

Budget

Bowling Green State University (062893) - Wood County - 2017 - Straight A Fund - Rev 0 - Straight A Fund - Application Number (118)

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	0.00	0.00	0.00	0.00	0.00
Support Services		0.00	0.00	0.00	0.00	0.00	0.00	0.00
Governance/Admin		0.00	0.00	0.00	0.00	0.00	0.00	0.00
Prof Development		48,237.00	14,515.00	635,982.00	0.00	0.00	55,898.00	754,632.00
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							0.00	0.00
Total		48,237.00	14,515.00	635,982.00	0.00	0.00	55,898.00	754,632.00
							Adjusted Allocation	0.00
							Remaining	-754,632.00

Application

Bowling Green State University (062893) - Wood County - 2017 - Straight A Fund - Rev 0 - Straight A Fund - Application Number (118)

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

A) APPLICANT INFORMATION - General Information

1. Project Title:
BCI Science School (BCISS)

2. Project Tweet: Please limit your responses to 140 characters.
BCISS is a grade 4 STEAM curriculum based on a BCI mystery. Videos of BCI experts help explain the lessons. BCISS teachers may obtain CEUs.
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					
Education	Pre-K Special	K	1	2	3
160	4	5	6	7	8
9	10	11	12		

Year 1					
Education	Pre-K Special	K	1	2	1000 3
5000	4	1000	5	6	7
9	10	11	12		

Year 2					
Education	Pre-K Special	K	1	2	1000 3
5000	4	1000	5	6	7
9	10	11	12		

Year 3					
Education	Pre-K Special	K	1	2	1000 3
5000	4	1000	5	6	7
9	10	11	12		

Year 4					
Education	Pre-K Special	K	1	2	1000 3
5000	4	1000	5	6	7
9	10	11	12		

Year 5					
Education	Pre-K Special	K	1	2	1000 3
5000	4	1000	5	6	7
					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.

Beginning January 2017, the BCI Science School (BCISS) curriculum will be available to every fourth grade teacher in the State of Ohio. The program will begin with 8 pilot schools that will test the program in the fall of 2016 and then expand for maximum student impact. Teachers who use the curriculum will be eligible to attend a 1-week workshop in the summer of 2017, at BGSU. To further extend the impact of BCISS, teachers attending the workshop will be tasked with developing an After School Program (ASP). In exchange teachers will receive CEUs at no cost to teachers or school districts. The ASP would be made available to all Ohio teachers. The ASP will be geared towards 3rd, 4th, and 5th grades, which greatly expands the potential impact of the combined facets of the project. Both the BCISS curriculum and the ASP will be available resources for elementary teachers for years to come. 5,000 students or more may be involved during the first year and many more in the subsequent 5 years.

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

First and last name of contact for lead applicant
Dr. Jon Sprague, R.Ph., Ph.D.

Organizational name of lead applicant
Bowling Green State University

Address of lead applicant
14 College Park Office, Bowling Green, Ohio 43403

Phone Number of lead applicant
419-372-0224

Email Address of lead applicant
jesprag@bgsu.edu

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

The National Science and Technology Council's Committee on STEM Education reported in the Federal STEM Education Strategic Plan, May, 2013, that "The demand for professionals in STEM fields is projected to outpace the supply of trained workers and professionals. Additionally, STEM competencies are increasingly required for workers both within and outside specific STEM occupations. A recent report by the President's Council of Advisors on Science and Technology (PCAST) estimates there will be one million fewer STEM graduates over the next decade than U.S. industries will need." One goal the Strategic Plan proposes to help address this need is to "Support a 50 percent increase in the number of U.S. youth who have an authentic STEM experience each year prior to completing high school." We propose to do that by engaging students in authentic STEM experiences that relate to forensic science scenarios.

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

To provide engaging and authentic STEAM experiences, BCISS takes a topic that children are often intrigued by and familiar with from popular culture and television and applies age-appropriate scientific and mathematic principles to make these topics fun and exciting. Using a scenario that involves a missing persons case and a burglary, students will use STEAM disciplines and inquiry-based learning to help them solve the case. Students will be introduced to the field of forensic science at a level appropriate for fourth graders. Early grades 3-5 are chosen because science education in these grades is often weak or neglected [Report of the 2012 National Survey of Science and Mathematics Education, Horizon Research, Inc., Chapel Hill, NC 2013] and thus students start to lose interest in these fields at an early age. Giving students highly engaging and authentic STEM experiences in these early grades can prevent loss of interest and help to maintain the pipeline into later grades. Other efforts will address the pipeline issues following this period. As an incentive for students who participate in BCISS, those who excel in the program will have the opportunity to be nominated to attend a 1-day summer day camp at one of BCI's laboratory locations. The day camp will allow the students to tour an active crime lab; see a crime scene truck; meet BCI agents, forensic scientists, and other law enforcement professionals; and take part in even more hands-on, forensic science experiments. As a companion piece to BCISS, BGSU will host a summer workshop for teachers who have used the BCISS curriculum in their classrooms during the 2016-2017 school year. The workshop, planned for summer 2017, will be hosted by Bowling Green State University (BGSU), in conjunction with the Bureau of Criminal Investigation. A pre-existing partnership between BGSU and BCI has already established the Center for the Future of Forensic Science - a unique forensic science research and training center located on BGSU's campus. With a working forensic crime laboratory on campus (one of five such situated in the nation), BGSU will provide an exceptional opportunity for teachers to expand their own understanding of forensic science while gaining CEU's. The participating teachers will work together to create a Forensic Science ASP. Once completed, the after school program will be distributed for use by any school in the state of Ohio. The program will be geared towards 3rd, 4th, and 5th grade students. This range will allow 3rd grade students to develop an interest in the crime scene and forensic science program, the 4th grade students to reinforce the skills and principles learned while completing the BCISS Program, and the 5th grade students to foster and further build on what they learned the previous year. All components of the BCISS program and summer teacher's workshop will be provided free of cost to schools and teachers in the grant year. This will provide uniform access to high-quality, multi-disciplinary, STEAM teaching materials, regardless of a school district's financial state. Further, all activities in the regular curriculum use only every-day or commonly found, inexpensive materials.

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.

The primary desired outcome is increased confidence and interest in STEAM subject matter of elementary-age students, leading to higher STEAM academic performance. Secondary desired outcomes include stronger public-law enforcement relationships, the contemplation of career fields and opportunities in STEAM disciplines, and improved confidence and competence of upper-elementary school teachers in the areas of curriculum development and forensic science.

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.

For the desired outcomes to be achieved students must find the curriculum topics chosen to be interesting, stimulating, and understandable. The professional development for teachers must promote their effective use of the materials. The curriculum materials must be effective in promoting student mastery of the STEAM concepts that underlie them. And there must be a widespread, effective implementation of the BCISS curriculum throughout Ohio.

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

New Forensic Science undergraduate degree programs have proven to be extremely popular among students at BGSU since they were offered after establishing the new BCI Center for the Future of Forensic Science demonstrating the high level of interest that Ohio students have in these topics. The National Research Council of the National Academy of Sciences reported in 1999 that students are much more engaged and learn more effectively when they have learning experiences that involve hands-on inquiry within meaningful contexts. The forensic science curriculum developed in this project represents exactly that type of learning and teaching strategy. "Forensic science is undergoing a global expansion and becoming increasingly important, both as an area of study and to the criminal justice system...Television shows, such as 'CSI,' 'Law and Order,' '24,' 'Crossing Jordan,' and 'Forensic Files,' have had such high ratings that producers are having a hard time keeping up with the demand from their viewers. These popular shows are broadcasted to various countries around the world including, the United States, England, Thailand, India, and many more. Because of the popularity of these shows, there is an overwhelming interest for educational programs so that others can establish careers that imitate their favorite actors on television. Worldwide, colleges have established undergraduate, graduate, and doctoral programs pertaining to the study of forensics. Such colleges include, the University of New Haven in Connecticut, the University of Wisconsin, the Philippine College of Criminology, and the University of Glamorgan in England, just to name a few. Similar programs are even being introduced into high schools and middle schools in the United States, the UK, and even Australia." [H. Stankiewicz, "Investigating the Worldwide Popularity of Forensic Science" 2007]. Thus these assumptions are based on extremely strong evidence.

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).

We will measure: The number of teachers who adopt the curriculum. The number of students who are taught with this curriculum. Student interest in STEAM topics and desire for additional learning about these topics by surveying the students before and after they complete this curriculum. How well students learn the STEAM concepts that underlie the curriculum by administering an assessment of STEAM content knowledge developed and validated by STEAM education experts. Teacher perception of the level of student interest and engagement in

these learning activities relative to their level of interest and engagement in their other science education activities by surveying participating teachers.

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

Immediately prior to and following teachers' use of the forensic science curriculum, they will administer an assessment to determine students' level of interest in, desire to learn about STEAM, and their mastery of the STEAM concepts on which the forensic science curriculum materials are based.

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

If it is found that the students fail to find the forensic science curriculum interesting and engaging and we find that the students fail to learn the STEAM concepts on which it is based, the Science School consultant, Amy Rogers, will work with STEAM education experts, BCI scientists and students in the targeted grades to guide the revision of the materials so as to ensure that they achieve the intended outcomes.

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 measurable 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.

754,632.00 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.

Budgeted costs for BCI Science School largely consist of payment of personnel, travel, and materials and supplies. The salaries include the BCI Science School Consultant (who is creating the curriculum), regional science school consultants, BCI personnel who will be involved, and the BGSU personnel who will coordinate the teacher's summer workshop. Travel for teachers for the summer workshop, BCI/BGSU personnel, and bussing costs for students for the BCISS Scholar Day have also been incorporated. Lodging and per diem for teachers and BCI/BGSU personnel will be covered, as needed, as will lunches for students who attend the BCISS Scholar Day. To provide professional development to teachers who have not used inquiry-based learning or focused on STEAM principles, two reference books will be purchased and provided for up to 500 teachers. These can be reused for many years, to provide additional professional development. In order to make the BCISS curriculum as cost effective as possible over the next 5 years, many of the materials and supplies needed by teachers in the classrooms will be purchased in year 1 of the grant. Non-consumable materials will be purchased and provided to schools (up to 500) which are using the BCI Science School Curriculum in Spring 2017. Consumable supplies, such as clay and pens, will be purchased in advance in Year 1, and made available as

needed to replenish the schools' materials in Years 2 - 5. Perishable items, such as graham crackers, will need to be procured by the schools every year but the cost of these perishable items is expected to be less than \$10 per school per year. Postage and other distribution costs for shipping and creating curriculum and materials in Year 1 have also been accounted for. BGSU's portion of the budget totals \$142,725 of which \$55,898 is IDC at 8% MTDC and is shown in the budget under Other/Professional Dev. The Ohio Attorney General's BCI budget totals \$437,106 and the cost of the evaluation is \$174,801

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.

1,500.00 a. Sustainability Year 1

1,500.00 b. Sustainability Year 2

1,500.00 c. Sustainability Year 3

1,500.00 d. Sustainability Year 4

1,500.00 e. Sustainability Year 5

15. Please provide a narrative explanation of sustainability costs.

Sustainability costs include any ongoing spending related to the grant project after June 30, 2017. Examples of sustainability costs include annual professional development, staffing costs, equipment maintenance, and software license agreements. To every extent possible, rationale for the specific amounts given should be outlined. The costs outlined in this narrative section should be consistent and verified by the financial documentation submitted and explained in the Financial Impact Table. If the project does not have sustainability costs, applicants should explain why.

There is a minimal cost of sustainability in pilot schools past the grant year. By year 2 and going forward, the initial participating schools should possess the all of the necessary, non-consumable supplies from use the previous year. Using these materials in subsequent years drastically decreases the sustainability costs of the program. Grant money will be used to pre-purchase non-perishable consumable materials to provide to a number of schools through years 2 through 6. These materials kits will be provided to up to 500 schools in the grant year, based on statements of need provided to BCI. With a materials kit, schools will only need to provide (or seek donation of) perishable items (such as graham crackers and sugar cubes), which should cost less than \$10 per classroom. Schools will then be able to reuse supplies received by participating in Year 1, but may receive pre-purchased consumable, non-perishable items (such as clay and ink pens) in Years 2 through 5. Regardless, this cost is expected to be minimal each year, as most supplies can be reused each year and consumable costs will be minimal. Professional development for teachers who replace those who adopted the curriculum during the grant year will be provided using books will be pre-purchased during the grant period and teachers who have already used the program will train the new, incoming teachers. If any other professional development is needed, that cost can be accommodated by using money that had been planned for professional development for the curriculum that was replaced by the BCISS curriculum. The curriculum will be provided at no cost to any participating school. There will be no licensing fees or curriculum-purchasing costs associated with the program in any year. Schools will only need to make sure they have all materials.

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.

Because this curriculum and most materials will be provided at no-cost to schools, money otherwise spent on purchasing another, different curriculum and materials can be used to pay for the few perishable items that cannot be provided by BGSU and BCI in the coming years. Likewise, the professional development needed for the new teachers, who replace the teachers who participate in the original professional development during the grant year, will be accomplished in part with the documents and videos provided at no cost by BCI, by instruction from the trained teachers who are continuing to use the materials, and by a small amount of PD with the cost of that being covered by not doing other PD that the schools have already budgeted.

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.

N/A

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 Summer 2016

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

1 - Complete BCISS curriculum and videos in May 2016 2 - Provide lesson plans and videos to pilot school partners in June-July 2016 3 - Provide pilot teachers with instruction and guidance on use of BCISS 4 - Identify and hire regional BCI Science School Consultants

22. Implementation (grant funded start-up activities)

a. Date Range Fall 2016 - Spring 2018

b. Scope of activities - include all specific completion benchmarks

1 - Professional Development Session for piloting teachers planned for Summer 2016 Benchmark: Completion of Professional Development training 2 - Pilot program of BCISS curriculum with select schools in early fall 2016 Benchmark: Completion of pilot program in participating schools 3 - Begin evaluation process and get feedback received from pilot sites by late fall 2016 Benchmark: Collection and consideration of Evaluation information from Pilot Program 4 - Create Professional Development Webinar or DVD for new teachers using BCISS next semester in late Fall 2016. Benchmark: Creation of professional development training materials for Spring 2017 BCISS users 5 - Make edits to BCISS Curriculum based on evaluation results from piloting schools Benchmark: BCISS Curriculum distribute to all 4th grade teachers who wish to use it by spring 2017 6 - Launch BCISS Scholar Day Camp applications/nominations in late spring 2017 Benchmark: Receive applications for participating students 7 - Launch summer teacher After School Program workshop applications/nominations in late spring 2017 Benchmark: Receive applications for teachers for summer workshop 8 - Hold 3 BCISS Scholar Day Camps at BCI offices (BG, London, Richfield) in Summer 2017 Benchmark: Completion of BCISS Scholar Day Camps 9 - Hold teacher After School Program week-long workshop at BG in summer 2017 Benchmark: Completion of summer workshop Benchmark: Completion of After School Program (ASP) by late summer, 2017 Benchmark: Distribution of 3rd-5th grade ASP curriculum to schools in fall 2017

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

a. Date Range 2017 - indefinite

b. Scope of activities - include all specific completion benchmarks

1 - Late Spring of each year (2017, 2018, 2019, 2020), BCISS will be advertised to schools throughout the state of Ohio. Application process for use of pre-purchased materials kits will also be advertised (up to 500 kits per year). 2 - Mid Summer of each year (2017, 2018, 2019, 2020), BCI will review and award materials kits to schools based on need identified by applying schools. 3 - 2017, 2018, 2019, 2020 - BCISS available to all 4th grade teachers throughout the state of Ohio.

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:

By using this curriculum and being involved in this grant project, teachers will be able to implement, or reinforce their use of the following: A) 21st Century Skills - A set of abilities that students need to develop in order to succeed in the information age. The Partnership for 21st Century Skills lists three types: 1. Learning Skills - Critical Thinking, Creative Thinking, Collaborating, and Communicating 2. Literacy Skills - Information Literacy, Media Literacy, and Technology Literacy 3. Life Skills - Flexibility, Initiative, Social Skills, Productivity, and Leadership B) Problem Based Learning (PBL) - through being placed in a simulated real world context (in this case solving a crime) students will enhance their content knowledge (based on the ODE's 4th grade Learning Standards) while also developing important communication, problem-solving, critical thinking, collaboration, and self-directed learning skills. C) Inquiry Based Learning - students will take an active role in their learning by developing their own questions about content standards they are studying, making observations through experimentation, doing research about the subject matter, developing ways to collect data about their research focus and then analyzing and interpreting that data, as well as developing solutions to their questions/problems and predictions for future studies. There are different levels of inquiry-based learning, so teachers will need to start at the lower levels if they have not had experience using this instructional method before in their

classrooms. D) STEAM-Focused Lessons - an educational approach to learning that uses STEAM disciplines as access points for guiding student inquiry, dialogue, and critical thinking. Changes to a teacher's typical work day will include use of stream-lined lessons that effectively meet the need of all their individual learners, thus changing the amount of time they might spend on a specific area of content material

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:

Dr. Rachel Vannatta Reinhart Center for Assessment and Evaluation Services Bowling Green State University 365 Education Building
Bowling Green, OH 43403 Phone: 419-372-0451 Email: rvanna@bgsu.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.

Research Rationale: CAES will incorporate a Mixed-Methods Evaluation Design to examine both process & outcome variables for the project. This design will allow CAES to examine the formative data to make modification to project throughout Year 1. It will also give CAES a more detailed look at process variables that could affect the outcomes of the project. Methods of Analysis: CAES will use descriptive statistics to examine individual questions as well as demographics & to present frequencies, percentages, means, & sums to describe the results. We will use inferential statistics (Paired-Sample t-tests, Reliability & Item Analysis, Correlations, Multiple Regression, ANCOVA) to examine outcomes & reliability of the data. We will also use Teacher Knowledge, Beliefs, & Practices & Perceptions' of Student Engagement, Motivation, & Interest as moderating variables for student assessment outcomes. Qualitative data will be analyzed with Content Analysis. Data Collection: for Summer Institute Teacher Training will include: Teacher Knowledge Assessment of the BCISS Curriculum to examine content knowledge gain of teachers; Satisfaction with Training & Lessons to examine teachers' perceptions of the training & BCISS; & Overall Teacher Beliefs & Practices Survey to examine how a teachers' beliefs & practices affect implementation & outcomes of the project, Teachers' Perceptions of Students' Motivation, Engagement, & Interest Survey to examine change in STEAM attitudes, & Focus Group with Teachers on Summer Institute to examine strengths & weaknesses of the BCI training. Timelines: Teacher Knowledge Assessment (Pre-Post Summer 17 & 18) Satisfaction with Training & Lessons (Post only 17 & 18) Teacher Beliefs & Practices Survey (Pre-Summer 16 & 17; Post-Spring 17 & 18). Teachers' Perceptions of Students' Motivation, Engagement, & Interest Survey (Pre Summer 16-Post Spring 17) Instruments & Assessments will be included within the Modules & will be included in any new trainings in Sustainability Years 1-5. Data Collection: for BCI Classroom Implementation will include: Classroom Observation Tool & Interview to examine Implementation Fidelity to BCISS & lessons learned during implementation. The Implementation Online Survey with quantitative & qualitative questions will be completed by teachers to examine of the quantity & quality of implementation of the lessons, project progress & shortfalls. Timelines: Classroom Observation Tool & Interview (Winter 16-22); Implementation Checklist Online Survey (Fall, Winter, Spring 16--22). Data Collection: for Student Assessment Data will include: Formative Assessments for each lesson to examine content knowledge. Pre-Post Curriculum-Based Assessment which will examine content knowledge gains over the complete BCISS. State Assessment Data will be utilized to examine if BCISS Curriculum affects students' passage rate for applicable content standards. Timelines: Formative Assessments (Fall, Winter, Spring 16--22); Pre-Post Curriculum-Based Assessment (Fall & Spring 16-22); State Assessment Data (When Released 16--22). Other Process Data Data Collection: for Other Process data will include: Demographic data, # of teachers who adopt the curriculum; # of students who are taught with this curriculum; Project staff impressions of implementation & service delivery. Timelines: Process data (Spring 16-22) Reporting & Oversight CAES will be a part of the advisory board for this grant & attend monthly meeting as well as work BCI Curriculum to develop all instruments & assessments. A Comprehensive Evaluation Plan will be created & submitted to ODE in Fall of 2016. In Sustainability Years, CAES will meet with advisory board on a quarterly basis. Formative & Summative Report will be produced each year including all data discussed above as well as an Executive Summary & a Project Presentation.

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.

One of the intended goals for BCISS is the continued use of the curriculum across Ohio for years to come. This possibility is maximized through the development of flexible lesson plans that can easily be adapted by schools irrespective of funding availability. Many materials required for BCISS should be readily accessible to teachers, or easily procured for minimal cost. After acquiring materials for the first year of BCISS, most of the supplies can be reused for years to come. The impact will be expanded through the development of the BCISS after school program, which will also increase the scope of the project to incorporate 3rd and 5th graders as well. It is likely that the BCISS program will be useful to many school districts throughout the state, due to the extremely minimal cost to participating schools. By the intended nature of the BCISS curriculum, the curriculum will be replicated in as many fourth grade classrooms in the state of Ohio.

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).

X

Consortium Contacts

No consortium contacts added yet. Please add a new consortium contact using the form below.

Partnerships

Bowling Green State University (062893) - Wood County - 2017 - Straight A Fund - Rev 0 - Straight A Fund

Sections

Partnerships

First Name	Last Name	Telephone Number	Email Address	Organization Name	IRN	Address	Delete Contact
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Implementation Team

Bowling Green State University (062893) - Wood County - 2017 - Straight A Fund - Rev 0 - Straight A Fund

Sections 

Implementation Team								
First Name	Last Name	Title	Responsibilities	Qualifications	Prior Relevant Experience	Education	% FTE on Project	Delete Contact
W. Robert	Midden	Associate Vice Provost for Experiential and Innovative Learning, and Director of the Northwest Ohio Center for Excellence in STEM Education	Coordinating the support role of the Northwest Ohio Center for Excellence in STEM Education and advising the project leaders regarding the execution of key project activities	Dr. Midden has served since 2008 as the Director of the Northwest Ohio Center for Excellence in STEM Education (NWO) overseeing a program that has grown to an annual budget of \$1.8 million serving to advance STEM education for people of all ages throughout the 30-county region of the State of Ohio. He is the principal investigator for four grants funded by the National Science Foundation totaling more than \$8.5 million, Co-PI on a fifth NSF-funded project, principal investigator on five grant projects funded by the State, and involved in numerous other STEM education initiatives and efforts. NWO hosts a wide range of activities and events funded by a variety of sources including federal and state agencies, private foundations and corporations. More information about NWO is available on the web at: http://cosmos.bgsu.edu - Dr. Midden also serves as the Associate Vice Provost for Experiential and Innovative Learning charged with promoting the adoption of these high impact educational practices across campus in all colleges and degree programs.	Dr. Midden began his career by helping to start a new PhD program in Environmental Chemistry at Johns Hopkins University in Baltimore 1980-87. He then came to BGSU to help found the new Center For Photochemical Sciences. His research interests shifted from the biochemical mechanisms of carcinogenesis to fostering more effective practices for teaching and learning in STEM disciplines. He has been involved in numerous initiatives over the years that involve education research and reform, several now serving as signature features of Bowling Green State University including two residential learning communities, the Office of Service Learning which has become the new Center for Civic and Community Engagement, the Academic Investment in Mathematics and Science and the Northwest Center for Excellence in STEM Education among others.	BS in Chemistry at St. Johns University in Minnesota, 1974; PhD in Biochemistry at the Ohio State University, 1978; postdoctoral fellowship	3	
Emily	Davidson	Director of Professional Standards at BCI	Oversee BCI Science School Consultant, liaise with BGSU and BCI personnel, coordinate BCISS programming BCI and personnel	Current Director of Professional Standards at the Bureau of Criminal Investigation. Oversees policies, procedures, training, and some outreach activities for BCI. Experience as assistant counsel for BCI.	Coordinated and administered previous BCI Science School programming at Perrin Woods Elementary, coordinated BCI's Take Your Child to Work Day; 3 years	J.D., Cleveland State University; B.A. in History, Concordia University Wisconsin	15	

					administrative experience at BCI			
Amy	Rogers	BCI Science School Consultant	Develop curriculum for BCI Science School, oversee distribution of curriculum, and coordinate BCISS programming	Former elementary school teacher; Current BCI Science School Curriculum Developer	Former technology, math, and enrichment elementary school teacher, with experience in all subjects	Master's Degree in Education, Curriculum and Development, Ashland University; Bachelor of Science in Education, Otterbein University.	75	
Jon	Sprague	Director of the Ohio Attorney General's Center for the Future of Forensic Science	As PI, Dr. Sprague will oversee the project development and conduction, collaborate with all participants and faculty members. Dr. Sprague will provide administration and overall project direction, experimental design, and will assist in performing and supervising all experiments. Dr. Sprague will coordinate collaborative efforts within the project and with the external experts. Dr. Sprague will supervise the writing of manuscripts and reports. He will also organize and arrange bimonthly meetings and annual progress reports.	Initiated and championed undergraduate and graduate forensic science education at BGSU; managed state appropriations for forensic science research and education; liaison for the Ohio State Bureau of Criminal Investigation and BGSU; initiate and lead University wide forensic science research.	Professor, Chair and Dean of the Raabe College of Pharmacy at Ohio Northern University. Accomplishments included: Re-established full ACPE accreditation of pharmacy program; Co-Founder and Director of Technology, Genomic Guidance; Developing Memorandum of Understanding with Ghana Pharmacy Council; expanding educational opportunities with Ghana.	B.S. in Pharmacy at Ferris State University, 1989; Ph.D. in Pharmacology and Toxicology at Purdue University, 1994.	8	