

Budget

Warrensville Heights City (045005) - Cuyahoga County - 2017 - Straight A Fund - Rev 0 - Straight A Fund - Application Number (139)

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

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
<b>Instruction</b>		231,000.00	64,680.00	65,896.00	0.00	0.00	0.00	361,576.00
<b>Support Services</b>		0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Governance/Admin</b>		0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Prof Development</b>		0.00	0.00	14,000.00	0.00	0.00	0.00	14,000.00
<b>Family/Community</b>		0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Safety</b>		0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Facilities</b>		0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Transportation</b>		0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Indirect Cost</b>							0.00	0.00
<b>Total</b>		231,000.00	64,680.00	79,896.00	0.00	0.00	0.00	375,576.00
							<b>Adjusted Allocation</b>	0.00
							<b>Remaining</b>	-375,576.00

Application

Warrensville Heights City (045005) - Cuyahoga County - 2017 - Straight A Fund - Rev 0 - Straight A Fund - Application Number (139)

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

**A) APPLICANT INFORMATION - General Information**

1. Project Title:  
College and Career Readiness: Preparing Students for the Global Economy through Science, Technology, Engineering, and Mathematics.

2. Project Tweet: Please limit your responses to 140 characters.  
The program provides a transformative learning experience for students and teachers in grades 6 -12. The pathway focuses on creating an en  
*This is an ultra-concise introduction to the project.*

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

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

Grant Year				
Pre-K Special Education	K	1	2	3
4	5	6	7	135 8
20 9	10	11	12	

Year 1				
Pre-K Special Education	K	1	2	3
4	5	6	125 7	125 8
20 9	20 10	11	12	

Year 2				
Pre-K Special Education	K	1	2	3
4	5	6	125 7	125 8
20 9	20 10	20 11	12	

Year 3				
Pre-K Special Education	K	1	2	3
4	5	130 6	140 7	125 8
20 9	20 10	20 11	20 12	

Year 4				
Pre-K Special Education	K	1	2	3
4	5	130 6	130 7	140 8
20 9	20 10	20 11	20 12	

Year 5				
Pre-K Special Education	K	1	2	3
4	5	143 6	130 7	130 8

4. Explanation of any additional students to be impacted throughout the life of the project.

*This includes any students impacted indirectly and estimates of students who might be impacted through replication or an increase in the scope of the original project.*

This innovative approach will impact SY15-16 first graders in SY2020-2021, since these students will be sixth graders in five year. The implementation of this program will allow approximately 600 students to experience an innovative approach to offer a rigorous and relevant STEM curriculum for grades 6-12 the duration of the five year grant cycle, support him/her to graduate with his/her cohort and prepare for college and career.

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

First and last name of contact for lead applicant

Kenya Hunt

Organizational name of lead applicant

Warrensville Heights City School District

Address of lead applicant

4500 Warrensville Center Road

Phone Number of lead applicant

216-865-4722

Email Address of lead applicant

kenya.hunt@whcsd.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

The Graduation Rate has rapidly declined since 2009-2010 (98.5%); and the current Local Report Card (2014-2015) indicates the 4-Year Graduation Rate is 67.6%, 49.0% of the 2012 Graduation Class entered college within two years and students are not performing at the proficiency level in mathematics and science across all grade levels. This means approximately 33% of the students who entered the ninth grade in 2011 did not graduate, nor college and career ready and not equipped to compete in this global economy. The district has fallen into a predicament that is described by Ford Next Generation Learning, "Our educational institutions are simply not graduating enough students for the high-skilled positions in science, and technology, engineering, and mathematics (STEM) that employers need to fill and our high school in particular are not doing enough to prepare students for success, either in college or careers."

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

To ensure students graduate, to compete for high-skilled positions in Science Technology, Engineering and Mathematics (STEM) and prepared for the 21st century workforce, through implementation of the Engineering pathway in the middle school, our district is creating a feeder program based on the courses offered at the high school that students will later attend. This approach allows our middle school to

students to explore a potential pathway they may choose in high school. Reports indicated in the Federal Science, Technology, Engineering, and Mathematics (STEM) Education Strategic Plan, "Students who report early expectation for a career in science are much more likely to complete a college degree in a STEM field that students without those expectations. This suggests that early exposure to science topics, at middle grades or below, may be important for a student's future career aspirations." The district will collaborate with Project Lead the Way (PLTW) to implement an Activity, Project and Problem Based instructional model. Students will obtain problem-solving strategies, critical and creative thinking skill, how to communicate and collaborate with their peers and career exploration in computer science, engineering and biomedical science. PLTW Gateway will be implemented at the Middle School for grades 6-8. Please note the implementation of this program will start in the 8th grade for SY16-17, and the following year 7th graders will participate in the program, and Seventh and Eighth graders will engage in hands-on activities, projects and problems in PLTW engineering pathways (i.e. Automation and Robotics). The PLTW Gateway Units are related to the PLTW High School Course Programs that will be implemented at the High School: (1) Introduction to Engineering Design, and (2) Principles of Engineering. The PLTW Engineering (9-12) will provide students who select this pathway an opportunity to design a home programming electronic device or robotic arms, or exploring algae as a biofuel source; and collaborating to design and develop solutions to local and global challenges. Although teachers who will be implementing the PLTW are certified in either 7-12 grade science, biology, chemistry and physics and meet the Highly Qualified Teacher (HQT) requirement, will be required to attend the PLTW core training. As noted in the Federal Science, Technology, Engineering, and Mathematics (STEM) Education Strategic Plan "Roughly 30 percent of chemistry and physics teachers in public high schools did not major in these fields and not have earned a certificate to teach those subjects." This innovative approach will also address identifying students in SY16-17, as early as eighth grade who are at risk of not graduating with the 2021 Graduation Cohort. The ACT Engage will identify which students are at risk of academic difficulties or dropping out. The results of the assessment will be used to implement strategies and supports to address the identified academic behavior of concerns: (1) motivation, (2) social engagement, and (3) self-regulations.

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 process. - (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.*

The district's desired outcomes are to demonstrate a 20% gain the next five years (SY2021-2022) increasing the: (1) Percentage of the Graduation Class entering college within two years, and (2) 4-Year Graduation Rate. The implementation year of the program will start SY2016-2017 and 10th graders will have an opportunity to participate in the PLTW pathways, and assessments will be administered to determine if students are on track or off track from graduating with his/her cohort and college career readiness. The district's percentage for the graduating class of 2019 entering college within two years desired outcome is 69% or higher on the 2021-2022 LRC demonstrating a 20% gain from the 2014-2015 LRC. In addition, there will be expectation that the graduation rate for 2021-2022 will increase from 67.6% to 87.6% or higher, since seventh graders who will make up the 2022 Graduation Cohort will participate in the program in SY17-18. This increase will earn the district a grade of at least a B on a graduate.

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.*

Identifying students as early as eighth grade who are at risk of not graduating or dropping out, and implementing intervention to correct the problem can improve students' academic behaviors and success. According to Forgotten Middle, "Students who aren't on track for college and career readiness by eighth grade are unlikely to attain that level of readiness by high school graduation". By the district implementing the PLTW a STEM rigorous curriculum, "Students develop the attributes of college and career readiness from successful completion of a rigorous, college-aligned course of student with seamless transition into post-secondary education towards a viable career. The research indicates that eighth-grade academic achievement and being on target for college and career readiness in eighth grade have a significant impact on students' ability to become college and career ready by the end of high school." noted by Westover and Hatton (2011). Students will be able to reflect, research, discuss

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

As mentioned when stating the problem the district Ford's Next Generation summarize the state of the district based on the 2014-2015 LRC, "Our educational institutions are simply not graduating enough students for the high-skilled positions in science, and technology, engineering, and mathematics (STEM) that employers need to fill and our high school in particular are not doing enough to prepare students for success, either in college or careers." To address the problems the district reviewed various programs and determine that PLTW is aligned to the priority investment areas indicated in the Federal Science, Technology, Engineering, and Mathematics (STEM) Education Strategic Plan (2013): (1) Improve STEM Instruction- Prepare 100,000 excellent new K-12 STEM teachers by 2020, and support the existing STEM teacher workforce, and (2) Increase and sustain youth and public engagement in STEM. Support a 50 percent increase in the number of U.S. youth who have an effective, authentic STEM experience each year prior to completing high school. The collaboration with PWT will allow the district to provide students three pathways: (1) computer science, (2) engineering, and (3) biomedical science aligned to STEM, and teachers who are already certified in grades 7-12 science, biology, chemistry and physics will have an opportunity to obtain in depth knowledge about STEM by attending the PLTW PD and earn college credits. By the district implementing this innovative approach with fidelity, the following strategies will be implemented as stated in the Progress Report on Coordinating Federal Science, Technology, Engineering, and Mathematics (STEM) Education (March 2015) Major Strategies to Achieve Impact: (1) Support teacher preparation efforts encourage use of evidence-based STEM learning opportunities, (2) Increase and improve authentic STEM experiences for teachers, (3) Integrate STEM into school readiness, and (4) Improve empirical understanding of how authentic STEM experiences influence learning or interest. This implementation will allow the district to address a barrier according to ACT, 2007a, 2008a, Allen, Robbins, Sawyer and Enhancing College and Career Readiness and Success: The Role of Academic Behaviors, "One of the biggest challenges in raising student achievement and reducing dropout is early identification of those students who would benefit most from intervention. While assessments of academic achievement provide early identification of risk, academic behaviors are also important for persistence and success." Administering the ACT Engage will allow the district to identify students' academic behaviors to determine if he/she is on track or not on track of graduating with his/her Graduation Cohort; and college career readiness. Through the five year grant

cycle, the district will be moving in the directions of college and career ready academic programs, and approach will be aligned to the Gates Foundations six high leverage strategies included in the Closing the Gaps of College and Career Readiness, March 1, 2011, (1) Define the steps required to achieve college readiness and intervention to accelerate progress, (2) identify a core set of standards focused on the skills students need for success after high school,(3) created classroom learning, student assignments and test that reflect core standards,(4) design better data systems that measure progress and identify effective classroom practices, (5) develop academic supports that engage students and ease transition into high school, and (6)develop pathways to graduation based on demonstrations of college-ready knowledge and skills.

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 indicators that will be used to measure the progress toward the desired outcome are majority of the :(1) students that possess the academic behaviors to graduate with his/her Graduation Cohort, (2) students college and career readiness, and (3) students performing at Proficiency levels or higher in Science and Mathematics. The ACT Engage will be administered to determine the number of students who are on track and not on track to graduate his/her cohort. Quarterly benchmarks (i.e. NWEA, STARS and CAP) aligned to college and career readiness standards will be used to identify students' college and career readiness. The OST statewide assessment science and mathematics data will be used to evaluate the number of students who are proficient or above in science and mathematics. The PLTW formative and summative assessment will be used to identify students having difficulties with the content to implement intervention, and monitor student progress with mastering the content.

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 pertinent data points that will be used to measure student achievement and provide baseline data for future comparison will be the results of the ACT Engage, Quarterly benchmark and PLTW formative and summative assessment. The ACT Engage and Benchmark assessment will have three testing administrations: (1) Fall, (2) Winter and (3) Spring. The Fall results will provide pertinent information if students' academic behavior indicates he/she is on the track of graduating, and mastering content in science and mathematics; and to implement intervention for students who are identified at risk of academic difficulties or dropping out. The Winter administration will monitor students' progress and determine if the strategies are impacting students' academic behavior and achievement. The Spring Administration will allow the district to predict if students are on track or not on track of graduating with his/her cohorts, and performance on the statewide assessment (i.e. OST). The results fro

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

The district will be prepared to alter the course of the project if assumptions prove false or outcomes are not realized after SY17-18. The innovative approach will be implemented for two years with fidelity, collected comparable data to evaluate the effectiveness of the program and predict the number of students who are on track to graduate with his/her cohort and college career readiness. The implementation team will review the results districtwide and schoolwide to identify trends, analysis/interpret data and evaluate if the programs are impacting students' academic performance and behavior.

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. Please enter the Net Cost Savings from your FIT.

v. List and describe the budget line items where spending reductions will occur.

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 indicator for this goal.*

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

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

d. Implementing a shared services delivery model

i. List the desired outcomes.

*Examples: increase in quality and quantity of employment applications to districts; greater efficiency in delivery of transportation services, etc.*

ii. What assumptions must be true for this outcome to be realized?

*Example: neighboring districts have overlapping needs in administrative areas that can be combined to create efficiencies.*

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

iv. List the specific indicators that you will use to monitor progress toward your desired outcomes.

*These should be measurable changes, not the accomplishment of tasks.*

*Example: consolidation of transportation services between two districts.*

v. List and describe pertinent data points that you will use to evaluate the success of your efforts, providing baseline data to be used for future comparison.

*Example: change in the number of school buses or miles travelled.*

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

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

- a. New - Never before implemented
- b. Existing - Never implemented in your community school or school district but proven successful in other educational environments
- c. Replication - Expansion or new implementation of a previous Straight A Project
- d. Mixed Concept - Incorporates new and existing elements
- e. Established - Elevating or expanding an effective program that is already implemented in your district, school or consortia partnership

### C) BUDGET AND SUSTAINABILITY

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

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

[Enter Budget](#)

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

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

Upload Documents

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

375,576.00 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.*

Instruction/Salaries(231,000) for 2 teachers (i.e. MS and HS) to implement the engineering courses of study. Instruction/Salaries line item (64,680.00) will cost for retirement/fringe benefits. 65896.00 will cover the instructional materials that used for coursework as indicated in the Instruction/Purchase Service line item. The Professional Development (PD/ Purchase Service (PS) allocation (14000) will cover the cost of four teachers to receive PD on: Engineering. FY 18-73,396.00 will cover the Engineering instructional materials that are used for coursework and Design and Modeling instructional materials as indicated in the Instruction/Purchase Service line item. The PD/PS cost is 6,210 will cover the cost of 1 teacher to receive PD on: Principles of Engineering. FY19-75,450 will cover the engineering, design and modeling, automation and robotics, instructional materials that are used for coursework as indicated in the Instruction/Purchase Service line item. The PD/PS allocation of 8,985 the cost of 2 Teachers to receive PD on: Automation/Robotics and Civil Engineering and Architectures. FY20-86,225 will cover the engineering, design and modeling, automation and robotics, principles of engineering, civil engineering and architectures, digital electronics, specialization unit instructional materials that are used for coursework as indicated in the Instruction/Purchase Service line item. The PD/PS allocation of 11,716 will cover the cost of 2 teachers to receive PD in: Specialization Unit and Digital Electronics. FY21-88,225 will cover the engineering, design and modeling, automation and robotics, principles of engineering, civil engineering and architectures, digital electronics, specialization unit instructional materials that are used for coursework as indicated in the Instruction/Purchase Service line item. The PD/PS allocation of 20,000 will cover the cost of new teachers to receive PD in: All. FY22-88,225 will cover the engineering, design and modeling, automation and robotics.

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.

367,706.00 a. Sustainability Year 1

380,115.00 b. Sustainability Year 2

393,621.00 c. Sustainability Year 3

403,905.00 d. Sustainability Year 4

406,180.00 e. Sustainability Year 5

15. Please provide a narrative explanation of sustainability costs.

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

The costs will be sustained through the General Fund. As the District attracts our students back that reside in Warrensville but currently attend charter schools and/or receive EdChoice vouchers will increase the state foundation payments. The District has seen an increase in student enrollment in the last year and is on track by adding in other programming that has proven to attract students back.

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

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

17. Please explain how these cost savings will be derived from the program.

*Applicants who selected spending reductions in the five-year forecast as a goal must identify those expected savings in questions 16 and 17. All spending reductions must be verifiable, permanent, and credible. Explanation of savings must be specific as to staff counts; salary/benefits; equipment costs, etc.*

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

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

19. Please explain the source of these reallocated funds.

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

As part of the district reviewing the current Organization Chart and revising the chart for the upcoming school year, the cost savings of the General Funds will be allocated to cover the two teachers' salaries/retirement fringe benefits (\$295,680.00). The Curriculum Department will allocate funding from the department budget (General Funds) to cover the projected cost for the duration of the grant cycle Professional

Development (\$66,831) and supplies (\$406,296).

## 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 Team Key Personnel information by clicking the link below:

[Add Implementation Team](#)

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 Range October 2015 - July 2016

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

Review and revise current pathways to ensure engagement of students at all levels of achievement, and offer students an opportunity through the use of 21st century skills to explore STEAM, Health Science & Law, Early College, Business, and the Career Technical Education fields. Assessed current district opportunities to earn college credit through College Credit Plus, Kenyon Academic Partnership, and Advance Placement opportunities. 2 selected staff members (one from HS one from MS) will participate in the following Professional Development through Project Lead the Way: Readiness Training focuses on preparation and awareness to ensure that teachers have basic technical and content knowledge prior to participating in pedagogy, skill, and knowledge enhancement training experiences. The PLTW Learning Management System (LMS) will be used to deliver Readiness Training, which consists of self-paced e-Learning resources. Successful completion of Readiness Training is required before teachers attend Core Training. (Spring of 2016) Core Training focuses on building awareness and confidence related to STEM education; activity-, project-, and problem-based learning; the roles of the teacher and student as they relate to instruction; and unit-specific STEM content. Core Training is a collaborative, in-person training experience offered at PLTW Affiliate Universities across the nation and facilitated by PLTW Master Teachers. After successful completion of Core Training, teachers receive access to the National Gateway Professional Learning Community (PLC), unit-specific student and classroom instructional resources, and Ongoing Training resources. (Summer of 2016) Ongoing Training the third phase, consists of self-paced and live online e-Learning resources that provide enhancement opportunities and ongoing learning for educators. Met with CTE Coordinator at Cuyahoga Community College Complete CTE-26 application through ODE Communicate with parents about CTE

### 22. Implementation (grant funded start-up activities)

a. Date Range August 2016 - July 2017

b. Scope of activities - include all specific completion benchmarks

Fall of 2016 Middle School Implementation -All eighth grade students will experience nine-week units, in a 45 minute block, of the STEM pathway through PLTW's Gateway Curriculum. -Eighth grade students will complete the Design & Modeling course. During this course, students apply the design process to solve problems and understand the influences of creativity and innovation in their lives. They work in teams to design a playgroup and furniture, capturing research and ideas in their engineering notebooks. Using Autodesk design software, students create a virtual image of their designs and produce a portfolio to show case their innovation solutions. High School Implementation - Introduction to Engineering Design (IED) will be the course offered to ninth graders. The capacity of this course will be limited to 20 ninth graders who choose to select this elective for their selected pathway. -The course is designed for students to dig deep into the engineering design process, apply math, science and engineering standards to hands-on projects. They work both individually and in teams to design solutions to a variety of problems using 3D modeling software and document their work in an engineering notebook. Spring 2017-2018 SY Implementation -Select one staff member for the high school to implement Principles of Engineering (POE) course Fall of 2017. -The selected teacher will complete the following course trainings: -Readiness Training (spring 2017) -Core Training (summer 2017) -On Going Training (teachers who have participated in the above training previously) -Staff members who have completed the trainings in the summer of 2016 will utilize the On Going training option to keep abreast with the program.

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

a. Date Range SY2017 through SY2022

b. Scope of activities - include all specific completion benchmarks

Middle School -Implement DM curriculum in 7th and 8th grade. High School -Continue providing 20 ninth graders with the IED course. -Tenth grade students who participated in IED in ninth grade will move to the POE course. Students will learn through problems that engage and challenge, explore a broad range of engineering topics including mechanisms, the strengths of structures and materials, and automation.

Students develop skills in problem solving, research, and design while learning strategies for design process documentation, collaboration and presentation. Spring 2018 -Identify teacher to be trained in Automation and Robotics (AR) for the middle school. AR will be implemented in the Fall of 2018 in eighth grade. -Identify teacher to be trained in Civil Engineering and Architecture (CEA) for the high school. CEA will be implemented in the Fall of 2018 in eleventh grade. -Selected teachers will complete the following trainings: - Readiness Training -Core Training (summer of 2018) -On Going Training (teachers who have participated in the above training previously) -School Administration will ensure classroom space and resources are ready for Fall 2018 implementation for new course. 2018-2019 SY Implementation Fall of 2018 Middle School -Continue implementing DM for 7th graders. -Begin implementing AR for 8th grade students. In the AR course, students trace the history, development, and influence of automation and robotics as they learn about mechanical systems, energy transfer, machine automation and computer control systems. Students use the VEX Robotics platform to design, build, and program real-world objects such as traffic lights, toll booths, and robotic arms. -Select a specialization unit to be implemented in the fall of 2019 with eighth grade students. High School -Continue implementation of IED in ninth grade and POE in tenth grade. -Begin implementing CEA for eleventh graders. Students in the CEA course will learn important aspects of bu

## 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:

Through implementation of the Engineering pathway in the middle school, our district is creating a feeder program based on the courses offered at the high school that students will later attend. This approach allows our middle school to students to explore a potential pathway they may choose in high school. In addition, by implementing PLTW Engineering pathway in the high school, our district will need to monitor and ensure students choosing to enter that pathway have the readiness skills to succeed. For example, students interested in selecting the Introduction to Engineering Design course in 9th grade should have successfully completed Algebra I or is concurrently enrolled in the course with the IED course. PLTW programs are designed to be taught in conjunction with a rigorous academic curriculum. Therefore, one change that will occur is how student's course selections are monitored and aligned to the pathway they choose to enter in HS. Due to the implementation of PLTW, our secondary curriculum committee has realigned course offerings to include prerequisite courses to be completed to pursue this pathway. Another change that will occur is the way our Teacher Based Teams are set up. At this point the teams are made up of content specific teams at the high school and content specific by grade level at the middle school. This will allow for content area teachers to identify trends across grade levels at the high school but does not allow for the same collaboration at the middle school. In addition, since the core content emphasis of the program is on science and mathematics, our teacher based team schedules

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:

Roxann Lozar Academic Coordinator (this will change to our secondary coordinator once position is approved/person is hired) Email  
Roxann.lozar@whcsd.org Phone 216 865-4717

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.*

One quantitative metric used to measure impact on student achievement will be the percentage of students proficient or higher on the Ohio State Test in Science and Mathematics. We will use the 7th grade mathematics and 8th grade science and mathematics results from the Spring 2016 assessments for baseline data. These results will be released June 30, 2016. In addition our 7th and 8th grade students are assessed using CAP for science. These scores from the Spring of 2016 will also be used as baseline date. In the fall of each year, our students will take the CAP (science), NWEA (mathematics) or STAR (mathematics) assessment. We will also use data from the Spring OST and End of Course Exams for Physical Science as pre assessment data of the students. Mid-year (winter) students will take NWEA or STAR to monitor progress. Twice a year, students will also take district created Benchmark assessments to monitor progress as well. At the end of each year, students will take the CAP, NWEA or STAR, OST and End of Course Exams to see the impact the program has had on student achievement. PLTW utilizes a balanced approach to assessment for all programs, integrating both formative and summative assessments. Students demonstrate their knowledge throughout the course by completing activities, projects, and problems using a variety of assessment tools, such as performance rubrics and reflective questioning, to deepen and expand their knowledge and skills. PLTW's assessments are created by using best practices and methods to design, test, and implement End of Course (EoC) assessments for schools. The End of Course assessment gives students an objective evaluation of their achievement, and stakeholders obtain data to make informed decisions. As a final analysis of the PLTW program, the EDD capstone course uses a portfolio assessment hosted through the Innovation Portal. Students can document and demonstrate their learning in an online portfolio and have their work evaluated using the research-based Engineering Design Project Portfolio Scoring Rubric. Many colleges, universities, and other organizations use students' EoC scores for student recognition opportunities. The Executive Director to the Superintendent, Academic Coordinator and Principals will meet every

trimester to monitor progress of the program. In addition, Teacher Based Teams meet weekly to analyze data and collaborate. Building Leadership Teams meet monthly to analyze school level data and create action plans based on the overall trends.

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.*

After the initial 5 years of implementation, the district will be able to analyze the student enrollment in the pathway, the overall data from both internal and state assessment to see the effectiveness of the program. The program has potential to increase the number of courses offered in the district to expand the enrollment of students in the Engineering pathway. Expanding the enrollment of the program means to expand the staff trained in teaching the courses offered. In addition, the district currently partners with other districts so that our students can attend their Career and Technical Education pathways that Warrensville does not offer. By successfully implementing this program, students from our partnering districts would be able to take advantage of the Engineering Pathway utilizing the PLTW curriculum. Our district would welcome other districts interested in pursuing the pathway to come and observe the training, speak with key personnel in the program, and our budgeting scope of work for carrying out the project. During the implementation of the program, key personnel will be documenting the planning, implementation and evaluation steps, including barriers, solutions and mid-course corrections.

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).

I, Donald J. Jolly II, 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).

Consortium

Warrensville Heights City (045005) - Cuyahoga County - 2017 - 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

Warrensville Heights City (045005) - Cuyahoga County - 2017 - Straight A Fund - Rev 0 - Straight A Fund

Sections

**Partnerships**

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

Implementation Team

Warrensville Heights City (045005) - Cuyahoga County - 2017 - Straight A Fund - Rev 0 - Straight A Fund

Sections 

Implementation Team								
First Name	Last Name	Title	Responsibilities	Qualifications	Prior Relevant Experience	Education	% FTE on Project	Delete Contact
Janet	McDowell	Principals	Overseeing the implementation of the College and Career Readiness: Preparing Students for the Global Economy through STEM at Warrensville Heights High School	-Monitors classrooms to ensure delivery of rigorous, high quality Career-Technical Education programming, in compliance with ODE standards -Keeps current with the 9-12 grade courses of study and state standards/guidelines. - Work with new and veteran teachers to incorporate best practices in their classroom -Monitors the continuing and effectiveness of courses and assists in the coordination of applicable staff development. -Use relevant, research based instructional practices to analyze and make data-driven decisions, identifying and recommending areas for improvement	Academic Goal were met earning an increased rating of Academic Watch, 2008/2009 and continuous improvement since 2011-2012 school year. Leadership Team were created in making the changes necessary for school improvement, vision, mission, instruction and Academic Achievement Plan.	B.S Elementary Education, Masters, Education in Administration, Superintendent License	20	
Tamea	Caver	Executive Director to the Superintendent	Overseeing the implementation of the College and Career Readiness: Preparing Students for the Global Economy through STEM districtwide.	Directs district-wide curriculum, instruction, assessment, and staff development programs. Articulates a clear philosophy and shared vision of learning. -Helps mobilize the community and community partners to maintain a strong commitment of support for the school district. - Analyzes data to improve school academics and operations. Develops and implements the district's continuous improvement plan. -Identifies and develops partnerships that enhance district services. - Implements funded proposals and complies with reporting requirements. - Implements state mandated and locally developed personnel appraisal standards. Plans and delivers effective professional development programs	Ensure the implementation of effective instructional practices to improve academic achievement. Lead the process of setting, monitoring and achieving challenging goals utilizing data.	Doctor of Philosophy in Urban Education, Masters of Arts in Interdisciplinary Studies, Master of Education and Bachelor of Arts in Management	20	

				that improve teaching outcomes and student learning. -Keeps current with the K-12 courses of study, the district's scope and sequence framework, and state standards/guidelines.				
Roxann	Lozar	Academic Coordinator	Assisting the Executive Director to the Superintendent with the implementation of the College and Career Readiness, Preparing Students for the Global Economy through STEM. Evaluating the effectiveness of the program by analyzing the pertinent data points to measure the progress toward the desired outcomes.	-Provides leadership and school building level support to promote the delivery of rigorous, high quality Career-Technical Education programming, in compliance with ODE standards -Assist with the development and implementation of Scope and Sequence, providing specific support for Career-Technical Education program areas -Work with new and veteran teachers to incorporate best practices in their curriculum - Researches current academic and career readiness issues to provide Principals and teachers with up-to-date data, relevant and timely application of assessment tools, and concrete instructional strategies for boosting student achievement and ultimately high school graduation. -Recognizes, recommends and secures the purchase of curriculum resources/materials, and state of the art equipment/classroom technology to promote student academic and technical skill achievement and overall CTE performance measures	Served as an Academic Team Coach by collaborating with the Network Support Leader, Principals, and School Leadership Team. Provided professional development for Principals and Teachers based on data and observation to strengthen academic instruction and student growth. Research current academic issues, provide Principals and Teachers with up-to-date data, relevant and timely application of assessment tools, and concrete instructional strategies for boosting student achievement.	Bachelor of Science in Early Childhood Education. Currently enrolled in Master's Program for Curriculum and Instruction	20	
Constance	Rudolph	Principal	Overseeing the implementation of the College and Career Readiness: Preparing Students for the Global Economy through STEM in Warrensville Heights Middle School	Supervision staff; Coordinate new middle school building transformation; Observe and Evaluate Teachers; Master Schedule; Member of District Steering Committee; OIP; Strategic Planning Committee; Member of District leadership Team (DLT); Facilitate Building Leadership Teams (BLT) and Teacher Based Teams (TBT's); Ohio Learning Standards; Implemented Positive	Assist with testing; academic and career advising/planning; assist with master scheduling; Implement and develop guidance orientation and intervention programs; Individual and group guidance; Communicate with parents, staff, administrators,	Superintendent Licensure, Education Administration (4-12), Master of Education (School Guidance Counselor) and Bachelor of Science	20	

			<p>Behavior Intervention Support Program (PBIS); Coached by Making Middle Grades Work (MMGW); Coached by the Association for Middle Level Education (AMLE); Maintain positive relationships with parents, students, and staff; Promote a safe and effective work/learning environment; Analyze data to improve instruction and academic achievement; monitor student progress; Oversee building budget; Plan and provide professional development to staff; Develop and implement honors/advanced programs; Promote and monitor educational building programs to improve student academic progress; parent and community engagement/partnerships.</p>	<p>and the community; attend monthly professional development in-service meetings; Assist and help coordinate activities which contribute to effective operation of the school.</p>			
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