<table>
<thead>
<tr>
<th>Purpose Code</th>
<th>Object Code</th>
<th>Salaries 100</th>
<th>Retirement Fringe Benefits 200</th>
<th>Purchased Services 400</th>
<th>Supplies 500</th>
<th>Capital Outlay 600</th>
<th>Other 800</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Instruction</td>
<td>100</td>
<td>62,000.00</td>
<td>33,000.00</td>
<td>0.00</td>
<td>33,500.00</td>
<td>0.00</td>
<td>0.00</td>
<td>128,500.00</td>
</tr>
<tr>
<td>Support Services</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Governance/Admin</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Prof Development</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Family/Community</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Safety</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Facilities</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>871,500.00</td>
<td>0.00</td>
<td>871,500.00</td>
</tr>
<tr>
<td>Transportation</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Indirect Cost</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Total</td>
<td>62,000.00</td>
<td>33,000.00</td>
<td>0.00</td>
<td>33,500.00</td>
<td>871,500.00</td>
<td>0.00</td>
<td>0.00</td>
<td>1,000,000.00</td>
</tr>
</tbody>
</table>

**Adjusted Allocation**: 0.00

**Remaining**: -1,000,000.00
Please respond to the prompts or questions in the areas listed below in a narrative form.

**A) APPLICANT INFORMATION - General Information**

1. **Project Title:**
   Rooftop Garden

2. **Project Summary:** Please limit your responses to no more than three sentences.
   Urban communities face numerous challenges related to the health and well-being of citizens. Several of these challenges arise as the direct result of implementing this project. This is an ultra-concise description of the overall project. It should only include a brief description of the project and the goals it hopes to achieve.

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

<table>
<thead>
<tr>
<th>Grant Year</th>
<th>Pre-K Special Education</th>
<th>K</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td></td>
<td>9</td>
<td>10</td>
<td>11</td>
<td>12</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year 1</th>
<th>Pre-K Special Education</th>
<th>K</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>4</td>
<td>5</td>
<td>140</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td></td>
<td>30</td>
<td>9</td>
<td>30</td>
<td>10</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year 2</th>
<th>Pre-K Special Education</th>
<th>K</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>4</td>
<td>5</td>
<td>140</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td></td>
<td>40</td>
<td>9</td>
<td>40</td>
<td>10</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year 3</th>
<th>Pre-K Special Education</th>
<th>K</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>4</td>
<td>5</td>
<td>140</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td></td>
<td>50</td>
<td>9</td>
<td>50</td>
<td>10</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year 4</th>
<th>Pre-K Special Education</th>
<th>K</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>4</td>
<td>5</td>
<td>140</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td></td>
<td>60</td>
<td>9</td>
<td>60</td>
<td>10</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year 5</th>
<th>Pre-K Special Education</th>
<th>K</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>4</td>
<td>5</td>
<td>140</td>
<td>6</td>
</tr>
</tbody>
</table>
4. Explanation of any additional students to be impacted throughout the life of the project. This includes any students impacted or estimates of students who might be impacted through future scale-ups or replications that go beyond the scope of this project.

Steubenville City Schools provides students in grades 6-12 with career pathways to take as their elective courses. Students in grades 6-8 take a rotating 6 week career pathway course. In this way, all students in grades 6-8 will be directly impacted by the rooftop garden program. Students in grades 9-12 have a selection of career pathway courses to take as electives. We expect the students in grades 9-12 to increase by 10 students each year for the life of the grant project. Students will also have access to the Rooftop Garden through the community summer program. The students impacted will be of various ages, not directly related to school sponsored programming. The community summer programs have an average of 100 students participate during the summer months.

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

First and last name of contact for lead applicant
Shana D'Aurora

Organizational name of lead applicant
Steubenville City Schools

Address of lead applicant
1400 West Adams Street, Steubenville Ohio 43952

Phone Number of lead applicant
740-283-3767

Email Address of lead applicant
sdaurora@scsohio.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

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

Of primary significance to urban food production is sustainable agriculture. According to the National Sustainable Agriculture Information Service, sustainable agriculture is defined as applying natural principles to grow enough food for people without depleting the earth's resources or polluting its environment while maintaining healthy communities and economic viability (Earles 2005, 1). This movement builds on principles and practices that have been passed down through many generations. The proposed project would promote beautification, nutritional awareness, the importance of nourishment farming, local sourcing, and would reduce energy consumed by the buildings. Rooftop gardening itself is a healthy alternative to clearing land for farming, as it utilizes already existing areas. Previously regarded as unusable space, the landscape of rooftops is being reclaimed for productive and sustainable purposes. Whereas in the past, roofs have been a liability-emitting heat into the urban atmosphere, shedding pollutants into the watershed, requiring costly repair and replacement—some cities are transforming roofs into assets. They are being used as catchment areas for irrigation water, renewable energy platforms, recreational open space, food and educational gardens, reduction of storm water surges, and aesthetic improvement. In short, rooftops are
b. The proposed innovation and how it relates to solving the problem or improving on the current state.

Historically, rooftop gardens have been used to create green space in the built environment. Today (2015), city planners and community members are using them to create green spaces, start urban micro-farms, teach students, provide relief for vulnerable populations, and develop green office buildings and green cities. On a city wide level the benefits are clear. One of primary benefits touted and researched by the EPA is the reduction of heat island effect. Currently, most of the roofs in cities are flat and covered by waterproof tar sealant. Like asphalt roads, these absorb the sun’s heat and radiate it back into the surrounding atmosphere. Rooftop gardens cover the tar and are constructed of materials that do not radiate heat. Plants add to the cooling factor by releasing water through the process called evapotranspiration. Additionally, plants provide the added benefit of reducing CO2 levels in cities. Roofs can create storm water runoff problems for cities. Water collects on the roofs and then spills down into storm drains, this becomes problematic as it wastes our rain water, floods the drains, and increases storm water discharges. Roof top gardens absorb the rain water, making the plants hydrated, and reducing the need to water them, while also reducing the flow into the storm drains. The Roof Top Garden project will begin with the construction of agricultural green roofs on Steubenville High School Commons- (flat roofed buildings). The project itself will be guided by the following phases: -The implementation of a green roof via its construction on The Steubenville City Schools Commons. -Student and staff run initiatives and class programs designed to work with the idea of urban agriculture and green design—using the rooftop garden as a both a classroom and a design example. -The use of the gardens will slowly be adapted into the usage by dining services. Offering a “fresh from the garden” type of marketing campaign, which will gauge student engagement in the project and test the viability and acceptance of the roof top garden. -Expansion of a program designed specifically for community school students in order to engage them in the use of renewable energy through the use of green roofs, while simultaneously educating them on agricultural use. The introduction of a summer farmer’s market for the beginning of the fall year and for the summer will help engage harvesting and care over the summer and will also create a profit margin. -Through the experimentation, attrition rates for garden volunteers, student run help, etc. will help to see if the rooftop gardening is a good idea. If the experimentation of the roof top garden is proven successful, then further projects can be initiated community-wide. Students working on the roof top garden will gain valuable skills in urban management, sustainable agriculture, and outreach to various organizations. A partnership with the cafeteria will help to bring sustainable food harvested from the rooftop gardens to the plates of students, giving them a local, food-mile reduced, and carbon-foot print friendly alternative. Recycled food can be reused for fertilizer across the rooftop gardens. The accessibility of the area would require students to travel less in order to find fresh food and produce and could reduce the food miles of community members (and therefore, the energy used) in traveling to shop for local, fresh produce. The implementation of this program will, overall, introduce a new wave of sustainable growth for Steubenville City Schools. The roof top garden will engage students, attract attention, beautify the community, sustain the dining services, and pique interest in potential gardening and volunteer opportunities to garden. The energy saved in kWh and the potentiality of expansion and reduction of food miles are just two parts of the project: it is the education factor and the idea behind the roofs that will ultimately sustain future in

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 project. - (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.

-Student achievement Y/N (check box) -List the desired outcomes (2000 characters). Examples: fewer students retained in third grade; increase in graduation rate; increased proficiency rate in a content area; etc. Students working on the rooftop garden would gain valuable skills in urban management, sustainable agriculture, and outreach to various organizations. A partnership with the cafeteria will help to bring sustainable food harvested from the rooftop gardens to the plates of students, giving them a local, food-mile reduced, and carbon-foot print friendly alternative. Recycled food, aside from being put through the pulper could be reused for fertilizer across the rooftop gardens. -Address multiple learning styles -Provide opportunities for interdisciplinary lessons -Improve environmental attitudes -Promote good nutrition and exercise -Teach patience and responsibility -Instill a positive work ethic -Increase students’ self-esteem -Build classroom relationships, improve teamwork, and strengthen school spirit -Beautify the environment

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.

It takes time for students to develop the ability to work cooperatively in an outdoor classroom setting, but once it is established, we are hoping to find that from year-to-year, students will develop more independence and cooperative skills for their ongoing explorations. -Cooperative Structures -Small-group cooperative learning is especially effective in an outdoor classroom setting -Team Teaching -Solar installations on schools will provide teachers with a unique opportunity to teach concepts in science, technology, engineering, and mathematics (STEM) and pique student interest in these critical subjects.

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

To achieve sustainability, food and agriculture must be an important part of how we define our cities (Thompson et al. 2007). Soil, water, nutrients and biodiversity are fundamental to the biological systems that make up farms. Sustainability is achievable by establishing cultivation practices that encourage the health of these systems. This ecological approach increases plant and animal species diversity that is critical for disease resistance, pollination and healthy soil and water. Soil depletion due to erosion and chemical application can be mitigated through reduced tillage, cover cropping, and reincorporating composted plant nutrients (2005). This also prevents the release of carbon dioxide from the soil into the atmosphere. “Intensive soil tillage, erosion, and fertilization” on U.S. farms and around the world which are large contributors of greenhouse gas emissions contributing to global climate change. In 2004, agriculture was responsible for over 13% (6.5 billion tons) *of the total annual human-induced greenhouse gas emissions (49 billion tons), a majority of which came from the
Green Roofs cost from $15-$30 per square foot installed. The cost varies depending on the type of roof garden system, project size and

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 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).

The following indicators will be measured to ensure the success of the rooftop garden: Environment: -Teachers and students will create a natural systems ecosystems which will include habitat, water, air quality, waste, resource conservation. -Teachers and students will plan and design roof top land use which will include the transportation and mobility of goods to the roof top, planning and designing a roof top park, open spaces and space for recreation. -Teachers and students will plan and design the energy and climate for the roof top space, which will include monitoring energy, emissions, renewable energy, and maintaining a green building. Economy: -Teachers and students will plan for economic development by incorporating clean technologies and green jobs, encouraging local commerce, tourism, and maintaining a local food system -Teachers and students will plan for employment and workforce training by researching and supporting green job training, employment and workforce wages, and youth skills. Society: -Teachers and students will continue to support education excellence, by offering arts and culture, and civic engagement and vitality on the rooftop. -Teachers and students will promote health and wellness, access to fresh foods, and public safety.

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

Teachers will complete Student Learning Outcomes (SLO) for the program. The outcomes will involve knowledge (cognitive), skills (behavioral), or attitudes (affective) that will provide evidence that learning has occurred as a result of the program activity. -The SLO will provide a documented course of action so that teachers, students and administration understand the expected outcomes and means to ascertain whether the outcomes have been met. -Student test scores will be monitored year to year to correlate the rooftop garden to an increase in student interest in the STEM subjects and state indicators. -Student survey will be given as a pre survey and a post survey to gauge student interest in the program, and compare to other programs offered for the students. -Teachers and students will create community engagement by providing food to the community and will work to raise awareness of healthy eating habits. -Teachers will collect qualitative, quantitative, direct and indirect data to enhance the program and student learning objectives.

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

Steubenville City Schools will seek assistance from school districts currently using a rooftop garden for educational purposes to understand why it is successful, and how to mirror the success. By gathering and tracking information about the rooftop garden’s activities, Steubenville City Schools may see new opportunities to refine the rooftop garden to work better to accomplish or expand goals the districts goals. Collecting data that describes the rooftop garden’s activities and output will help raise funds to support the districts ongoing work and future projects.

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.

Steubenville City Schools will reduce the cost of both the electrical and gas bills. For the 2015 fiscal year, the electrical bill was $169,762 and the gas bill was $92,000. The district is looking to save 1/3 of the bills with the rooftop garden. The total cost savings for the year would be approximately $75,000. The district will also save money on the cost of produce. With the rooftop garden, the district will look to save an estimated $5,000 a year. The district will also utilize QZAB bonds to offset the cost of the rooftop garden. The QZAB bonds will assist in the energy reduction plan for the school. The district will also continue to save students and families money with the college credit plus program. The program offers 71 college credit courses to students, with the addition of the rooftop garden and the implementation of new programs such as agriscience, the district will increase the amount of college credits available to students thus saving families more money. The district saves families who participate in the college credit plus program an estimated $20,000 a year.

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.

Green Roofs cost from $15-$30 per square foot installed. The cost varies depending on the type of roof garden system, project size and...
accessibility, height of the building, square footage of pavers, quantity of planters, and the overall design complexity. -Reduced HVAC Costs: The ambient temperature on a unvegetated roof can reach 160F. A green roof reduces this temperature by as much as 60F. For every degree the ambient air that an HVAC unit intakes is reduced, a 1% reduction in energy use results. This can equate to substantial, long-term energy savings. -Reduced Heating & Cooling Costs: The roof garden is able to transfer heat from the rooftop and away from the building by a process known as evapotranspiration. This reduces the HVAC energy costs for the space directly below the green roof. -Roof Membrane Life Extension: Roofs that are covered by a green roof are protected from harmful UV rays, and will last twice as long as unprotected roofs. This has been proven in Germany where roof gardens have been used for the past 25 years. -Reducing Stormwater Runoff Costs: Installing a roof garden will reduce the amount of stormwater runoff by as much as 60%. This reduction in impervious areas saves money when constructing a new building and reduces the size of drainage systems.

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

Green roofs can contribute to landfill diversion by: -Prolonging the life of waterproofing membranes, reducing associated waste -The use of recycled materials in the growing medium -Prolonging the service life of heating, ventilation, and HVAC systems through decreased use With green roofs, water is stored by the substrate and then taken up by the plants from where it is returned to the atmosphere through transpiration and evaporation. -In summer, depending on the plants and depth of growing medium, green roofs retain 70-90% of the precipitation that falls on them; in winter they retain between 25-40%. -Green roofs not only retain rainwater, but also moderate the temperature of the water and act as natural filters for any of the water that happens to run off. -Green roofs reduce the amount of stormwater runoff and also delay the time at which runoff occurs, resulting in decreased stress on sewer systems at peak flow periods. -Through the daily dew and evaporation cycle, plants on vertical and horizontal surfaces are able to cool cities during hot summer months and reduce the Urban Heat Island (UHI) effect. The light absorbed by vegetation would otherwise be converted into heat energy. -UHI is also mitigated by the covering some of the hottest surfaces in the urban environment - black rooftops. -Green roofs can also help reduce the distribution of dust and particulate matter throughout the city, as well as the production of smog. This can play a role in reducing greenhouse gas emissions and adapting urban areas to a future climate with warmer summers. -The plants on green roofs can capture airborne pollutants and atmospheric deposition. -They can also filter noxious gases. -The temperature moderating effects of green roofs can reduce demand on power plants, and potentially decrease the amount of CO2. http://www.greenroofs.org/index.php/about/greenroofbenefits

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

The district will monitor utility bills to ensure the gas and electric bills are decreasing. Steubenville City Schools will reduce the cost of both the electrical and gas bills. For the 2015 fiscal year, the electrical bill was $169,762 and the gas bill was $92,000. The district is looking to save 1/3 of the bills with the rooftop garden. The total cost savings for the year would be approximately $75,000. The district will also save money on the cost of produce. With the rooftop garden, the district will look to save an estimated $5,000 a year. The district will monitor the amount of college credit is offered to the students, to ensure the continued cost savings to the students and families with the increase in courses and programs. QZAB bonds will be used to offset the total cost of the project, the cost savings will reflect the 10% match and cost savings required. The district is estimating $80,000 cost savings per year.

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

The district will monitor utility bills to ensure the gas and electric bills are decreasing. Steubenville City Schools will reduce the cost of both the electrical and gas bills. For the 2015 fiscal year, the electrical bill was $169,762 and the gas bill was $92,000. The district is looking to save 1/3 of the bills with the rooftop garden. The total cost savings for the year would be approximately $75,000. The district will also save money on the cost of produce. With the rooftop garden, the district will look to save an estimated $5,000 a year. The district will monitor the amount of college credit is offered to the students, to ensure the continued cost savings to the students and families with the increase in courses and programs. QZAB bonds will be used to offset the total cost of the project, the cost savings will reflect the 10% match and cost savings required. The district is estimating $80,000 cost savings per year.

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

Steubenville City Schools will seek assistance from school districts currently using a rooftop garden for educational purposes to understand why it is successful, and how to mirror the success. By gathering and tracking information about the rooftop garden’s activities, Steubenville City Schools may see new opportunities to refine the rooftop garden to work better to accomplish or expand goals the districts goals. Collecting data that describes the rooftop garden’s activities and output will help raise funds to support the districts ongoing work and future projects.

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

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

-Team teaching will be utilized during the rooftop garden program. Teachers and students will be working together to accomplish the following outcomes to ensure the success of the rooftop garden: -Outdoor classroom and meeting area -Designate a shaded area with adequate seating for class discussion, writing, and drawing. A dry erase board attached to one side of your outdoor structure is useful for instructions and ongoing communication. -Beds or planting areas for each classroom -3 feet wide or bigger so students can work from either side without stepping on the plants and compacting the soil. -Community growing area -These can include a cut-flower growing area, herb garden, market garden, and specialty areas such as a pumpkin patch or plantings that attract butterflies and birds. -Special project area for student experiments -Dedicate a portion of the garden for individual projects. Signs can tell visitors what student scientists are investigating. -Greenhouse or cold frame -A greenhouse or cold frame is a protected place for starting seedlings in a controlled environment, and helps to extend the growing season. You can also set up an indoor growing area in your classroom. -Signage -Signage will help identify the school garden as an outdoor learning center, and announce times the garden is open, and provide rules and guidelines for using the space. -Students will design the logo or drawing that will appear on their sign.

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...
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.*

For the 2015 fiscal year, the district spent the following on instructional practices: 67.5% of spending was spent on instruction. The district ranks 111/279 of similar districts. The operating spending per pupil is: $7,943 compared to the state of $9,189. Classroom instruction-$5,362 Non-classroom spending-$2,582 The breakdown is: Local-$3,295,267 State-$13,193,961 Federal-$3,864,408 Other-$4,024,045 (grant awarded, open enrollment) Total-$24,377,682 The district expects this number to increase with the addition of the rooftop garden and implementation of agriscience programs. This program should draw students from other districts, as well as increase students interest in agriscience and green technologies. The instructional spending will increase with the repurposing of staff for this program. A dedicated teacher will complete the vocational education requirements to teach the agriscience course work, as well as oversee the instructional practices needed to maintain the rooftop garden.

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.*

Increase student interest in rooftop gardening and agriscience. Increase student interest in the rooftop garden by employing the following measures to ensure the success of the rooftop garden: Increase the variety of plants and vegetables -Develop projects that contribute to habitat creation, where appropriate. -Develop plant management programs for native and non-native plants where appropriate -Enhance the ecological value of plants and vegetables -Improve storm water quality by implementing of the storm water strategy. -Control soil erosion and potential overshadowing caused by building developments along waterways. -Encourage the establishment of water storage for storm water management, habitat creation and water re-use where possible. -Enhance biodiversity through partnerships with other community partnerships -Encourage community landholders and developers to plant for biodiversity by providing information on indigenous plants and vegetables -Increase community awareness of biodiversity -Involve students, local communities and other organizations in planting, revegetation and monitoring projects related to the Roof Top Garden -Provide information to residents on local indigenous plants suitable for home gardens -Provide information on habitat improvement opportunities for the residents of Steubenville.

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

Steubenville City Schools will work with area businesses to ensure the success of the rooftop garden project. Steubenville City Schools will seek out volunteer garden managers to assist with and oversee individual gardens by keeping track of vacancies, reporting maintenance issues, and working with gardeners. Volunteers from the community and partner organizations help gardeners by coordinating and participating in advocacy, outreach, fundraising, and work parties to maintain garden commons.
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.

1,000,000.00 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.

The project budget includes (estimated): Professional Services - $17,000 Landscape and furnishing materials $136, 000.00 Hardscape materials and expenses $147, 000.00 Total= $300,000 for supplies (listed below) Professional services- $17,000 -Design fees- $14,000.00 -Preliminary Design- $4,000 -Design Development - $4,000 -Construction Documents - $5,000 -Work includes design of all landscape and water elements Consultant Allowances- $1,500 -Mechanical Designs Allowance for water features ($1,500) -Water includes developing, sizing and specification of mechanical systems for the water elements. Landscape Materials and Expenses -Plant Materials - $19,000 -Specimen Trees- $4,000 -Middlestory Trees- $6,000 -Groundcover (plants and grass)- $2,000 -Freestanding (plants and containers) - $2,000 -Costs are the nursery prices at time of grant write up - Freight Charges - $500 -Soil- $15,000 -Costs reflect custom premixed soil to work with the sub-irrigation system. Cost per cubic foot is $3.55 -Drainage- $5,000 -Underlayment drainage of all roof top areas -Irrigation System- $7,000 -The system waters only the plants and effectively reduces maintenance time -Installation labor- $6,000 -Time required to complete the installation - On site supervision and project coordination- $4,000 -Equipment Rentals- $2,000 -Site Furnishings- $12,000 -Lighting - $6,000 Water Feature,
D) IMPLEMENTATION

44.00 16. What percentage of these costs will be met through cost savings achieved through implementation of the program?

Total cost savings from section B of the Financial Impact Table divided by total sustainability cost from section A of the Financial Impact Table. If the calculated amount is greater than 100, enter 100 here.

17. Please explain how these cost savings will be derived from the program.

Applicants who selected spending reductions in the five-year forecast as a goal must identify those expected savings in questions 16 and 17. All spending reductions must be verifiable, permanent, and credible. Explanation of savings must be specific as to staff counts; salary/benefits; equipment costs, etc.

The cost savings will be derived from the program by: Modernized infrastructure- If properly allocated, cost savings can support capital investments in both energy and non-energy improvements necessary to maintain the long-term quality of school facilities. Improved facilities operations- Improved operations can reduce waste and lower costs. Energy efficiency improvements can include the outsourcing of ongoing services for operations and maintenance, or enhanced training for existing facilities staff to improve overall facilities operations and the quality of schools' learning environment. Improved comfort and/or functionality- When performance and reliability standards for heating and cooling systems, for example, are met and exceeded, operating costs will fall, and teacher and student comfort will rise. Environmental compliance- Environmental quality affects the productivity of staff and students as well as the value of the building. Environmental compliance can include measures to convert cooling systems to CFC-free equipment or properly dispose of lighting and other potentially toxic materials. The specific cost savings will be: The cost savings of the rooftop garden will allow the district to hire a full time dedicated teacher to run the rooftop garden, and teach the agriscience courses. The district will be able to repurpose the classrooms with the greater use of space. The district will continue to offer vocational education programs that would other wise not be possible in the urban city. The district will continue to offer college credit plus courses for students to take to offset the cost of college for families. Currently, the district offers 71 total courses, with the addition of the rooftop garden and agriscience program, the district is now able to offer additional college credit plus opportunities will increase the already $20,000 saved a year for families pursuing college credit.

56.00 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.

The reallocated cost savings from the food program of $5,000 and the cost savings of the electrical and gas bills which is estimated at $75,000 will be reallocated to teacher salary for a dedicated teacher to run the rooftop garden and the agriscience program. The cost savings that this program will provide to our students through the increase college credit plus opportunities will increase the already $20,000 saved a year for families pursuing college credit.
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 Key Personnel information by clicking the link below:

Add Implementation - Key Personnel

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 October 2015- August 2016
   b. Scope of activities - include all specific completion benchmarks.
      · Select roofing company - October 2015 - Submit Straight A Grant - December 2015 - Plan the statement of probable costs which include the following:
      - January 2016 - The plants, often specially selected for particular applications
      - An integrated irrigation system and controls
      - An engineered growing medium
      - Landscape or filter cloth to contain the roots and the growing medium, while allowing for water penetration
      - A specialized drainage layer, with built-in water reservoirs
      - Selection of hardscape materials (paving, structural materials, site furnishings and water as a design element) and their special use and requirements as part of a roof garden system
      - Public safety and security
      - Ease of maintenance
      - The waterproofing/roofing membrane, with an integral root repellent
      - The roof structure, with traditional insulation either above or below

22. Implementation (grant funded start-up activities)
   a. Date Range May 2016- August 2016
   b. Scope of activities - include all specific completion benchmarks
      · Remove and dispose of existing roofing material.
      · Roof deck shall be thoroughly inspected, and any repair/replacement will be billed as a change order.
      · Provide and install new polyisocyanurate roof insulation board.
      · Provide and install a .060 fully adhered EPDM rubber roofing system.
      · Flash watertight all existing roof penetrations.
      · Fabricate and install a new metal edge around the perimeters of all roof areas.
      · Owner to choose from manufacturer's standard color chart.
      · Provide and install Live Roof vegetated roofing on all roof areas.
      · All modules to be standard 1' x 2' x 3.25" in size.
      · Kalkreuth includes the Classic Mix from Corso's Perennials. Please note that the growing season begins in mid April and concludes no later than the end of July.
      · Plant growth takes approximately 90 days to fully mature and cannot be installed once the soil has become completely frozen.
      · Kalkreuth includes all aluminum edge restraints.
      · Kalkreuth includes a .045 mil black EPDM slip sheet between the roof membrane and the modules.
      · Provide and install new solar panels on all roof areas.
      · Provide a 20 year manufacturer's warranty upon completion of the project.
      · Organize and clean-up project at the completion of each day.
      · All work will be completed within strict accordance to the manufacturer's specifications.

23. Programmatic Sustainability (years following implementation, including institutionalization of program, evaluation and communication of program outcomes)
   a. Date Range January 2016- Ongoing
   b. Scope of activities - include all specific completion benchmarks
      · Work with Kalkreuth to ensure the upkeep of the rooftop garden. Work with local higher education institutions to ensure college credits continue for coursework in the agriscience program. Work with staff and students to ensure interest is still viable for the project.
      · Continue to promote the agriscience program and rooftop garden to the community and local businesses to encourage partnerships and continued growth.
      · Continue to research funding options to increase the rooftop gardens supplies and produce. Continue to research rooftop gardens and green technologies to ensure Steubenville is staying ahead of the latest programs and technologies to continue to offer cutting edge programs to our students.
      · Review data collection quarterly to ensure the cost savings continues for the electrical, gas and food programs.
      · Research and implement new ways to go green to build off of the rooftop garden.

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.
The Roof Top Garden will improve the following for Steubenville City Schools: Community-based: - Gardening favors contacts and exchanges and betters the quality of life. For students, gardens stimulate social encounters, physical activity. It can mean getting back to the earth for some and participating in a lively project that comes with various benefits. The community in contact with the garden will benefit from the feeling that comes from helping others, commitment to a project and socializing with one another; Educational: - As a place for experimentation with nature, the garden will be a space for pedagogical and recreational activities that will reinforce scholastic materials or themes from day camps (ecology, botany, health, alimentation, cooking, gardening, biology, etc.) and increase the spirit of initiative, teamwork, patience, etc.; Food security: - Gardening will favor the production of food for a meals-on-wheels program or a food bank, or for personal use; Economic: - The rooftop garden will improve the building's energy efficiency and increase its value for little cost by expanding the useable space. Food cultivation also diminishes expenses related to acquiring food; Environmental: - The improvement of air quality through the absorption of carbon dioxide and the production of oxygen by plants. The consequent increase in humidity and evaporation will bring down the ambient temperature, biodiversity will attract birds and insects; and plants will absorb ambient noise. Using rainwater to irrigate plants will reduce pressure on the municipal waterworks and can be integrated in a system that uses household wastewater. Eating organic and local will reduce the quantity of chemical products used to grow plants and to transport food; Horticultural: - Experimenting with new gardening techniques or developing a new model for urban gardening to spread urban agriculture could be on the menu; Personal: - The simple pleasure of gardening and being able to benefit from a relaxing space at home will be the foremost motivation.

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. Charles Kokiko, Jefferson County ESC

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.

Data collection will begin with the tracking of students enrolled in the agriscience program. This will begin with students in grades 6. The rationale is that our career pathways begin in grade 6. All students in grades 6-8 will have exposure to the rooftop garden and the a introductory coursework of agriscience. This will be done to peak student interests in the programs. Students in grades 9-12 will select their career pathways based on their individual interests. Students in the agriscience program will have a dedicated teacher and classroom utilization through the lifetime of the program. Steubenville is expecting an increase of 10 students per year in the agriscience program, which would begin in grade 9 and go through grade 12. Data collection will be used to track the amount of college credits awarded to the students. With the implementation of agriscience, the current coursework available of 71 credits will increase. We will work with the local community college and other higher education entities to increase this number and offer additional opportunities to the students in the program. Data collection will be used to monitor the gas and electric bills. The total cost savings should be 1/3 the total cost. Steubenville is estimating $75,000 cost savings for the combined gas and electric bills per year. Data collection will be used to monitor the produce costs. With the rooftop garden and agriscience program, the estimated cost savings is $5,000 per year.

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.

Historically, the Steubenville City Schools District has been a district of continuous change and renewal. The District is deep rooted in tradition and heritage, as such, Steubenville City Schools has always assessed education and extra-curricular programs and modified or branched out to meet the needs of individual children and society. Our performance index reached the 100 point index. Each year, our staff, Board and Administration plan for constant improvement and renewal through the use of quality tools and assessment. Steubenville City Schools strives to preserve the strong core of our school district and stimulate progression each year. Our ultimate goal is to provide strong academic and extra-curricular programs. In 2008, Steubenville City Schools completed a 32 million dollar building project. The project included building Pugliese West Elementary School and remodeling Garfield East Elementary School, and Steubenville High School. This project was made possible through the support of citizens of Steubenville and the Pugliese Foundation. Since 1854, when the first Steubenville school opened its doors, until today (2015), the Steubenville City Schools and the citizens of our great community have consistently shown their unwavering support for the education of our youth and the future of our region. In 2011, Steubenville City Schools began a project to remodel Harding Stadium. The west end bleachers were replaced at a cost of $220,000. In 2014, Steubenville City Schools in partnership with the Pugliese Foundation and the National Education Foundation created a STEM Academy. STEM is an acronym for Science, Technology, Engineering, and Mathematics. The students of Steubenville City Schools experience a rigorous high school and college curriculum where upon completion they will receive a high school diploma, college credits in a declared associate degree program, and industry certifications to become college and career ready citizens of society. The district believes in the opportunity that this program can have on the students and staff for Steubenville. While thousands of schools have already realized the cost savings and other benefits of installed solar energy capacity, this opportunity is generally underutilized. The large, flat rooftops typically found on public and private K-12 school buildings throughout Ohio make many of these properties excellent candidates for rooftop solar thermal systems. Steubenville City...
Schools will build upon the rooftop garden by researching the various outlets surrounding the school such as the school parking lots, which can be put to productive use with solar canopies, which provide the added benefit of shading parked vehicles on sunny days, and tracts of vacant land on campus can be used to support modestly-sized solar PV farms. Other options for the district include the rooftop of the middle school, and the three elementary schools, as well as the multipurpose building. The district will openly work with other school districts on their interests in replicating the rooftop garden, as well as work with a consortium of partners to create a community wide rooftop garden for families in community to benefit from for their health and well being.

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).

Shana D'Aurora- Research Development Coordinator Bryan D'Aurora- Technology Coordinator
<table>
<thead>
<tr>
<th>Consortium Contacts</th>
</tr>
</thead>
</table>

No consortium contacts added yet. Please add a new consortium contact using the form below.
<table>
<thead>
<tr>
<th>First Name</th>
<th>Last Name</th>
<th>Telephone Number</th>
<th>Email Address</th>
<th>Organization Name</th>
<th>IRN</th>
<th>Address</th>
</tr>
</thead>
<tbody>
<tr>
<td>Geoff</td>
<td>Wack</td>
<td>304-232-8540</td>
<td><a href="mailto:gwack@krsm.net">gwack@krsm.net</a></td>
<td>Kalkreuth Roofing and Sheet Metal</td>
<td></td>
<td>53-14th Street Suite 100, PO Drawer 6399, Wheeling, West Virginia, 26003</td>
</tr>
<tr>
<td><strong>First Name</strong></td>
<td><strong>Last Name</strong></td>
<td><strong>Title</strong></td>
<td><strong>Responsibilities</strong></td>
<td><strong>Qualifications</strong></td>
<td><strong>Prior Relevant Experience</strong></td>
<td><strong>Education</strong></td>
</tr>
<tr>
<td>---------------</td>
<td>--------------</td>
<td>-------------------------------</td>
<td>-------------------------------------------------------------------------------------</td>
<td>--------------------------------------------------------------------------------</td>
<td>--------------------------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------</td>
</tr>
<tr>
<td>Shana</td>
<td>D'Aurora</td>
<td>Research Development Coordinator</td>
<td>Coordinate Advanced Career Pathways for Agriscience Coordinate the College Credit Plus course offerings Track the data necessary for the grant</td>
<td>10+ years working with College Credit Plus programs and vocational education programs.</td>
<td>Dean, School of Business and Information Technology, Blue Ridge Community and Technical College</td>
<td>Doctor of Science in Information Systems and Communication</td>
</tr>
<tr>
<td>Bryan</td>
<td>D'Aurora</td>
<td>Technology Coordinator</td>
<td>Responsible for the rooftop garden infrastructure Responsible for the rooftop garden solar panels Responsible for the electrical components for the project Responsible for the maintenance and upkeep for the project.</td>
<td>15+ Years of professional experience as an electrical engineer for CHM2Hill, Pittsburgh, PA</td>
<td>15+ Years of professional experience as an electrical engineer for CHM2Hill, Pittsburgh, PA</td>
<td>Bachelor of Science, Electrical Engineer</td>
</tr>
</tbody>
</table>