## Budget

### Cleveland (043786) - Cuyahoga County - 2017 - Straight A Fund - Rev 0 - Straight A Fund - Application Number (72)

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

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

<table>
<thead>
<tr>
<th>Purpose Code</th>
<th>Object Code</th>
<th>Salaries 100</th>
<th>Retirement Fringe Benefits 200</th>
<th>Purchased Services 400</th>
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**Adjusted Allocation** 0.00

**Remaining** -452,650.00
A) APPLICANT INFORMATION - General Information

1. Project Title:
Engage! Explore! Excite! - Enhancing STEM Learning for Cleveland Metropolitan School District (CMSD) Middle Schoolers

2. Project Tweet: Please limit your responses to 140 characters.
From scholars to makers, CMSD middle school students fabricate their futures for the digital workforce

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.

<table>
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<tr>
<th>Grant Year</th>
<th>Pre-K Special Education</th>
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</table>
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.

Engage! Explore! Excite! focuses on grades 5-8 at five PK-8 STEM schools in CMSD. Scholars at lower grades will be engaged and excited through the exhibition of learning by their upper grade level peers. Additional 900 students will be inspired in the initial year of the project. The online professional development platform and the CMSD information management system will provide for replication of the trans-disciplinary learning experiences across CMSD with the potential to reach an additional 10,000+ students. Initial replication efforts will focus on the eight PK-8 schools in the STEAM Network, a collaboration of CMSD schools promoting STEAM learning. Finally, high school students from CMSD STEM platform (MC2STEM and Design Lab Early College) and portfolio schools will serve as near peer mentors to the targeted CMSD scholars. The initial year of the project will engage 50-100 near peer mentors to support implementation of the digital fabrication learning experiences.

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

First and last name of contact for lead applicant
Tim Sisson

Organizational name of lead applicant
Cleveland Municipal School District

Address of lead applicant
1111 Superior Avenue Cleveland, Ohio 44114 Suite 1800

Phone Number of lead applicant
216-838-0000

Email Address of lead applicant
timothy.sisson@clevelandmetroschools.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 a 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

CMSD offers a variety of strong HS pathways preparing students for college and career success. Our middle schoolers need a continuum of positive experiences, especially in math, science and real world problem solving so they can optimize HS pathway choices. CMSD provides some opportunities to grow both student and teacher skills in engineering design increasing student experiences for real-world problem solving. We need more high quality teachers with technological content knowledge so all students build STEM literacy. We need to design & execute more authentic learning experiences guided by the engineering design process and within engaging fabrication spaces so more students explore & develop 21st century skills in exciting ways. MS students need connections with near peer role models. We must grow what works by scaling these experiences for adults and children so we can engage & excite more middle schoolers and better prepare them for success in high school, college and career.
b. The proposed innovation and how it relates to solving the problem or improving on the current state.

CMSD is committed to cultural transformation driven by student need and the growth of K-12 STEM initiatives (The Cleveland Plan). Engage! Explore! Excite! sets the stage to transform CMSD middle level instructional paradigm to a learning paradigm where a transdisciplinary approach to technology & experiential curriculum is implemented. The proposed innovative solutions will Engage! CMSD educators, partners and students to Engage! learning through eyes of a Maker using inquiry-based learning & engineering design and digital fabrication to solve real world problems. Our hybrid approach to educator PD will strengthen, scale and sustain equitable access to STEM education exciting all students to question, innovate, create, collaborate & make as they fabricate their futures for a digital workforce. Engage & deepen partnerships to expand understanding & implementation of authentic learning at five K-8 STEM schools (Orchard, Mound, Michael R. White, George Washington Carver, & Hannah Gibbons). Teachers will learn experiential pedagogies promoting Maker culture through the use of a mobile digital fabrication laboratory (Mobile Fab Lab) from our partner Teaching Institute for Excellence in STEM (TIES). Engage a learning community across the Northeast Ohio STEM Ecosystem, We will harness unique contributions of teachers, businesses and informal education as they engage together in PD on the engineering design process using components of digital fabrication & bring about a transformational change from instruction to learning. TIES will create an online platform to support targeted teachers, build capacity with innovative instructional practices & create a community of practice. Implement a near-peer mentor (NPM) model where high school students from CMSD STEM platform (MC2STEM & Design Lab Early College) & portfolio schools support MS students as they learn the engineering design process & use digital fabrication equipment. According to An Innovative Near-Peer Mentoring Model for Undergraduate and Secondary Students: STEM Focus by Tennenbaum, Anderson, Jett, & Yourick (2014), a near-peer mentor is a bridge between learning & technology. Working with NPMs, our MS mentees will see a role they can achieve- they strive to achieve because their mentors communicate at their level because they've recently walked in those shoes. Explore learning through the eyes of a Maker. Teachers will design, test, improve and scale new transdisciplinary lessons integrating multiple content areas including math and science with a deep focus on authentic problem solving which requires students to design, prototype, & fabricate solutions using engineering design processes. 763 MS students become 'makers' and real-world problem solvers at the center of instructional design; their learning contextualized by making & doing; their journey documented and shared through presentations & evidence-based discussions. Excite students through engineering design experiences for real-world problem solving. Students need to make connections with the content knowledge and with near peer role models. We must awaken their senses and strive to make every day an educational journey that ignites their initiative to make meaning out of experiential learning experiences and ultimately empowering them to be productive citizens of Cleveland and beyond.

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)

<table>
<thead>
<tr>
<th>a. Student achievement</th>
</tr>
</thead>
<tbody>
<tr>
<td>i. List the desired outcomes.</td>
</tr>
<tr>
<td><strong>Examples:</strong> fewer students retained at 3rd grade, increase in graduation rate, increased proficiency rate in a content area, etc.</td>
</tr>
<tr>
<td>ii. What assumptions must be true for this outcome to be realized?</td>
</tr>
<tr>
<td><strong>Examples:</strong> 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.</td>
</tr>
<tr>
<td><strong>Assumption 1</strong> A synergistic approach to improving achievement is realized using authentic learning experiences, engaging professional practices of doing, FabLab experiences, near peer mentoring, &amp; teacher-readiness. Research: Learning by design is an effective instructional technique to combine content, pedagogy &amp; technology &amp; contexts in which they function, according to Koehler and Mishra, J Educational Computing Research (2005). Assumption 2 CMSD defines PBL as authentic learning experiences that weave content standards &amp; iterative design processes into solutions. PBLs enhanced by a Fab Lab allow students to create prototypes of innovative solutions &amp; skills necessary to be STEM-literate. Assumption 3 While disciplinary knowledge is important, we realize most learning occurs in a blended, trans-disciplinary environment. We remove isolated subjects, fixed schedules, &amp; traditional labels of classrooms to integrate learning in authentic ways. Learning is relevant, flexible, custom.</td>
</tr>
<tr>
<td>iii. Describe any early efforts you have made to test these assumptions (pilot implementation, etc), or how these are well-supported by the literature.</td>
</tr>
<tr>
<td>Engage! Explore! Excite! is an extension of ongoing, STEM-related work already underway in CMSD and aligned to The Cleveland Plan. The goals of The Cleveland Plan are to grow the # of high-performing district and charter schools in Cleveland, focus district’s central office on key roles and transfer authority and resources to schools, invest in high-leverage system reforms across all schools, and create The Cleveland Transformation Alliance to ensure accountability for all public schools. CMSD is committed to changing the culture of learning and has realized &quot;HS graduates that are better prepared and staying longer in colleges,&quot; according to the Higher Education Compact of Greater Cleveland, March 18, 2016. Starting in 2007 with the Platform STEM Schools and K8 STEM Initiative, two objectives focused our work. Objectives 1: Establish a STEM Platform High School in the Cleveland Metropolitan School District: MC2STEM High School is Trans-disciplinary, Project / Problem Based, Mastery Assessed and framed by the Greater Cleveland Context. Objective 2: Develop a PreK-8 STEM School Model and coordinated STEM Network supported around Professional Development for teachers and administrators. This model will include Project / Problem Based Learning, Capstone and Design Process integration, enhanced science and math inquiry and instruction, place-based learning opportunities with community partners, as well as student exhibitions and presentation of learning. In earlier years, CMSD has established five PreK-8 Schools, developed PreK-8 STEM Framework and Design Principles, designed Project Planning Documents, created definitions of STEM and Project Based Learning, insured focused support for teachers &amp; administrators, design the requirements around Common Planning Time, instituted the Lead STEM Practitioner (LSP) program, planned and executed STEM Leadership Instructional Rounds, organized Winter and Spring STEM Showcases, facilitated the alignment of partners and STEM programs, executed Race to the Top STEM Initiative, partnered with KeyBank Foundation, and established a STEM Office within CMSD. This work has been a collaborative effort supported by diverse stakeholders and partners in the greater Northeast Ohio</td>
</tr>
</tbody>
</table>
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).

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?

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?
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

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.

452,650.00 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.

CMSD has budgeted the following to support the project goals and outcomes, including internal district and building-level capacity to provide quality and sustainable teacher professional development as well as updating existing resources to enhance learning experiences for students and teachers alike. Purchased services represents a majority of the requested funding and are one-time expenditures. $420,150 TOTAL PURCHASED SERVICES: $229,000 is budgeted for purchased contract (professional development category) with TIES including: $55,000 ($1,000/teacher x 55) for 12 days of PD/Curriculum co-development and module creation facilitation of contextualized Fab Lab training during grant year; $99,000 for the Cohort 1 teachers stipends paid by TIES (up to $1,800/teacher) to receive PD and co-design modules; $20,000 for CMSD 2-week teacher train-the-trainer (June 2017) to prepare Cohort 1 teachers to co-design PD for next cohorts; $40,000 to facilitate the creation of online PD platform for addl/1 CMSD teachers during Year 2 and sustainability years; and $15,000 for 10 Lead STEM Practitioner PD and co-design stipends during summer 2017 ($1,500/teacher). $150,000 is budgeted for purchased services contract (support services) with Lorain Community College to partner with CMSD to update and recondition the existing Fab Lab equipment and technology, including technical PD/support. $41,150 is budgeted for a purchased service contract (governance/admin) with Cleveland State University to conducted evaluation activities during grant year and 5-year sustainability period. $12,500 TOTAL SUPPLIES: $12,500 is budgeted for various instructional fab lab materials and supplies related to fully integrating student learning into personalized learning experiences, utilizing the teacher PD and content. $13,800 TOTAL SALARY and $6,200 TOTAL BENEFITS COSTS (Governance/Admin) budgeted for internal project management and fiscal oversight during grant year. Benefits calculated at 45%

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.

37,500.00 a. Sustainability Year 1
37,500.00 b. Sustainability Year 2
37,500.00 c. Sustainability Year 3
37,500.00 d. Sustainability Year 4
37,500.00 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.

In large part, the proposed project costs consist of one-time teacher training/PD and equipment/materials updates and expenses, that will build internal capacity to replicate and scale throughout the district during the 5-year sustainability years. However, approximately $187,500 total ($37,500/year) is estimated to sustain the program during the 5-year sustainability period. This number is significant lower due to the implementation and internal capacity-building through teacher training/PD as well as the deployment of the train-the-trainer model during Sustainability Y1-5. The annual sustainability costs comprise the following: $2,500/year for instructional supplies/materials ($2500/CMSD K-5 building) to sustain instructional integration and replication ($12,500 total); and $35,000/year for purchased services related to general maintenance of Fab Lab vehicles, equipment and technology ($175,000 total).

95.30 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.

The project will realize approximately $178,750 in cost-savings during the 5-year sustainability period as a direct result of the project implementation and the deployment of the train-the-trainer model for district replication and scale. $22,000/year or $110,000 over five years, will be saved through the replication and on-boarding of new CMSD teachers through the train-the-trainer model instead of utilization of an external
PD provider in years 2-6. This is calculated by estimated 20 teachers per year requiring training/PD and the external PD cost and associated expenses total about $1,000/new teacher. In addition, the train-the-trainer PD model will provide a direct cost-savings due to the reduce external PD costs and expenses for core teachers during sustainability period 25% or 3 days/year for an estimated savings of $13,750/year or total of $68,750 over five years.

4.70 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.

To ensure the project’s programmatic and fiscal sustainability during the sustainability period, each of the 5 participating PK-8 STEM buildings has committed to reallocating $2500/building or aggregate total of $12,500/year in instructional/curriculum materials funds to sustain the project. These are funds that would be reallocated directly to cover the Fab Lab instructional materials and supplies that would be required during the sustainability period ($12,500 total over 5 years).

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 June 2016 through August 2016

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

Upon award: media notification; board approvals/contracts signed; planning team designated; finalize professional learning surveys & evaluation plan; weekly Project meetings during planning period to ensure all processes are in place for implementation. TIES uses a Design Studio format when implementing Fab Lab PD in schools. The design studios will have as their goal to enable the alignment of vision, creation of design principles and design features for the Fab Lab and its operation as well as to design the instructional approach that will be used to align the curriculum and standards to activities in the Fab Lab. By 8/1/2016 Project leadership team meeting schedule Kick-off planning retreat Partner/sub-contract agreement and process (data use agreements) Benchmarks to demonstrate success Design, update, and procure FabLab Outfit Lab Engage schools - meet with teachers and principals, engage with MC2STEM and Lorain County Community College Local visit to a Cleveland Fab Lab - Teachers and Principals Create a PD schedule for each quarter Teach one PD for qtr 1 Planning for online platform Tentative calendar of curriculum implementation Select and Identify near peer mentors, create selection process Meet with near peer mentors and provide training Communicating/coordinating project within timeline CMSD will offer stipends to teachers; Teacher participation will ensure staff buy-in; Tim Sisson will work with the key leadership team to develop a communication strategy which will include media releases, email blasts, announcements of program activities, etc. Board and teacher’s union have been actively engaged in project and will continue. Key project leaders will update board at least quarterly.

22. Implementation(grant funded start-up activities)

a. Date Range July/Aug 2016- June 2017

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

Fall/Winter/Spring 2016-17 FabLab visits 5 schools 4 times per year, 1 week Teachers will design, test, improve and scale transdisciplinary lessons integrating math and science Fall/Winter/Spring 2016-17 The equivalent 3 days /qtr of PD MS students become 'makers' and real-world problem solvers Fall/Winter/Spring 2016-17 Monthly leadership team meetings Harness unique contributions of teachers, businesses and informal education in PD Au/Wi/Sp 2016-17 Data collection Fall/Winter/Spring 2016-17 Teachers using online PD and collection of data Communicating/coordinating project within timeline Qtrly. planning meetings to review data & refine processes; Project managers communicate with staff/ partners; Board receives qtrly. reports from evaluator.

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

across the district. Engage! Explore! Excite! deepens collaboration and inquiry for the 5 STEM schools and creates an outlet for sharing lessons across the district that emphasize the engineering design process & components of digital design & fabrication to bring about a transformational change in instruction & learning. The train-the-trainer model used in Engage! Explore! Excite! transforms the CMSD organization. The online PD platform will be developed to support targeted teachers and builds capacity with innovative instructional practices & create a community of practice for all teachers in CMSD. Furthermore, we see our PD aspect & online platform minimizing teacher turnover and increase resources and support for teachers. Demonstrate how project activities/partnerships are expected to change behaviors Engage! Explore! Excite! will partner with TIES to enhance PD surrounding digital design & fabrication. TIES has designed over 50 Fab Labs in K-12 school districts in US & overseas. Through this partnership, CMSD will have access to the Fab Lab Network garnering our students with exposure to a community of engineering design professionals with 1000 Fab Labs in more than 78 countries!

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:

Name and Title: Adam Voight, Ph.D., Director of the Center for Urban Education and Assistant Professor of Curriculum and Foundations, Cleveland State University Responsibilities (for this grant project): External evaluator Qualifications: Dr. Voight is recognized as a national leader in educational research and has an extensive record of accomplishments in educational research and evaluation. In the past five years, he has published 15 articles in high-impact, peer-reviewed research outlets related to education and school improvement and has given over 20 presentations on his research at national and international conferences. His research has been supported by leading funding agencies in educational research, including the U.S. Department of Education and the Spencer Foundation. He also instructs graduate-level educational research courses at Cleveland State University. Prior relevant experience: Dr. Voight has evaluated numerous national- and state-level federally funded grants.

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 project evaluation will include 2 major components: a process evaluation that assesses how the project has been implemented & an outcome evaluation that assesses the impact of the project on student achievement outcomes noted above in section (a). The process evaluation will describe project activities & outputs. Data include (a) sign-in sheets for all teacher PD sessions; (b) a survey administered 2 times per year to participating school staff that measures comfort with implementing PBL and using the Mobile Fab Lab (MFL); (c) CMSD human resources report of teacher retention; (d) a calendar of MFL school visits; (e) # participating CMSD students; (f) a roster of CMSD students participating in near-peer mentoring, including self-reported number of mentoring sessions; and (g) sign-in sheets for project leadership team meetings to track external partner engagement in the project. Descriptive analyses will calculate (a) # of PD sessions offered & total and mean attendees per session; (b) mean levels of teacher comfort with PBL & the MFL at each measurement point using DoS from PEAR; (c) annual overall district teacher retention rate & rate for participating teachers; (d) # and mean duration of MFL school visits; (e) # and mean student participants per MFL visit; (f) # students participating in near-peer mentoring and (g) mean # of sessions per student; and (h) # of external partners attending each leadership meeting. The outcome evaluation will use quasi-experimental design to assess impact of project on student outcomes. Data will derive from district administrative records & include (a) student NWEA and AIR math, reading, & science test scores; (b) composite rubric scores from students' PBL projects; (c) the high schools that students choose to attend; and (d) results from the district's student-report Conditions for Learning (CFL) Survey, administered 2x per year, for which students receive
Individual scale scores measuring their perceptions of "challenge" & "support" at school. These outcomes measured in spring 2017 will serve as the outcome in separate analytic models. Outcomes for students that participate in the project will be compared to outcomes among same-district students who do not participate. There may be reason to suspect that the two groups (i.e., project participants vs. others) are not equivalent to one another in ways that may explain observed differences in outcomes, so a propensity-score matching procedure will be used. This ensures that comparisons are made between students with similar scores on outcomes at baseline (i.e., spring 2016) & with similar demographics. This approach involves 2 steps: (1) estimating logistic regression models with the full population of CMSD middle school students that treat project participation as a dichotomous outcome & with covariates representing students’ spring 2016 measure of outcome, race/ethnicity, eligibility for special education & English-learner services, socioeconomic status, gender, & grade in school; & (2) matching each student participant with a same-district non-participant who has the most similar propensity for having participated in the project. Both processes will also be assessed via student focus groups. 2 focus groups with a randomly selected group of eight student participants each will be organized at the conclusion of the first project year, and resulting data will be analyzed using an iterative qualitative coding procedure to identify themes associated with students' experience with the project. This mixed-methods approach will provide a comprehensive evaluation. Both evaluation components will serve formative and summative purposes. A final evaluation report will be completed in August, 2017, and the report will be shared with stakeholders at the beginning of 2017-18 to assist with project planning. Evaluation results will be shared the annual fall conference of OH Education Research Center in Columbus, OH.

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.

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 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. Diana Ehlert
Deputy Chief of Academic Resources 1111 Superior Avenue, Suite 1720 Cleveland, Ohio 44113 216-838-0122
Diana.Ehlert@clevelandmetroschools.org
**Consortium Contacts**

No consortium contacts added yet. Please add a new consortium contact using the form below.
<table>
<thead>
<tr>
<th>First Name</th>
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<th>Delete Contact</th>
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<tbody>
<tr>
<td>Jan</td>
<td>Morrison</td>
<td>4434211076</td>
<td><a href="mailto:janmorrison@tiesteach.org">janmorrison@tiesteach.org</a></td>
<td>TIES</td>
<td></td>
<td>Halle Building Suite 1199 1228 Euclid Ave., Cleveland, Ohio, 44115</td>
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<tr>
<td>Adam</td>
<td>Voight</td>
<td>216-687-5437</td>
<td><a href="mailto:a.voight@csuohio.edu">a.voight@csuohio.edu</a></td>
<td>Cleveland State University</td>
<td>062950</td>
<td>1860 E 22nd St, Cleveland, OH, 44114-4435</td>
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<tr>
<td>Patricia</td>
<td>Allen</td>
<td>617-484-0466</td>
<td><a href="mailto:Pallen@mclean.harvard.edu">Pallen@mclean.harvard.edu</a></td>
<td>PEAR Institute</td>
<td></td>
<td>115 Mill Street, Belmont, MA, 02478</td>
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<td>Kelly</td>
<td>Zelesnik</td>
<td>440 366 7028</td>
<td><a href="mailto:Kzelesni@lorainccc.edu">Kzelesni@lorainccc.edu</a></td>
<td>Lorain County Community College</td>
<td></td>
<td>1005 N. Abbe Rd, Elyria, OHIO, 44035</td>
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<tr>
<td>Alyssa</td>
<td>Lenhoff-Briggs</td>
<td>330-402-1016</td>
<td><a href="mailto:Alyssajbriggs@gmail.com">Alyssajbriggs@gmail.com</a></td>
<td>NEO STEM Ecosystem % One Community</td>
<td></td>
<td>1375 Euclid Avenue, Cleveland, OHIO, 44115</td>
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<td>Prior Relevant Experience</td>
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<td>Kathleen</td>
<td>Cornell</td>
<td>Teacher, Mound STEM School</td>
<td>Mrs. Cornell will provide leadership and a voice from the perspective of her fellow educators. She will additionally provide peer to peer support for during professional development and implementation.</td>
<td>Teacher 1990-present Cleveland Metropolitan School District (2010-present Teacher at Mound STEM School)</td>
<td>Mrs. Cornell has been an educator for more than 25 years in the Cleveland Metropolitan School District. She has held her currently appointment at Mound STEM school for almost 6 years. Her service to the school has included being the lead STEM practitioner providing her peers with onsite support in developing a STEM culture and learning experiences for Mound scholars. Through her work she had collaborated with diverse partners across northeast Ohio, including but not limited to Progressive Arts Alliance, Botanical Gardens, Cleveland MetroParks Zoo, and ArcelorMittal. Additionally, she had facilitated professional development session focused on engineering design and STEM education.</td>
<td>BA - Eastern Michigan MA - Cleveland State University</td>
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<tr>
<td>Marc</td>
<td>Siciliano</td>
<td>TIES Teaching Institute for Excellence in STEM</td>
<td>Marc will focus on planning TIES support of the project, including leading the design of professional development sessions</td>
<td>19 years working in STEM education as: 6-12 grade science teacher, middle school director, director of STEM for a secondary charter school, science director for NYCDOE Bronx region of small</td>
<td>Worked on two NSF-funded curriculum development projects on inquiry and design at the University of California, Berkeley Lawrence Hall of</td>
<td>BA in Biology, North Park University MA in Education Policy and Administration, Northeastern IL University</td>
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<tr>
<td>Tim Sisson</td>
<td>STEM Project Manager</td>
<td>Mr. Sisson will handle project oversight and partnership development, ensure project aligns with school/district's overall mission and improvement plans; manage project budget, conduct walk-throughs and observations of project implementation to continually provide formative and summative feedback for staff regarding implementation of blended instructional model. Project Manager ensure all project outcomes are completed on time and within budget. He will review progress, address barriers and Fab Lab Coordinator will support Project Manager in ensuring project success. Mr. Sisson has conducted numerous professional development sessions and worked with students from elementary</td>
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<td>Mr. Sisson</td>
<td>Director, CMSD PreK-8 STEM School project since 2010; co-authored the CMSD STEM framework that guides the schools’ instructional decisions.</td>
<td>Director, 9-month $665,000 STEM Demonstration Grant for the dissemination of STEM teaching and learning practices, and development of a web-based platform for sustainability and replication? Director, Student Success in Mathematics and Improving Retention and Learning of STEM Students Through Learning Communities Choose Ohio First Scholarship programs to increase retention, graduation and success of STEM undergraduate students through scholarship, community and authentic learning experiences?</td>
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<td>B.S. Microbiology, Ohio University, 2000; M.S. Curriculum and Instruction, University of Akron, 2007</td>
<td>Mr. Sisson has been leading efforts to advance P-20 STEM education for over 10 years. During this time period he has managed more than $5.8 million in grant funding to support projects focused on teacher professional development, college and career readiness, curriculum development, student mentoring and transformation of educational cultures. His experience goes beyond the administrative aspects of project management and includes programmatic implementation. Mr. Sisson has led consultant on the CMSD PreK-8 STEM School project since 2010; co-authored the CMSD STEM framework that guides the schools' instructional decisions.</td>
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<tr>
<td>Adam Voight</td>
<td>Director of the Center for Urban Education</td>
<td>Dr. Voight will serve as the external evaluator for this project. Dr. Voight is recognized as a national leader in educational research and has an extensive record of accomplishments in educational research and evaluation. In the past five years, he has published 15 articles in high-impact, peer-reviewed research outlets related to education and school improvement and has given over 20 presentations on his research at national and international conferences. His research has been supported by leading funding agencies in educational research, including the U.S. Department of Education and the Spencer Foundation. He also instructs graduate-level educational research courses at Cleveland State University. Dr. Voight has evaluated numerous national- and state-level federally funded grants, including the Safe and Supportive Schools (S3) program of the U.S. Department of Education in California, Louisiana, and South Carolina and the national Army Youth Programs in Your Neighborhood (AYPYN) initiative of the U.S. Department of Defense. He has also evaluated many federal- and state-funded grants to local education agencies, including the School Climate Transformation Grant of the U.S. Department of Education in Hemet (CA) Unified School District and the Straight A Fund grant of the Ohio Department of Education in Cleveland Heights-University Heights City Schools. Dr. Voight has a Ph.D. in Community Research and Action from Peabody College of Education at Vanderbilt University (Nashville, TN). He also instructs graduate-level educational research courses at Cleveland State University.</td>
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<td>Dennis Kubick</td>
<td>Deputy Chief of Finance/Controller</td>
<td>Mr. Kubrick will collaborate with the project director to CPA/Treasurer. He has 30 years of finance experience. He holds a Bachelor's of Business Administration.</td>
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provide fiscal oversight, financial reporting and financial management for this project.