Budget

Metro Early College High School (012391) - Franklin County - 2016 - Straight A Fund - Rev 0 - Straight A Fund - Application Number (5)

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	0.00	0.00	0.00	40,500.00	40,198.00	0.00	80,698.00
Support Services	0.00	0.00	113,913.00	0.00	0.00	0.00	113,913.00
Governance/Admin	0.00	0.00	61,404.00	0.00	0.00	0.00	61,404.00
Prof Development	0.00	0.00	293,992.00	0.00	0.00	0.00	293,992.00
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	0.00	0.00	469,309.00	40,500.00	40,198.00	0.00	550,007.00
						Adjusted Allocation	0.00
						Remaining	-550,007.00

Application

Metro Early College High School (012391) - Franklin County - 2016 - Straight A Fund - Rev 0 - Straight A Fund - Application Number (5)

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

A) APPLICANT INFORMATION - General Information

1. Project Title:
PowerUP STEM After School

2. Project Summary: Please limit your responses to no more than three sentences.
PowerUP STEM After School dynamically builds immersive and replicable informal ed programs for students alongside facilitator training.

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	50 5	50 6	50 7	50 8
9	10	11	12	

Year 1

Pre-K Special Education	K	1	2	3
4	50 5	50 6	50 7	50 8
9	10	11	12	

Year 2

Pre-K Special Education	K	1	2	3
4	50 5	50 6	50 7	50 8
9	10	11	12	

Year 3

Pre-K Special Education	K	1	2	3
4	50 5	50 6	50 7	50 8
9	10	11	12	

Year 4

Pre-K Special Education	K	1	2	3
4	50 5	50 6	50 7	50 8
9	10	11	12	

Year 5

Pre-K Special Education	K	1	2	3
4	50 5	50 6	50 7	50 8

9 10 11 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.

PowerUP STEM After School will impact additional students beyond the 1200 Metro Early College Middle School students attending the PowerUP programs at the Innovation Learning Labs. A primary outcome of the project is that the PowerUP partners, EdHeads, Girl Scouts, and Boys and Girls Club of Columbus, will replicate and implement the programs built through Straight A support of this project in the sustaining years at multiple locations associated with the partnering organizations regional and nationally. The organic growth of the PowerUP STEM programs through partnerships elevates the total impact beyond the direct impact to Metro Middle School and neighborhood students. The total estimated impact by 2022 for the three after school programs created through this PowerUP STEM is 3600 students across central Ohio, tripling the direct impact.

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

First and last name of contact for lead applicant
Meka Pace

Organizational name of lead applicant
Metro Schools

Address of lead applicant
1929 Kenny Rd., Columbus, OH 43210

Phone Number of lead applicant
614-259-6639

Email Address of lead applicant
pace@themetroschool.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

Students across Ohio who come from a traditional lecture/textbook instructional strategy are often unprepared for the rigor and pace of STEM problem-based learning (Dancy & Henderson 2008 Barriers and Promises in STEM Reform). The period of transition from traditional instructional strategies to problem-based learning strategies often causes a dip in grades and increased stress for students. Formal educators are actively seeking solutions to accelerate transition in an effort to ameliorate this threat to success of STEM education, often referred to as "the wobble." With the increasing number of Ohio schools transitioning to STEM, the wobble continues to plague students who shift to STEM strategies halfway or part of the way through their educational careers. Until there is a full paradigm shift in instructional strategies across the entire K-12 landscape, there will be a need for transitional solutions that prepare both students and teachers for this more experiential way of learning. At the same time, informal education is searching for effective and efficient ways to update after school and out of school programming that expands learning outside the formal classroom, that is responsive to regional, workforce development

needs, and offers meaningful knowledge and skill-building development (Honey et 2014 STEM Integration in K-12 Education; Status, Prospects, and an Agenda for Research). The challenge is how to leverage informal education to address a need in formal education STEM instructional strategy transition thus ameliorating the negative effects of the shift and accelerating transformation of the educational landscape.

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

PowerUP STEM proposes an innovative solution to the challenge that leverages informal education to address the need of accelerated transition from traditional instructional strategies to STEM strategies by designing, building, and running three dynamic, immersive, after school programs for students to experience STEM education in a low risk environment outside the formal educational format. These three programs will cross multiple content areas; Minecraft Math focusing on spatial math and geography; EdHead STEM Careers focusing on exposing students to careers associated with existing pathways at the Metro/PAST Learning Labs (Bodies, Design, Digital, Energy, FabLab, and Growth), and Art in STEM focusing on the nexus of math and art. Although versions of each of these programs have been implemented in other locations, none have been fully developed into replicable modules or used to enhance professional development for informal education. PowerUP STEM targets middle school students from the communities surrounding the Metro Early College Middle School, surrounding community middle school students, and partnering organization constituencies (EdHeads, Girl Scouts, and Boys and Girls Club of Columbus), with the PAST Foundation, a leader in STEM immersion, bridge programs to facilitate the development of rigorous and relevant after school programming that accelerates students into STEM learning environments. These programs will be accompanied by fully developed transdisciplinary problem-based (TPBL) modules that are aligned to Common Core and Next Generation Science Standards. PowerUP STEM also partners with established community, after school and out of school organizations, including EdHeads, Girl Scouts, and Boys and Girls Club of Columbus to help develop and facilitate the programs with the intention of training key facilitators and replicating the programs in the sustaining years at other organizational locations in order to reach more Central Ohio students. By partnering with established after school organizations, issues and expenses associated with transportation that often threaten sustainability will be eliminated. Each developed PowerUP program will run three times over the course of the implementation phase of the grant for a period of one month each time, twice a week from 2:30pm to 5pm. By running the programs multiple times with periods in between to reflect and revise, the programs that are ultimately replicated by partnering organization in the sustaining years will have the benefit of in house evaluation, and real time course correction to insure relevance and rigor. PowerUP STEM After School models rigorous instructional strategies in an experiential environment that shares resources; organically grows programs through hybrid professional development and key community partnerships; is cost effective; and creates a bridge for students to accelerate in the transition to STEM instructional strategies, which will ameliorate declines in achievement.

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.

PowerUp's desired outcomes for student achievement are two-fold: 1) To provide a low risk, informal environment where students can become familiar with the rigor and delivery of immersive STEM education, and; 2) To create the bridge in understanding and practice so that when students enter a formal educational environment they will not experience a decline in their grades nor an increase in stress due to the new strategies in the classroom. PowerUP is designed to accelerate the transition from traditional instructional strategies to STEM creating a needed bridge for student achievement.

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.

The assumptions made to insure student achievement by PowerUP STEM are three-fold; 1) PowerUP STEM assumes that in a low risk, informal environment students are more likely to experiment with new learning strategies. We know that students will spend hours with online gaming attempting to solve problems that take them to a higher level within the game environment. Etuk in his studies of gaming notes formalizing the engagement with directed learning and articulated outcomes leverages interest and provides a learning pathway (Etuk 2014 Future Learning); 2) PowerUP STEM assumes the developed STEM modules will be agile enough to continue to modify over the coming years to stay relevant out to 2022. Experience with the continued interest in Forensic Science, which has been offered as an informal, bridge immersion program since 2005 reveals that leveraging interest and engagement has the power to continue to attract students and provide meaningful experience that amplifies formal learning. The California STEM Network has strategically promoted STEM through after school programs as a vehicle to ease STEM into the formal classroom environment. One result of a statewide program run through University of California, Irvine is the increased achievement in standardized test scores advancing math and reading literacy by significant percentages (After-school All-Stars 2001 University of California, Irvine After-School All-Stars); and 3) PowerUP STEM assumes that the partnering organizations will establish a system to pass the training along to new staff as the program matures. By creating a well-articulated plan for training, as well as ongoing support through Virtual Brainstorms during the first year of multiple site sustaining, partnering organizations have both the readiness to implement and the desire. Moreover, the data collection produced by the PowerUP modules provides the partnering organizations with important data that reflects their impact on education.

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

For PowerUP STEM After School Metro Early College Middle School has chosen to address student achievement in the transition to STEM learning by creating an innovative program that leverages informal education. Metro is partnering with PAST Foundation, EdHeads, Boys and Girls Club of Columbus, and Girl Scouts because of their established experience in after and out of school programming. Metro's experience with the PAST immersive programs over the last nine years through summer bridge programs and the SOILab experience provides Metro with confidence and evidence that student achievement is enhanced through their immersive programs. Koreen Pagano in her book Immersive Learning (2013) notes that the future of technology-enabled learning is immersive. Immersive programs prepare students for STEM learning by providing the hierarchical framework for critical thinking and authentic outcomes. Participants at the Immersive Experience Conference at the University of Surrey, collaborated to define the power of immersive experiences (Jackson 2006).

They concluded that immersive experiences require intense levels of engagement both in terms of concentration and emotional engagement. These findings support the assumption that immersive after school programs will help students bridge from experiences in traditional classroom that rely on lecture to learning that require interaction. Partnering with established after and out of school providers will directly impact Metro students to help eliminate the transition difficulties related to achievement and stress, but also impact and improve the transitions and achievement form other students in the surrounding communities impacted by replication of the PowerUP programs. There is abundant amount of literature that supports the powerful impact of after and out of school programs for students as well as immersive learning and cost effectiveness. For decades researchers have been studying the affects of organized after school informal programs on student achievement. Posner and Lowe in their 1999 Developmental Psychology article noted, "Children who attended after-school programs spent more time on academic and extracurricular activities..." (After-school activities and the development of low-income children: A longitudinal study). A decade later positive findings continued to prove the benefit of after school programs on multiple levels from academic achievement to social behavior. Durlak and Weissburg of the University of Chicago noted in their 2007 CASEL research, "Youth who participate in after-school programs improve significantly in three major areas: feelings and attitudes, indicators of behavioral adjustment, and school performance" (The Impact of After-School Programs That Promote Personal and Social Skills). Study after study shows that after school programs benefit students both academically and socially. Together the approach of leveraging after school programs and building in STEM structure provides a innovative approach that can address the problem of better preparing students to transition to STEM both academically and socially.

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).

The metrics that PowerUP will use to inform and benchmark student achievement progress will include both qualitative and quantitative data sets. PowerUP STEM will employ an ethnographic-based mixed methods, qualitative approach to inform the team in real time in regards to actionable changes during the implementation year, which monitors change. PowerUP STEM will use short cycle pre/post assessments to measure growth benchmarked against Common Core and Next Generation Science Standards. Pre/post assessments administered each time the program is implemented enable facilitators to gather baseline data at the start of a program and four weeks later gather comparative data to benchmark growth in key concepts across multiple content areas. These questions will be designed to specifically chart basic, proficient and advanced understanding changes in participating students. Over time short cycle assessments, which are conducive to informal educations implementation, will enable partners to definitively show percentages of growth in key content areas as well as changes in critical thinking skills. The short cycle, pre/post assessment is well suited to after school quantitative data collection since participating students may come from disparate locations representing multiple schools and school districts making collection of larger standardized test data difficult, especially over the course of six years. This quantitative data will be able to easily measure and chart change in percentages across multiple years.

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 quantitative data points PowerUP will use to ascertain baseline data and longline data will be pre/post short cycle assessment scores. The scores will be calculated for overall participant groups and for gender examining short term growth and achievement changes. The quantitative pre/post assessments are well suited to informal education and doable for partnering organizations. A template for tracking data will be given to each partnering organization and an online platform will be made available for them to post data collection on at regular intervals. The aggregated data for Metro PowerUP STEM and all partnering organizations will be collected, compared, analyzed, and reported bi-annually. The budgeted amount of for each program is equivalent to week-long immersive bridge programs run in summers, in which short cycle change is also monitored. Measuring the impact of the PowerUP STEM programs costs against the established summer program impacts is another pertinent data point that will be examined and compared. Finally, PowerUP STEM will be tracked for fidelity to the proposed budget in order to determine that proposed project activities and outcomes are maintained.

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

Quantitatively, pre/post assessments are an excellent barometer for each student participant group gauging baseline knowledge level at beginning of each PowerUP program implementation. PowerUP will be developed with extension and enhancement activities enabling individual programs to be expanded vertically/horizontally in terms of content complexity. For example, if a cohort exhibits no basic knowledge of a set of concepts associated with a PowerUP program, program activities can be tailored into simpler definitions of concepts to bring students forward. Conversely, if a cohort exhibits a full understanding of basic and proficient knowledge then activities can be scaled up to more complex understandings. Qualitatively, the voice of the students through online surveys and focus groups will inform real time course corrections of the programs between pilot, beta and final implementation. By including student achievement, shared resources, and the importance of greater impact that drives more resources into the classroom as benchmarks within evaluation both the qualitative and quantitative data can be analyzed examine and recommendations made to insure student achievement is optimized. The data from quantitative and qualitative data will be shared at regular intervals with the project team through; 1) Basecamp an online management platform; 2) Monthly update meetings; 3) Quarterly reports during the planning and implementation year will cover activities, budget fidelity, outcomes and recommended real time changes to be implemented in upcoming quarter; 4) Virtual Brainstorms to provide ongoing support at the partnering organizations replicate the PowerUP STEM modules at multiple locations. By creating a overarching design that provides clear communication pathways for all partners, PowerUP STEM is well situated to respond to necessary changes throughout the implementation phase and create a model for continued communication and modification in the sustaining years.

☐ 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.

PowerUP will leverage multiple sets of resources to significantly increase shared services delivery. PowerUP STEM programs will achieve the increased shared services by implementing the programs in Metro's new Learning Labs located adjacent to the school. The Learning Labs are designed to serve third and fourth year high school students during the formal academic day. PowerUP STEM plans to take advantage of the spaces after school implementing the informal programs in these same learning labs and thus taking advantage of the flexible spaces that place the students in a rich STEM environment without the pressure of formal courses. The ability to place students in learning labs will help acclimate them to STEM environments and further amplify the experiences of the after school programs. Sharing the space and taking advantage of the open environments help PowerUP STEM leverage shared services to more fully take advantage of existing resources.

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.

The assumptions for the benefits of shared services delivery are three-fold: 1) PowerUP assumes that placing the after school programs in a STEM environment without the pressure of formal learning will help acclimate students and better prepare them for transition into the formal educational landscape of STEM; 2) PowerUP assumes that by taking advantage of formal STEM learning spaces for informal delivery, the PowerUP STEM program will also model how to set up shared resources and delivery for partnering organizations so that they can replicate the model further enhancing multiple programs across Ohio; and 3) PowerUP assumes that the quantitative data collected over six years with regard to the pre/post assessments will greatly benefit the partnering organizations, EdHeads, Girl Scouts, and Boys and Girls Club of Columbus in as evidence that their contribution to educational landscape is substantial and responsive to the needs of formal education.

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.

There are a number of studies that support the importance of share services delivery between formal and informal education going back several decades. David Burley in his 1990 work within Jeff's and Smith's edited work, Using Informal Education, noted, "informal education in schools tends to be underplayed" (Jeffs and Smith 1990:62). He went on to argue that informal education is, "a way of positively enhancing [formal] curriculum." This supports both the assumption that the low risk environment has less pressures and that by taking advantage of the informal education PowerUP has the opportunity to amplify shared services. Today, many programs have successfully created a nexus between formal and informal education. Alan Friedman, in his work for the National Academy of Sciences notes informal learning in the US is a billion-dollar industry and yet because approaches to technology literacy in informal learning is not articulated and planned into learning it is not enhancing nor amplifying formal education. He argues that programs need to have intent to reach full potential (2002). Friedman's work supports PowerUP's assumption that the data collected across the six years will provide important data to after school programs that often struggle to substantiate the impact of the programs which generally do not track the benefits of shared services and academic supplementation. These authors and researchers continue to point out that informal education has the potential to enhance, accelerate and promote learning that directly impacts all of society and represents a way of sharing resources that benefits both informal and formal education.

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.

PowerUp STEM through qualitative and quantitative evaluation will monitor and inform progress and real time course correction in terms of shared services during all phases of the grant. Qualitative evaluation used in the first 15 months of the PowerUP program will capture perceived successes and constraints from multiple stakeholder perspectives of the shared services used to plan and implement the program setting up the opportunities to brainstorm proactive solutions. By applying the solutions, PowerUP can quickly modify STEM TPBL modules that are designed and then implementation can be successfully modified to achieve greatest impact. The voice of the stakeholders provides insight into the perceived benefits and constraints allowing the project team to either amplify components are modify components of each module so that replication of the TPBL modules are as agile and successful as possible. During implementation at multiple sites by the trained facilitators, the Virtual Brainstorms and experience in real time course correction will empower the trainers to enact changes as necessary to fully implement programs in varying environments. The quantitative pre/post assessments in the implementation year will be able to closely track the academic success of ability to facilitate understanding of the aligned concepts the through the academic success of programs the students in regard to Common Core and Next Generation standards alignment and the ability to facilitate understanding of the aligned concepts. Together the qualitative and quantitative data sets will enable the project team to modify modules and modify delivery of the programs to fully take advantage of shared resources.

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.

The data points produced from the qualitative data captured from observations, interviews, and focus groups will produce actionable pathways for program and module modification. The quantitative data points produced from the pre/post assessments will produce summative, long line data that can be compared to more formal educational summative assessments since they are both aligned to Common Core and Next Generation standards. Together the qualitative and quantitative data points will help inform real time course corrections during the planning and implementation phases so that success of the program continues out through the sustaining years.

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

The qualitative and quantitative data sets are intended as indicators for actionable response to constraints that impact success. Utilizing both qualitative data and quantitative data throughout the planning and implementation phases will enable the project team to make critical course corrections prior to the sustaining years. By including shared resources and student achievement as benchmarks within evaluation, both the qualitative and quantitative data can be analyzed examine and recommendations made to insure shared resources are optimized. The data from the quantitative and qualitative data will be shared at regular intervals with the project team through; 1) Basecamp, an online management platform; 2) Monthly update meetings; 3) Quarterly reports during the planning and implementation year will cover activities, budget fidelity, outcomes and recommended real time changes to be implemented in upcoming quarter; 4) Virtual Brainstorms to provide ongoing support at the partnering organizations replicate the PowerUP STEM modules at multiple locations. By creating a overarching design that provides clear communication pathways for all partners, PowerUP STEM is well situated to respond to necessary changes throughout the implementation phase and create a model for continued communication and modification in the sustaining years.

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

- [x] 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.

550,007.00 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.

In order to operationalize the PowerUP STEM After School plan details of the budget are submitted for your consideration. The following details are represented within three budget categories; Purchased Services (85.3%), Supplies (7.3%), and Capital Outlay (7.3%). One hundred percent of the total budget goes directly to support the PowerUP STEM program helping Metro Early College Middle School provide quality after school programming to its students and students from the community. Metro is pleased to partner with existing and recognized programs that have the experience, not held within the Metro faculty, to provide these services to its students in an effort to establish after school programming that creates a new and sustainable model for bridging the gap between traditional instructional strategies and STEM strategies leveraging informal education to impact formal education. This is a reallocation of funds in the sustaining years. Purchased Services: A total of $469,309 is broken down as follows: Program Management and Oversight to insure fidelity to the proposed program and timely submission of deliverables $56,160; Field Management to insure that the day to day operations are implemented $44,032; Professional Development to insure that the STEM TPBL modules well designed and the program staff are well prepared through workshops and professional development $14,000, online professional development for program directors and facilitators $5,500, Virtual Brainstorms as ongoing support for the partnering organization facilitators once they begin implementation of the programs at additional sites $1500; Individual Program direction and staffing to insure that the programs are staffed with both content knowledgeable individuals who can direct and mentor staff and partnering organizations facilitators, 3 program directors and staff $86,400, 6 partnering organization facilitators for 47 days $142,560; Outside (external) Evaluation $57,753; and Administration of the PowerUP $61,404. Supplies: A total of $40,500 to be divided evenly across the 3 PowerUP programs at $13,500 per program kits. Capital Outlay: A total of $40,198 for 30 Mac Airs and the mobility cart to support all of the programs.

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.

86,400.00 a. Sustainability Year 1

86,400.00 b. Sustainability Year 2

86,400.00 c. Sustainability Year 3

86,400.00 d. Sustainability Year 4

86,400.00 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.

PowerUP STEM After School will sustain by reallocating the existing after school programs funding line for Metro Early College Middle school students to PowerUP STEM programs developed in the implementation year. The current cost per student for after school is $45 per month. Currently Metro Early College Middle School expends $45 per month per student per academic year with the ability to serve up to 200 students. The sustaining costs of the PowerUP STEM After School program will not exceed current after school program costs. The funds will continue to cover the costs of staff, who run the programs over the course of 10 months and replenishment of materials associated with the programs. The PowerUP programs, which serve the needs of Metro students transitioning to STEM will also amplify the programs of Boys & Girls Club along with the programs of EdHeads, and the Girl Scouts provided at multiple locations. In the sustaining years 2018-2022 the three STEM TPBL modules for Minecraft Math, Art in STEM, and STEM Careers, will be available for replication at multiple locations facilitated by Girl Scouts, EdHeads and Boys and Girls Clubs of Columbus sustaining and growing the PowerUP programs. The three PowerUP programs have been chosen for their low maintenance and high sustainability both in student interest and cost effectiveness. Minecraft Math and EdHead STEM Careers require a one time license fee providing students ongoing access even after the after school program is complete. Art in STEM requires no licenses and can adapt to any materials changing outcomes to meet availability and interest of the students. All three programs provide for continued training of facilitators through the hierarchy of program director (mentor) and program staff (future facilitators and/or directors). Thus, not only can these three programs sustain, they will be in a position to generate spin-offs and collateral programs that leverage the same initial investments for years to come.

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.

n/a

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.

Metro Early College Middle School will reallocate funds currently available for the after school programs to sustain the developed PowerUP STEM programs. The current cost per student for after school is $45 per month. The Metro after school program can serve up to 200 students at full capacity. The cost to Metro Early College Middle School for staffing after school programs in the sustaining years that serve 200 students is $90,000. There is no additional cost to continue the PowerUP programs in the sustaining years. Running the PowerUP programs over the sustaining years also allows for the continued training of staff from partnering organizations. In addition, the PowerUP programs, which serve the needs of Metro transitioning to STEM will also amplify the programs of Boys & Girls Club along with the programs of EdHeads, and the Girl Scouts provided at multiple locations. Thus, PowerUP STEM After School is not intended to add additional costs to Metro Early College Middle School after school programs but rather redirect the activities to continue to serve after school needs while addressing the issues of transition to STEM learning environments. This reallocation of funds reflects a positive and thoughtful response to the the current needs of Metro repurposing existing assets.

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 RangeMarch 2016 through August 2016

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

Date Range (March 2016 through August 2016 Scope of Activities with benchmarks March 2016: Activity: Inform partners of award, submit contracts for board approval, and distribute initial schedule April 2016; Activities: Partnership workshop to establish communication protocols, deliverables, benchmarks, and schedules. Benchmarks: meeting schedules, deliverables and outcomes scope, communication platforms initiated Activity: In House Evaluation baseline survey, Benchmark: survey results April 2016; Activity: Online professional development for selected program directors and facilitators, Benchmark: first draft of TPBL modules for programs Activity: 2 Day PD Workshop for program directors, staff and facilitators; Benchmarks: Fully designed program modules June 2016; Benchmark: Quarter 1 report to ODE and External Evaluator May - August 2016; Activity: Development of program modules complete with activities, standards alignment, schedules, and pre/post assessments, Benchmark: publishable modules for pilots Activity: Marketing for PowerUP programs, Benchmark: advertising to be used in neighboring communities and partnering organizations Activity: Registration for PowerUP programs, Benchmark: students registered for programs Activity: In House Observations of program development, Benchmark: regular feedback to project team and quarterly report

22. Implementation(grant funded start-up activities)

a. Date RangeAugust 2016 through June 2017

b. Scope of activities - include all specific completion benchmarks

Activity: 1 day PD finalized planning workshop for directors and facilitators; Benchmark: published pilot modules Activity Implementation of after school PowerUP STEM programs, Benchmarks: Program 1 implementation- August, January, April, Program 1 Real time course correction analyzed and used to inform changes - October, March, June Benchmarks: Program 2 implementation September, February, May, Program 2 Real time course correction analyzed and used to inform changes - November, April, June Benchmarks: Program 3 implementation October, March, June, Program 3 Real time course correction analyzed and used to inform changes - January, May, July

Activity: In-House Evaluation; observations, focus groups, collection of pre/post data September 2016; Quarter 2 Report to ODE and External Evaluator January 2017; Quarter 3 Report to ODE and External Evaluator March 2017; Quarter 4 Report to ODE and External Evaluator June 2017; Activity: PowerUP Showcase at the Innovation Lab with public invited July 2017; Final Report for Implementation

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

a. Date RangeAugust 2017 through June 2022

b. Scope of activities - include all specific completion benchmarks

Date Range: August 2017 through June 2022 Scope of Activities with benchmarks August 2017-June 2022: Activities: Implement PowerUP programs at multiple locations; Benchmarks: Bi-annual aggregated pre/post assessment data report from across all partnership utilization of PowerUP STEM programs. October 2017: Activity: Virtual PD with partner organizations to update on delivery and modifications; Benchmark: bullet report on adaptation published on collaborative online platform January 2018: Activity: Virtual PD with partner organizations to update on delivery and modifications; Benchmark: bullet report on adaptation published on collaborative online platform April 2018: Activity: Virtual PD with partner organizations to update on delivery and modifications; Benchmark: bullet report on adaptation published on collaborative online platform

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:

PowerUP STEM after school is expected to accelerate the transition of students from traditional instructional strategies to STEM strategies. The expected changes Metro Early College Middle School and partnering organizations expect to see from implemented STEM immersion after school programming are three-fold: 1) Metro Early College Middle School and partnering organizations expect to experience less remediation for students entering formal STEM learning environments because they will be familiar with the rigor, scope, delivery, and expectations of problem-based learning. 2) Metro Early College Middle School and partnering organizations expect to observe less stress among students entering formal STEM learning environments because familiarity with the deliver style will empower them to be more proactive and utilize the skills of collaboration, grit, communication, and critical thinking in their classroom work. 3) Metro Early College Middle School and partnering organizations expect students to gain a head start on understanding the potential and variety of careers associated with Innovation Learning labs because the PowerUP programs engage them in the exploration of careers through EdHeads specially aligned to the Innovation Learning Labs, Bodies, Design, Digital, Energy, FabLab, and Growth. Less focus on remediation, stress alleviation, and basic familiarization will enable educators in formal classrooms and learning labs to accelerate content learning further empower K-12 schools to move students into post secondary courses sooner and begin blurring the lines between high school and college/career readiness.

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:

Outside Evaluation Dr. Monica Hunter PAST Foundation Director of Research 1003 Kinnear Rd Columbus OH 43212 614-3401208

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.

PowerUp STEM After School will engage an outside evaluation team to externally evaluate both the planning/implementation phase and sustaining phase of the project. The Knowledge Capture (KC) team of PAST Foundation will provide the outside evaluation for PowerUP STEM After School. Recognized for their cutting edge evaluation using a mixed methods approach, the PAST KC team is well acquainted with research on immersive bridge programs and the emerging STEM educational landscape (Smith et al 2015 SOIL and Growing SOIL Final Report; Hunter 2015 Math Matters Formative Evaluation: Knowledge Capture) The outside evaluation team will be responsible for securing an expedited IRB for the entire six year duration of the grant, planning through sustaining, since the qualitative and quantitative data involve human subject research. During the planning and implementation phase the outside evaluation team and project team will collect two types of data, qualitative and quantitative. During implementation the outside researchers will collect qualitative data from three groups of stakeholders; program staff, partners, and participating students using a mixed methods approach that employs observation, key informant interviews, and facilitated focus groups. The analysis of the collected information will be reported to the project team at regular intervals and amassed in the quarterly reports to the funder. The analysis will be used to drive actionable real time course correction with regard to the module and implementation modification. In the implementation phase the project team will also collect quantitative pre/post assessment

data tracking short term growth used to inform real time course corrections in module content and enhancements. The pre/post assessments will be configured to specifically benchmark growth in key concepts aligned to Common Core and Next Generation Standards. The pre/post assessments will also be used to track disparities in gender participation in STEM programs. All data collection will be reported in conjunction with the required FIT reporting that tracks the change percentages proposed. The final evaluation report for the planning and implementation phases will be in August 2017. After June 2017 outside evaluation will shift solely to qualitative reporting across the sustaining years. In the sustaining years (2018-2022) the project outside evaluation team will collect pre/post assessment data bi-annually from all partners implementing the programs at multiple locations, as well as the main PowerUP location at Metro Early College Middle School Learning Labs. The aggregated results of short term growth across the expanding programs will be reported to the funder. The underlying research rationale for the research method choices made by the outside research team in partnership with the PowerUP project team reflect two distinctive needs: 1) the need to assess and modify in real time the project product deliverables, and 2) the need to track short term change caused by immersive STEM programming as a longline data set.

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.

PowerUP STEM After School is specifically designed to be scaled up and replicated. The nature and goal of the PowerUP STEM partnerships with established after and out of school programs is to replicate the proposed PowerUP programs at multiple locations scaling up the implementation organically by training facilitators who can return to their organization and both run and train more facilitators. Moreover, the very design of PowerUP STEM creates an environment that fosters continued partnerships, training, development and replication with Boys and Girls Club of Columbus, Girl Scouts, and EdHeads as well as others in Central Ohio in order to accelerate STEM in both formal and informal learning. Within the scope of the proposed PowerUP STEM program the partnerships with Boys and Girls Club of Columbus, Girl Scouts, and EdHeads enable PowerUP to more than double the number of directly impacted students (4,950) associated with the lead school to conservatively 10,890 youth associated with the partnering after and out of school organizations. The need for accelerating the transition from traditional instructional strategies to STEM strategies to alleviate diminished academic achievement and increased stress is widely recognized by research of leading STEM schools across the nation. Thus PowerUP provides an innovative solution that can be replicated and scaled by any district and/or collaboration with after and out of school partners. The probability that PowerUP STEM will prove useful to the acceleration of student transition and the alleviation of stress in transition is high. Out of school immersion programs have a history of alleviating diminished achievement, engagement and elevated stress associated with transition (High Tech High, Metro Early College High School, and CleanTech High School) thus the formalization of after school immersion programs to accomplish the same affects will reach and accelerate the transition of greater number of students simultaneously creating a model for instructional strategy transition. All three of PowerUP STEM programs will be published and available for free due to the support of Straight A Round 3 enabling them to be replicated, expanded, and spun off by informal educational providers. By creating a product that can be used, modified and easily assessed again and again, PowerUP STEM has a high probability of the tailored immersive experiences replication, and scale up, alongside the programs ability to produce longline evaluative data on the short term growth and changes among a wide array of student population in readiness to transition to STEM learning.

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).

Meka Pace Chief Academic Officer Metro Middle/Early College High School 11/20/2015

Consortium

Metro Early College High School (012391) - Franklin 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.

Partnerships

Metro Early College High School (012391) - Franklin County - 2016 - Straight A Fund - Rev 0 - Straight A Fund

Sections

Partnerships							
First Name	**Last Name**	**Telephone Number**	**Email Address**	**Organization Name**	**IRN**	**Address**	**Delete Contact**
Annalies	Corbin	614-340-1208	annalies@pastfoundation.org	PAST Foundation		1003 Kinnear Rd., , , Columbus, , OH , 43212	
Arielle	Scott	406-241-1293	ascott@bgcolumbus.org	Boys & Girls Clubs of Columbus		115 S. Gift St., , , Columbus, , OH , 43215	
Tracy	Moore	614-487-8101	tmoore@gsoh.org	Girls Scouts of Ohio? s Heartland		1700 Watermark Dr., , , Columbus,, OH , 43215	
Gail	Wheatley	614-535-8126	gail@edheads.org	EdHeads		5802 Wooden Plank Rd., , , Hilliard, , OH, 43210	

Implementation Team

Metro Early College High School (012391) - Franklin 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
Meka	Pace	Chief Academic Officer	project oversight and grant assurances; coordinate with project implementers	Ms Pace is the Chief Academic Officer for the Metro Early College schools overseeing all curriculum development and delivery	Ms Pace has been instrumental in the design and development of one of Ohio's premier STEM school systems.	BS -education handicapped K12 BGSU; Capella U - MAEd 6-12	3	
Calvin	Mires, PhD	Principal Investigator	project manager and liaison between partners will set schedules and monitor activities to insure they meet deliverables	Dr. Mires is the Director of Bridge Programs for the PAST Innovation Lab. He oversees the team that plans, builds and implements immersive bridge programs and partners with community and industry partners locally, regionally and nationally.	Dr. Mires oversaw the immersive bridge programs of Growing SOIL, and SEAMahp in Salem Massachusetts. Prior to joining the PAST Foundation in 2015, Dr Mires led collegiate field work in maritime heritage for East Carolina University from 2005-2014	PhD (2014) East Carolina University; MA (2005) East Carolina University; BA (1998) University of Montana	20	
Sheli	Smith, PhD	Project Director	project oversight	Dr. Smith is the Chief Academic Officer of the PAST Innovation Lab and oversees all programs	Dr. Smith has been planning, building and implementing bridge programs for 30 years	hD (1986) U. of Penn; MS (1979) Texas A&M Univ; BA (1976) Univ of Arizona	5	
Ketal	Patel	Project Manager	will lead program design including workshops and professional development	Ms Patel is the Director of School Redesign and Strategy for the PAST Innovation Lab. She oversees the team of STEM Coordinators who facilitate professional development	Ms. Patel oversaw the design and implementation of the hybrid bridge professional development program that will be employed to help train and prepare the participating facilitators to run programs in the future	MA (2011) OSU; BA (2006) OSU	8	
Ashley	Bloom	Bridge Program Coordinator	will manage day to day implementation of the programs in year 1 and collect quantitative data in years 2-6	Ms. Bloom is the Bridge Program Coordinator responsible for the day to day logistics of programs	Ms. Bloom was part of the SOIL staff at the Kelleys Island Prototyping field station and was the Bridge Program Coordinator at the Growing SOIL Hocking College environmental field station.	BS (2013) University of Rio Grande	40	
Kat	Deaner	Online PD	will deliver online professional development course for administrators teachers partners and facilitators	Ms. Deaner is the Director of Online Learning for the PAST Innovation Lab. She has led the team designing and developing online learning that support TPBL and its delivery	Ms. Deaner held the Battelle Fellow for STEM education when she designed and directed the Bridge program Growing America before becoming a STEM Coordinator now program director.	MS (2011) OSU; MEd (2011) OSU; BA University of California, Santa Cruz	2	
Monica	Hunter, PhD	In House Evaluation	oversee all evaluation activities	Dr. Hunter is the Director of Research for	Dr. Hunter is a leader in the field of STEM	PhD (2003) University of	5	

				PAST Foundation. She oversees all evaluation; internal and external	research on the emergent educational landscape. She has pioneered a distinctive mixed methods approach to provide real time feedback	California, Los Angeles; BA (1991) California State University, Long Beach		