### Budget

**Huber Heights City (048751) - Montgomery County - 2014 - Straight A Fund - Rev 0 - Straight A Fund - Application Number (77)**

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

**Plus/Minus Sheet (opens new window)**

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**Adjusted Allocation**: 0.00

**Remaining**: -989,900.00
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: Straight to the Roots of STEM

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.

Huber Heights City Schools intends to root itself in STEM Instruction at the elementary level and properly train 110 teachers and 6 administrators to implement STEM effectively in their classrooms: regular education, gifted, intervention specialists, and teachers who work with students who are English as a Second Language. Providing our students with rich, student-centered and cognitive-guided instruction encourages higher level questioning and enhances students' critical thinking skills across the subjects, and increase students progress and achievement specifically math and science, and reduce the achievement gap for all subgroups.

3. 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:

Huber Heights City Schools recently obtained National Certification and had its high school STEM program, PLTW, recognized as an outstanding STEM program. Huber Heights is one of seven districts in southwest Ohio that provides both the Pathway to Engineering and Biomedical Sciences at the high school. Huber Heights City Schools also offers Gateway To Technology to all seventh and eighth graders, affording students greater exposure to STEM curriculum. Our high school math and science scores have been steadily increasing. Our trend analysis report card data indicates that math and science is a serious concern in our elementary schools and junior high. Our 2012-2013 district report card data documents that zero indicators were met in grades 3-8 in math and science. Introduction of STEM at the elementary level will have a direct impact on increased student achievement in math and science and reduce the achievement gap for all subgroups.

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.

Successful implementation will require 110 elementary teachers and 6 administrators to attend intense, content-rich professional development to better learn science and math standards. Through professional development and acquisition of necessary instructional materials, teachers will develop and sharpen their own content knowledge while enhancing their pedagogical content knowledge to better understand how to properly implement STEM curriculum in the elementary math and science setting resulting in increased student achievement in math and science and reduce the achievement gap for all subgroups.

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

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

$989,900.00 * 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, RIT 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).

Huber Heights City Schools' rationale is to grow and enhance the STEM initiatives in Huber Heights City Schools because of the impact this curriculum has on our students' critical thinking skills.

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

By the introduction of STEM at the elementary, we hope to reduce a math and science intervention that may result from the implementation of the innovative project.

* Narrative explanation/rationale: Provide details on the anticipated savings (annual)

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

D) IMPLEMENTATION - Timeline, communication and contingency planning

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.

0.00 * 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.

Recurring costs will be absorbed because the initially trained participating elementary teachers will be used in the "train the trainer" model. If funds need to be used to support professional development, RIT and Title IIA funds will be used. Currently, our RIT and IIA funds have been used to support OTES, OPES and transition to the common core. That transition is coming to a close and RIT and IIA funds will be focused to sustain ongoing STEM professional development. Permanent improvement monies could also be used to support the program and purchase additional classroom resources and for replacement of technology as needed as the elementary STEM expansion continues to grow.

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

100,000.00 * 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.)

17. Provide a brief explanation of the overall budget. 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.

By the introduction of STEM at the elementary, we hope to reduce a math and science intervention at the Jr high and high schools. There is no intent to hire additional staff.

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

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): 01/01/14

* Narrative explanation

Schedule training, identify teachers to be trained, identify and material to be purchased. Rationale: Grant indicates that all monies must be spent prior to June 30, 2014. Obstacles: All 110 teachers and 6 administrators need to be trained before the end of June, parent meetings need to occur, and focus on initial and ongoing community participation.

Implement (MM/DD/YYYY): 06/30/2014

* Narrative explanation

Implement training, locate hardware in classrooms. Rationale: Implementation of STEM will focus learning and adjusting to new teachers skills and implementation of curriculum. Obstacles: Building capacity, retooling/retraining of math and science teachers, and reviewing effectiveness.

Summative evaluation (MM/DD/YYYY): 6/15/2014

* Narrative explanation

Compliance documentation - Training and purchase of instructional materials and supplies by 6/30/2014 Annually - Data driven evaluations to determine success of STEM implementation. Rationale: Yearly data collection/review, short cycle assessments, attendance rates and closing the Student Achievement Gap for students will be evaluated.

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

Huber Heights City Schools expects to see realistic changes in the development and implementation of STEM instruction as measured by student performance and achievement in math and science and closing the achievement gap between all learners. Teachers who understand the content which they are teaching can provide more clarity and better guided-instruction. Open-ended STEM lessons afford students and teachers the opportunity to learn content in a real world setting and to work collaboratively to solve challenging problems. Classroom are no longer a teacher-centered entity. Instead, classrooms are student-centered and focus on providing rich, engaging content for students to enjoy and learn while focusing on newly adopted standards (Revised State Science Standards and CCSS).

* Proposal Timeline Dates

Plan (MM/DD/YYYY): 01/01/14

* Narrative explanation

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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.

Huber Heights City Schools' rationale is to grow and enhance the STEM initiatives in Huber Heights City Schools because of the impact this curriculum has on our students' critical thinking skills. We know and understand that providing students with engaging curriculum at a younger age will encourage students to continue with the STEM path in our district. We currently offer Gateway to Technology to all 7th and 8th graders and PLTW, Engineering and Biomedical, to our high school students. We know that a solid STEM foundation at the elementary level will further grow our district STEM program. Students' math and science scores will increase as a result of the improved critical thinking and cognitive-guided instruction, resulting in the closing of the achievement gap for all subgroups.

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

\[ \text{Yes} \quad \text{NO} \]

22. If so, how?

Other districts can acquire similar STEM courses and provide similar training to their staffs.

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

The substantial value and lasting impact includes: increased high school PLTW enrollment, allowing students to benefit from dual credit opportunities, increased ACT/SAT scores, increase in post secondary participation in math and science fields, increases in students entering the workforce in fields of math and science. According to the U.S. Bureau of Labor Statistics, 2011, Ohio is projected to have 97,000 available STEM jobs in the state and our country will have an estimated 8,654,000 STEM jobs available nationwide. Our focus is to grow and retain our STEM students in our local region and community. Our plan supports the regional initiative "Learn to Earn Dayton", a broad-based improvement strategy to foster a dynamic, economically and competitive Dayton Region. By 2018, two out of three jobs will require a post secondary credential. Currently, only 36% of Montgomery County residents possess some sort of post secondary degree (the national average is around 38%). Through acquisition and implementation of the Straight A Fund, Huber Heights will be able to clearly focus on one of Learn to Earn's broad-based goals and "increase the number of highly skilled math and science teachers'
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.

In five years, we anticipate reduced intervention costs and also know that we will show no additional cost after the first year of implementation. Five year impact reflects no additional expenditures as a result of this project. Preliminary success measurements - Increased OAA and OGT results (math and science) - Closing the achievement GAP and reviewing progress measures for all subgroups. Ongoing success measurements: - increased enrollment in Gateway to Technology courses (Junior High STEM) - increased enrollment in PLTW - Biomedical and Engineering (High School STEM) - increased enrollment in post-secondary math and science degree/certification programs - increased number of students entering the workforce which use science, technology, engineering, and mathematics (STEM).

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.

Modifying/Changing the plan: Principals will also be trained in STEM implementation, allowing them to monitor and assist with building wide STEM implementation. Building Leadership Teams will be responsible for gathering student outcome data from pre/post tests and report to the District Leadership Team, while longitudinal data is able to be provided by current PLTW staff. DLT's will meet to review "short cycle" assessments and analyze the data gather each semester in an effort to reevaluate and make necessary changes. Short Term: - Increasing development, facilitation, and implementation of STEM lessons and activities and enhancing teacher content knowledge and pedagogical content knowledge. - Increase interest in science and math across the district - Implement a STEM driven curriculum at the elementary level (PLTW). Long Term: - Increase students' critical thinking, process and application skills - Reducing cost of intervention - Increase student test results on OAA/OGT/ACT/SAT - Increase community/business partnerships - Increase students entering the workforce in the areas of STEM - Track exiting students career/college paths - Reducing the achievement gap for all subgroups in math and science.