in mathematics and science by using a pretest, mid-year test and end of the year assessment. The science progress monitoring test will be the Pro-Core on-line assessment and mathematics will be monitored by the STAR on-line assessment. The students will set individual goals at each benchmarking. Each module will also consist of a pre-test, during lesson progress monitoring activities and a final assessment. The project will be evaluated mid-year and at the end of year to monitor the effectiveness. Some changes that may be made if insignificant progress is made are exit slips that track student's experiences, journalizing to identify the student's depth of knowledge and understanding as well as substituting specific ineffective modules.

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 timeframe. The Governing Board of the Straight A Fund reserves the right to conduct evaluation of the plan and request additional information in the form of data, surveys, interviews, focus groups, and any other related data to the legislature, governor, and other interested parties for an overall evaluation of the Straight A Fund.

PROGRAM ASSURANCES: I agree, on behalf of this applicant agency and/or all identified partners to abide by all assurances outlined in the Assurance section of the CCIP. In the box below, enter "I Accept" and indicate your name, title, agency/organization and today's date.

Billie Jo Johnson Assistant Principal Youngstown Community School 10/25/2013