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Adjusted Allocation 0.00
Remaining -902,400.00
Applicants shall respond to the prompts or questions in the areas listed below in a narrative form.

**A) APPLICANT INFORMATION - General Information, Experience and Capacity**

1. **Project Title:** COLLABORATION FOR THE IMPROVEMENT OF STUDENT OPPORTUNITY TO LEARN THROUGH EMERGING TECHNOLOGIES

2. **Executive Summary:** Provide an executive summary of your project proposal and which goal(s) in question 8 you seek to achieve. Please limit your responses to no more than three sentences.

   This project's goal is to improve the college-ready and work-ready skills of students so that schools reflect the emerging technologies that change the ways people communicate and collaborate to support students in developing and mastering the content of Ohio's mathematics and science standards. A diverse collaboration of 10 school districts representing 5 counties, 2 Educational Service Centers, 1 Career Center, 2 engineering and architecture firms and WVIZ/PBS ideastream Education will utilize emerging digital resources (eBooks, flex books, digital text, web-based videos, blogs, web-based collaborative professional communities) within a problem-based STEM instructional format to integrate Ohio's New Learning Standards at the middle school level aimed at increasing the levels of cognitive demand of the participants' instructional programs. In order to immerse the superintendent-nominated lead teachers in a problem-based learning environment, we will present them with the foundational principles for Problem Based Learning through professional development, and challenge them to address this problem as a deliverable outcome of our efforts: - Create a set of electronic standards-aligned instructional materials that can be developed and used collaboratively across a consortium of professional educators with complimentary teaching assignments - Provide, as deliverables, specific examples and artifacts of how the presence of eLearning devices and "anytime, anywhere" information access changes the planning responsibilities and roles of teachers in designing and delivering instruction - Participate in the culminating Summer Teacher Institute on emerging instructional technologies and the engineering competition for the participating students.

   7200 3. Total Students Impacted:

4. **Lead applicant primary contact:** - Provide the following information:

   First Name, Last Name of lead applicant: Ken Veon

   Organizational name of lead applicant: Beachwood City Schools

   Unique Identifier (IRN/Fed Tax ID): 043554

   Address of lead applicant: 24601 Fairmount Blvd. Beachwood, OH 44122

   Phone Number of lead applicant: 216-464-2600

   Email Address of lead applicant: kve@beachwoodschools.org

   5. **Secondary applicant contact:** - Provide the following information, if applicable:

   First Name, Last Name of contact for secondary applicant: Bay Village City Schools Bedford City Schools Brecksville-Broadview Heights City Schools Brooklyn City Schools Kenston Local Schools Olmsted

   Organizational name of secondary applicant: N/A

   Unique Identifier (IRN/Fed Tax ID): N/A

   Address of secondary applicant: N/A

   Phone number of secondary applicant: N/A

   Email address of secondary applicant: N/A

6. **List all other participating entities by name:** Provide the following information for each additional participating entity, if applicable: Mention First Name, Last Name, Organizational Name, Unique Identifier (IRN/Fed Tax ID), Address, Phone Number, Email Address of Contact for All Secondary Applicants in the box below.

   WVIZ/PBS ideastream Education/SMART Consortium (Lead Partner) Lake County ESC Cuyahoga County ESC Cuyahoga Valley Career Center Lubrizol Corporation URS (waiting for signed agreement, contact oversees)

7. **Partnership and consortia agreements and letters of support:** - (Click on the link below to upload necessary documents).

   * Letters of support are for districts in academic or fiscal distress only. If school or district is in academic or fiscal distress and has a commission assigned, please include a resolution from the commission in support of the project.

   * If a partnership or consortium will be established, please include the signed Straight A Description of Nature of Partnership or Description of Nature of Consortium Agreement.

   UploadGrantApplicationAttachment.aspx

8. **Provide a brief description of the team or individuals responsible for the implementation of this project including relevant experience in other innovative projects. You should also include descriptions and experiences of partnering entities.**

   The Beachwood City School District has demonstrated its ability to manage a grant of this scope through the participation in the state/national Race to the Top (RTTT) grant. Over four years, our district team developed a targeted plan, managed its funding and improved classroom instruction with the support of the RTTT grant. This is evidenced by improved performance on OAS, DGTs, ACTs, and SATs and the fiscal responsibility demonstrated in our use of the grant funds. Currently, the Beachwood City School District serves as the fiscal agent for several Tech Prep consortium units enrolling students from nine area school districts including Beachwood. The district also houses several special education units that enroll students from throughout Northeast Ohio. As fiscal agent, Beachwood oversees the annual budget for these programs, totaling $4-$5 million dollars. That fiscal experience, coupled with Beachwood's history of perfect audits and its Aaa bond rating, serve as evidence of its ability to manage effectively any potential Straight A Funding. WVIZ/PBS ideastream, as the largest public television, radio and multimedia station, is a State of Ohio Educational Technology Center providing expert technological assistance to northern Ohio schools for nearly 40 years. The SMART (Science and Math Achievement Required for Tomorrow) Consortium, which is a division of ideastream Education, was established in partnership with the Ohio Department of Education in 1998 to support improvement in Science and Mathematics learning in Northeast Ohio. The SMART Consortium is comprised of 50 school districts and three Educational Service Centers. ideastream Education and the SMART Consortium has extensive experience in creating digital learning assets and providing professional development in STEM, as well as creating eBook media for member districts in Cuyahoga, Lake and Lorain Counties. This extensive experience has shown that it is important to have ongoing support system for teachers when using this new technology to enhance academic achievement. ideastream Education and the SMART Consortium partnered with Michigan State University to implement a decade long National Science Foundation project which focused on improving math and science instruction and learning in K/12 schools by identifying gaps in teacher understanding of the content they were expected to teach. As a result, they were able to show the profound effect that content-based pedagogy has on student achievement. The member schools that are participating in this project have taken the lead in other SMART Consortium projects by assisting Consortium districts in facilitating professional development and serving as experts in teaching and learning. The participating business partners have had a long standing relationship with the SMART Consortium and have served as experts and mentors to students and teachers through other SMART Consortium projects.

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

9. **Which of the stated Straight A Fund goals does the proposal aim to achieve?** - (Check all that apply)

   - Student achievement
   - Spending reductions in the five-year fiscal forecast
   - Utilization of a greater share of resources in the classroom

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

    - New - never before implemented
    - Existing and researched-based - never implemented in your district or community school but proven successful in other educational environments
    - Mixed Concept - incorporates new and existing elements
    - Enhancing/Scale Up - incorporates new and existing elements

11. **Describe the innovative project.**
teacher content knowledge to student achievement. Therefore this project aims to increase teachers’ content knowledge by engaging them in the development and use of comprehensive high-quality digital resources for classroom use. Project to be Undertaken Toward Solving the Problem: Through the implementation of this project, a consortium of lead teachers of math and science will be identified within each participating school district. These lead teachers will collaborate to develop numerous eResources (ebooks/ flexbooks, web-based video clips, content specific blogs with the intended audience being teachers and students, on-line professionally collaborative message board focused on sharing ideas and resources focused on middle-level math and science instruction) that are aligned to the Ohio Learning Standards and shared across participating districts. At the conclusion of the project, all of the created digital assets will be shared with all teachers in the State of Ohio on the SMART Consortium website. The project will be divided into five component parts. Component A will identify lead teachers and assess infrastructure needs. During this process, any upgrades to a school’s wireless network will be made and the appropriate devices will be deployed to each school. As Component B begins, the lead teachers will begin their work in developing flexbooks for classroom use. These will face a peer review using the Ohio Quality Rubric and the Ohio Learning Standards to assess quality, accuracy and alignment. Component C will provide the teachers with professional development in the form of workshops and content focused school-based coaching on the topic of Problem Based Learning in math and science. The project will begin in the fall of the first year and continue through the first year with phase, practicing teachers and architects will provide support and guidance to the teachers in the development of Problem Based Learning Units. Through the duration of Components B and C, the teachers will develop web-based video clips intended to introduce problems and perturbing thinking. The teachers will also author blogs on math and science instructional practices focusing on teacher pedagogy to further collaboration; content specific blogs will be developed with students to leverage student learning for their own enhanced learning. The teachers will also collaborate on an interdisciplinary, professionally collaborative message board focused on sharing ideas and resources focused on middle-level math and science instruction. Newly created Problem Based Learning units will be shared through the internet. Component D, a culminating activity, will be an engineering competition at the Idea Center in downtown Cleveland for the participating schools. During this competition, the students will be given the materials to solve several problems that will focus on classroom technology applications. Component E, the final phase, will be to bring the teachers together over the summer of 2014 for a multi-day institute on the use of emerging technologies in the classroom setting. Throughout the project, the teachers will be invited to participate in an online community of professional collaboration intended to share products, practices and expertise.

12. Describe how it will meet the goal(s) selected above. If school/district receives school improvement funds/support, include a brief explanation of how this project will advance the improvement plan. Subject achievement goals in the areas of science (e.g., increased inventory of web enabled devices, utilization of a greater share of resources in the classroom, development of flexible learning environments, development of digital learning tools, efficiencies in future purchases because of the cross-platform compatibility of the end products produced as flexbooks, web texts, iBooks, Kindle books, Nook books, and interactive PDF files) and math (e.g., increased inventory of web enabled devices, digital learning tools, efficiencies in future purchases because of the cross-platform compatibility of the end products produced as web text, iBooks, and interactive PDF files) that may result from the implementation of the innovative project?

13. Financial Documentation - All applicants must enter or upload the following supporting information. Responses should refer to specific information in the financial documents when applicable:

a. Enter a project budget

b. Upload the Straight A Financial Impact Template forecasting the expected changes to the five-year forecast resulting from implementation of this project. If applying as a consortia or partnership, please include the five-year forecasts of each school district, community school or STEM school member for review.

c. If subsection (b) is not applicable, please explain why, in addition to how the project will demonstrate sustainability and impact.

NA

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

$902,400.00 * Total project cost

* Provide a narrative explanation of the overall budget. The narrative should include the source and amount of other funds that may be used to support this concept (e.g., Title I funding, RTT money, local funding, foundation support, etc.) that may be included in the project.

The total cost of this project is $902,400.00. These costs will provide for upgrades to the wireless infrastructure of the participating buildings. Classroom sets of tablets will be purchased. The budget will also cover the costs of the associated professional development, engineering competition and summertime.

15. What new/recurring costs of your innovative project will continue once the grant has expired? If there are no new/recurring costs, please explain why.

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

* Narrative explanation/rationale: Provide details on the cost of items included in the budget (i.e. staﬀ counts and salary/beneﬁts, equipment to be purchased and cost, etc.). If there are no new/recurring costs, please explain why.

Our proposal is designed to provide the capacity for schools to begin a successful transition to the use of digital tools for learning. Successful implementation of this project will leave the participating districts with no new/recurring costs beyond those covered by the grant. They already have robust Internet connections in the schools. The increased inventory of web enabled devices will also provide the schools with efficiencies in future purchases because of the cross-platform compatibility of the end products produced as flexbooks (Web texts, iBooks, Kindle books, Nook books, and interactive PDF files) and through widely available, and low-cost, web resources.

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

65,000.00 * Specific amount of expected savings (annual)

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

The implementation of this project will alleviate the need to purchase science lab materials, test materials in both math and science and update existing infrastructure to improve internet access. The increased penetration of web enabled devices will also decrease the need for future purchases of desktops or laptop computers, since access to information is provided “just-in-time” by on-board apps, and does not tax the school’s budget for software. These investments will also provide the schools with increased inventory of web enabled devices in future purchases because of the cross-platform compatibility of the end products produced as flexbooks (Web texts, iBooks, Kindle books, Nook books, and interactive PDF files) and through widely available, and low-cost, web resources.

17. Provide a brief explanation of how the project is self-sustaining. If there are ongoing costs associated with the project after the term of the grant, this explanation should provide details on the cost reductions that will be made that are at least equal to the amount of new/recurring costs detailed above. If there are no new/recurring costs, explain in detail how this project will sustain itself beyond the life of the grant.

A brief explanation of how the project is self-sustaining. If there are ongoing costs associated with the project after the term of the grant, this explanation should provide details on the cost reductions that will be made that are at least equal to the amount of new/recurring costs detailed above. If there are no new/recurring costs, explain in detail how this project will sustain itself beyond the life of the grant.

The project will provide the ability for practicing teachers to leverage student learning for their own enhanced learning. The teachers will also collaborate on an interdisciplinary, professionally collaborative message board focused on sharing ideas and resources focused on middle-level math and science instruction. Newly created Problem Based Learning units will be shared through the internet. Component D, a culminating activity, will be an engineering competition at the Idea Center in downtown Cleveland for the participating schools. During this competition, the students will be given the materials to solve several problems that will focus on classroom technology applications. Component E, the final phase, will be to bring the teachers together over the summer of 2014 for a multi-day institute on the use of emerging technologies in the classroom setting. Throughout the project, the teachers will be invited to participate in an online community of professional collaboration intended to share products, practices and expertise.

D) IMPLEMENTATION - Timeline, communication and contingency planning

18. Fill in the appropriate dates and an explanation of the timeline for the successful implementation of this project. In each explanation, be sure to briefly describe the largest barriers that could derail your concept or timeline for implementation and your plan to proactively mitigate such barriers. In addition, the narrative should list the stakeholders that will be engaged during that stage of the project and describe the
communication that occurred as the application was developed.

Describe the ongoing communication plan with the stakeholders as the project is implemented. (Stakeholders can include parents, community leaders, foundation support and businesses, as well as educational personnel in the affected entities.)

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<tr>
<td>Implementation (MM/DD/YYYY): December 18, 2013</td>
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\* Narrative explanation

This project will begin upon receipt of the award letters. A detailed timeline is reflected below. The project will conclude in the summer of 2014.

Implement (MM/DD/YYYY): December 18, 2013

\* Narrative explanation

The complete group of Components will take place from December 2013- June 30, 2014

Component A: Identification of participants (lead teachers - 60 participating teachers; 10 schools X 3 grade levels X 2 departments) 1. Identification of lead teachers representing 1 mathematics teacher and 1 science teacher per grade level per participating building. 2. Assessment of infrastructure needs

Component B: Development of flexbooks

1. Development of flexbooks in mathematics and science by inter-district grade level teams 2. Peer review of flexbooks


Component D: Design Squad Challenge 1. Participant students will compete in a design competition based in problem based engineering activities that create a solution to a proposed problem. Component E: Teacher Summer Institute 1. Participating lead teachers will take part in a multi-day institute focused on leveraging emerging technologies in the classroom. Outcome for these workshops would be a continued collaboration across the summer in the development of shared, standards-aligned electronic learning materials (ePubs, Apps for instruction, blogs and video assets). 2. Continued collaboration across the summer on the development of shared, standards-aligned electronic learning materials (ePubs, Apps for instruction, blogs and video assets). Teachers will continue to develop common digital assets collaboratively and leverage said assets in a position to increase their impact on teaching and learning in the 2014/2015 academic year. The participating LEAs and WVIZ/PBS ideastream Education/SMART Consortium will collaborate jointly on Components A-F to ensure a successful implementation of this project. The participating ESCs will assist with the implementation of Component B and Component C. The identified business partners will assist with the implementation of Components B and D.

Summative evaluation (MM/DD/YYYY): 08/30/14

\* Narrative explanation

The final reports are due in September. The project will be monitored by a steering committee comprised of one representative from each participating entity and headed by a project manager that will be selected by an executive committee comprised of a representative of ideastream, Beachwood Schools, a participating district, a business partner and an Educational Service Center. Throughout the project, a potential barrier to success will be the communication between the steering committee to the stakeholders. In order to ensure accurate and complete communication, a manager will be selected from the steering committee.

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

This project will develop a cadre of school-based experts that will serve as leaders to further the implementation of Project Based Learning activities and the use of emerging technologies across contexts. Further, through the duration of the project, a rich resource library of standards aligned digital assets, that will be available across the state for classroom use, will be developed. This will further the penetration of emerging digital technologies into the classroom. The participating lead teachers will serve as champions in integrating emerging technologies into the classroom setting. They will be in a position that allows them to model the best practices associated with Problem Based Learning.

E) SUBSTANTIAL IMPACT AND LASTING VALUE - Impact, evaluation and replication

20. Describe the rationale, research or past success that supports the innovative project and its impact on student achievement, spending reduction in the five-year fiscal forecast or utilization of a greater share of resources in the classroom.

The Beachwood City School District has demonstrated its ability to manage a grant of this scope through participation in the state/national Race to the Top (RTTT) grant. Over four years, the district team developed a targeted plan, managed its funding and improved classroom instruction with the support of the RTTT grant. This is evidenced by improved performance on OAAs, OGTs, ACTs, and SATs and the fiscal responsibility demonstrated in our use of the grant funds. WVIZ/PBS ideastream Education/SMART Consortium has been coordinated the efforts of over 50 northeast Ohio school districts in improving math and science education since its founding in 1998. The SMART Consortium has successfully implemented the goals set forth in many grants from organizations such as the Martha Holden Jennings Foundation, the Ewing Foundation, the White Foundation and Arcor. Most notably, the SMART Consortium was a partner in an 8 year National Science Foundation grant that worked with over 400 teachers and impacted over 7,000 students. During the 2012/2013 academic year, the SMART Consortium provided over 300 days of school-based coaching days and WVIZ/PBS ideastream Education/SMART Consortium conducted over 200 workshops and online courses.

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

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

22. If so, how?

This project will develop a library of digital assets that are accessible to all Ohio school districts. These assets will be aligned to the Ohio Learning Standards in math and science. Further, the lead teachers will serve as experts in their home districts and regionally to support further development of digital resources that will be available on the SMART Consortium website.

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

This project will enable a core group of lead teachers to establish the use of digital assets in the classroom setting. This will expose students to the idea of cloud computing and the value of technology based learning and collaboration. In doing so, the students will develop many skills necessary for the job market that they will be entering. Additionally, this project will train the teachers in the use of Problem Based Learning in mathematics and science. This approach has been shown to increase student achievement and engagement.

24. What are the specific benchmarks related to the fund goals identified in question 9 that the project aims to achieve in five years? Include any other anticipated outcomes of the project that you hope to achieve that may not be easily measured.

This project will lay the groundwork to begin phasing out mathematics and science textbooks. The elimination of the need for these books will lesson a district's costs in that area over the coming years. This project will also provide for many of the technology and infrastructure upgrades that will be made necessary as web based devices further penetrate the school environments.

25. Describe the plan to evaluate the impact of the concept, strategy or approaches used.

\* Include the method by which progress toward short- and long-term objectives will be measured. (This section should include the types of data to be collected, the formative outputs and outcomes and the systems in place to track the program's progress).

\* Include the method, process and/or procedure by which the program will be evaluated.

Teachers will provide self-reported analyses of their practices and student artifacts. Artifacts illustrating student learning will be collected throughout the duration of the project. Teachers will share their reflections on their new strategies and how those strategies impacted the quality of teaching and learning in their classrooms. Each participating school will also have a group of lead teachers that can serve as leaders to further build the capacity of their buildings in using emerging technologies. The compilation of digital assets will also be an indicator of success.

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 timeframe. The Governing Board of the Straight A Fund reserves the right to conduct evaluation of the plan and request additional information in the form of data, surveys, interviews, focus groups and any other related data to the legislature, governor, and other interested parties for an overall evaluation of the Straight A Fund.

PROGRAM ASSURANCES: I agree, on behalf of this applicant agency and/or all identified partners to abide by all assurances outlined in the Assurance section of the CCIP. In the box below, enter "I Accept" and indicate your name, title, agency/organization and today's date.

Agreement to Voter Director of Curriculum and Technology Beachwood City School District 10/25/13