

Budget

Lorain County ESC (048108) - Lorain County - 2017 - Straight A Fund - Rev 0 - Straight A Fund - Application Number (25)

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

Plus/Minus Sheet (opens new window)

Purpose Code	Object Code	Salaries 100	Retirement Fringe Benefits 200	Purchased Services 400	Supplies 500	Capital Outlay 600	Other 800	Total
Instruction		0.00	0.00	665,099.00	0.00	0.00	0.00	665,099.00
Support Services		0.00	0.00	96,343.00	0.00	0.00	0.00	96,343.00
Governance/Admin		60,000.00	18,000.00	0.00	0.00	0.00	0.00	78,000.00
Prof Development		0.00	0.00	35,600.00	0.00	0.00	0.00	35,600.00
Family/Community		0.00	0.00	0.00	0.00	0.00	0.00	0.00
Safety		0.00	0.00	0.00	0.00	0.00	0.00	0.00
Facilities		0.00	0.00	0.00	0.00	0.00	0.00	0.00
Transportation		0.00	0.00	0.00	0.00	0.00	0.00	0.00
Indirect Cost							12,000.00	12,000.00
Total		60,000.00	18,000.00	797,042.00	0.00	0.00	12,000.00	887,042.00
Adjusted Allocation								0.00
Remaining								-887,042.00

Application

Lorain County ESC (048108) - Lorain County - 2017 - Straight A Fund - Rev 0 - Straight A Fund - Application Number (25)

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

A) APPLICANT INFORMATION - General Information

1. Project Title:
Enhancing Math Literacy through Game-based Learning

2. Project Tweet: Please limit your responses to 140 characters.
Lorain County ESC Consortium to use an innovative, visual, individualized game-based math learning program to close student achievement gap.
This is an ultra-concise introduction to the project.

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

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

Grant Year				
Pre-K Special Education	825 K	870 1	892 2	900 3
950 4	1070 5	1055 6	1000 7	955 8
9	10	11	12	

Year 1				
Pre-K Special Education	825 K	825 1	870 2	892 3
900 4	950 5	1070 6	1055 7	1000 8
9	10	11	12	

Year 2				
Pre-K Special Education	825 K	900 1	825 2	870 3
892 4	900 5	950 6	1070 7	1055 8
9	10	11	12	

Year 3				
0 Pre-K Special Education	825 K	900 1	925 2	825 3
870 4	892 5	900 6	950 7	1070 8
9	10	11	12	

Year 4				
0 Pre-K Special Education	825 K	900 1	925 2	950 3
825 4	870 5	892 6	900 7	950 8
9	10	11	12	

Year 5				
0 Pre-K Special Education	825 K	900 1	925 2	950 3
980 4	825 5	870 6	892 7	900 8

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

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

Lorain County ESC Consortium's primary focus is on closing the achievement gap in math among students with disabilities, economically disadvantaged students, and/or racial subgroups. The proposed program to enhance math literacy will serve all students in the participating schools throughout the project's life and beyond. With the requested funds, unlimited ST Math site licenses will be provided to partner schools, providing access to all current, new and incoming students and teachers at those sites. Based on the anticipated success of ST Math, we expect that other schools will seek to replicate the program. Additionally, other ST Math program-related activities such as the Ohio Game-a-thon Challenge (<http://www.mindresearch.org/press/2016-04/ohio-gameathon>) will engage students and families from partner and non-partner schools across the county, positively impacting even more children.

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

First and last name of contact for lead applicant
Moirra Erwine

Organizational name of lead applicant
ESCLC

Address of lead applicant
1885 Lake Avenue

Phone Number of lead applicant
4403245777

Email Address of lead applicant
erwine@esclc.org

Community School Applicants: After your application has been submitted and is in Authorized Representative Approved status an email will be sent to your sponsoring entity automatically informing the sponsor of your application.

6. Are you submitting your application as a consortium? - Select one checkbox below

Yes

No

If you are applying as consortium, please list all consortium members by name on the "Consortium Member" page by clicking on the link below. If an educational service center is applying as the lead applicant for a consortium, the first consortium member entered must be a client district of the educational service center.

[Add Consortium Members](#)

7. Are you partnering with anyone to plan, implement, or evaluate your project? - Select one checkbox below

Yes

No

If you are partnering with anyone, please list all partners (vendors, service providers, sponsors, management companies, schools, districts, ESCs, IHEs) by name on the "Partnering Member" page by clicking on the link below.

[Add Partnering Members](#)

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

8. Describe the innovative project: - Provide the following information

The response should provide a clear and concise description of the project and its major components. The following questions will address specific outcomes and measures of success.

a. The current state or problem to be solved; and

For all students in the Lorain County ESC Consortium to be competitive in a knowledge-based economy, we must improve students' math/critical thinking skills and close the math achievement gaps. In the Consortium's districts, large disparities exist between students, particularly students with disabilities (SWDs), economically disadvantaged students, and/or students that belong to racial subgroups. Two districts currently have a D on the Ohio Dept of Ed report card with a 65% achievement gap and more than a 30% gap between SWDs and other students. The other four districts have 20-47% gaps with SWDs compared to 3-10% of all students. The consortium partners' gaps between students and economically disadvantaged students range from 3-11%; racial achievement gaps are in the 5-15% range. Emphasis on literacy has also created a gap between reading and math performance in the partner districts. All of these gaps must be addressed to ensure our students' future academic and career success.

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

While districts in the Lorain County ESC Consortium have been using software programs such as Study Island, Achieve 3000, and others to try and improve math performance, these programs have not been seamlessly integrated into the instructional design. Most teachers have not had blended learning or flipped classroom training, so the math programs are used as an add-on rather than an integrated and cohesive part of the math instruction. We have identified a solution which involves creating a new blended learning environment with an innovative, research-based digital program- STMath. We will use STMath to transform the way math instruction is being delivered by 275 teachers, 8517 students in 16 schools in 6 districts across Lorain, Huron, and Cuyahoga Counties. Through the implementation and use of STMath with comprehensive, high quality professional development on both the program and blended learning, teachers in the consortium will create a new, effective learning environment in their respective classrooms that will engage students and increase math performance. Currently, STMath is being used by over 1 million students and 39,000 teachers, in 3,100 schools in 43 states with proven results. In Ohio, nearly 35,000 students and 1,300 teachers are using the program. STMath creates a digital learning environment where students learn math in a unique and engaging way. Based on neuroscience research, the program helps children learn in ways that are consistent with how their brains function. STMath uses a uniquely visual approach that accesses the brain's innate "spatial temporal" reasoning ability through animated representations of math concepts as visual puzzles that do not involve language. Self-paced and self-motivating, STMath provides students with immediate, instructive feedback on why answers are correct or incorrect. Not only does this approach deepen problem-solving and reasoning skills, it also fosters students' confidence in their ability to learn and their desire to advance their mathematical knowledge. By promoting "learning by doing," STMath ensures that students gain a deep understanding and are able to apply that understanding to the solving of challenging non-routine problems especially problems requiring critical thinking, creativity and persistence. Students need to form hypotheses, test conjectures, make mistakes and learn from those mistakes. Teacher professional development is a key component to implement this program and there is comprehensive, succinct professional development and training component to complement STMath. Prior to beginning the program, teachers will go through an initial training that will focus on what they need to know to start STMath in their classrooms. A schedule will be developed with the Consortium's leadership team to offer multiple opportunities for teachers to attend start-up training in person in their respective locales. In addition, live webinars and a self-paced course option are available for teachers in case they are unable to attend the in-person session or would like additional reinforcement. Follow up training and professional development will be conducted that focus on data and reporting as well as the integration of STMath with core curriculum. A 'train-the-trainer' model will also be utilized by the consortium in which each district will have an 'STMath Expert', a teacher that is able to assist his or her peers on STMath implementation and integration. Other teachers will be trained, and this large cohort will have the benefit of ongoing support from STMath trainers and collaborative opportunities online within their schools through our LMS system, Eduplanet 21. This type of professional development and support model not only enhances the teachers' use, increases their math content knowledge and prompts them to connection between what the students are learning in the program and what they are learning during classroom instruction.

9. Select which (up to four) of the goals your project will address. For each of the selected goals please provide the requested information to demonstrate your innovative process. - (Check all that apply)

a. Student achievement

i. List the desired outcomes.

Examples: fewer students retained at 3rd grade, increase in graduation rate, increased proficiency rate in a content area, etc.

Increase student math achievement, math proficiency growth rates and math literacy in order to close the gap and challenge students. Enhance students' creative reasoning and problem-solving skills and perseverance. Promote 'learning by doing' vs. 'teaching by telling' which fosters an environment of facilitated learning. Use data to monitor progress. Enhance teachers pedagogical math content knowledge. Increase efficacy in the classroom. Decrease student achievement gaps between SWDs, economically disabled, and/or racial subgroups with other students. Increase student engagement fostering a growth mindset about problem solving.

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. Each school has the required infrastructure and hardware to implement the program over the course of the project. 2. STMath program will be implemented within each school and districts with fidelity. This will be realized by "train-the-trainer" model PD provided by our regional trainer that is differentiated to assure that each district's implementation plan is tailored to the individual schools. 3. Teachers value instructional coaching through job embedded High quality professional development 4. Data based decisions will impact teacher pedagogy. Teachers' efficacy in the classroom will improve as they will have real-time data reporting and job embedded coaching enabling them to modify their instruction meeting individual students' needs.

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

Bay Village is currently using STMath in grades K-4 and based on the first year of implementation they have seen success with individual students. They now want to increase using in grades 5-8 because of the impact it has had with students being excited about Math and asking questions. The professional development that is part of the STMath program resulted in teachers actually having discussion about the pedagogy with each other. North Ridgeville is currently piloting STMATH in kindergarten. Based on STAR results 80% of students are scoring proficient or above in critical numeracy skills. Here in Ohio, Fairfield County ESC received nearly 8 million dollars through Straight A Funds to increase math scores by 4% when the state average is 1% over the last few years. Through the use of STMATH they have seen students' gain greater interest in math, and a deepening of conceptual understanding leading to an increase in math achievement. Two recent independent studies by WestEd confirmed gains, respectively, in California and Los Angeles Unified School District (LAUSD) schools using ST Math. Specifically, WestEd measured the impact of MIND's ST Math program in 209 second- through fifth grade classrooms serving more than 19,980 students at 129 California schools that fully implemented the program in a blended learning environment. Findings showed that those grades using ST Math for one year exhibited a 6.3 percentage-point gain in the number of students scoring proficient or better on the California Standards Test, compared to those at similar schools without the program. The effect size of this difference between the two groups was 0.42-well beyond the What Works Clearinghouse threshold of 0.25 for "substantively important" effect size. In LAUSD, another WestEd study showed ST Math has made a statistically significant impact on student math performance across 45 elementary schools. The rigorous analysis found a statistically significant difference in the average percentage of students in two groups: those scoring advanced, and those scoring advanced or proficient on the California Standards Test (CST) in 2011.

Effect sizes across the grades also exceeded the What Works Clearinghouse threshold. Results from MIND's 2014 teacher survey (1,212 respondents) suggest that ST Math also has a dramatic impact on students' motivation and attitude towards math. Ninety-four percent of teachers agreed that the program has a positive impact on student attitudes about math learning and that using ST Math positively affects students' depth of understanding about how math works. Eighty percent of teachers agreed that using ST Math helps improve student perseverance while facing challenging problems. It must also be noted that the ST Math program received recognition from two national consortiums. After a rigorous vetting process, Change the Equation, an initiative to mobilize the business community to improve the quality of STEM learning in the United States, recognized ST Math as a program that consistently yields positive results for students. Similarly, Business Roundtable recognized ST Math as an "Outstanding" K-12 STEM education program. The Business Roundtable selection process was a detailed six-month undertaking by an independent panel of experts that reviewed nearly 100 applicants. Change the Equation's applications were evaluated by the independent firm WestEd. ST Math was the only program to be selected by both groups. MIND's professional development is also garnering national attention as we were recently selected as a partner of the 100Kin10, a multi-sector network that responds to the national imperative to train 100,000 excellent science, technology, engineering, and math (STEM) teachers by 2021.

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).

All Math teachers in the consortium will be trained. Teachers will use data to inform their instruction. Teachers will accurately use the data from the reports to target student populations in order to foster increased math growth. Teachers will adapt to blended learning instruction. Students will show achievement in Math.

v. List and describe pertinent data points that you will use to measure student achievement, providing baseline data to be used for future comparison.

Collect, analyze, and summarize baseline 2016-2017 mathematics state assessment data [building/district level data] (Fall 2016) Collect, analyze, and summarize a sample of baseline district level Grades K-3 local measures [building/district level data] (Fall 2016) Design, administer online, analyze, and summarize professional development feedback questionnaires used after (1) initial district selected PD option A, B, or C (Fall/Winter 2016), (2) June 2017 Academy held at ESC Design, administer online, analyze, and summarize teacher instructional practice/implementation questionnaire May 2017 (pre-professional development), September 2017 (initial implementation), and April 2018 (experienced implementation) Collect, analyze, and summarize ST Math usage data and student achievement change data (October 2016, January 2017, April 2017) Conduct, analyze, and summarize focus group int

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

The proposed program will enhance teachers' time as blended learning is one of the major educational ways of promoting deeper learning by personalizing student skill building, creating new and interesting learning environments, and allowing students to access content more frequently. Deeper learning is centered on depth over breadth, and gaining a conceptual in conjunction with learning procedures. STMath enhances the blended learning environment for both students and teachers. It helps transition the learning environment from being teacher-centric to student-centric, where students are able to explore content that provides them with more effective critical thinking tasks and hands-on learning. This provides teachers more freedom to work with small groups or individual students and promotes deeper discussion and facilitates open-ended questions that allow for more analytical thinking on the part of the student. The educator role shifts from that of "telling" to "asking". More importantly, students are no longer just memorizing concepts, but gaining greater conceptual knowledge. STMath also enhances teacher efficacy as the program integrates frequent formative assessments and feedback for students and teachers. As part of the training process, teachers will learn how to use the visual tools in STMath to support their core math instruction to help explicitly strengthen the bridge between technology and the core classroom instructional program. The goal is to achieve the use of STMath demo lessons in support of the core math curriculum on a regular basis utilizing existing school display technology and STMath exercises where they link to and reinforce the schools' core math instruction, The STMath teacher-leader training program (train the trainer) will focus specifically on this aspect of integration. Long-term sustainability and scalability is also facilitated as STMath teacher leaders will assist schools/districts when staff changes occur.

b. Spending reductions in the 5 year forecast

i. List the desired outcomes.

Examples: lowered facility cost as a result of transition to more efficient systems of heating and lighting, etc.; or cost savings due to transition from textbook to digital resources for teaching.

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

Example: transition to "green energy" solutions produce financial efficiencies, etc.; or available digital resources are equivalent to or better than previously purchased textbooks.

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

iv. Please enter the Net Cost Savings from your FIT.

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

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

c. Utilization of a greater share of resources in the classroom

i. List the desired outcomes.

Example: change the ratio of leadership time spent in response to discipline issues to the time available for curricular leadership.

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

Examples: improvements to school and classroom climate will result in fewer disciplinary instances allowing leadership to devote more time to curricular oversight.

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

iv. Please provide the most recent instructional spending percentage (from the annual Ohio School Report Card) and discuss any impact you anticipate as a result of this project.

Note: this is the preferred indicator for this goal.

v. List any additional indicators that you will use to monitor progress toward your desired outcome. Provide baseline data if available.

These should be specific outcomes, not just the accomplishment of tasks. Example: fewer instances of playground fighting.

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

d. Implementing a shared services delivery model

i. List the desired outcomes.

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

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

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

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

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

These should be measureable changes, not the accomplishment of tasks.

Example: consolidation of transportation services between two districts.

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

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

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

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

a. New - Never before implemented

b. Existing - Never implemented in your community school or school district but proven successful in other educational environments

c. Replication - Expansion or new implementation of a previous Straight A Project

d. Mixed Concept - Incorporates new and existing elements

e. Established - Elevating or expanding an effective program that is already implemented in your district, school or consortia partnership

C) BUDGET AND SUSTAINABILITY

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

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

[Enter Budget](#)

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

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

[Upload Documents](#)

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

887,042.00 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.

To achieve the goals listed above regarding STMath the grant funds will be invested as follows: Instruction- Purchased Services; \$\$665,099 Total for ST Math unlimited site licenses and support for 5 years. Governance/Admin- Salaries and fringe benefits; \$78,000, 1/4 of ESC director for overseeing implementation, training of teachers within the schools, for grant year and subsequent 5 years. Governance/Admin- purchased services; Support Services- \$96,343, external evaluator services as per evaluation design specifications for the grant year and subsequent 5 years. Professional Development- Purchase services; \$25,600 for instructional consulting 'train the trainer' professional development for teachers, regarding ST Math and \$10,000 for teacher substitutes or stipends for same years. Total \$35,600. Indirect Cost- other; ESC Fiscal management services for implementing the grant \$12,000

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.

0.00 a. Sustainability Year 1

0.00 b. Sustainability Year 2

0.00 c. Sustainability Year 3

0.00 d. Sustainability Year 4

0.00 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 the purchase agreement with MIND, the districts' schools that are participating in the project will receive perpetual STMath licenses for a unlimited number of students in each building. This means incoming students will receive access to the program in subsequent years for no additional cost. In addition, professional development and training as well as technical support services for the first five years will be included in the agreement. This will encompass minor software updates, user guides for each school, online teacher support and resource materials, 'train the trainer model' for instruction of new teachers or ST Math teacher leaders, and class reports. Existing grade level, building and district leadership meetings will be used to share data, share effective practices and to problem solve. Districts have the required infrastructure and hardware to support the program implementation throughout the project and have conveyed that they do not anticipate any additional costs with utilizing and sustaining STMATH.

100 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.

Cost savings will be derived through elimination of programs that have not been effective. Most districts have identified some savings in textbooks, Study Island (a software program being used by many of the districts in Lorain County), materials and supplies as well as some professional development. One of our districts has identified some savings in use of tutors for those students who are struggling at various grade levels.

0 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.

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 August 2015--August 2016

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

Pilot in Bay Village K-4 and N.Ridgeville, results shared April 2016 Consortium Meetings, STMATH overviews in consortium districts September- December 2015. December 2015 Straight A Grant Submission STMATH Open House March 2016- Bay Village Consortium Meetings to review feedback from last round. Evaluation Team review of feedback and revision of evaluation plan-April 2016 Board approval of assurances May 2016 Submission for 2016-2017 Straight A Grant-May 6, 2016 Upon receipt of grant award the following activities will take place; Grant announcement made, primary leadership team meeting held, (including fiscal agent, STMATH representative, implementation team and external evaluator. Create a marketing plan to inform teachers and parents about the program. Schedule professional development dates and secure venues.

22. Implementation(grant funded start-up activities)

a. Date Range August 2016-June 2022

b. Scope of activities - include all specific completion benchmarks

Grant will be unpacked by Moira Erwine, ESCLC Program Coordinator. The Implementation team meets to review expectations and the budget, make any necessary revisions. -Gather district implementation plans -Training and training evaluations for districts completed by 10/31/2016 - training will be multi-modal with multiple dates/options to maximize delivery -Grants manager conducts monthly meetings with all district representatives and external evaluator to review timeline and troubleshoot unforeseen issues -External evaluator completes a training/implementation report - 12/31/2016 -External evaluator provides a mid-grant progress report summarizing the fidelity of implementation and student progress - 1/31/2017 -ST Math teacher leaders receive 2-3 trainings throughout the year that will prepare them to train new teachers in subsequent years and assist current teachers with any concerns -External evaluator will prepare a quarterly report on student usage/progress - 4/30/2017 -A professional development day will be held in June 2017 (teachers to share successes, collaborate on ST Math/blended learning in the classroom; include evaluations of the program and its implementation and identification of additional needs) -External evaluator creates summative evaluation on usage, progress, growth and impact -Grants manager creates: 1) communication to be sent to all teachers regarding the impact and implementation of ST Math across the consortium; 2) letter template districts can use to share ST Math results with parents; 3) press release about the impact of the consortium's implementation of ST Math - -External evaluator provides tools for districts for ongoing monitoring of blended learning, ST Math fidelity of implementation and student progress - 6/30/2017

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

a. Date Range June 2022-June 2027

b. Scope of activities - include all specific completion benchmarks

Ongoing networking with STMATH implementation teachers will be continued through Eduplanet21 Learning Management System ESC trained personnel will provide online Eduplanet21 support as needed to the community of teachers in the project.

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:

We will be training 295 teachers in grades K-12. This high quality professional development includes job embedded coaching from the STMath consultant as well as the ESC trained personnel. Changing pedagogy to blended instruction and learning the STMATH program will be the focus of the grant year. Ongoing coaching will follow as well as an intentional networking of all STMATH teachers supported by the Educational Service Center of Lorain County's learning management system, Eduplanet21. All of our consortium districts have systems in place to review data, discuss strategies for differentiation, and target the populations that we are focused on in this project.

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:

The evaluation of Enhancing Math Literacy through Game-based Learning will be conducted by the Discovery Center for Evaluation, Research, and Professional Learning (formerly Ohio's Evaluation and Assessment Center for Mathematics and Science Education. All evaluation activities will be overseen by Sarah B. Woodruff, PhD (Center Director) and led by Chris Cox (Senior Research Associate and Project Team Leader). Evaluation contact information: Chris Cox, Senior Research Associate and Project Team Leader; Discovery Center for Evaluation, Research, and Professional Learning; McGuffey Hall Room 408; Miami University; Oxford, Ohio 45056; 513-529-5433; chris.cox@MiamiOH.edu

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 evaluation of Enhancing Math Literacy through Game-based Learning will provide timely formative feedback to project directors while measuring summative progress toward goals of the project focused on (1) increasing student achievement in mathematics, (2) reducing spending, (3) increasing resources available to classrooms in the region, and (4) utilizing the ESC to increase efficiency and effectiveness and long term sustainability. The mixed method design of this evaluation collects and analyzes multiple and repeated sets of data deliberately selected to monitor implementation and outcomes for students, teachers, buildings, districts, and the ESC region. This evaluation is guided by the overarching question, "What is the nature and extent of change in students' mathematics achievement when students and their teachers engage in mathematical ideas through visual and game-based learning?" and will be investigated by collecting and analyzing data measuring the implementation and impact of project activities from students', teachers', and project leadership data. Quantitative data analyses will include appropriate descriptive and inferential statistics including ANOVA. Qualitative data will be thematically analyzed and triangulated with survey data to provide a more rigorous assessment. Students, mathematic achievement will be longitudinally analyzed across 3 data sources: (1) game-based system reported progress, (2) K-3 local measures, and (3) state mathematics assessments. Beginning Fall 2016, teachers will be surveyed online about their instructional practices and implementation perceptions before designated professional development (Math Literacy Instructional Practices and Project Questionnaire) and will be repeated March 2017. This survey will be repeated at the beginning and middle of each Project Year 2-6 providing corrective feedback for implementation and professional development. Teacher responses will be linked across administrations to monitor pockets of successes and challenges. After initial and subsequent professional development including academies and train-the-trainer sessions, teachers will be surveyed for their feedback and future needs to enhance the fidelity of implementation (Math Literacy PD Feedback Questionnaire). In Year 1, focus group interviews of a sample of participating teachers in Spring 2017 will provide Year 1 summative feedback and formative feedback for corrective modifications regarding implementation and ways for improvement. Interviews of project leaders and a sample of district liaisons/trainers will occur in all years in late fall/early winter to qualitatively assess implementation and outcomes. In Spring 2017, data will be collected from each partner regarding their implementation, associated costs as a participant of the consortium, anticipated costs without consortium membership. These data will contribute to a comparative analysis of cost savings to be repeated and reported each Spring 2017-2022. Formative reporting via evaluation memos will coincide with analyses of received data. The frequency of these evaluation memos will help with planning project activities and activity modification when warranted by the analysis of data. Annual reports will note accomplishments and challenges within each school year and longitudinally. Program findings, lessons learned, and evaluation methodologies will be disseminated through venues such as (1) consortium partner meetings, (2) state sponsored Straight A Fund meetings, (3) state/national mathematics teacher conferences, (4) state/national evaluation association conferences.

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.

This has been done through Fairfield County ESC and impacted K through 5th grade with larger district and more districts involved. We will be implementing ST Math at some different grade levels cross the county, including high school, some of our schools are small and rural. We are interested in including our ESC preschool program, long with North Ridgeville City Schools and Bay Village City Schools at implementing ST Math at the preschool level, though not included at this time. The program design has already been proven successful as demonstrated across other districts and schools in the country. In order to adapt to local conditions while maintaining strong fidelity of program implementation, major design considerations have been incorporated into the ST Math program model for scalability which are 1) it can be use with any other conventional curriculum in any school and 2) it has a reasonable requirement for training and initial teacher use. Follow up training and professional development is also available to assist teachers in fully incorporating the program into their core curriculum. ST Math (MIND) staff will work with the districts interested in obtaining the program and develop and implementation plan. Consortium members will host site visits for teachers and administrators interested in seeing the program in classroom use and employ the 'train the trainer' model to provide support to educators both within and outside of their respective districts.

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 the Lorain County ESC, 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 outline in the Straight A Assurances. Moira Erwine, The Governing Board of the ESC of Lorain County was informed of last round grant application on at the regular November 2015 Board Meeting and are aware that we have reviewed the feedback and are resubmitting. The Treasurer, Superintendent and Board President will sign the assurance at the regular May 2016 meeting

Consortium

Lorain County ESC (048108) - Lorain County - 2017 - Straight A Fund - Rev 0 - Straight A Fund

Sections

Consortium Contacts

First Name	Last Name	Telephone Number	Email Address	Organization Name	IRN	Address	Delete Contact
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Michael	Molnar	440-988-4406	mike_molnar@amherstk12.org	Amherst Exempted Village	045195	185 Forest St, Amherst, OH, 44001-1605	
Bryan	Drost PhD	440-965-5821	bdrost@firelandsschools.org	Firelands Local	048157	112 N Lake St, South Amherst, OH, 44001-2824	
Vicky	Timko	440-233-5412	vicky.timko@clearviewschools.org	Clearview Local	048132	4700 Broadway, Lorain, OH, 44052-5542	
Char	Shryock	440-617-9300	Char.Shryock@bayschoolsohio.org	Bay Village City	043547	377 Dover Center Rd, Bay Village, OH, 44140-2304	
David	Pritt	440-327-4444	davidpritt@nracs.k12.oh.us	North Ridgeville City	044537	5490 Mills Creek Ln, North Ridgeville, OH, 44039-2339	

Partnerships

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Sections

Partnerships

First Name	Last Name	Telephone Number	Email Address	Organization Name	IRN	Address	Delete Contact
Jon	Weiss	440-731-0288	jweiss@mindresearch.org	MIND Research		111 Academy Suite 100 , , Irvine , California , 92617	
Moira	Erwine	4403245777	ERWINE@ESCLC.ORG	Educational Service Center of Lorain County		1885 Lake Avenue, , Elyria, Ohio, 44035	
Chris	Cox	513-529-1686	chris.cox@miamioh.edu	Miami University Discovery Center		408 McGuffy Hall, 201 E Spring Street, Oxford, Ohio, 45056	
David	Silverberg, PhD	216-524-3000 Ext 4253	dsilverb@ashland.edu	Ashland University Telego Center		121 W. Main Street, , Ashland, Ohio , 44805	
Mark	Doughty	419-433-1234	mdoughty@huron-city.k12.oh.us	Huron City Schools	044131	712 Cleveland Rd E, Huron, OH, 44839- 1871	
Michael	Molnar	440-988-4406	mike_molnar@amherstk12.org	Amherst Exempted Village	045195	185 Forest St, Amherst, OH, 44001-1605	
Bryan	Drost PhD	440-965-5821	bdrost@firelandsschools.org	Firelands Local	048157	112 N Lake St, South Amherst, OH, 44001-2824	
Vicky	Timko	440-233-5412	vicky.timko@clearviewschools.org	Clearview Local	048132	4700 Broadway, Lorain, OH, 44052- 5542	
Char	Shryock	440-617-9300	Char.Shryock@bayschoolsohio.org	Bay Village City	043547	377 Dover Center Rd, Bay Village, OH, 44140-2304	
David	Pritt	440-327-4444	davidpritt@nracs.k12.oh.us	North Ridgeville City	044537	5490 Mills Creek Ln, North Ridgeville, OH, 44039-2339	
Twana	Young	440-731-0288	tyoung@mindresearch.org	MIND Research		111 Academy Suite 100, , Irvine, California, 92617	
Kimberly	Mogavero	440-731-0288	kmogavero@mindresearch.org	MIND Research		111 Academy Suite 100, , Irvine, California, 92617	

Implementation Team

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Sections 

Implementation Team

First Name	Last Name	Title	Responsibilities	Qualifications	Prior Relevant Experience	Education	% FTE on Project	Delete Contact
Michael	Molnar	Executive Director of Educational Services Amherst Exempted Village	Michael will oversee the implementation at Amherst Exempted Village.	Michael oversees the Technology Department and Special Education Dept. He is directly responsible for Amherst's Gifted and Talented, Resident Educator, and Title 1 Programs. Michael leads the district's Race to the Top Transformation Team and Appraisal Review Committee. He also manages the areas of curriculum and instruction, testing and assessments as well as professional development.	Before coming to Amherst, Michael was the principal of Hilltop Elementary School in the Beachwood City Schools for 6 years. He served as principal of Tennyson Elementary School in Sheffield/Sheffield Lake City for four years and was a 2/3 Multiage Teacher at Crestwood Elementary school in Elyria City School District for 5 years	Masters Degree in School Administration at CSU and currently enrolled in Kent State Doctoral Program.	15	
Moira	Erwine	Senior Director of Curriculum/Instruction and Professional Development	Moira will be the project lead.	11 years with the Educational Service Center including providing researched best practices professional development. School Improvement Consultant with the State Support Team 2 and presently director of curriculum and instruction. Moira is chair of the Middle School P16 REACHigher committee and a member of the Great Cleveland Consortium of Mathematics Teachers. Moira also supports the region as the Value Added	Having been a consultant for the Ohio Improvement Process with the State Support Team, Moira has supported districts through change and has an extensive knowledge of research best practices. She has also served as a board member for the Northern Ohio Branch of the International Dyslexia Association.	MA. Ed Elementary Principal MA. Ed Supervision	25	

				Data Lead. She is highly trained in Adaptive School/Garmston techniques.				
Twana	Young	Educational Consultant, MIND Research Institute	Twana supports schools and districts with the implementation of STMATH into their instructional framework. She supports the development of blended learning models that are intentionally designed to meet instructional goals. She provides professional development and coaching on topics like; Common Core Standards in Mathematics, Intervention Strategies, lesson design as well as strategies to support students with special needs, gifted, and ELL.	Twana has received many awards and recognitions for her commitment to education including achieving the National Board Certification in Mathematics: Early Adolescence. She was recognized as the Columbus Public Schools Teacher of the Year along with the Urban Systemic Initiative Award. She twice received the Performance Advancement Award for improving student achievement. She has presented at State and National Conferences and serves on state and national committees.	16 years in urban education as an elementary and Middle School teacher. District Curriculum Specialist and Director experience. She has led school improvement efforts, developed STEM pathways, led the development and implementation of curriculum, assessments and coaching programs. She has also developed innovative programs and provided professional development to teachers and administrators to reach their goals.	MA Ed	20	
Char	Shryock	Director of Curriculum Bay Village Schools	Char will oversee the implementation at Bay Village School District.	Char is the district technology coordinator.	Char has supported a pilot with STMATH in grades K-4 during the 2015-2016 school year.	M. Ed	15	
Sarah	Cummings	Educational Consultant, MIND Research Institute	Sarah will be an integral part of the implementation team. As an Education Consultant for MIND Research Institute, Sarah supports schools and districts in implementing and integrating ST Math into their instructional framework. She conducts	Educational Consultant for MIND Research Institute, a certified ST Math Trainer.	Sarah is a former 6th grade math teacher who used STMATH in the classroom while teaching in the Gahanna Jefferson Public School District. During her time as a teacher, Sarah became certified as an STMATH Trainer.	B.S-Human Ecology Ohio State University MA Ed Ohio State University	20	

			trainings, school professional development, and family/community events. Sarah also works with students in the classroom while they are on ST Math and teaches classroom lessons with ST Math.					
Bryan	Drost PhD	Director of Educational Services at Firelands	Bryan will oversee the implementation at Firelands Local Schools.	Bryan has experience with curriculum, instruction and assessments as well as technology integration. He also has led his district in curriculum mapping and textbook adoptions.	Academic Principal-Shaker Heights High School Kent State Professor-presently Director of Educational Services-Firelands Presently	Ph D-Curriculum, Instruction, Assessment M.Ed-Standards Based Instruction B.A-Cultural Foundations	15	
Douglas	Bruno	Manager of Consulting and Professional Services MIND Research Institute	Douglas will oversee the training and professional development of the consortiums teachers.	Douglas has managed training and professional development across Ohio.	With over 17 years of experience as a classroom teacher, software trainer, and education consultant/manager with large educational publishing companies, he works with districts to plan the implementation of large-scale program adoptions with an emphasis on outcomes and reporting.	B.S Education-Penn State University Tech Integration Certificate-Penn State University Network Plus Certification-New Horizon	15	
David	Pritt	Director of Curriculum and Instruction North Ridgeville	David will oversee implementation within North Ridgeville.	Oversees curriculum and instruction for the district PK-12 and is well versed in technology integration.	Building Principal Assistant Principal Teacher	Associates LCCC Bachelors Baldwin Wallace College Berea Ohio Masters and Post Masters Baldwin Wallace College Berea, Ohio and CSU	15	
David	Silverberg, PhD	Director of Telego Center, Ashland University	Dr. Silverberg will coordinate efforts between the Lorain County ESC and the Discovery Center	Dr. Silverberg received his BA from Wesleyan University, CT, and both his MS (Educational	Dr.Silverberg conducts professional development workshops on the STEPS manuals for	PhD	15	

			to provide portions of the evaluation. He will conduct several focus group sessions held during the 6 years of the project. Dr. Silverberg will also work directly with the Project Coordinator and other Lorain administrators to facilitate the project and other Lorain administrators to facilitate the project and provide resources as needed to ensure its success.	Leadership and Administration) and Ed.D. (Educational Leadership, Administration, and Policy) from Pepperdine University, CA. Dr. Silverberg has been in the field of Education for over 20 years and has experience as a teacher, administrator, writer, and professor. He is employed at the Telego Center for Educational Improvement at Ashland University, Ashland, OH, as an adjunct professor, and is on the editorial board for the American Secondary Education Journal.	Math, Language Arts, Reading & Writing Across the Curriculum, Science, and Social Studies, and has presented workshops and lectures at state, national, and international conferences.			
Vicky	Timko	Curriculum Director at Clearview Schools	Vicky will oversee the implementation at Clearview Schools.	22 years of experience in education with experience in Math Curriculum development and textbook adoption.	Vicky has 16 years of Math Classroom experience and 2 years as an instructional coach.	MA-Ed MA-Administration	15	
Sarah	Woodruff	Director of Discovery Center for Evaluation, Research and Professional Learning Miami University	Sarah will direct all aspects of the formative and summative evaluation activities for the project.	As Director of the Discovery Center, Dr. Woodruff oversees all aspects of the project and program activities by providing leadership in research design, data analysis, proposal and report development, and evaluation and research implementation. Dr. Woodruff has a broad understanding of education, having served as a teacher and an administrator at	Direction/Leadership of the following 25 current projects: Evaluation of Fighting with Food: Battling Chemical Toxicity with Good Nutrition (National Center for Research Resources (NCRR) National Institutes of Health (NIH) Evaluation of Further Development and Testing of the Target Inquiry Model for Middle and High School Science Teacher Professional Development (NSF DRK12) Evaluation of Targeted MSP: The University of Buffalo/ Buffalo	BS Biochemistry BS Ed Phsy Science The Ohio State Univ. MED Educational Leadership- Wright State PhD Educational Leadership- Univ of Dayton	15	

the local level and as an Assistant Director and Program Administrator with ODE. She brings to this work over 15 years of experience with project/program evaluation, including expertise in instrument design, qualitative methods and observational fieldwork.

Public Schools (UB/BPS)
Interdisciplinary Science and Engineering Partnership (NSF/MSP)
Evaluation of Kent State University NOYCE Scholars Program (NSF NOYCE) Evaluation of Leadership, Empowerment, and Advancement for STEM Women Faculty (LEAF) at UC Cross-Project Evaluation of Ohio Mathematics and Science Partnership (OMSP) Program (ODE/OMSP)
Evaluation of Biology with X-Ray Lasers (NSF/STC) (Univ. of Buffalo - SUNY)
Evaluation of Electronics and Computing Service Scholars (NSF DUE - S-STEM: SCHLR SCI TECH ENG & MATH) CAEP Targeted Inquiry (TI) Program Evaluation (Miami University)
Evaluation of Advancing Educational Technology in Butler County Classrooms (ODE/Straight A) (Butler County ESC)
Evaluation of Making Ohio AWARE: Building Statewide Mental Health First Aid Capacity (SAMHSA) (DHHS/SEA)
Evaluation of CS10K: Leading the Way to CS10K: Assessing a Just-in-Time Professional Development Approach to Teacher Knowledge Growth in Computer Science (NSF/CE21) (MSU)
Extension and Enhancement of the Ohio Resident Educator Program Evaluation (ODE)
Public Schools Program Research

					and Evaluation Services (Dayton Board of Education) Evaluation of Now I Get It! Scientific Argumentation in Middle School (OBR/ITQ) Evaluation of iDiscovery: Professional Development Through Web-Based Learning Communities 15/16 (OBR/ITQ) Taking off to Success Program (TOTS) Program Evaluation (Montgomery County) are notable.			
Mark	Doughty	Building Principal Huron City	Mark will oversee implementation at Huron City Schools.	Administration license PreK-12, OTES certified	Mark taught for 12 years as Math instructor and has been a building administrator for 14 years. He is on the district value added team and supports the team with understanding growth measures.	BA Ed, University of Toledo MA D BGSU Superintendent	15	