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Adjusted Allocation: 0.00
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1. **Project Title:** Kelleys Island STEM Outdoor Innovation Labs

2. **Executive summary:** Provide an executive summary of your project proposal and which goal(s) in question 9 you seek to achieve. Please limit your responses to no more than three sentences.

   **SOIL** is an extraordinary blend of **STEM curriculum development**, professional development for teachers, student field experiences, and development of 21st century outdoor school learning labs - all of which will significantly impact student achievement in all core content areas as evidenced by the success of the state's HB119 STEM Schools. Every Ohio school can benefit from STEM-based instruction. The goals of the project are 1) plan and build well designed outdoor learning labs at strategic locations in Ohio schools (adding significant resources to classrooms), 2) utilize the Kelleys Island (KI) Field Station and Outdoor Curriculum Prototyping Center (OCCPC) to work with their well established environmental programs to model process and practice for both teachers and students, and 3) create transdisciplinary problem-based learning (TPBL) curriculum modules for utilization in the new outdoor labs as a mechanism for engaging students and increasing academic achievement. Once established through this effort, the portfolio of sites requires no new investment to be sustained. SOIL is a quick paced program that draws on the expertise of established process and programs to serve as a model, as well as the expertise of community members to help develop the labs. KI Field Station and PAST Foundation in partnership with 9 Ohio schools are committed to launching SOIL with the goal of being ready to implement the program in the new outdoor labs during Fall 2014.

3. **Total Students Impacted:**

4. **Lead applicant primary contact:**

   - **First Name:** Last Name of Contact for lead applicant: Peter Legere
   - **Organizational name of lead applicant:** Kelleys Island School District
   - **Unique Identifier (RN/Fed Tax ID):** 046797
   - **Address of lead applicant:** 528 Division St, Kelleys Island, OH 43438
   - **Phone Number of lead applicant:** 419.746.2730
   - **Email Address of lead applicant:** peteleger@gmail.com

5. **Secondary applicant contact:**

   - **First Name:** Last Name of contact for secondary applicant: Lucas Cech, Assistant principal
   - **Organizational name of secondary applicant:** Columbus City Schools, West High School
   - **Unique Identifier (RN/Fed Tax ID):** 043802
   - **Address of secondary applicant:** 179 S Powell Ave, Columbus, OH 43204
   - **Phone number of secondary applicant:** 614.365.5956
   - **Email address of secondary applicant:** loch8781@columbus.k12.oh.us

6. **List all other participating entities by name:** Provide the following information for each additional participating entity, if applicable:

   - **First name, last name of contact for additional applicant:** Dr. Sheli Smith, Assistant principal
   - **Organizational name:** Metro Early College High School
   - **Unique Identifier (IRN/Fed Tax ID):** 043802
   - **Address:** 3001 Valleyview Dr, Columbus, OH 43204 Phone: (614) 365-5974 Email address: pbailey574@columbus.k12.oh.us

7. **Partnership and consortia agreements and letters of support:**

   - **Letters of support 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 Strait A Description of Nature of Partnership or Description of Nature of Consortium Agreement.**

8. **Please 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.**

   SOIL is a team of innovative Ohio leaders. The team will schedule, coordinate activities, monitor and evaluate progress, advise, and submit reports. SOIL Team KI District Liaison: Peter Legere, PhD, Director of the Soil Education project for SOIL. Dr. Exec. oversight SOIL Director: Shell Smith, PhD, PAST, Programs Director. Leads innovative team of national STEM Coordinators who design, facilitate, and implement TPBL programs partnering with teachers. Role: Oversees SOIL program; planning to implementation. KI Program Coordinator: Beth White, PAST, Bridge Program Coord. Coordinates PAST Bridge Programs and Design Challenges insuring each program is rigorous, well organized, and engaging. Role: Coordinate and manage Kelleys Island Field Station programs. SOIL Coordinator: Kat Deane, PAST, STEM Coord. Coordinates innovative PAST Ohio STEM Coordinators facilitating professional development for teachers. Role: Lead teacher PD and assist with SOIL sustainable community partnerships. SOIL Advisor: Herb Broda, PhD, Ashland University Considered one of the nation’s foremost experts on outdoor learning designs. Broda has national recognition in outdoor educational classroom design. Role: Advisor for lab planning and TPBL module development. Project Evaluations: Monica Hunter, PhD PAST, Research Director Pioneer in the use of ethnographic methods in education evaluation. Knowledge Capture (KC) team captures stakeholders voice creating recommendations that accelerate change that inform policy for in-house and external evaluation. Role: Oversees in-house evaluation. SOIL Liaisons Dan Hoffman, PhD, STEM Dir., Central Ohio ESC. Led early Reynoldsburg district interest-based academies & K-12 STEM pathway innovation efforts: founded Ohio Center for Essential School Reform; led early planning of Metro High School as we. Rich Rosen, Visiting Fellow Johns Hopkins University, Fr.d., Indigo Strategies LLC partnered with local businesses to found Metro Early College HS, First Executive Director of the Ohio STEM Learning Network, Chairman Board of Trustees Columbus State Community College, and development partner for over 25 STEM schools across the US and internationally. Annalies Corbin, PhD PAST, Pres./P.nder. Named a Top 100 US STEM leader; leads PAST in education transform across the US: pioneered replicable processes & knowledge capture; leads combined approach of anthropology & Education amplifying unique cultural strategies. SOIL Partners KI Field Station KI School District is invested in building a permanent prototype center for development and testing of curriculum to be deployed at the consortia schools focused on environmental, TPBL programs. Consortia Schools Nine schools are partnered in SOIL 1 high schools (HS) and 5 middle schools (MS). They represent urban and suburban populations, as well as public and charter schools. Akron Inventors Hall of Fame MS and Reynoldsburg ESTEM HS are HB119 STEM schools eager to expand their non-traditional outdoor labs. Rootstown BioMed Science Academy HS, Metro HS, and Metro MS, pioneering Ohio STEM charter schools, are also eager to expand their non-traditional learning labs. The 3 West Feeder System schools, West HS, Starting MS and Westmoor MS, are Columbus City Schools designated STEM schools committed to transforming into non-traditional learning centers. PAST PAST is dedicated to transforming traditional education by promoting TPBL. PAST is a leader in whole school redesign and innovative approaches including: bridge programs that help teachers and students experience the shift in learning; professional development that partners with teachers to create TPBL, and knowledge capture that empowers stakeholders to guide processes and policies.

9. **Which of the stated Straight A Fund goals does the proposal aim to achieve?**

   - **Student achievement**
   - **Spending reductions in the five-year fiscal forecast**
11. Describe the innovative project

SOIL possesses both immediate and long-term impacts on Ohio education, significantly driving resources to classrooms and improving student achievement. SOIL provides an articulated process that uses Lake Erie KI Field Station as a prototype and demonstration outdoor learning lab to develop and deploy replicable TPBL modules that are aligned to educational standards, benchmarked for fidelity, and create a process for replicating future outdoor labs. Straight A Goal #3 SOIL will significantly drive resources to classrooms by creating outdoor learning labs at 9 strategic locations in Ohio that are surrounded by rich natural environments. The pilot 9 SOIL schools will choose teams that design, plan use, and budget for 9 outdoor labs. PAST and Dr. Broda will facilitate planning with workshops. Teams will host planning charrettes drawing on community experts. A reviewed presentation scheduled for mid March will allow teams two weeks to synthesize presentation feedback and make modifications to plans prior to final submission and acceptance. SOIL schools will be funded to create the labs. Construction of labs will occur April to June. Each team will keep a Statement of Invention to track submitted plan modifications. Straight A Goal #1 SOIL will significantly improve student achievement by accelerating classroom transformation toward responsive outdoor learning centers with accompanying TPBL modules. While the labs are being built, the 9 SOIL schools will send 1 teacher and 20 students to KI Field Station for 1 week to experience hands-on learning. The KI Field Station will host 12 weeks of innovative field experience. The first 9 weeks are reserved for SOIL schools and the final 3 weeks are open to all Ohio students. During the SOIL programs, partners will engage in immersive, programs pivoted on environmental issues utilizing the island's ecosystems, aligned to Common Core, Ohio and Next Generation Science Standards. Alongside students teachers will experience the excitement and importance of applied learning in an outdoor lab, gaining critical insight into the mechanisms of TPBL. The KI field station infrastructure shows teachers how to use KI Field Station as a demonstration rapid prototyping platform capable of influencing the future of educational environment in Ohio. PAST will provide both expertise and staffing for SOIL field experiences, as well as ongoing PD for teachers throughout the project. After the KI field experience teachers will attend PD workshops to design TPBL modules to be implemented at the SOIL Plus One initiative. Developed modules will be archived and available for all Ohio schools. To significantly expand impact and develop sustainability the KI School District will be responsible for project oversight and planned TPBL modules that will inaugurate the labs. Each team will develop a PPP packet for a planned media event to project to keep all partners informed of activities, schedules the surrounding, as well as provide a forum for communication among participants and a place to post and archive accumulated project materials. The KI Field Station and KI School District will be responsible for project leadership, and this has been demonstrated through their prior investments in transforming the district over the period 2011-2013. As teachers and students attend workshops on site at KI in future years, these will be covered by district funds, or per student fees by families, as has been the successful practice with the field station in the prior years.

12. Describe how it will meet the goals selected above. If school/district receives school improvement funds/support, include a brief explanation of how this project will advance the improvement plan.

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 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.

COSTABILITY - Planning for ongoing funding of the project, cost breakdown

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

$52,092.00 * Total project cost

* Provide a brief 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, RitM money, local funding, foundation support, etc.), and provide details on the costs of items included in the budget (i.e. staff counts and salary/benefits, equipment to be purchased and cost, etc).

The expenses within the budget divide out between two categories, Purchased Services and Supplies. Within each of the categories are sub-sections which include Instruction, Support Services, Governance and Administration. Transferring an innovative teaching strategy, supplies and what those supplies specifically cover. Among the partners the budget breaks down to $146,250; $18,250School building: $35,120 for KI Field Station; and $320,272 for PAST in purchased services. There is an additional $15,350 allocated for supplies for projects that will also be administered by PAST. The following gives a detailed breakdown of the expenditures by category and sub-category. Purchased Services: ($506,142) Instruction: ($197,750) Covers the cost of direct instruction, PD, mentorship, and field equipment for students. Outdoor Lab Coord. ($40,000 [90 days@ $44/day with benefits]); Outdoor Education Advisor ($25,000 [25 days@$1000/day - no Benefits]); Substitute Teachers ($7650 [$150/day x substitute X 9 schools X 5 substitues]); Lead Teacher Honorarium ($27,000 [3000/teacher x 9 schools]); Co-Teacher Honorarium ($9000 [teacher x 10 schools]); Outdoor Lab personnel ($9000 [10,000/week x 9 schools]); Support Services: ($110,000) Covers the costs of the supporting the KI field experience. Purchased Services: ($30,000 [90 days $300/day - Benefits]); Field Station Cook ($800/day x 12 weeks - no Benefits); Program Evaluators ($6000 [34 days - no Benefits]); Program Evaluators ($6000 [34 days - no Benefits]); Website development ($5000 [single event contract]); Insurance ($1200 [100k per week x 12 weeks]); Travel ($6720 [Lodging $150/night x 12 nights]; Per Diem $150/day x 12 days; Mileage $153.15/month]. KI from Columbus X 2 cars x 12 weeks); Transportation: ($33,120) Covers the direct cost of transporting students to and from KI field experience as well as additional transportation needed on the island. KI Ferry ($7920 [20/person x 25 X 12 weeks + $30/car X 2 cars X 12 weeks]; Soft Cart and Grounds ($2000 x 2 cars x 12 weeks); Gas $200/week x 12 weeks); Buses for schools ($18,000 [100l/h bus stipend/school X 12 weeks]); Supplies ($18,950) Covers the cost of supplies that directly supports the activity of the project. Instruction & Professional Development Equipment for field students ($9300 [37.5/student X 20 students X 12 weeks]); Professional development supplies ($1350 [50/person/school X 3 people x 9 schools]); Support Services: ($3000) KI Building Security & Maintenance ($3000 [3000/week x 12 weeks]); Family & Community Outreach: ($300) Community Engagement materials ($5000 ($834/month x 6 months)).

15. What new/recurring costs of your innovative project will continue once the grant has expired? If there are any new/recurring costs, please explain why.

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

* 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.

There are no new or recurring costs required to maintain the baseline SOIL outdoor network. Funds requested in this proposal are used for non-recurring design and development expenses. The initial project, once complete, will have constructed nine outdoor learning spaces, and established at least twelve unique curriculum modules that can be used by all consortia schools. Teacher salaries and activities at each school can be carried out in the future at the ongoing school funding levels. Further, the operation of the KI Field Station as a curriculum prototyping center is incorporated into the KI district budget at its current funding level. This has been demonstrated through their prior investments in transforming the district over the period 2011-2013. As teachers and students attend workshops on site at KI in future years, these will be covered by district funds, or per student fees by families, as has been the successful practice with the field station in the prior years.

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

- **Proposal Timeline Dates**

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<th>Implement (MM/DD/YYYY):</th>
<th>April 1 - June 30, 2014</th>
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<td>Narrative explanation</td>
<td></td>
</tr>
<tr>
<td>Significant Milestones:</td>
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<td>Workshops (Jan 1-Feb 15, 2014) Charettes (Mid-Feb to Ma 1, 2014) SOLIL Planning Presentations</td>
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<tr>
<td>Implementation is the first phase of this fast paced grant. The goals of this phase is to plan an outdoor lab that best fits the natural landscape of the school, the academic needs of the school, and some of the pressing issues of the community. By including a wide array of stakeholders into the process the planned lab will resonate with the community as a whole. This phase is tightly structured with strategic cuts that can be made to define problems and outcomes through a system of rubrics, charette activities, workshops, and feedback. The established communication system will enable teams to pose questions to the whole SOLIL cohort, share ideas and resources, and bring questions to the cohort in order to better solve problems as they arise. Finally a public presentation by each of the teams to a broad audience of stakeholders and experts will provide the authentic evaluation that assists each planning team in identifying both strengths and weaknesses in their plans. Time is provided after the evaluation prior to final submission for each team to modify their plans. The combination of systems structure and communication protocols are intended to proactively mitigate potential impediments that often overwhelm project teams tasked with intense projects that must be completed in a short timeline.</td>
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<td>Engage Stakeholders The planning phase engages stakeholders who can approve, implement plans and utilize the finished outdoor lab. Thus Administrators, Community partners, Teachers, and Students are engaged in the Planning phase of the outdoor labs to insures that needs and understanding of all pertinent stakeholders are addressed. Communication Plan Each planning team will be provided with a rubric of criteria that must be included in each presented plan, 2) two planning workshops that expose teams to the range of possibilities, and regular virtual access to the entire SOLIL project through the online management webbase, Basecamp.</td>
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<td>Potential Impediments The potential impediments at this point in the planning are 3 fold and include finding overwhelmed by the sheer magnitude of the project, the scope of the work, and unfamiliar with potential variety of outdoor labs. Unformatted Mitigation SOLIL will prepare and circulate the rubric, dates, for the workshops, enroll all participants in the SOLIL Basecamp project path as soon as confirmation of the grant award is provided.</td>
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**Narrative explanation**

- **Significant Milestones: 2014 Construction Begins Apr 23 Virtual Brainstorm PD Apr 26-27 Teacher PD to plan TPBL Modules Mar 31 Camp 1 Middle School Apr 7 Camp 2 High School Apr 14 Camp 3 High School Apr 21 Camp 4 High School Apr 25 Camp 5 High School May 12 Camp 6 Middle School May 19 Camp 7 Middle School May 26 Camp 8 Middle School Jun 2 Camp 9 Middle School Jun 4 Virtual Brainstorm PD Jun 7-8 Teacher PD to plan TPBL Modules Jun 25 Directed Focus Discussion [Teacher & Administrators & Stakeholders] Jun 16 Camp 10 Open Enrollment OH Jun 23 Camp 11 Open Enrollment OH Jun 30 Camp 12 Open Enrollment OH Jun 30 Culumminating Presentation of Construction & TPBL modules Post Grant Aug SOLIL Openings Fall 2014 Implementation of TPBL modules Narrative explanation Implementation is the second phase of the project and has a three-pronged approach to simultaneously construct the outdoor labs at the individual school sites, expose teachers and students to an established outdoor lab experience at Kelleys Island Field Station, and design and align new TPBL modules for implementation at the new outdoor labs. This phase is long in order to accommodate the necessary activities that take place. The established communications plan and the proactive systems in place to avoid potential impediments are designed to bring each of the participating schools to a culminating point that readsies them for launch. Engage Stakeholders in the implementation phase the number of participants grows to accommodate the array of activities taking place. This phase includes the entire planning team, other potential community contractors, and twenty selected students from each participating school, the Kelleys Island Field Station and the PAST professional development team. Communication Plan All participating construction teams will have the finished plan to work from and will keep a Statement of Intent to track progress and modifications. These will also be posted to Basecamp so that questions can be posed and answered, and real time course corrections can be implemented without seriously affecting the pace of the project. Teachers and students will be prepared for the Kelleys Island experience with packets of information. Finally through the combination of virtual and physical professional development the teachers will be stepped through the process of creating TPBL modules that draw on their experience at Kelleys Island, clearly lay out activities and expectations, and are aligned and benchmarked to educational standards. Like the construction teams the teachers also will have access to Basecamp so where they will be required to post all module planners and snapshots. |  |
  | Potential Impediments Testing schedules and weather are the two largest impediments to this phase of the project. Teacher availability for PD is also a potential impediment. Mitigation The time frame for this phase is long in order to accommodate the impact of the outdoor labs. Field experiences are designed to accommodate inclement weather, as well. The schedules for the field station also consider the testing schedules for OGT and OAA so that all of the field experiences will be available for all students. Finally the teacher professional development is scheduled in a combination of virtual and physical sessions so that teachers have the maximum ability to participate. |  |

- **Narrative explanation**

Significant Milestones: Jan 30, 2014 Collect standardized test scores for participating students for baseline data from 2013/2014 Jan 31, 2014 Collect direct focus group data on stakeholders Jun 30, 2014 Collect standardized test scores for participating students for 2013/2014 Post Grant Dec 20, 2014 Collect standardized test scores for participating students at individual participating schools. Narrative explanation The summative phase of the project extends across the two earlier phases collecting data in terms of products produced within each phase in addition to pre and post survey data to form a final, summative report on the process and the progress tracked across the project. The evaluation data that will be considered includes standardized test scores to establish baseline proficiency, pre and post survey qualitative data that is analyzed quantitatively for presence and absence themes, and the comparison and contrast of professional growth among participating teachers. This phase is intended to culminate in a model that defines how the process works and can be replicated as well as the evidence that reflects the types of growth among students and teachers that should be expected. Engage Stakeholders The engaged stakeholders in the summative phase relates back to administrators, teachers, and students, along with the evaluation Knowledge Capture team who will be collecting, aggregating and analyzing the data. Communication Plan Prior to engagement of teachers and students at Kelleys Island, online pre-surveys will be administered. These will be followed by a set of directed discussion focus groups. All of the information gathered throughout the course of the project will be presented in a bulleted roadmap report. Potential Impediments Collecting specific test scores can present a challenge, focusing and fastaging the project will enable participants to stay on course. The field experiences would be included in the final report. The summative analysis will be completed and presented at the end of the project in January to form the baseline from which to evaluate change. All future standardized test scores including in some instances 2013/2014 can be compared to baseline data. |  |

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

Instructional Changes: SOLIL promotes transdisciplinary problem-based learning that changes instruction in 3 distinct ways. 1) Problem-based learning pivots on real world issues that resonate with a specific community need and addresses the problems solved at the outdoor labs real to both the students and the teachers. 2) Transdisciplinary problem-based learning blurs the traditional silos of content enabling students to solve complex or wicked problems from numerous lenses, which encourages differentiated learning. 3) TPBL immerses students and teachers in a learning experience, ripe with teachable moments as opposed to more traditional lecture/test event cycles. Reaching more students with engaging problems and differentiated way to demonstrate mastery of learning ultimately reaches a broader audience. In other words, students learning with increased academic achievement. Increased academic achievement reduces the need for remediation. These instructional changes simultaneously increase achievement, reduce school remediation costs, and promote more multi-content rich teaching teams, which will directly affect the organizational look of SOLIL schools. Organizational Changes: Beyond impacting planning and instructional design, SOLIL promotes school transition from classroom only instruction to broader learning centers. In the case of SOLIL, outdoor learning labs are the specific focus. Use of outdoor learning moves schools away from rigid systems of time and locations to immersive learning that is transdisciplinary with more distinctive time allocations and instructional partnering. This flexible and collaborative instructional style is responsive to both applied learning and 21st century digital native cohorts. Indoor labs and other learning centers drive change in both the way teachers facilitate learning and the way students learn, as well as look the look of the school days and arrangements.

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

10. 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 institution.

Daniel Pink writes in his book, *A Whole New Mind* that "according to the latest research, IQ accounts for between 4 and 10 percent of career success (Pink 2006)." He suggests that to be successful one must be able to see the big picture, to synthesize what is seen, and understand the meaning in the patterns discovered. Applied learning in real world situations provides for the other 90% in successful learning. Creating innovative laboratories where students can explore, tackle problems, and find solutions is this century's response to the practice of memorizing theories, part of the traditional classrooms
Institutional strategy. SOIL appeals to the other 90% of learning necessary for critical thinking across all content areas. SOIL pivots the resonant curricula designed by teachers for their students on STEM subjects aligned with underlying learning foundations in Language Arts, Humanities, and Design. Recent data from problem-based learning schools reveals that the applied approach when pivoted in STEM topics, culturally relevant, and well articulated in approach raises student achievement between proficient and advanced, across all content areas, by several percentage points (SIK, 2013). Data from PAST Bridge Programs, with an underlying emphasis on Math, helped low performing students rise to grade level, understanding of Algebra (I Know I Can 2010). The SOIL program used this research for informing where the greatest need for learning context lies, and how this approach will impact overall student achievement. As the springboard for further research on the benefits of outdoor learning centers, the American Camp Association (ACA) has noted, “For generations, outdoors have gone beyond the traditional classroom setting to become the ‘great experiential learning above and beyond the four walls of a classroom” (American Camp Association 2013). By combining the research that recognizes the importance of applied learning with the research that acknowledges the benefits of outdoor experience and exploration, SOIL melds to powerful learning strategies to deliver robust education. Utilizing the PAST replicable process for designing and implementing TPBL programs, SOIL ensures that all developed materials and outdoor labs will help establish a model for transforming learning. Placing the TPBL modules at an established field station familiar with both the PAST process and the PAST Bridge Program approach, SOIL establishes a model that can be replicated, studied, and sustained.

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

[ ] Yes  
[ ] No

22. If so, how?

SOIL is replicable because the program follows the principles of design with defined phases of planning, building, evaluation, modification and presentation. By using the same systematic approach with the same deliverables an infinite number of schools could replicate the process coming up with unique outdoor labs and community resonant TPBL modules. SOIL has a well-articulated project path that packs progress and defines deliverables at each phase creating the capability of real time course correction. Each phase: 1) Outdoor lab Design Plan, 2) Outdoor lab experience, 3) Outdoor lab construction, and 4) Outdoor lab implementation all have specified deliverables that help inform the process and empower the pilot schools to make real time course correction. SOIL utilizes an established replicable process to create TPBL modules and sustain learning communities. The PAST TPBL process and programs, partnered with the KI Field Station provide an established platform and process, from which teachers can build TPBL modules that are robust in content yet address the unique needs of their lab. In addition, SOIL partners planning teams with experienced experts and established outdoor lab platforms to provide mentoring for the 9 piloting schools and connect them with the greater world of experiential learning. Finally, the in-house evaluation protocol tracks qualitative and quantitative information to inform all schools as well as the overall process. The combined process and ongoing evaluation of SOIL aims to create a replicable model for creating future outdoor labs that build upon the foundation of the pilot.

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

Funding for SOIL provides immediate stimulus in 3 areas that will lead to long lasting impact that is both sustainable and cost effective. -SOIL provides the stimulus for development of 9 strategically located outdoor learning labs that utilize curricula developed in-house -SOIL provides the stimulus for development of a bank of 18 replicable TPBL modules pivoted on ecology and the environment. -SOIL provides the stimulus for KI Field Station to become a demonstration platform that has the capability of dramatically accelerating the shift in Ohio education from tradition instructional strategies and delivery systems to 21st century strategies and deliveries that engage this century’s schools and better prepare them for college and careers. The lasting impact of these deliverables include -Reduced reliance on costly off the shelf science textbooks and enables STEM programs in schools to maintain current and relevant curricula that is aligned and benchmarked to educational standards. This represents millions of dollars freed up to apply elsewhere. -Increased use of replicable TPBL modules that cross content, are vertically scalable, and readily benchmarked. Moreover, a continually increasing bank of TPBL modules, easily accessed by all teachers. This lasting impact provides a reliable benchmarking system for both teachers and administrators to evaluate growth among students and teachers. -Ongoing professional development through the cohort of teachers that mentor one another as they use and further develop curricula for the new outdoor labs. SOIL will reach 9 early adopter teachers in the initial project who will in turn mentor a minimum of 9 more teachers in the first academic semester of implementation. As the use of the Outdoor labs spreads throughout feeder and district systems the number of teachers developing and using the SOIL TP modules will continue to grow exponentially. This lasting impact creates a model of sustained professional development that draws on the strengths of the whole community and eliminates the repetitious cycle of grants supporting salaries instead of sustainable programming. -Increased academic achievement moving students steadily toward higher performance on standardized testing that focuses on problem-solving and critical thinking skills. This lasting impact reduces the need for widespread remediation, a costly by product of unengaged learners. -Accelerated transformation of schools into learning centers. Once the outdoor labs are constructed and implemented, each lab has the opportunity to recruit more use, more TPBL modules, and more community support, according to the pre-designed Use Plans. By having a roadmap for future use the STEM outdoor labs have both impetus and procedures for sustainability. Moreover, the STEM labs themselves become training environments for both in-service and pre-service professional development.

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 benchmarked.

Straight A Goal #1 Benchmarks: Quantitative pre and post summative quizzes and OGT and OAA scores 2012/2013 for baseline gauge. Pre and post quizzes will enable the evaluation of immediate impact of outdoor learning labs on students and teachers. Standardized test scores will enable evaluation of long term impact by baselining the scores pre Outdoor labs and post outdoor labs. Straight A Goal #3 Benchmarks: Quantitative tracking of number of created TPBL modules; Alignment to Common Core, Ohio and Next Generation Science Standards. Using existing standards both state and national, PAST and teachers will benchmark the TPBL modules. Administrators and teachers will be provided fidelity checklists to benchmark implementation of the modules and short cycle, standardized quizzes will benchmark achievement impacts.

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).

The evaluation benchmarks are both quantitative and qualitative at aimed tracking progress both for fidelity to the proposed project and immediate impacts as well as long-term impacts in terms of teacher growth and student achievement. A mixed methods approach will be employed. Articulated products will be reviewed at each phase of the project to benchmark fidelity to the proposal and budget. A combination of quantitative data including pre & post quizzes as well as existing standardized tests will be used as an assessment of immediate impact as well as a baseline and future gauge. Traditional ethnographic methods consisting of online survey and directed focus group discussion will be used to collect qualitative data from the teachers that is then analyzed for real time course correction and future replication. Evaluation Benchmarks for Fidelity All programs required of participating teams will be benchmarked against the criteria rubric provided. The Statement of Invention will benchmark the construction of the outdoor labs against the proposal submitted by the planning teams. Quantitative Evaluation Benchmarks, Quantitative data for student achievement will be benchmarked against 1) pre and post survey questions administered to all SOIL student who attend KI field programs, and 2) standardized tests both OAA and OGT, administered at the close of year. The baseline data of the 9 SOIL schools will be collected for 2012/2013. 2014/2015 data will be the first year when all participating school data can be compared for achievement change. The pre and post survey assessments will indicate immediate impact in academic achievement and the standardized test results will indicate long-term impact in academic achievement. Qualitative Evaluation Benchmarks Qualitative data for teacher growth will be benchmarked by 1) pre-surveys administered to all SOIL teachers who attend KI field program, and 2) directed focus group discussions held after both the KI field experience and the development of TPBL modules. The combined pre-surveys and focus group data will provide immediate impact indicators for teacher growth. Long-term impacts can be benchmarked against indicators defined by the teachers in terms of preservice/ableness at any future time. Handling of all evaluation data will conform to protocols laid out in a project IRB expedited request. The request will be submitted to the PAST Internal Review Board. These IRB protocols will include participation consent forms for both teachers and students that protect anonymity. The aggregated data will all be translated into quantitative presentations that identify themes, constraints, and successes. The results of the evaluation will be published within a roadmap report.

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 the request 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.

Accept, Phil Thiede, Superintendent of Kelleys Island School District15.25.2013