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<th>Salaries 100</th>
<th>Retirement Fringe Benefits 200</th>
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<th>Supplies 500</th>
<th>Capital Outlay 600</th>
<th>Other 800</th>
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<td>0.00</td>
<td>191,452.00</td>
<td>193,505.00</td>
<td>557,439.00</td>
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</tbody>
</table>

Adjusted Allocation 0.00

Remaining -557,439.00
Please respond to the prompts or questions in the areas listed below in a narrative form.

A) APPLICANT INFORMATION - General Information

1. Project Title:
Blazing a Pathway for Career Readiness in Fire Science

2. Project Tweet: Please limit your responses to 140 characters.
MCCTC will transform the fire science HS pathway through a new fire lab, leveraging partnerships, & increasing gr 5-8 experiential learning.
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.

<table>
<thead>
<tr>
<th>Grant Year</th>
<th>Pre-K Special Education</th>
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<td>Year 5</td>
<td>4</td>
<td>600</td>
<td>5</td>
<td>600</td>
<td>6</td>
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</tbody>
</table>
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.

Through our partnership with three area fire departments, we will impact the lives of approximately 2,000 5th-8th graders from three surrounding school districts. The fire department that is located in each of the school district's jurisdictions will create a unique year-long partnership. 5-8 grade students will be transported to our lab in order to teach them the fundamentals of fire science and safety. Students will collect authentic experiential data using monitors and sensors that are connected to the firefighters while they are active in the fire house. From a safe distance and under direct supervision, students will use technology to monitor heart rate, oxygen levels, and other important sustainable life factors from the firefighters. Students will analyze the data and report findings to partners.

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

First and last name of contact for lead applicant
John Zeheintbauer
Organizational name of lead applicant
Mahoning County Career and Technical Center
Address of lead applicant
7300 N. Palmyra Rd., Canfield, OH 44406
Phone Number of lead applicant
330-729-4001
Email Address of lead applicant
John.zehentbauer@mahoningctc.com

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

Mahoning County Career & Technical Center (MCCTC) with three local fire departments will improve the quality and safety of firefighter training by sharing our area’s first dedicated fire training lab. MCCTC provides Public Safety Programs for state certification in firefighting Levels I & II for HS career tech students and adults. Top concerns are immediate safety of trainees and long-term safety of professional firefighters, which is improved by high-quality training. MCCTC currently spends considerable resources adapting "make-shift props" to meet National Fire Protection Agencies (NFPA) standards for live burn training. Some training scenarios cannot be replicated without an engineered lab. As a result, only 40 percent acquire state certification. A dedicated lab will improve the safety and quality of firefighter training. MCCTC’s partnership with local fire departments will expand the benefits by: 1) Training local professional firefighters, and 2) Career exposure programs.
Blazing a Pathway designs & scales real world problem solving experiences, exposing gr.11 & 12 firefighting students with knowledge, skills, & work habits essential for success in the high-demand career field of firefighting. MCCTC will establish a firefighting curriculum & fire tower that enables students to demonstrate 21st century skills. Blazing a Pathway additionally will: Develop & expand College Credit courses for HS students in firefighting in partnership with 3 area fire departments; Erect fire training lab. Lab will be a pre-engineered building that is specifically designed as a live fire training tower & evolution lab. This building will exceed all (NFPA) codes for live burns & the safe environment for evolutions associated with firefighter training. These codes include NFPA #1402 and #1403 & all of their subsections. Those subsections are too many to list. This lab will allow our instructors to place firefighter students in real life live burn situations. Partner with Cardinal Fire Department (FD), Austintown FD, & Western Reserve Joint FD. Firefighters donate time to mentor gr. 11 & 12 students to boost engagement & real-world experiences, resulting in increased passage of the state-certification test. 3 FDs benefit from fire tower for their training needs & increase their operation efficiency. Early Firefighting Awareness, Safety, & Exposure for gr 5-8 students: Deepen exposure to fire safety offered to 2,400 students from 3 area school districts. Lessons would be taught by firefighters from each school’s unique jurisdiction. Students transported to fire tower to learn fundamentals of fire science, safety, & grade level ELA & science standards. Students collect authentic experiential data using monitors & sensors that are connected to firefighters while they are active in fire house. From safe distance & under direct firefighter supervision, students monitor heart rate, oxygen levels, carbon monoxide, & other gas & temperature levels. Students & firefighters form ongoing partnerships through classroom visits. Local associated FDs and the MCESC science liaison will work with MS principals & teachers to help align & develop standards. We will develop the standards & lessons over the summer & provide them to districts. There is no cost to the district. The U.S. Department of Labor Bureau of Labor Statistics projects employment of firefighters to grow 5% from 2014 to 2024, about as fast as the average for all occupations. Competition for jobs will likely be strong, according to BLS, favoring physically fit applicants with high test scores. BLS also notes that firefighters have one of the highest rates of injuries & illnesses of all occupations. They often encounter dangerous situations, including collapsing floors & walls, traffic accidents, & overexposure to flames & smoke. Firefighter injury & death rates in active fires have been reduced by more than 50% since 1981, due to improved safety & training standards, according to NFPA. There were nearly 60,000 job-related injuries in 2013 (the most recent year reported), nearly half of which were in active fires. Another 12% happened in training. State-of-the-art training facilities are essential to improving the safety & quality of training for firefighters. Our proposal recommends that the services share has been negotiated with the 3 FDs to share services with respective legal representatives & be approved by their Boards of Trustees. The agreements allow FDs access to the training facilities for on-going professional training. In return the FDs will provide mentorship to high school students & career exposure activities to middle school students. MCCTC will host visitations, release publications highlighting lessons learned & offer support/strategies for replication across the state. Gr. 5-8 students will have experiential learning exposure, plan investigations, collect data, & make conclusions based on data. Students will present findings to partnering groups.

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)

- Student achievement
  i. List the desired outcomes.
  Examples: fewer students retained at 3rd grade, increase in graduation rate, increased proficiency rate in a content area, etc.
  Increase student safety and reduce the risk of injury. Measurement: Mandated fire evaluations three times per year. Increase student performance on State Fire License assessment. Measurement: Mandated fire evaluations three times per year. Deepen gr. 5-8 ELA & science standards with experiential learning Measurements: Participation rates and achievement in ELA and science courses; % grades 5-8 scoring 4-5 on A.I.R. science test. MCCTC will have fiscal capacity to sustain this project locally without additional income. Measured by cost savings within project and re-allocation cost savings as described on FIT.

- 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.
  Assumption 1. Live burn scenarios are a mandated part of training firefighters in OH & our schools. A structure/lab that provides safety for students is paramount to continuing our program at the HS. The engineered automatic safety controls in this lab will help to protect students against injury or worse. Assumption 2. Lab will allow instructors to place students in real life situations & allow them to handle situations in a training environment instead of experiencing them in real life & risking injury or death. As we do not want to overstate the risk of injury, it is a real concern, especially with younger students in our HS program. Assumption 3. Firefighters need certification in order to begin work as a firefighter. Our program does not currently produce students who can pass the state certification test. With the funding of fire tower, students will be better equipped with resources and experiences to perform better on the state mandated certification test.

- Describe any early efforts you have made to test these assumptions (pilot implementation, etc), or how these are well-supported by the literature.
  Early on in our program, we used vacant houses slated for demolition as "live burn houses". These structures were lit on fire and used by our students prior to their demolitions. This application for live burn scenarios failed for a couple of reasons. The first reason is that these structures were abandoned for a reason. Their conditions were very poor with weak floors and rotted structural components. This put our students at risk of falling through floors and structural collapse while training in them. Secondly, it proved to be very cost prohibitive because of the asbestos abatements and structural repairs that had to take place prior to conducting a live burn in them. It was not unusual to spend $3,500 to make an abandoned house somewhat safe to train in. These structures proved to be very dangerous and cost prohibitive. We then and now currently use old shipping containers welded together for our live burn training. These containers are actually safer than using abandoned houses as training structures but still have inherent risks associated with them. These containers do not have the automatic safety including heat sensors and immediate mitigation of heat and smoke features as our proposed lab will have. These containers rely on the students and the instructors abilities to realize a dangerous situation and conduct an emergency evacuation from the structure. This presents a problem for the instructors because they are trying to give real life feel in these containers which include having the students experience high heat situations so they will know what to expect in the real world setting. Additionally, the fire protective equipment (protective coat, pants, face shield, etc.) is so good today that firefighters inside these training structures do not realize the heat temperatures are to the dangerous levels until it is too late. We realze we have to make this hands-on training safer especially for high school students who may not have the life experiences vital to make good critical decisions.
realized these potential life threatening training hazards several years ago. They are the lead agency in firefighter safety and produce a set of standards in which all firefighting training is to be conducted. As discussed earlier in this application, NFPA #1402 and #1403 encompass all of these safety guidelines. This new training lab will incorporate all of their recommendations and comply with all of their applicable codes. The NFPA has published many articles on exactly what we are discussing in this application as have the International Associations of Fire Chiefs, the International Association of Firefighters and many Bureaus of Workers Compensation. The use of safe training structures/labs is not only well documented but has led to national safety codes being implemented across the world.

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).

Formative Indicators to measure progress students participation in training/earn credentials # firefighters from three fire departments hosting high school student mentors Use MAP assessment results (3 times/yr) to identify students not on-track to reach levels 4 or 5 on 5th & 8th gr science assessment cost savings and re-allocation per FIT evaluation by the local fire chiefs who hire these students after their training is complete. Summative indicators to measure progress Increase baseline by 20% the # of 9-10 graders exploring firefighting as a career choice Increase by 50% #5-8th grade students exposed to fire science as a career pathway Increase by 25% 12 grade students who pass the state certification test spending reductions through cost savings and reallocation; sustainable costs as verified by annual FIT

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

List and describe pertinent data points for student achievement SMART Goal from Q9 (iv). student participation in training # college courses offered partners interested in hosting student intern/apprentices cost savings and re-allocation per FIT Ohio’s dual enrollment (college credit plus) benchmark as defined by ODE injury and incident reports - an analysis of safety with regard to the students especially in hands-on training evolutions Instructor and student evaluation scores - students and the instructors rate the safety and the quality of the education provided. fiscal reporting to include: spending reductions through cost savings and reallocation; sustainable costs

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

A key factor in ensuring success is the active involvement of the leadership team in guiding processes. This team will bring on board captain of each of the eleven fire departments to create the leadership team. Together they will review relevant data bi-monthly as available. Annual staff and industry partner surveys will include questions that can help identify where recalibration or options may need to be expanded. This team will work with Karen Larwin, Ph.D., to create a more in depth evaluation plan that has target percentages (formative/summative data) and specific plans to adjust training/support if targets are missed. There is high demand for and shortage of training facilities in our surrounding areas. There will be a potential for expanding the project if our current assumptions on our plan would fall short, which according to our research is not likely. As mentioned previously in this Grant application, the field of firefighting is ever changing. This training facility will continue to evolve. Minor alterations to standard operating procedures and safety factors will always be developing. That is why we will put into place the evaluation process defined in section iv. above. We will constantly evaluate the outcomes and safety factors of this project. We will not only have our education facility evaluations but we will have that of outside interests who have a great knowledge in this area. This is a unique project. This type of training will need to be altered and we will have the process in place to do so. Change and updated information is an expectation of the project and not a "curve ball" as is the case with other projects applying for this Grant. Not that our assumptions will be false, but evolution is a must when dealing with this type of training. Our process will have to keep evolving in order to stay current with safety.

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.
**d. Implementing a shared services delivery model**

<table>
<thead>
<tr>
<th>i. List the desired outcomes.</th>
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<tbody>
<tr>
<td><strong>Examples:</strong> increase in quality and quantity of employment applications to districts; greater efficiency in delivery of transportation services, etc.</td>
</tr>
<tr>
<td>Partner with Cardinal Fire Department (FD), Austintown FD, &amp; Western Reserve Joint FD. Firefighters donate time to mentor gr.11 &amp; 12 students to boost engagement &amp; real-world experiences, resulting in increased passage of the state-mandated test. The 3 FD's benefit from fire tower for their training needs &amp; increase their efficiency in operations. Savings to both commercial and residential fire insurance premiums by improving rating on ISO fire rating scale. There is a savings directly back to commercial or residents.</td>
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<tr>
<th>ii. What assumptions must be true for this outcome to be realized?</th>
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<tbody>
<tr>
<td><strong>Example:</strong> neighboring districts have overlapping needs in administrative areas that can be combined to create efficiencies.</td>
</tr>
<tr>
<td>Assumption 1. Area fire departments have overlapping need of a fire tower. Sharing the fire tower will create efficiencies for partner fire departments. The three area fire departments will realize a decrease in the need for their firefighters to travel to cities in Columbus for fire tower trainings, reducing the cost for room, board, travel, and food expenses. These three departments have an estimated training budget of over 50,000, much of that is spent on travel costs including mileage, meals and lodging do to the distance that has to be traveled to gain access to a fire tower. Much of this cost would be reduced and/or more training could be provided by partnering fire departments by the completion of this project.</td>
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<th>iii. Describe any early efforts you have made to test these assumptions (pilot implementation, etc), or how these are well-supported by the literature.</th>
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<tr>
<td>Our Board of Fire Chiefs have made it very clear to our administration that firefighters with live practical experience make for better career recruits for their departments. They say students with this type of education are able to get off of probationary status much earlier than those without practical experience. They also say these firefighters are better versed in recognizing life threatening situations and are able to realize when they are in a situation that can injure themselves. Having this fire lab will allow us to produce firefighters that know how to keep themselves safe in a very dangerous profession. As discussed earlier in this application, NFPA Codes #1402 and #1403 support all our assumptions as well as the Fire Chief's experiences with students from different educational facilities.</td>
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<tr>
<th>iv. List the specific indicators that you will use to monitor progress toward your desired outcomes.</th>
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<td><strong>These should be measurable changes, not the accomplishment of tasks.</strong></td>
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<tr>
<td><strong>Example:</strong> consolidation of transportation services between two districts.</td>
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<tr>
<td>Formative # mentorship opportunities between students &amp; firefighters # days of usage from 3 FD's Data our 3 FD's provide in required surveys. Many of these FD's will have members on our advisory boards &amp; our safety boards. They will provide evaluation information which we use to determine how students are producing in their fields of study after entering the workplace. Data from injury reports and Worker's Compensation reports as they pertain to new employees in the work site. Summative # mentorship opportunities between students &amp; firefighters # days of usage from 3 FD's Data our 3 FD's provide in the surveys they will be required to provide us. Many of these FD's will have members on our advisory boards and our safety boards. They will provide us evaluation information which will determine how students are producing in their fields of study after entering the workplace. Data from injury reports &amp; Worker's Compensation reports as they pertain to new employees in workplace.</td>
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<tr>
<th>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.</th>
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<td><strong>Example:</strong> change in the number of school buses or miles travelled.</td>
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<tr>
<td>List and describe pertinent data points for student achievement Worker's Compensation reports--These reports will allow us to evaluate our student's ability to stay injury free after they have moved to the work place. It is our contention they will be better prepared for firefighting because of their advanced exposure to real life situations in this lab and thus reduce their risk of injury. We will also evaluate injury reports of not only our current students enrolled in our firefighting program but that of our graduates as they move forward to employment. A reduction in injuries of our students and our graduates through employment will be a success for this project. Our baseline data will be compiled from the past two years. We have these data points tracked already and will be able to compare the results.</td>
</tr>
</tbody>
</table>
vi. How are you prepared to alter the course of your project if assumptions prove false or outcomes are not realized?

A key factor in ensuring success is the active involvement of the leadership team in guiding processes. This team will bring on board each of the three fire departments to create the leadership team. Together they will review relevant data bi-monthly as available. Annual staff and industry partner surveys will include questions that can help identify where recalculation or options may need to be expanded. This team will work with Dr. Karen Larin to create a more in-depth evaluation plan that has target percentages (formative/summative data) and specific plans to adjust training/support if targets are missed. There is high demand for and shortage of training facilities in our surrounding areas. There will be a potential for expanding the project if our current assumptions on our plan would fall short, which according to our research is not likely. As mentioned previously in this Grant application, the field of firefighting is ever changing. This training facility will continue to evolve. Minor alterations to standard operating procedures and safety factors will always be developing. That is why we will put into place the evaluation process defined in section iv. above. We will constantly evaluate the outcomes and safety factors of this project. We will not only have our education facility evaluations but we will have that of outside interests who have a great knowledge in this area. This is a unique project. This type of training will need to be altered and we will have the process in place to do so. Change and updated information is an expectation of the project and not a “curve ball” as is the case with other projects applying for this Grant. Not that our assumptions will be false, but evolution is a must when dealing with this type of training. Our process will have to keep evolving in order to stay current with safety.

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)

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.

557,439.00 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.

All costs are associated with the purchase and construction of a state-of-the-art training facility. Estimates based on a confirmed quote provided by Fire Facilities Inc (FFI), the only major steel fire training towers manufacturing in the United States. FFI's steel fire training towers and steel training buildings are designed and manufactured specifically for the fire industry and are being used by fire departments around the world for live fire training. Purchased Services (Facilities) - $172,482 $165,015 for Construction Labor based on estimate by FFI $7,467 for Freight costs to deliver pre-engineered building and equipment, based on estimate by FFI. Equipment (Facilities) - $191,452 Safety and training equipment for Burn House: Exhaust Fan ($2,400); Fire Escape, 20' Tall/3rd Floor ($17,001); 2 Floor Doors, 30" X 30" ($3,876); Forcible Entry/Power Jamb Door ($3,933); Ladder, Ships, 10' ($2,940); 10 Movable Wall Panels With (1) 10' Long Track ($3,310); 6 Rappelling Anchor, Forged Swivel, OSHA Rated ($1,752); Rappelling Railing System, Peurbaint $1,485; Riser System w/ FDC, 3 Story ($3,672); Roof Hatch, 2'-6" x 4'-6" ($2,067); Sprinkler System, 2 head ($521). All component estimates by FFI. Other (Facilities) - $193,505 $148,505 for Fire Tower and Residential Section pre-engineering building Wesco Model WH-3ST. Estimate provided by FFI $45,000 for Building Foundation. Estimate provided by FFI.

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.

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>5,000.00 a. Sustainability Year 1</td>
</tr>
<tr>
<td>2</td>
<td>5,000.00 b. Sustainability Year 2</td>
</tr>
<tr>
<td>3</td>
<td>5,000.00 c. Sustainability Year 3</td>
</tr>
</tbody>
</table>
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.

Sustainability costs are related to utilities and maintenance of the training facility. Water and sewer costs are kept low by on-site water recovery system. Consumable supplies for operating the training facilities will be provided by local fire departments, as part of our shared services partnerships. Major maintenance of the facility is also provided by the local fire departments, although a minimal maintenance expense is shown as a contingency. Annual Sustainability Costs (5-Year Total = $25,000) Purchased Services - $5,000 per year $4,000 for utilities costs: electricity ($1,200), water and sewage ($2,800) $1,000 for maintenance expenses

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

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

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

Cost savings to the career center include one maintenance position and annual rental expenses for mobile fire training facilities. The responsibility for maintenance of the new training facility will belong to the three partner fire departments, as part of our shared services agreements. This results in the elimination of a position for the career center. The career center will no longer have to rent mobile training facilities for three annual trainings: Personal Services (5-Year Total = $223,560) Salary for 1 FTE maintenance position, with annual increases per negotiated bargaining agreement: Y1 ($43,674), Y2($44,220), Y3($44,773), Y4($45,220), Y5($45,673) Benefits (5-Year Total = $72,391) Benefits for 1 FTE maintenance position, calculated at 30% of salary: Y1($13,101), Y2($13,756), Y3($14,444), Y4($15,166), Y5($15,924) Purchased Services (5-Year Total = $75,000) $15,000 each year: Represents minimum mobile training unit rental cost of $5,000 per training event; 3 per year. Total savings over five years equals $370,951.

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 8/1/2016 - 12/1/2016

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

Upon award: media notification; board approvals/contracts signed; planning team designated; finalize evaluation plan; weekly project meetings with key staff and partners during planning period to ensure all processes are in place for implementation; Plan team and key partner meeting to finalize and adjust timeline as needed MCCTC and MCESC meeting to develop lessons and identify fall visit schedule for
22. Implementation (grant funded start-up activities)

a. Date Range 12/1/2016 - 6/30/2017

b. Scope of activities - include all specific completion benchmarks

Wi/Sp 17: Visits and data collection by gr. 5-8 classes Sp/17: Report out to townships and data review, Testing and analysis Sp/17: Presentations by 5th grades to the local fire departments and stakeholders Benchmarks to demonstrate success (LINK to Question 9 ‘data points’) 5th gr A.I.R. 8th gr. A.I.R. # students who explore fire safety # students who explore fire science 11th gr Fire Evaluation Scores 12th gr State Licensure Results 12 th gr Frequency of Injury/Incidents Communicating/coordinating project within timeline Communication/key stakeholder engagement/consent from all required officers, governing bodies; continue project coordination, marketing and communication activities and board reports as described in planning; administer and manage scope of work/ develop interdependent system of change; Project Director will coordinate Quarterly Project Steering Team meetings; CTC Teachers involved in decision making; annual surveys to determine project success; Board approves contracts and will receive quarterly reports from evaluator on progress; continue outreach with business/higher ed partners to build deeper relationships, Monthly meetings with evaluator to monitor evaluation plan & project fidelity.

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

a. Date Range 8/1/2017 - 6/30/22

b. Scope of activities - include all specific completion benchmarks

By 9/1/2017 & annually through project Training of local fire department partners and instructors employed by the MCCTC will take place on the proper use of a fire tower and facilities. Senior students in Fire Academy will be introduced to the use of the fire tower. A fire tower building use schedule will be developed in consultation with fire department partners and advisory group. Home school administrators will be contacted to set up schedules for different grade levels to be trained and educated on public safety here at MCCTC. Fire training and educational experiences will be provided per the developed schedule. 5th gr A.I.R. 8th gr. A.I.R. # students who explore fire science # students who explore fire science 11th gr Fire Evaluation Scores 12th gr State Licensure Results 12th gr Frequency of Injury/Incidents Communicating/coordinating project within timeline Communication/key stakeholder engagement/consent from all required officers, governing bodies; continue project coordination, marketing and communication activities and board reports as described in planning; administer and manage scope of work/ develop interdependent system of change; District admin sustain management during sustainability years to administer and manage scope of work/ conduct effective data collection: MCCTC will provide required data for analysis & include project related surveys and other relevant data needed to effectively access and analyze data. Once these lessons are developed, they are available for use by all teachers. Capacity to communicate Administer and manage scope of work/ communication/key stakeholder engagement/consent from all required officers, governing bodies; Consortia Leadership Team meet quarterly thru 2022; Dr. Larwin outcome reporting throughout sustainability period; semi-annual board reports; administer and manage scope of work/ develop interdependent system of change; District admin sustain management during sustainability years to administer and manage scope of work/ conduct effective data collection: MCCTC will provide required data for analysis & include project related surveys and other relevant data needed to effectively access and analyze data. Once these lessons are developed, they are available for use by all teachers. Capacity to communicate Administer and manage scope of work/ communication/key stakeholder engagement/consent from all required officers, governing bodies; Consortia Leadership Team meet quarterly thru 2022; Dr. Larwin outcome reporting thru 2022; semi-annual board reports.

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:

MCCTC is committed to changing the way we go about teaching and learning. Students today engage in technology as early as two years old, yet education still tends to look much like it did in the 1960’s. MCCTC will enable our instructors teach in an engaging manner using materials with real life implications and authentic activities by using hands-on learning. These activities will address high academic standards across the disciplines. We will provide MCCTC students the ability to do hands on, real life activities in the classroom using the identical equipment used in Industry. Professional Development will be provided to each MCCTC instructor to make sure they are Industry Certified. Building this fire tower will make training for our students, adult ed, and local fire departments much safer and cost efficient. As we stated before, it was very difficult and not cost effective to train our students and prepare firefighters for actual live burns. With this fire tower, we will be able to simulate actual live burns in a controlled setting. This in turn, will provide a much better trained firefighter. Beyond that, the ability to provide fire safety and public safety awareness to students and staff in and around the Mahoning Valley will be a change in paradigm for our area. Building this state of the art facility will also make it possible for us to increase passage scores of our students in both our daytime and adult program.
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:
Name: Karen H. Larwin, Ph.D. Contact information: REM Consulting, LLC PHONE: 330.509.5266 EMAIL: khlarwin@gmail.edu LOCATION: 14601 Seacrist Road, Salem, Ohio 44460

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.

Dr. Larwin will collect, record, and analyze both quantitative and qualitative data, both formatively and summatively, in an effort to provide consistent evaluation of all program outcomes. This work will include, but not be limited to, examining outcome measures which provide evidence of program impacts on participants, one year (or assessment measure) prior to program implementation through the full five programming period. Outcome data will be provided / generated at the student level, educator level and the district/fire department level.

Multiple-baseline data will be gathered for 2015/2016 (one year prior to implementation) and 2016/2017 (baseline for implementation) from (1) 5th and 8th grade science A.I.R. tests, (2) data from prior students in the firefighter training program (3) graduates for the fire fighter training program as outlined in the table below, and (4) trainer educators. Qualitative data (graduate evaluation beginning year two, trainer interviews and evaluations beginning year one, fire department feedback beginning year one, trainer feedback annually) will be analyzed and reported annually for trends. Data specifically identifying need for additional intervention, professional development, remediation will be conveyed and resolutions will be reported quarterly where available. The data will be aggregate with frequencies of reported occurrences provided in tabular form. Quantitative data will include measures of student progress data via quarterly measures (MAP assessments), student science achievement data for grades 5th and 8th for participants as well as for matching non-participants. Quantitative data will include measures of student progress data via the required five evaluation measures of firefighter students, student passage score/rates on state exams, and graduate injury/incident rates/reports annually for both participating students and student prior to intervention. Teacher level data will be evaluation feedback. As indicated, all outcome measures will be compared with non-participating students. This difference-in-difference (DID) approach to evaluating the impact measures generated across the grant activity period will: (1) provide formative feedback for identifying and implementing program improvements in an ongoing and timely manner; (2) will provide alerts and prescriptive guidance based on existing research; (3) will provide data trends longitudinally, using a multiple baseline approach, across the program period for both the participant group and the non-participant group; (3) will provide a non-participating comparison group for the purpose of generating control group (absence of any intervention) measures; and (4) will provide a non-participating comparison group for the purpose of examining for potential counterfactual support / evidence regarding the causal impact of program activities; (5) will provide a thoroughly reporting of lessons learn on an annual basis so that this information can be used to support other comparative initiatives. This is a gold-standard approach to impact evaluation. The data will be evaluated and reported quarterly, and presented to stakeholders and funders. Data will be analyzed using most appropriate univariate, bivariate, and or multivariate analyses approaches. The evaluation reports will comply with APA Style standards so that information is publication ready. Data to be collected and analyzed, which will be for students in the intervention (treatment) at pre- and post-, and matching schools (control): 5th gr A.I.R. 8th gr. A.I.R. # students who explore fire safety # students who explore fire science 11th gr Fire Evaluation Scores 12th gr State Licensure Results 12th gr Frequency of Injury/Incidents

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.

MCCTC’s Blazing a Pathway’s 5th - 8th grade on-site experiential learning activities are designed specifically to be replicated. This is a project that needs no more than a year for full implementation. This is a true example of shared services. It not only provides opportunities for school age children to not only prepare themselves for careers as firefighters, but other safety vocations as well. Once implemented, our team will look to team with local police and task force organizations to utilize the site for safety training, including hostage rescues, dynamic and covert entry techniques, personal security detail, rappelling and fast rope training, along with a variety of other disciplines. It is imperative to include other safety providers that would help not only enhance safety protocol in our local school districts, but in the community as well. Implementing a grassroots effort that would take shape in at other Career Centers in not only Ohio but across the United States. With safety in our communities and schools more important now, this project would be the first of its kind that could re-shape school culture. Potential replications Dr. Larwin’s evaluation process will provide critical information to MCCTC regarding process & implementation strengths/challenges so the work can be refined & scaled quickly. Possibility of publications MCCTC plans to submit proposals for statewide conference presentations such as the Assoc. For Career Tech Educators summer conference, High Schools That Work national conference and the career technical Best Practices Summit. MCCTC is happy to invite other schools to visit and will readily share resources. We will also apply to present at the state firefighters convention. Dr. Larwin may also submit journal articles or white papers on the project.

By virtue of applying for the Straight A Fund, all applicants agree to participate in the overall evaluation of the Straight A Fund for the duration of the evaluation time frame. The Governing Board of the Straight A Fund reserves the right to conduct an evaluation of the project and request additional information in the form of data, surveys, interviews, focus groups and other related data on behalf of the General Assembly, Governor and other interested parties for an overall evaluation of the Straight A Fund.
PROGRAM ASSURANCES: I agree, on behalf of this applicant, and any or all identified consortium members or partners, that all supporting documents contain information approved by a relevant executive board or its equivalent and to abide by all assurances outlined in the Straight A Assurances (available in the document library section of the CCIP).

I agree
Dr. Ron Iarussi
Superintendent
Mahoning Co Career Technology Center
5/4/2016
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>
<th>Delete Contact</th>
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</thead>
<tbody>
<tr>
<td>Chief</td>
<td>Donald</td>
<td>Hutchison</td>
<td>330-533-4316</td>
<td><a href="mailto:dhutchison@cardinaljointfire.com">dhutchison@cardinaljointfire.com</a></td>
<td></td>
<td>104 Lisbon St., Canfield, OH, 44406</td>
<td></td>
</tr>
<tr>
<td>Chief</td>
<td>Andrew</td>
<td>Frost III</td>
<td>330-799-1008</td>
<td><a href="mailto:irishfire188@aol.com">irishfire188@aol.com</a></td>
<td></td>
<td>82 Ohltown Rd., Austintown, OH, 44515</td>
<td></td>
</tr>
<tr>
<td>David</td>
<td>&quot;Chip&quot;</td>
<td>Comstock</td>
<td>330-757-8268</td>
<td><a href="mailto:dcj@csandw.com">dcj@csandw.com</a></td>
<td></td>
<td>111 S. Main St., Poland, OH, 44514</td>
<td></td>
</tr>
<tr>
<td>Karen</td>
<td>Larwin, Ph.D.</td>
<td>330-509-5266</td>
<td><a href="mailto:khlarwin@gmail.com">khlarwin@gmail.com</a></td>
<td>REM Consulting, LLC</td>
<td></td>
<td>14601 Seacrist Road., Salem, OH, 44460</td>
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</table>
## Implementation Team

<table>
<thead>
<tr>
<th>First Name</th>
<th>Last Name</th>
<th>Title</th>
<th>Responsibilities</th>
<th>Qualifications</th>
<th>Prior Relevant Experience</th>
<th>Education</th>
<th>% FTE on Project</th>
<th>Delete Contact</th>
</tr>
</thead>
<tbody>
<tr>
<td>John</td>
<td>Zehentbauer</td>
<td>Assistant Superintendent</td>
<td>John will handle project oversight and partnership development, ensure project aligns with school/district's overall mission and improvement plans; manage project budget, conduct walk-throughs and observations of project implementation to continually provide formative and summative feedback for staff regarding implementation of blended instructional model. Lead will work closely with Project Manager to ensure all project outcomes are completed on time and within budget. She is the direct supervisor of Project Manager. They will meet regularly to review progress, address barriers and John will support Project Manager in ensuring project success. Lead will facilitate school/district's Project Leadership Team. These meetings will focus on monitoring progress and reporting outcomes. John will continue to reach out to new partners to provide new opportunities and experiences for collaboration for district partners and students.</td>
<td>John has been at the MCCCTC for 25 years and has knowledge in managing career and technical programs grants and numerous programming activities. John has started over 10 programs at the MCCCTC and has ensured successful follow up and program improvements throughout Mahoning County and beyond. He has also developed Career Technical program curriculum and the purchase of equipment for all the programs associated with the district. John has overseen the rebuild of 35,000 square feet after a school fire in 2007 and several additional new construction projects.</td>
<td>John has managed several grants both at the local, state and federal level. Grants have included design build of infrastructure, purchase of equipment and curriculum development projects. He has been responsible for data collection and reporting for follow up.</td>
<td>Pittsburgh Institute of Aeronautics Assoc. In spec. Technologies (Aviation Maintenance) Kent State Univ. B.S. Career and Technical Education</td>
<td>40</td>
<td></td>
</tr>
</tbody>
</table>
Dr. Karen Larwin, Ph.D. will collect, record, and analyze both quantitative and qualitative data, both formatively and summatively, in an effort to provide consistent evaluation of all program outcomes. This work will include, but not be limited to, examining outcome measures which provide evidence of program impacts on participants, one year (or assessment measure) prior to program implementation through the full programming period. Outcome data will be provided/generated at the student level, educator level and the LLI level. Multiple-baseline data will be gathered for 2015/2016 and 2016/2017 from available achievement measures/tests and value-added scores to serve as a baseline measures for all participant and non-participant students. Qualitative data (teacher daily, weekly, bi-weekly reports, LLI reports) will be reported quarterly based on presenting trends. Data specifically identifying need for additional intervention, professional development, remediation will be reported and resolutions will be reported where available. The data will be aggregate with frequencies of...

Dr. Karen H. Larwin, has a Ph.D in Evaluation, Measurement, & Statistics from Kent State University. She has also been an active member and chair for the quantitative section of the American Evaluation Association since 2006 and has chaired the American Evaluation Associations committee for Evaluator Workshops. Dr. Larwin has provided teaching/training in the areas of program and process evaluation, basic and advanced quantitative and qualitative research design and analysis since 2006. She has been working in program evaluation since 2003 and has completed in excess of one hundred and fifty program evaluations/needs assessment reports in the areas of STEM, K-12 education, transition credits, health education, etc. Dr. Larwin is recognized nationally as a quantitative methodologist, and serves as the chair the American Evaluation Association's quantitative section since 2006. Dr. Larwin is currently involved in overseeing a program evaluation and needs assessment for the United Way of the Mahoning Valley, focusing specifically on the educational and social services and needs for a large local community school system. She serves as the REEP evaluator, and recently completed a multi-year community health education evaluation...

Dr. Larwin is considered to be an expert in the use of data across all analytical levels, utilizing the full spectrum of quantitative and mixed methods approaches. Dr. Larwin has a Master's degree in Evaluation and Measurement and a PhD in Evaluation, Measurement, and Statistics from Kent State University. She is formally trained in advanced quantitative and qualitative methods, psychometrics, and measurement theory, and has taught graduate level courses in these areas since 2006. Additionally, Dr. Larwin has continued her education as a graduate of the Stanford University Program on Research with Large Sample Data sets, the University of Madison Wisconsin's Program on Small Sample Research & Evaluation; and a graduate of Northwestern University's Program on Advances Methods Experimental and Quasi-Experimental methods. In addition, Dr. Larwin has attended trainings and is certified as an evaluator with the...
| Suzette Jackson | Science Supervisor for the Mahoning County Educational Service Center | ESC representative and support for integration of curriculum | As a Science Supervisor, one of the responsibilities is to help design innovative curriculum in partnership with teachers to improve science learning in our partner school districts. In working closely with the districts’ science teachers, the designing and sharing of lessons that are aligned to both the Learning Standards for Science and ELA already exists. | Co Writer, facilitator, and project coordinator of OPFERST, a MSP funded grant for science professional development in partnership with Youngstown State University that spanned over 3 years (2006-2009) | Higher Learning Commission and the Council on Accreditation of Education Programs (CAEP) and is an approved REEP evaluator for the State of Ohio. |

Quantitative data will include measures of student progress data via Progress Monitoring, quarterly measures (suggest TerraAnova), student value-added data and achievement data, as well as student attendance data. Teacher level data will include PD dosage (attendance), fidelity of running reporting, fidelity of PD implementation quarterly, as well as Value Added scores, Danielson Domain 1-3 scores, and aggregates of student progress measures. LLI measures will include fidelity reports about services and supports rendered, as well as aggregates of teacher outcomes. This is a gold-standard approach to impact evaluation. The data will be evaluated and reported quarterly, and presented to stakeholders and funders.

Higher Learning Commission and the Council on Accreditation of Education Programs (CAEP) and is an approved REEP evaluator for the State of Ohio.
| Jill Marconi, Poland Middle School Science/STEM teacher | Jill is a veteran teacher who serves as a model for many other science teachers. Her classroom and her instruction is often observed by science teachers from other districts. In addition to frequent visits, she always includes conversations with the teachers who have observed. She shares with them aspects of the lesson that cannot be directly observed such as the planning and the pre and post assessing. Jill has also presented to groups of teachers at various professional developments. | Jill implemented a new course for students this year. The course focuses on inquiry and writing. After completing a Project Based Learning training through the Illinois Mathematics and Science Academy, Jill began the planning of this new course with full implementation this school year. | Masters of Science in Education (Science Grades K-8) |

| Blaise Karlovic, Treasurer-CFO | Oversee fiscal implementation of the grant | Certified as a treasurer in Ohio | Certified as a treasurer in Ohio | Certified as a treasurer in Ohio | 2 |