### Columbiana County ESC (046417) - Columbiana County - 2016 - Straight A Fund - Rev 0 - Straight A Fund - Application Number (113)

**Budget**

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

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

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| Adjusted Allocation | 0.00 |
| Remaining           | -997,932.36 |
Please respond to the prompts or questions in the areas listed below in a narrative form.

**A) APPLICANT INFORMATION - General Information**

1. **Project Title:**
   Good for Some to Great for All

2. **Project Summary:**
   Please limit your responses to no more than three sentences.
   Personal Learning Career Pathways are created for all students through shared resources/services with emphasis on STEM.

   *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.*

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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.

5. Lead applicant primary contact: - Provide the following information:
   First and last name of contact for lead applicant
   Anna Marie Vaughn
   Organizational name of lead applicant
   Columbiana County Educational Service Center
   Address of lead applicant
   38720 Saltwell Rd., Lisbon, OH 44432
   Phone Number of lead applicant
   (330)424-9591
   Email Address of lead applicant
   avaughn@ccesc.k12.oh.us
   
   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

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
      Columbiana County is rural, high poverty, Appalachian, lacking access to state of the art technology, yet poised for marked economic growth unseen since the demise of the steel industry in the 1970s. Less than 10% of the population has a college degree. In 10 years, there will be 1.2 million STEM jobs without the skilled workforce to fill them(Ullman, Technology and Learning, Vol 36 Issue 3 October 2015). Business partner Pennex cannot recruit 40 workers needed for expansion, a challenge shared by other partners(Crestview STEM Advisory Board, 2012-2013). STEM 21st Century Skills are in critical demand. Ohio Means Jobs documents the need for Health Science, Technology Coding, and STEM related workforce. Cast.com names the top 10 jobs nationally: 5 Health Science, 3 Technology Coding, 2 Mathematics. Columbiana County, hub for shale industry, has increased demand for auxiliary services: Health Science, Technology/ Coding; Engineering and Trades. The Salem Regional Medical Center completed additions in patient care, oncology, and radiology to serve area needs. The area's largest employer, its need for health care workers is critical. Great for All addresses the need to: Improve student achievement in math and science, as only 35% of 8th grade students are proficient or above nationally(Ullman, Technology and Learning, Vol 36 No 3 October 2015) Local math scores mirror this(ODE 2015 Math Scores); Meeting college/career readiness standards as students lack math skills for entrance in the Kent Health Science departments(Dr. Celeste Oprean Kent State Salem Assistant Dean); Workforce(Pennex tests); Utilize greater shared resources/services for small, rural, high poverty districts to meet challenges of size/funding; Transform education from industrial age mass production to informational age learning customization(Baule, Technology and Learning, November 2015); Build sense of purpose and
The proposed innovation and how it relates to solving the problem or improving on the current state.

Great for All addresses needs of county students through an innovative, sustainable program to move from a “great for some” model in our STEM engineering program to a Great for All model to personalize learning for all students. Personalized learning environments for students will increase self-motivation, goal setting, and self-evaluation, a facilitator role for teachers, aiding future career choice. Content integrated PBL with analytical, research, and technology equipment in a collaborative, student centered, hands-on environment will focus on critical 21st Century Skills. Great for All implements research based Defined STEM K-12 curriculum, a highly motivating, engaging STEM program providing authentic career/industry context PBL for students. Critical thinking skills are used to analyze, compare/contrast, and strategize. Teams design solutions, test and evaluate their work; and alter their solutions as needed. Teams communicate their findings and engage the class to the class and other districts via videoconferencing. In addition, 7-8 grade students will utilize PLTW curriculum, engaging students through natural curiosity and imagination. Students will have exposure to STEM engineering, biomedical, and computer science skills and careers in an authentic PBL, Grade 7 Design and Modeling Grade 8, Automation and Robotics. PLTW, piloted successfully at Crestview MS, is the stepping stone for STEM career knowledge, skills, and interest in a hands on authentic PBL curriculum in which students become aware of the many STEM related careers possible, build aspirations for post HS education as a purpose in learning math and science is provided, and give students the means to express their needs to create personalized learning career pathways. PLTW has a strong history of implementation success, is well recognized by businesses and colleges as a high quality, research based curriculum that improves student performance not only in math and science, but all content areas with its cross-curricular approach. Defined STEM curriculum and rigorous K-12 PD will address our need for improved math and science scores, college/career readiness for personalized career pathways. This curriculum is embedded in a context of authentic career/industry real world problem solving performance tasks using 21st Century skills. Great for All provides a foundation for STEM career readiness and skills at the elementary level through community resource speakers; Defined STEM curriculum; Maker Space with manipulatives for hands on engagement; existing CCESC summer MineCraft camp at no cost; and field trips to a variety community sites. Great for All builds on that foundation with a central focus in grades 7-10: continuing career exploration with experts in the field, including a series of career days; Defined STEM career/ industry context based PBL curriculum; onsite visits to view careers in action; dedicated fully equipped STEM Lab with 3D virtual AV Rover, to improve understanding of functionality( Bamford, Anne, PH.D, The 3D Education White Paper, 2011), improving performance and shortening lesson times for quicker advancement; 2 research based PLTW Gateway courses; An expanded MS-HS-HE alignment grant team to develop career pathways with district instructors, and university partner department heads: YSU STEM College engineering; Kent Salem Health Science radiology, nursing, and OT, PT therapy; EGCC and CCCTC manufacturing and trade certifications. Grades 9-10 services include: 3D AV Rover; Health Academies to observe authentic field work; CC+ opportunities; HS math and science teachers review for adjunct status with tuition stipends for shared CC+ courses. Grades 11-12 advance to CC+ at Kent for Health Science and Technology Coding; YSU for engineering; participation in the summer volunteer program at the hospital; EGCC and CCCTC for career certifications; job shadowing and long term internships in the field

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.

1. Students will increase proficiency(performance?) in Math K-12. 2. Students will increase proficiency (performance?) in Science K-12. 3. Students will increase performance in all content areas K-12. 4. Increase retention rate in college by 2% per year, starting -2020 first group through MS focus 5. Increase percentage of students enrolling in post graduate program the fall after graduation by 2%, 10% over the grant period.

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.

1. Authentic PBL STEM curriculum increases student interest, motivation and engagement to improve student performance in Science and Math 2. PBL learning prepares students for success with the 21st Century Skills needed for college and career 3. The remediation rate in college math scores will drop with rigorous math PD in PBL curriculum, remediation courses in math at MS and HS, and MS-HS-HE alignment committee work. 4. Retention rates in college 2 and 4 year programs will increase with the development of personalized learning career pathways and mentoring. (Student tracker) 5. Student engagement in field work will increase with the partnerships formed with community partners. Past practice, Asset surveys, 6. PBL STEM curriculum Defined STEM K-12, and PLTW in grades 7-8 addresses 21st Century learning skill development: collaboration; problem solving; critical thinking; communication; authentic real world problems in a context of career/industry to increase student performance. 7. Personalized learning career pathways provide opportunities to allow learners' voice and choice to be respected, encourages the use of the students' most effective learning styles through relevant content, creating a sense of purpose for their learning with a chosen career goal. 8. CC+ and trade certifications allow for advancement to career/college readiness with credits earned in HS toward career pathway. 9. Personalized career pathways increase student performance through relevant, interesting, authentic work. 10. PBL learning addresses the skills identified by industry partners. 11. Students have options that respect their rights to access the needed curriculum in a variety of ways: high school, early college on line and videoconference, CC+ program in Health Sciences and Technology/Coding for advancement in completing college credits while in HS. 12. CC+ credit hours increase with additional courses shared at HS with adjuncts and online.

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

1. Crestview STEM PLTW Gateway Pilot resulting in a full MS-HS PLTW program with YSU STEM College graduate instructor: All 219 7-8 grade students are taking PLTW gateway courses. Of those, 40 HS students took PLTW engineering courses in 2013 to 62 HS students in Fall 2015. 2. Crestview has open enrollment of 1/3 of student population-highest enrollment in school history 2015-2016, 1375, with many stating STEM education as reason. 3. Crestview is now seeing movement from MS-HS to engineering programs at the college level. 4. The Consortium implemented a STEM engineering grant with InventorCloud curriculum and 3D printers in 2014-2015: authentic, real world
problem solving, collaboration, 3D printing products, and data collected has shown high teacher excitement and student interest (grant evaluation). The project is now in year 2 and the addition of a large district has added an additional 2,010 students to the already 7,018 in the original project. We also added a district into the consortium for this year, Beaver Local with 1,978 students. Last year's implementation of Project Inspire was "Good for Some," but the addition of a large school to it, as well as the additional schools to this STEM grant project, demonstrate need to expand from STEM engineering to a larger STEM program including personalized career pathways for Health Science, Technology Coding, manufacturing and trades, and engineering, too. Collaboration with CC+ at Kent Salem and EL campuses (2007-present) for advancement and college credits in TAG and core courses improved the numbers of students applying and completing college coursework in HS, continuing and completing college associate and baccalaureate degrees. (CC+ CCESC/Kent yearly surveys. 6. HS-HE grant opened dialogue between HSs and university (KSU, YSU) to direct course pathways to success can now be used to address MS alignment for more seamless transitions, as well as providing the foundation to design personalized career pathways. 7. Personalized learning career pathways research shows that performance increases with "learning skills and content that is relevant and addresses learning style and interests" (C Schwahn and B. McGarvey, Inevitable: Mass Customized Learning, May 2012) 8. Personalized learning pathways on the systemic level adds meaning to assessment (Sherman, Morton, Personalized Education on the Systems Level, School Administrator No 10 Vol 72, November 2015) 9. Student voice with greater choice creates real world learning used in Meridian Conn. (M.Benigni and B. Haefner, Student Designed Pearsonalized Learning, School Administrator, No 10 Vol 72, November 2015), improving performance through a student centered environment with educational programs leading to college and career readiness, including opportunities outside of the classroom. School viewed as a + place rose 16%/149 students earned HS credits outside the classroom. 10. Use of 3D Rover for introduction showed 32% gains in pre-test to post test scores, with lessons accomplished in shorter time (Case Study, www.dlp.com/edu, 2010) 11. Students in STEM programs feel engaged, express interest and enthusiasm compared to counterparts in traditional schools with no STEM programs; are creative and have the means to express it; students report strong teacher-student rapport, challenging expectations in collaborative, long term projects requiring hands on tools and 21st century skills, "not busy work" ( The Effect of Student Engagement on Student Achievement in STEM, Yazzie-Mintz, OERC 2010). 12. "Education is facing deep disruption and reconfiguration: Looking ten years out, we expect to see learning resources and experiences fit together in a much more modular way than we are used to. Teaching and learning have become unbundled from traditional education institutions" (KnowledgeWorks, Recombinant Education: Regenerating the Learning Ecosystem, June 2013).

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 implement one new project using new collaborative instructional skills, (indicates a change in the classroom) NOT; teachers will be trained in collaborative instruction (which may or may not result in change).

   1. Teachers will implement 2 PLTW units in a 9 week rotation at the Middle school level in 2016-2017 2. HS-HE-MS Alignment Team will identify need and create one new career assessment for Math 3. Each trained teacher will teach 2 PBL units with Defined STEM in 2016-2017 increasing to 4 units each by the end of the grant. 4. Districts will commit to do 3 career speakers each year. 5. Consortium districts will be offered 2 on-site visits, job shadowing, and internships to 9-12 students in each year. 6. 5 career pathways, Health Science: radiology, nursing; Additive manufacturing and welding certifications; engineering; will be developed by June 2017. 5 career pathways will be developed in the next 5 years of sustainability.

v. List and describe pertinent data points that you will use to measure student achievement, 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?

The managerial team will meet monthly to address immediate concerns. Advisory Board will meet semiannually to provide feedback from all key stakeholders to address concerns from all perspectives: school districts, CCCTC, University partners, and business partners. External evaluator will measure the outcomes quantitatively and qualitatively to provide data. Adjustments in rate of outcomes being realized with adjustments made based on data collected and analyzed. District liaisons will provide the on the ground implementation feedback so critically needed to resolve any issues in each district quickly, as needs may vary. Teacher PD may need to be increased if PBL units do meet outcomes; curriculum issues that arise during implementation will addressed by Defined STEM and PLTW to achieve outcomes; performance scores will be addressed by increased interventions and personalized learning needs for alignment to standards. Industry partners will provide data from job skills assessment and field work in their sites to guide needs to be adjusted, changed, or added for career readiness. The MS-HE-HS team will use feedback from the managerial team, advisory board, district guidance counselors and external evaluator to make needed adjustments and changes in the personalize career pathways in Engineering, Health Sciences, Technology coding, manufacturing, and trades. The EGCC and CCCTC will provide input on the performance progress in trade certifications. The managerial team will use all input to address challenges, provides the changes needed to address successful implementation to produce identified outcomes in student performance.

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
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.

1. Curriculum will be shared: Defined STEM K-12 PBL curriculum, Shared PD in PLTW and Defined STEM with 8 districts and CCCTC
   with train the trainer model, follow up PD from CCESC consultants, and supports from Defined STEM experts. Collaborations with teachers
   and students across districts will occur through DL technologies. PLTW Gateway PBL curriculum, shared curriculum, PD, projects and
   equipment provided in the STEM labs can be shared in district and beyond with DL technologies. Shared CC+ courses by HS adjutants
   identified and trained HS teachers reviewed and approved for adjunct status will share out CC+ courses at Consortium HS through
   synchronous and asynchronous technologies. Other shared resources: On Line courses in Technology/Coding at the HS 9-12 level will
   allow CC+ courses to be shared at HS sites from university partners. CC+ expansion: YSU Stem College, Kent Health Sciences in nursing,
   radiology, OT and PT career pathways, advancing students individually as needed Virtual 3D Rover equipment: Provides 1 at MS, 1 at HS
   with consortium shared PD, shared math and science resources for use, and while in the STEM lab, will be in the STEM lab is on mobile
cart for use in other content areas such as biology or automotive engineering. Funds for Manipulatives will be shared with districts so
   specific elementary school student needs will be met for collaborative activities across districts with videoconferencing and online access
to ideas 2 times per year, 2017-2022. Job Shadowing and Internships will increase beyond what is currently happening at the CCCTC to all
   consortium HSs by 2 each year, 2017-2022. Computers will be in the MS STEM lab, but will be on charging carts and can be moved into
   other classrooms for STEM related projects.

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.

More students will attain a college 2 or 4 year degrees with increased CC+ options. Adjunct status HS instructors for CC+ will share
   courses to other HS classrooms through IVOL will increase CC+ credits at the HS level. On line Technology/Coding courses will begin as
   earlier as 9th grade, for attainment of associate degrees. More students will attain certifications with career pathways designed with MS-
   HS-HE team, CCCTC, and EGCC 3D visual Rovers will be shared by classrooms in addition to STEM courses to help all students MS-HS
   for improved student performance Elementary grade use of computers, a Maker Space with manipulatives, and PBL Defined STEM
   curriculum will build the foundation for STEM skills and career awareness Development of career pathways with students, districts, and
   parents, led by the MS-HS-HE team will be shared in all 8 districts, CCCTC, and university partners

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

STEM Project Inspire used a train the trainer model to build capacity, sustain the project, and with utilization of shared resources, increased
direct services to students: 3D printers; center productivity hub at the CCCTC; K-12 STEM curriculum; shared PD through a train the trainer
model. This project would not be possible at small, rural districts without utilizing shared resources. External evaluation demonstrates the
meeting of the outcomes. The project is now being replicated in a district with addition of 2,010 directly impacted students. Lessons
learned tell us Great for All will be successful through use of shared resources: Curriculum, Personalized learning career pathways, HS
adjuncts for CC+ expansion, and business, industry, and university partnerships to meet school and local community needs. Online
Technology/Coding will expand by offering 9th and 10th grades CC+ courses, increasing the numbers of students advancing to more credit
hours while in HS. A 7 year history of success in our early college dual credit partnerships provides data for sustainability of negotiated
agreements with Kent State Salem and East Liverpool campuses and the surety of expanding CC+ with YSU STEM College and EGCC.
The process of calibration with last year's STEM IC courses at YSU and EGCC, demonstrates the ability to add curriculum courses for CC+.
Partnerships have been forged in past grant projects through the Ohio STEM Learning Network, Akron hub, and Project Inspire, with STEM
focused career presentations shared with districts via interactive videoconferencing. We have had success in student/Districts sharing
presentations, so increasing this shared resource is realistic. Expansion of the partnerships has a solid foundation on which to build,
including use of industry job skill tests for career readiness; Job shadowing and long-term internships for grades 11-12 to strengthen
these partnerships and meet the personalized learning career needs of student while providing the skilled labor force that is needed.
Begnini and Haefner cite the opportunities in their STEM Student Designed Personalized Learning in Meridan, CT for opportunities outside
the classroom (Nov. 2018). CCESC will collect baseline data for how many students enter the engineering career field from the Crestview
STEM pilot and the Health Science and Technology fields to see the impact STEM education has meeting the national goal "Given the
demands of a global, technology-based society, facilitating students into the STEM pipeline (majoring in STEM related fields and careers,
Stem schools have been created nationwide" (Patel, Franco, and Lindsey, The Effect of Student Engagement on Student Achievement in
STEM: Implications for Public Policy for High School STEM Education, OERC, June 2014). The HS-HE team created course pathways for HS-HE for Guidance Counselors and college advisors. Reconvening this team, expanding it to include MS and adding university partners, it will design personalized learning career pathways, shared with districts, families, and most importantly, students to follow for career readiness. Student voice, engagement climate, and culture will be positively affected (M. Begnini and B. Haefner, Student Designed Personalized Learning, School Administrator, No. 10 Vol. 72, p 28). Hands on tools and Defined STEM curriculum will lay the foundation for STEM career awareness, college-career readiness as K-6 students use a Maker Space to explore STEM 21st Century skills. Dr. Bamford states we are a nation of “digital Native learners” in her White Paper on education. We will tap into student’s natural curiosity and technology abilities. The virtual 3D Rover, with its math and science resources is a critical technology tool to address an 85% student preference for visual hands on learning. Dr. Bamford notes that performance increased 86% with 3D technology as compared to students using the same visual hands on curriculum, but in 2D with only 52% improvement.

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.*

Most recent spending percentage from state report card—discuss anticipated impact as result of this project Crestview—69% East Liverpool-70.3% East Palestine-64.5% Leetonia-68.5% Lisbon-68.3% Columbiana-68.5% Beaver-66.8% Wellsville-66.4% The impact of the utilization of a greater share of resources will be for the percentage of each district’s classroom instruction to be reduced at an average of .5%. One of the small rural districts in the consortium, Lisbon, has a yearly budget of $12,000,000.00. A career field facilitator would have an experienced employee have an average salary of $55,000.00 and benefits of $24,000.00 totaling $79,000.00. That would be a reduction of .66% through consortium member districts sharing that facilitator at one eighth of that cost. Additionally, up to a .5% reduction would be experienced through sharing HS adjunct instructors for CC+ courses taught across all 8 districts via a distance learning network provided by the CCESC. The train the trainer model for Defined STEM curriculum would also impact this figure by up to .1%. We project the classroom instruction percentage of spending to decrease overall by up to .8% to 1%.

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.*

None

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

The managerial team will meet monthly to address immediate concerns. Advisory Board will meet semiannually to provide feedback from all key stakeholders to address concerns from all perspectives: school districts, CCCTC, University partners, and business partners. External evaluator will measure the outcomes quantitatively and qualitatively to provide data. Adjustments in rate of outcomes being realized may need adjusted, based on data. Accomplishments made will be analyzed to improve methods, based on all gathered data. Shared resource PD with train the trainer model for Defined STEM may need to be increased if PBL unit outcomes are not met; shared curriculum issues that arise during implementation will be addressed by Defined STEM and PLTW to achieve outcomes; if the PBL units, co-teaching, and career explorations do not meet the minimum requirements, the managerial team will request meetings with any district out of compliance. The MS-HE team may need to increase number of meetings to complete 5 shared career pathways by June 2017. Guidance counselors will work with the team and provide feedback as they use them for student advisement to weigh how well they are working. The career field facilitator will meet as needed with districts and partners to arrange field work for students, evaluate field work, and assess students with shared rubrics, checklists to give credit to students in addition to the monthly managerial meetings. Advisory Board members will hear all reports and provide information for adjustments based on their unique perspectives the managerial team may need. All changes need to address any barriers for successful outcomes will be made by all key stakeholders at the advisory board meetings to ensure that we have a STEM program that is truly Great for All!

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.*

1. The CCESC will provide the shared: services including: project director, 5 curriculum consultants for PD trainings and follow up, Ed. Tech for implementation supports and DL duties, Director of Technology to coordinate technology installation and curriculum programs with district techs, an External Evaluator will collect and provide data analysis for all districts at individual level and as a consortium. 2. CCESC will hire and districts will share the Career Pathway Facilitator will work closely with district guidance counselors, The CCCTC coordinator, curriculum directors, and partners to smooth the transformation process from traditional classroom courses based on seat time to field work credits. 3. Shared PD train the trainer model for Defined STEM will build capacity and sustainability. 4. Local MS PLTW expert Jason Board will advise districts STEM lab sets up in August and a follow up consultation day for all PLTW teachers during implementation for all consortium districts. 5. High school staff, approved as University adjuncts for CC+, will teach to all consortium districts and the CCCTC via DL synchronous and asynchronous technologies, providing additional CC+ courses with reduced cost. 6. Industry and business partners will provide job shadowing and internships for Grades 11-12, a shared service for all districts coordinated by the Career Pathway Facilitator.

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.*

1. Utilizing the shared services of CCESC personnel provides time and cost efficiency in managing and supporting the grant project. 2. Hiring one career field facilitator for all districts reduces costs, allows information to flow freely throughout districts on ideas, successes and solutions to any barriers, and is time efficient in reporting to project director, managerial team, district personnel, and Advisory Board. 3. Defined STEM PD with a train the trainer model saves time, money, amount of time teachers need to be out of the classroom, efficiently addresses an overburden of substitute class cover, thus building local capacity and sustainability for consortium districts. 4. Some HS students prefer to earn college credits at their HS site vs the college campus. By supporting the identification and training for adjunct approval through our university partners, the shared services of distance learning CC+ courses among 8 consortium districts will reduce costs, meet individual student needs, and expand the number of courses that can be shared. 5. Career pathways will be developed in the grant period through the shared work of the expanded MS-HE team representing the shared knowledge and skills of district instructors, university faculty, guidance counselors, and shared throughout consortium districts to personalize learning for students.
1. The CCESC and Columbiana County School Consortium have a long and successful history of collaborative grant projects. Examples include: S2S, now CC+, with Kent State Salem beginning with a one year grant funded period with shared services that has grown in size for 7 years with the University/school district agreement. Another example is the Project Inspire grant, a project sustained through cost reductions in other areas, so successful that we just added a large district post funding period with district cost reductions and current funds purchasing the curriculum and technology equipment. The HS-He alignment Grant teams have continued to dialogue 2 years after the funding period. Other examples are the COAL project and Teaching American History grant that brought together teachers from across the southern Appalachian counties in Ohio to share services through the CCESC. Utilizing services saves time and money yet provides high quality programming that otherwise would not be possible in small, high poverty rural districts such as those in the Columbiana County School Consortium. 2. In Project Inspire, the consortium hired a shared employee to instruct STEM 3D printing and manage the production hub. The cost shared by 8 districts was small enough to be off set in several areas of the FIT. The STEM instructor/manager has proven successful, even a critical part of the program. Now in year two, the districts are able to afford a shared person and have the cost reductions to sustain his employment without grant funds. We have added one large district in year 2. 3. We have used the train the trainer model of PD in Math and ELA CCSS standard rollouts to district teachers; rollouts of new state Ohio standards for Science and Social studies, World Languages, Physical Education, the Arts; new state tests; and the list continues. It is successful in cutting the need for the high numbers of substitutes needed in both time and money; it builds local capacity to sustain programs; it places a trained expert throughout each district school; it allows PD to occur at a time best for district schedules. 4. The CCESC/CCCTC/Consortium and KSU-Col County have a 7 year S2S, now CC+, program with HS students taking college courses in the mornings and returning to their high schools so as not to miss their extra-curricular activities and the Senior year experience with their classmates. Study groups for support were offered each Friday and a CCESC employee served as a liaison between Kent professors and district guidance counselors, meeting with any students who do not do well early in the semester to address any issues hindering student success. That program has grown each year and now has over 200 students participating. Before that program, we ran dual credit classes through a partnership in Stark County Grants, but had to host them before school and during the summers. We could not identify High school teachers to serve as adjunts during the school day. Great for All will fill that known gap with university partners meeting with high school faculty to review and identify those having the credentials to apply for adjunct status and share courses during the regular school day to other district high schools. Stipends will be offered for those math and science teachers to take the courses needed to become adjunts. Our history points to the success of shared CC+ at the high schools and on campuses. 5. We have worked with the HS-HE alignment team to create course pathways in math to meet student individual needs. We also developed a fourth year PBL math course to address the gaps identified. The success of the team, who is still dialoguing beyond the grant period will expand to MS-HS-HE to develop personalized learning career pathways to be shared with all districts and used by guidance counselors and college advisors, but also the career field facilitator and business and industry partners with the CCCTC and EGCC for career readiness.

d. 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.
1. Each consortium districts will place 1 student with job shadowing in the field in the 2016-2017 school year, and add 2 each year 2018-2022. 2. The consortium will provide 2 internship opportunities per year starting in the 2016-2017 school year increasing to 1 each year from 2017-2022. 3. HS-HE team will expand to include MS and Science faculty to develop 5 career pathways in 2016-2017 school year adding 1 per year 2018-2022. 4. HS faculty will provide one additional CC+ course offered to multiple consortium HS districts by 2017-2018 school year and another by 2018-2019 school year.

iv. How are you prepared to alter the course of your project if assumptions prove false or outcomes are not realized?
The managerial team will meet monthly to address immediate concerns. Advisory Board will meet semiannually to provide feedback from all key stakeholders to address concerns from all perspectives: school districts, CCCTC, University partners, and business partners. External evaluator will measure the outcomes quantitatively and qualitatively to provide data. Adjustments in rate of outcomes being realized may need adjusted, based on data. Accomplishments made will be analyzed to improve shared service delivery model methods, based on all gathered data. Teacher PD with train the trainer model for Defined STEM may need to be increased if PBL unit outcomes are not met, having more trainers available; shared curriculum issues that arise during implementation will be addressed by Defined STEM and PLTW to achieve outcomes; The MS-HS-HE team may need to increase number of meetings or complete 5 pathways by June 2017. Guidance counselors will work with the team and provide feedback as they use them for student advisement to weigh how well they are working. The career pathway facilitator will meet as needed with districts and partners to arrange field work for students, evaluate field work, and credit students in addition to the managerial meetings. Advisory Board members will hear all reports and provide information for adjustments based on their unique perspectives the managerial team may not anticipate. District treasurers meet regularly and will be updated by the project director as well as informing him of any changes or challenges that must be resolved to meet the FIT. While Great for all has a minimal cost at each district, a shared service model reduces district cost to an affordable cost not possible to individual small, rural 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.
1. Baseline data to be collected in 2016 before implementation for number of HS students placed in the field (job shadowing and internships) by the CCCTC, the only school doing field placements at the time. Data will be collected by career pathway facilitator each year in June, 2017-2021. 2. Student surveys and guidance counselors will provide the data on utilizing the MS-HS-HE career pathways in selecting their courses. 3. University data on adjunct status and courses offered to the consortium districts 2017-2022 yearly.

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) 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)

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)

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.

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.

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.

Sustainability costs for the grant include: 1) Salary and Benefits of the Career Pathway Facilitator that we will be hiring to work as a liaison between the school districts, higher education, and local businesses. We have built in cost increases for both salary (starting at $55,000 in FY17 to $60,724.44 in FY22) and benefits. This is a shared cost among the 8 school districts involved. 2) Purchased Services costs in the sustaining years of the grant for licensing of PLTW - $750/year and Defined STEM costs that vary based on the school's enrollment (smallest school @ $2,826/year to the largest @ $7,465/year). This licensing is required as both will become an integral part of the school curriculum as we do careers and place a strong emphasis on STEM. Both companies have agreed to not increase this cost over the life of the grant. Other Purchased Services needed to sustain the grant include bussing to transport students to various career exploration events, Student Tracker ($425 per district - every other year) to gather data on students retention rates, majors, and graduation timelines, and mileage for the Career Pathway Facilitator. 3) Supplies that are required for the two courses, Design & Modeling and Automation & Robotics, which will have to be purchased on an annual basis. These costs are $1,900 for East Liverpool and Beaver Local, our larger districts, and $1,500 annually for all the other districts. We have also added an annual warranty cost for the 3D printer at a cost of $125 annually per district. The final sustainability cost will be for maintenance of our hardware beyond the 3 year warranty. We will provide all maintenance within each district but have built in costs for parts starting in FY20-22. The 3DAV Rover comes with a standard 5 year warranty. Because we are utilizing Columbiana County Educational Service Center consultants for our initial professional development, we will not have sustaining costs as all our districts already have a consultant assigned to them and that will become part of their job duties. We have also gotten a commitment from our districts to use one day a year for follow up PD which will not have any costs as they will build it in to their calendars.

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 years 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.

We have no cost savings as our grant actually has increased costs for our districts. However, without the ability to share resources, none of our districts would be able to provide what they are receiving in this grant.

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.

Re-allocation 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.

Our sustaining costs are very small and range from $16,554.75 in FY17 to $23,244.31 in FY22 for our largest two districts. The source of the reallocated funds is described below specific to each of the 8 districts involved in the grant: Beaver Local - Sustainable costs (FY17 - $21,903.75 to FY22 - $23,244.31) - Beaver has a math teacher retiring and they will hire in at the bottom of the pay scale for a salary savings of $29,257. No savings in benefits. Columbiana - Sustainable costs (FY17 - $17,838.75 to FY22 - $19,479.31) - Columbiana Board has approved a retirement resignation and that position to be replaced with a new teacher at base salary for a salary savings of $33,067 and savings of benefits of $4,710. Crestview - Sustainable costs (FY17 - $19,018.75 to FY22 - $20,659.31) - Offset by a highly paid teacher who gave notice of retirement 11/11/2015 and will be replaced with a lower paid teacher starting FY 2017 - saving $31,029 East Liverpool - Sustainable costs (FY17 - $21,903.75 to FY22 - $23,244.31) - Retirements accepted that were replaced lower scale saving $25,430 annually. East Palestine - Sustainable costs (FY17 - $18,238.75 to FY22 - $19,875.31) Reduction of a Half -Time Teaching Position reducing salary costs by $23,000 and benefits by $8,150 totaling $31,150. Leetonia - Sustainable costs (FY17 - $16,554.75 to FY22 - $16,195.31) - Reduction of Supplies from courses taken out of rotation with PLTW courses put in and savings from textbooks not purchased due to online curriculum totaling $20,000 annually. Lisbon - Sustainable costs (FY17 - $17,210.75 to FY22 - $18,851.31) - Lisbon has an approved retirement of a certified staff with a salary of $36,688 and benefits of $11,667 that will not be replaced. Wellsville - Sustainable costs (FY17 - $16,650.75 to FY22 - $18,291.31) - Wellsville has received a teacher retirement resignation for the end of the 2015-2016 school year and will be rehiring staff at a lower salary saving the district $41,000.

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.

Add Implementation - Key Personnel

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

a. Date Range: Jan-June, 2016

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

Plan Phase January - June 2016 Includes: Management teams will coordinate technology equipment and curriculum purchases for consortium school buildings, Elementary, MS and HS; Recruit 1 PLTW Gateway teacher at each district for training; Schedule PLTW trainings for those teachers in each district; Schedule Defined STEM PD with a train the trainers model; Collect and analyze baseline data on student performance from 2015 state tests; Administer teacher and student pre-surveys; Plan one week each Health and Technology Academy for each district with partners; Identify any possible barriers and resolve; PLTW teacher training in June; MS-HS-HE team develops career pathways. July-mid-August Steve Stewart and Joe Warchol, Technology Director for the CCESC will direct the ordering and installation of equipment and software and set up STEM maker space with each district technology person; Identify any possible remaining barriers and resolve before implementation; Defined STEM PD before start of school to set the foundation for a new way of teaching with the emerging trend of personalized learning career pathways and achievement advancement.

22. Implementation (grant funded start-up activities)

a. Date Range: Aug., 2016 - June, 2017

b. Scope of activities - include all specific completion benchmarks

Implementation Phase August 2016-June 2017 Includes: June: KSU Salem Rural Scholars Summer Camp grades 7-10; ESC Minecraft summer camp for elementary students; MS-HS-HE meetings during 2016-17 school year that will complete the career pathways by June, 2017. Career Pathway Facilitator will create job shadowing and internship opportunities with local industry and businesses. Late August: final student enrollment for CC+ courses; Classes begin; PLTW rotation courses begin; Defined STEM curriculum implemented K-12, schedule career explorations for the year; Schedule on site visits and guest speakers for the year; October- June Begin MS student career explorations for aspirations, awareness, and preparedness through site visits to partners; Youngstown State STEM College; Kent State University Health and Science guest speakers and site visits to the new Science wing completed last year; Salem Regional Medical Center guest speakers, on-site visits, job shadowing; summer teen volunteer program; Mahoning County Manufacturers Coalition guest speakers and onsite job shadowing with possible HS internships; Health Academies begin at schools; monthly management team meetings, semiannual Board of Directors’ meetings with feedback used to inform decision making for full implementation in all districts. The project will be sustained with this timeline January-June 2016 Timeline, and will repeat each of the following 5 years of sustainability unless our evaluations determine the need for changes.

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

a. Date Range: July, 2017 - June, 2022

b. Scope of activities - include all specific completion benchmarks

The project will be sustained with this timeline January-June 2016 Timeline, and will repeat each of the following 5 years of sustainability unless our evaluations determine the need for changes. June-August: PD with Defined STEM train the trainers model to expand the number of teachers implementing; PBL supported through CCESC consultants in districts; Board of Directors meetings to review the progress in each year; changes made based on evaluation data, student and teacher feedback, student performance; Recruit and train staff in districts joining the consortium program; Career exploration presentations, field trips, on-site visits, job shadowing, and internships scheduled; data collected and analyzed by the evaluator will be compared to see if the program is growing; Rural Scholars camp; Minecraft summer camp. October-June Begin MS student career explorations for aspirations, awareness, and preparedness through site visits to partners; Youngstown State STEM College; Kent State University Health and Science guest speakers and site visits to the new Science wing completed last year; Salem Regional Medical Center guest speakers and site visits, job shadowing, summer teen volunteer program, and internships; Mahoning County Manufacturers Coalition guest speakers and on-site visits, job shadowing with possible HS internships; Health Academies begin at schools; monthly management team meetings, semiannual Board of Directors’ meetings with feedback used to inform decision making for full implementation in all districts. The project will be sustained with this timeline January-June 2016 Timeline, and will repeat each of the following 5 years of sustainability unless our evaluations determine the need for changes.

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:

Beneficial changes expected from Great for All include: A systemic transformation process as schools move to personalized learning career pathway; improved student performance in Math and Science with the implementation of a rigorous, ONL standard aligned curriculum,
capitalizing on hands-on authentic PBL in an industry context; Significant improvement in student technology skills with 21st Century technology tools including the Virtual 3D Rover; Significant improvement in student self-motivation, purpose and engagement in personalized learning environments in a student centered curricular model; Positive impact in student progress in all content areas based on program research; Students learn to work collaboratively for future college and career pursuits; Student awareness and preparation increase in STEM career opportunities; and most importantly, students will possess the 21st Century college and career readiness skills needed for future success. Students and teachers will experience positive attitudinal changes as opportunities for differentiation and creative problem solving in an authentic work setting occur. Teachers will embrace teaching with new technologies in innovative PBL, rigorous curriculum with authentic assessments, transferring this teaching model to their other courses. Teachers will assume the role of facilitator in a student centered, student driven model. Systemic transformation will begin in an* anyone can learn anytime, anywhere, at an advanced pace environment,* with the creation of personalized learning career pathways and student credits in alternative settings, including field work, internships, and career courses at colleges. Schools will accommodate Great for All with daily schedule changes and realignment of staff. Existing Distance Learning equipment will be utilized including: shared instruction of courses, collaborations and presentations between schools; partner career presentations; teacher collaborative planning and peer reviews across districts. Small rural poverty district concerns for programs this substantial are eliminated by consortium shared resources and services providing equal access to all K-14 students in this area. Schools will realign 5 year projected budgets to sustain and grow the project at significant savings in PD, trainings by trained staff, CCESE consultants, support of co-teaching collaborations across districts. Other changes include: teachers learning to instruct in a PBL setting as facilitators who guide students to find and apply knowledge rather than serve as the provider of knowledge. Great for All creates and fosters industry partnerships benefiting students by providing field sites to train the skilled workers identified in partner surveys as needed. The county communities will benefit from a rise in the college percentage of their populations, as well as a work force trained for fair salaries. The project inspires staff to expand opportunities with teachers not directly involved in the project. Expansion of Great for All to schools south of Columbiana County allow connections to existing partners in Mahoning, Trumbull, Carroll and Stark counties, as well as southern Appalachian counties, providing valuable opportunities for expansion. Districts will look at the implementation of an innovative program, moving closer to an anyone, anytime, anywhere model to allow students a seamless K-14 STEM program throughout the county and into other districts to replicate the project. Additional collaborations with shared resources will replicate and strengthen the sustainability of Great for All as more districts join the consortium for effective cost savings, just as existing Project Inspire with the addition of a new district with 2,010 students.

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:

Shawn M. Fitzgerald, Ph.D. Fitzgerald Educational Consulting, INC. 539 Morgan Drive Mickleton, NJ 08056 330-221-2386 Shawn Fitzgerald earned his PhD in 1997 majoring in educational research, statistics, measurement, and program evaluation with an educational psychology minor. Shawn currently serves as the Dean of the School of Education, Hospitality, and Continuing Studies at Widener University. He has over 20 years of professional publications in peer reviewed journal, has made over 60 presentations at national and international conferences, and has authored 31 program evaluations in the field of education. He manages his own educational consulting firm which serves numerous school districts and non-profit agencies throughout the mid-west and northeast. His large-scale program evaluation responsibilities have included work with the Col. Co Educ Serv.Center as well as the Portage Co Educ. Serv. Ctr, Ashtabula City Schools, and Medina City Schools. (Evaluation of alternative education programs).

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.

The Program adheres to a Concerns-Based Adoption Model (CBAM) and Total Quality Learning (TQL) tools to provide structure to the formative program evaluation and assessment throughout the years of the project. Both the CBAM and TQL are demonstrated approaches to bringing about effective change in individuals. Furthermore, the Program will be following an evidence-based approach to provide structure to the summative program evaluation and assessment of program objectives in the years to come. Qualitative and quantitative data will be gathered from program director observations, teacher self-reflections, teacher surveys, student test data, student survey data, Kent health Science entrance exam, student tracker student college retention and achievement, industry math exams. The Program Objectives and Desired Outcomes 1) Shared Resources: Sharer of classroom enrollments for 9,788 K-12 students. Shared resources: a. Districts will share the Defined STEM and PLTW programs, PD, materials and supplies in a STEM lab, a shared career pathway facilitator, and train the trainer model with CCESE personnel. Districts will share CCESE proj. dir., Ed Techs, 5 consultants, and evaluator. Educational consultants will support teachers and students with PD and follow-up, classroom visits, support and upgrading of equipment. b. CCESE distance learning network will allow teachers and administrators to collaborate more efficiently by allowing them to work together without having to travel thereby saving districts money. Students will be able to work collaboratively in a time efficient and effective anywhere, anytime learning environment. Educational consultants will provide each district with onsite visits. c. Districts will have access to courses that include, Defined STEM, and PLTW Gateway. 2) Shared Service Delivery Model. This model increases efficiency, effectiveness, long term sustainability, and scalability through Great for All's strong 12 year history of a collaborative consortium supported by business, community, and university partnerships, now expanding for this STEM initiative to support our students. The model will include: a. The CCESE distance learning network and in person sessions; providing teachers the ability and opportunities to collaborate, share ideas and successes, and compare experiences; providing students with an online curricula to allow anywhere, anytime collaborations. b. Management team will share efforts and responsibilities, working closely with the project director, Advisory Board, and district personnel to ensure timelines are met and the project is monitored as needed. c. Shared intensive PD in the summer will follow a train to trainer model with CCESE consultants to train all district teachers. Two follow-up days will support increased effectiveness and efficiency of PD, as well as building in a PD model for long term sustainability with easy replication for expansion beyond the county. d. Shared agreements provide college credit to all HS students through
partnerships with several universities/colleges thereby enhancing partnerships with industry and CCCTC for trade certifications. e. Shared career pathway facilitator will work with districts, industry partners, and colleges to expand STEM career explorations. 3) Student Outcomes and Achievement. Students in grades K-12 will improve in the following areas: a. Ability to collaborate and work together as members of a team to achieve a common goal? b. Ability to analyze? compare/contrast? research effectively? and use details, examples, and facts/figures to reach logical conclusions? c. Ability to be creative and innovative problem solvers as they identify specific problems and investigate solutions. d. Achievement in science and math will improve by a minimum of three percentage points on Ohio's next generation assessments as students apply lessons in science and math that align to Ohio content and common core standards at each grade level.

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.

Great for All is easily replicated. The Project Inspire program has been successfully implemented in 8 districts of the county and is in its second year, expanding to one additional district this year, adding 2,010 students to the existing 7,018 students. Existing I curriculum also has biomed components for this grant program, expanding the use of existing curriculum. Eastern Gateway Community College, Kent State Salem and YSU have partnered with the CESC and county school consortium for CC+ 7 years after funding, numbers growing yearly; HS-HE Alignment grant 2 years beyond the funding period; Rural Scholars program for early exposure to college and careers with on campus events for MS-HS for first year generation college aspirations. The Columbiana County Consortium has a proven record of designing collaborative programs that have historically scaled up, expanded, and been replicated in other schools. The consortium has working relationships with other Appalachian counties through the COAL project for technology in Science; federal Teaching American History Grant in a 5 county consortium; Carroll and Stark counties for dual credit grants. We will reach out to these past partnerships to encourage replication and expansion after establishing and evaluating this program for 2 years. The nature of PBL Defined STEM curriculum, accessed online, makes growth and replication easily accomplished. The CESC train the trainer models allows for scaling up with more teachers trained each year, building capacity. Follow up PD with CESC and local PLTW consultant will make schools comfortable in joining the network. PLTW Gateway curriculum was piloted in Crestview Local MS, and was so successful in the class rotation model at the MS, that a full MH-HS program was established. Overwhelming interest has lead the other county districts to choose the PLTW curriculum for this grant. Just as curriculum was replicated from the MS model to full courses at the HS, it will be easily replicated in consortium districts. The need for math PD has been identified in our consortium districts, just as it is nationwide. Thirty five percent of 3rd graders are scoring at proficiency or above nationwide (Haidet). Our districts mirror that statistic and we know our Kent Health Science programs have rigorous entry math requirements that many county students can't meet to be excepted, often causing them to work at least a year to try for entrance to programs in year 2. Our chosen curriculum will address math needs of students to make them college and career ready. Job skill math tests scores are lacking, so as we expand, we will continue to monitor math scores from industry partners. CESC consultants will offer math PD opportunities. District teachers will share their passion and commitment to high quality STEM programming by highlighting their student work at the state OETC conference; the national ISTE conference; OSBA conference of exhibits; media venues such as CESC and district newsletters; radio and TV media; videoconferencing with other classrooms to stimulate interest for growth. The CCESC will host a web site for other districts to access the information needed for replication of Great for All. Video lessons, lesson plans, examples of projects, lists of resources with project contacts will be available. We are moving from Good for Some to Great for All as we scale up to meet the diverse needs and interests in our students, developing unique learning pathways for college and career readiness. Students will find Great for All unique, effective, and interesting, appreciating the opportunity to create solutions to real-world problems. Teachers see ease of implementation with support that exists from curriculum staff, CESC staff, and their fellow teachers. School leaders appreciate innovation and access to modern research equipment. The curriculum is online, reach logical conclusions?

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).

Anna Marie Vaughn
## Consortium Contacts

<table>
<thead>
<tr>
<th>First Name</th>
<th>Last Name</th>
<th>Telephone Number</th>
<th>Email Address</th>
<th>Organization Name</th>
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<tr>
<td>Louis</td>
<td>Ramunno</td>
<td>(330)385-6831</td>
<td><a href="mailto:louis.ramunno@beaverlocal.org">louis.ramunno@beaverlocal.org</a></td>
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<td>043927</td>
<td>200 West North Avenue, East Palestine, OH, 44413-1779</td>
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<td>(330)482-5352</td>
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<td>Columbiana Exempted Village</td>
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<td>Crestview Local</td>
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<td>44100 Crestview Rd Ste A, Columbiana, OH, 44408-9660</td>
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<td>330-332-7152</td>
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<td>Salem Regional Medical Center</td>
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<td>1995 East State St., Salem, OH, 44460</td>
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<td>Celeste</td>
<td>Oprean</td>
<td>(330)332-0361</td>
<td><a href="mailto:coprean@kent.edu">coprean@kent.edu</a></td>
<td>Kent State University Columbiana County</td>
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<td>2491 S.R. 45, Salem, OH, 44460</td>
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<td>William</td>
<td>Sturrus</td>
<td>(330)941-3009</td>
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<td>Youngstown State University</td>
<td></td>
<td>One University Plaza, Youngstown, OH, 44555</td>
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<td>Johnjoe</td>
<td>Farragher</td>
<td>(224)220-3583</td>
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<td>Defined Learning</td>
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<td>Julie</td>
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<td>First Name</td>
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<td>Title</td>
<td>Responsibilities</td>
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<tr>
<td>Steve</td>
<td>Stewart</td>
<td>Consultant</td>
<td>As the head of the management team, Steve will oversee the recruitment, interviewing, and hiring of a full time shared Career Field Work Facilitator (100%) who will provide districts with support as students move from the traditional classroom to the field; serve as part of the district career pathways team; serve as a liaison with field sites and schools, and assist in evaluating field work for credits. Qualifications include education experience, STEM background, and assessment experience. Steve will also purchase curriculum and equipment; will work to select the two Kent campuses Biomed and Technology Coding courses for CC+ with Assistant Dean Celeste Oprean, Ph.D.; with YSU Dr. Martin Abraham, provost, for CC+ engineering; work closely with CCESC.</td>
<td>Steve is now in his 38th year of education starting out as a history teacher in August, 1974. Having taught history, math, and computer technology for 16 years he was hired as the first Technology Coordinator for Salem City Schools. During his time there he was given additional duties when he was assigned to become the Director of State and Federal Programs. During this time he was responsible for all federal and state funds that Salem City Schools received. He retired in May, 2008 and began working in August 2008 for both Columbiana County ESC as a consultant and also for Lisbon Exempted Village School District. During this time he has written, implemented and overseen a number of grants for both districts. He has vast experience in the total educational arena.</td>
<td>Steve has worked on the following projects in his career: While at Salem City Schools, Steve was the Director of Technology and State and Federal Programs for over 7 years before he retired in May, 2008. During his tenure he implemented all SchoolNet and SchoolNet Plus initiatives. He also secured a $500,000 community grant for technology for Salem City Schools that he carried out. Race To The Top - While employed at Lisbon Exempted Village School District Steve oversaw all 5 years of RttT. At the same time he was the Federal Program Coordinator. Seniors to Sophomores - $300,000 grant to expand the number of students taking college classes. In fall, 2008, we started with 40 students and now have 200+ as we transition to College Credit Plus. He established the first county online program for Columbiana county ESC for districts within the county. Steve also was and is the Project Director for Project Inspire, a Straight A grant that Columbiana County ESC received in 2014 that has expanded since its original implementation.</td>
<td>August, 1973 - BA in History from Youngstown State University June, 1989 - Masters Degree from Kent State University in Instructional Tech.</td>
<td>50</td>
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Technology Coordinator, Joe Warchol (10%), and district techs for equipment installation and curriculum software; communicate with all key stakeholders to inform any needed adjustments or changes to the project; schedule PD trainings and manage the budget; communicate monthly with the management team for updates as to the status of the project.

| Marie Williams | Consultant - Language Arts | The ESC consultants will be responsible for training the consortium district teachers in Defined STEM. Our consultants will be trained by Defined STEM and then will use a Train the Trainer model to train all the teachers in our consortium. | ResidentEduc Mentor - National Writing Project Teaching Consultant - Trained in Olweus Bully Prevention Program and PBIS Resident Educator Years 2, 3, and 4 Facilitator Value Added Leader OTES evaluator OIP Facilitator Kindergarten Readiness Assessment Trainer INFOhio ICoach Provided numerous trainings for Ohio Initiatives SLOs and Value Added Third Grade Reading Guarantee Kindergarten Readiness Assessment PARCC OTES | Columbiana County Educational Service Center 38720 Saltwell Rd. Lisbon, OH 44432 (330) 424-9591 K-12 English Language Arts Instructional Consultant August 2013-present St. Joan of Arc Elem Sch 120 Bordner Ave. SW Canton, Ohio 44710 (330) Pre-K-8 Sch Princ. July 2011-August 2013 St. Peter's Elem Sch Canton, Ohio 44702 6-8 Grade LA Teacher Aug 2001-June 2011 |

| Alaina Kilpatrick | Consultant - Science | The ESC consultants will be responsible for training the consortium district teachers in Defined STEM. Our consultants will be trained by Defined STEM and then will use a Train the Trainer model to SUMMARY OF QUALIFICATIONS ? An enthusiastic, creative, and passionate educator, mentor and advisor who believes that all children can learn and thrive in a learning environment that is stimulating, comforting and appropriate to their unique talents and abilities. | COLUMBIANA COUNTY EDUCATIONAL SERVICE CENTER Lisbon, Ohio 2013 - Present Science Curriculum Consultant Provide professional development to K-12 teachers on Science Education. Ohio Department of Education Grade 6 Science Content | Dec 2005 - MA in Educ - Univ. of Southampton, UK Dec 2000 - BS of Sci in Educ - Youngstown State Univ. |
train all the teachers in our consortium. Additionally, Alaina will work with the HS-HE alignment groups as we create Career Pathways and must implement additional STEM opportunities to our students in Engineering and Health Services.

Specializations include: Curriculum, Instruction involving hands on inquiry learning, and Assessment? Instructional Leadership - Use a balanced blend of motivational and targeted instruction methodologies to enhance curricula, focus on the three "R"s - rigor, relevancy and relationships.?

Engage Parents - Work closely with parents throughout career, repeated successes securing a high level of parental involvement.?

Leverage Resources / Strategic Collaborations - Work closely with district leaders and community partners to encourage parental involvement and strong community alliances.?

Utilize a visionary approach with consistency to help students past the threshold of not-knowing to knowing and develop to their fullest extent.

Advisory Committee - responsible for the creation of the yearly state mandated assessments. Provide professional development to k-12 teachers on State initiatives such as the Ohio Teacher Evaluation System, Student Growth Measures, Value Added, and the Ohio Improvement Process. Provide professional development for k-12 teachers involving curriculum mapping, assessment literacy, SMART goals, and State assessment preparation. Use innovative methods and materials to produce effective learning experiences including cooperative learning, thematic instruction and differentiation whilst following "Best Practices."

Employment GATEWAY ELEMENTARY Conneaut, Ohio 2006 - 2013 Fifth Grade Teacher 5th grade Science and Language Arts education.

Utilize multiple assessments in compliance with district and state requirements to inform instruction.

District Leadership team member focusing on the overall quality of education through meeting the needs of the Ohio Improvement Plan for Ohio schools. Gateway Elementary School Leadership Team implementing teacher based teams within the fifth grade. President of Conneaut City Schools Green Team/Green Apple Project, focusing on and implementing sustainable development activities in schools. Ashtabula County SEED grant team, developing professional
| Joe Warchol | Technology Consultant/Coordinator | Joe will work with Steve Stewart in the procurement of all technology and will oversee its installation at all the districts. He will be the one responsible for the training of district technicians and be their main support link. He is well suited with his background and experience and actually works in 50% of the districts at this time. | Joe has over 30 years experience in technology and has deployed thousands of computers, numerous servers, done extensive professional development for staff, and implemented a number of networks - both wired and wireless. Service and support of computers, file servers and printers. Advanced knowledge in all versions of Windows operating systems. TCP/IP, IIS Web server, Domain Name Service, Video conferencing and Cisco routers. School District web site design and implementation. WAN and LAN design, topologies and bandwidth. Wireless Networking by Cisco, Linksys and Aruba. Responsible for selecting vendors and placing orders. Provide staff professional development. Certifications: Microsoft Certified Professional (MCP) Microsoft Certified Service Engineer (MCSE) Accredited Compaq Technician (ACT) | 1985 - 1994 GBS Computer Systems Youngstown, Oh Field Service Technician (4 Years) Troubleshooting and repair of IBM, Compaq and Hewlett Packard PC's. Component Level Repairs Attended Hewlett Packard Service training. Design and Implement Networks. Marketing Representative (5 Years) Received top marketing award. Responsible for gaining customer sales. Coordinate product delivery and customer installations. 1995 - Current Columbiana County Educational Service Center Technology Consultant/Coordinator Service and support of computers, file servers and printers. Advanced knowledge in all versions of Windows operating systems. TCP/IP, IIS Web server, Domain Name Service, Video conferencing and Cisco routers. School District web site design and implementation. WAN and LAN design, topologies and bandwidth. Wireless Networking by Cisco, Linksys and Aruba. Responsible for selecting vendors and placing orders. Provide staff professional development. Grant writing, technology planning, Federal E- | 1983 Woodrow Wilson High School Youngstown, Oh 1985 ATES Technical Institute Niles, Oh Associates Degree in Electronic Technology 15 |
The ESC consultants will be responsible for training the consortium district teachers in Defined STEM. Our consultants will be trained by Defined STEM and then will use a Train the Trainer model to train all the teachers in our consortium. Additionally, Sheri will work with the HS-HE alignment groups as we create Career Pathways and must implement additional math opportunities to our students.

Professional Highlights
- Facilitator in the Resident Educator program through the Columbiana and Mahoning ESC
- Facilitator of Highly Qualified teachers of Mathematics
- Participated in the Ohio State University mathematics Coaching Program
- Cognitive Coaching Seminar Foundation
- Trained Cathy Hamilton: leadership Academy Adaptive Schools Foundation
- Seminar Facilitator and Trained in Robert Marzano's High Yield Strategies

Columbiana County Educational Service Center Instructional Consultant
Columbiana, Ohio August 2013- Present
Ohio Teacher Evaluation System-Certified 2012-2016
Coordinate activities and programs pertaining to educational programs and service for client school districts
Facilitator in the Resident Educator program and an OTES evaluator
Assisted in facilitation of monthly principal and curriculum council meetings and provided follow-up meetings to any districts who were implementing programs discussed at the meetings
Youngstown City Schools Principal
Martin Luther King Elementary School
Youngstown, Ohio August 2012- 2013
- Created a shared vision and clear goals for MLK Elementary and ensured continuous progress in achieving the goals
- Able to use data to determine under- and over identification of students in gifted and/or special education
- Ensured communication and reinforcement of high behavior and attendance standards to staff, students, and parents
- Mahoning County Educational Service Center Instructional Consultant
Youngstown, Ohio August 2009- 2012
- Grades 6-12 Mathematics
- Instructional Consultant
- Provided guidance in the implementation of academics content standards

July 2011Westminster Col - Admin Licensure
Dec 2008 MA in Educ - Walsh Univ
June 1994 Youngstown State Univ - BS in Sci
| Yvonne Lipinsky | ESC Consultant - Gifted/Social Studies | The ESC consultants will be responsible for training the consortium district teachers in Defined STEM. Our consultants will be trained by Defined STEM and then will use a Train the Trainer model to train all the teachers in our consortium. | Professional Summary: Eight years as an effective classroom teacher, three years as a gifted coordinator, seven years as a successful supervisor. Core Competencies: Coordinator/Supervisor of Gifted Programs in Columbiana County Social Studies Consultant Credentialed Teacher Evaluator Ohio Improvement Process Facilitator Socials Studies Content Standards Rollout Grades K-12 Curriculum Mapping Specialist Adjunct Status at Ashland University Advanced Placement Coordinator District Value Added Specialist Middle School Supervisor Professional Development on Differentiation Grades K-12 Applied, Received & Managed $50,000 Teacher Mini-Grant Organize and Plan Parent Meetings Continuous Improvement Plan Committee Making | Columbiana County Educational Service Center, Lisbon, Ohio Coordinator of Gifted Program and Services 2008-Present - Supervisor of Gifted Teaching Staff - Differentiation - Curriculum Mapping and Development -Hire Gifted Teachers -Ohio Improvement Process Facilitator -Formative Assessment Development -Social Studies Supervisor - Rollout Ohio’s New Learning Standards K-12 -Assist in Implementing Teaching American History Grant Youngstown City Schools, Youngstown, Ohio Supervisor of Gifted Programs, Middle Schools, & Social Studies 2007-2008 Teacher on Special Assignment 2004-2007 - Gifted Coordinator - Advanced Placement Coordinator -Professional Development Presenter - Differentiation Teacher, Fifth Grade 2001-2004 Eagle Heights | 2007 Westminster Col - Admin License PK-9 2003 Youngstown State Univ - Master's Degree: Gifted K-12 1996 Youngstown State Univ - BS - El Ed |
| Katrina Moore | Educational Technology Consultant | The ESC consultants will be responsible for training the consortium district teachers in Defined STEM. Our consultants will be trained by Defined STEM and then will use a Train the Trainer model to train all the teachers in our consortium. Katrina will also be responsible for making all the video conference connections that will be set up for career explorations between districts, higher ed, and businesses. |
| Held the position of Education Technology Coordinator at the Columbiana County Educational Service Center for the past eleven and half years. Duties included professional development training for ESC staff, school district teachers and staff. Managed enrollments and supported are online course program. Responsible for organizing programs and virtual fieldtrips for county classrooms. Before the CCESC I worked for the The Health Museum of Cleveland providing community health education programs and lessons for K-12 classrooms. |
| Education Technology Consultant for Columbiana County Education Service Center | Provide various technology trainings for education staff. (iPad, Google Docs, LMS's) | Support and manage online courses and enrollment | Assist teachers in creating videoconferencing units and provide videoconferencing resources for teachers and administrators. | Develop new innovative tech integrated lessons and projects. | Responsible for providing videoconferencing equipment training for teachers and administrators. |
| Instructor at Cuyahoga Community College (Part-time) | Part time personal health instructor for freshman level students. | Distance Learning Coordinator for The Health Museum of Cleveland | Created health related curriculum for Distance Learning programming | Taught various health education programs to K-12 schools locally, nationally and internationally. | Responsible for marketing and sales of Distance Learning programs. |
| Experience in troubleshooting videoconference technology. | Assisted in the development of a three year strategic |
plan for Distance Learning. ? Assisted in managing the fiscal operations for the Distance Learning program. ? Implemented videoconference demonstrations for teachers, administrators, and educational service centers. ? Distance Learning Advisory Committee Board member. Health Promotion Consultant and owner of North Point Consulting ? Marketing wellness programs on a corporate level. ? Program development, implementation, and evaluation. ? Organize health-related events and activities. Wellness Coordinator at WellCorp Inc. ? Program development, implementation, and evaluation. ? Organization of health fair, health screenings, and flu shot programs. ? Develop and teach health educational seminars such as Stress Management, Men's and Women's Health, and Breast Care. Graduate Assistant at Marshall