

The following data is from the first mid-year report submitted by the Idaho STEM EcosySTEM to Idaho STEM Action Center.

Ecosystem Partners	Regions							TOTALS:
	1	2	3	4	5	6	Statewide	
Pre K-12	15	8	31	2	22	9	6	93
Higher Education	1	17	18	4	12	5	6	63
Out-of-School	10	3	2	0	0	2	16	33
Non-Profit	2	1	10	2	3	2	7	27
Industry	6	3	7	3	4	5	1	29
State/Local Government	0	0	0	2	2	3	13	20
Parents	0	0	3	0	0	0	4	7
Legislature	0	0	0	0	0	0	5	5
Other	0	0	0	0	1	0	1	2
TOTALS:	34	32	71	13	44	26	59	279

*Totals as of December 18

	# of Junior Teams	Anticipated # of Students	# of Senior Teams	Anticipated # of Students	
North Showcase		9	46	0	0
Southwest Showcase		4	27	1	4
Southeast Showcase		1	6	6	33
Statewide Totals		14	79	7	37

	# of Sites/Schools	# of Students	Year 1 Students	Year 2 Students	Year 3 Students	
STEM INNC	2	12	10	2	0	
SWISH	4	25	17	5	3	
ISEE STEM	7	55	46	5	4	
Statewide Totals	13	92	73	12	7	

	Number of New Contacts	Est. PreK-12 Educator/ Admin reach	Est. Higher Educator reach	Est. Student reach (Prek- 20)	Est. OOS reach	Est. Industry reach	Est. Gov reach	Est. Donor reach	TOTALS:
STEM INNC	16	39	31	405	29	27	2	9	542
SWISH	82	128	15	1855	103	26	1	0	2128
ISEE STEM	67	83	40	883	24	39	7	0	1076
Statewide	57	669	72	507	473	334	57	7	2119
TOTALS:	222	919	158	3650	629	426	67	16	5865

Name of Activity/Outreach- STEM INNC

INNC July general meeting
July Steering Committee
August Steering Committee
August general meeting
Sept general meeting
Sept Steering Committee
Latah County Fair Mtgs with Co-Chair
Marketing materials mtgs for Fair

Collaborate with 40+ Partners for Fair

Passport to STEM at Latah Co Fair...physical time at Fairgrounds
IASA conference
STEM conference at Borah
Meet with Fair Director and Assistant

Zoom with HYLS Lymaris Ortiz Perez
STEMAC/Ecosystem Webinar
ION Power Up Summit
AT&T Event Meetings
STEMAC/Ecosystem Webinar
Grants Committee for Rubric
Hivebrite meetings
Group Email updates to 215 EcosySTEM partners See tab I added
"PartnersIndiv" to see list
Weekly EcosySTEM meetings
Hub Coordinators meetings

Survey Monkey Apply initial meetings then follow-ups with team
CSO Planning Meetings
Women Innovators Initial Mtg
Inland Northwest Workforce Council
Area Health Education Center Advisory Board
Mtg w Christina Feliciano about YAP in Regions 1 and 2
LEGO Education Meeting
Oct General INNC Mtg First Thurs
Oct Steering Committee
AT&T Laptop Event
Transition and delivery of laptops
CSO Leadership Training
IBE Sandpoint Member Meeting
IBE Lewiston Member Meeting
IBE Coeur d'Alene Member Meeting
IDSEF Meetings
CSO meeting with Jim Buckler, St. Marie's Middle School
STEM INNC Steering Committee

STEM INNC Monthly Meeting
ISEE STEM Working group meeting
November CSO Meeting
Meeting with Jennifer at Learning Blade
ALICE Task Force Monthly Meeting
Meeting with Janet Mansinne from Knowledge Matters
Meeting with Katie Bosch-Wilson re: CS Ed Week
EcosySTEM Convening Planning meeting
Labor Economist Webinar
Meeting with Maren Maier, STCU

National Forum to Advance Rural Education Virtual Conference
Meeting with Steve Beyerlein
EcosySTEM Convening Planning meeting
Learning Blade Meeting
Hour of Code Industry Training
Meeting with Kristin Parker, KTEC
Meeting with Alex Reader, STIIX
ISEE Learning Blade Webinar
Live Q&A Grant Session
CSO Meeting with Zac
ISEE Learning Blade Webinar
CS Ed Week Meeting with Julie Anderson and Alayna Utt
ISEE STEM Steering Committee Meeting
Idaho Hub Coordinator Meeting with partners
STEMConnector Webinar
STEM EcosySTEM Educator Prep & Support Working Group
STEM INNC Steering Committee
Nez Perce Tribe's 14th Annual STEM Fair
STEM INNC Monthly Meeting
SWISH Steering Committee Meeting
CEDA - STEM INNC Visit
Meeting with Alayna Utt
Meeting with Science Olympiad
SWISH Action Group Meeting
NIBCA Young Professionals Social

Name of Activity/Outreach- SWISH

STEM Conference
LEGO Store Grand Opening
STEM Day at the Fair
Children's Museum of Idaho Space Day Event
STEM Designation Planning Meeting
W.IN Meeting
KIPR Meeting
Onramp Meeting
Education Advisory Board Committee for Discovery Center
SWISH August Steering Committee Meeting
Basin Teacher STEM Mentorship
ISEE Steering Meeting
Botball Meeting
Botball Meeting
BSU Micron Student Success Center Meeting
Meeting with Sara Hagenah and Katie Bosch-Wilson
Ecosystem funding/rubric discussion meeting
Murdock Grant Meeting & Follow Up
STEM AC/ Ecosystem Webinar
GIMM Lab Meeting
Power Up Summit
Waypoint Conference
Working with Maya Duratovic at BSU on Materials Camp
Chief Science Officer Training
Garden Valley STEM Leadership Meeting
Garden Valley Library Visit
Aerospace Day Planning with Riverside
AT&T Laptop Event
SWISH Steering Committee
Shop Talk
LINGO Meeting
Rural PD Discussion
Community STEAM Day
STEAM Happy Hour
CSO Leadership Training Institute
HS CS Outreach
Topping Out Ceremony at Children's Museum
Garden Valley CSO Training
IBE Member Meeting
Integra SWISH Intro
Idaho AEYC
Squishy Circuits Activity
SWISH Steering Committee
ISBA Annual Convention
CSO Meeting at East Valley Middle School
Maple Grove PTO Meeting

SWISH Action Group Meeting
Grant Support Meeting
Hour of Code Check In
Learning Blade Webinar
Hour of Code Basin Elementary
SWISH Steering Committee
Ready & Idaho STEM Meeting
IDX Support Chat
Middleton Visit
SWISH Action Group Meeting
Educator Action Group Meeting

Name of Activity/Outreach- ISEE STEM

CSO/ Women in STEM Meeting
Meeting with Jessica Henderson- Weston Idaho
Funding meeting with ISU Center for New Direction
Welcome Back Orange and Black
Aberdeen CS PD
Perpetua Support Meeting with Sho-Ban Jr/ Sr HS
Meeting with Code Ninjas
Sho-Ban Jr/Sr HS STEM Designation Meeting
ISEE STEM Steering Committee Meeting
ISEE STEM Working Groups Meeting
East Idaho Tech Summit
Kind Community Kick-off
Bear Lake School District PD
Teton Boy Scouts Council Office STEM-A-RAMA
STEMx Classroom visits
LEGO Education Meeting
ISEE STEM Fair Committee Meeting
ISEE STEM Steering Committee Meeting
Esports Visit- Thunder Ridge HS
North Canyon College and Career Fair
Shoshone-Bannock STEM Night
Idaho Library Association Annual Conference
ISU STEM Lunch
GAP Board Meeting
ISEE STEM Working Group Meeting
Twin Falls IBE Meeting
Knowledge Matters Coffee Meeting
ATT Event?
Idaho Falls IBE Meeting
TMC Presentation
CSO LTI
Podcast Interview with Chris Stoker
STEMx
Aberdeen Middle School Site Visit
American Heritage Charter School CSO meeting
Temple View Elementary CSO Meeting
ISEE STEM Steering Committee Meeting
ISEE STEM Working Group Meeting
Meeting with Idaho Science Coaches- ISEU
Meeting with Dana Cotton- CEI, Salmon
Meeting with Sonia Martinez and Kitty Griswold- ISU
ISEU Meeting
Salmon STEM Week
Hillcrest HS Science Fair
Valley Middle School Windmill building

Meeting with Sho-Ban- CSO update, STEM Designation update,
Convening discussion, and funding reminder
HOC/ CS Ed Week Prep Meeting with Katie BW
Learning Blade Webinar
ISEE STEM Event Planning Committee Meeting
White Pine STEM Academy CSO Check-in
Meeting with Penni- grant support
Kershaw Intermediate School HOC/ CS Ed Week events
ISEE STEM Steering Committee Meeting
Jerome High School HOC/ CS Ed Week events
Aberdeen STEM Night
William Thomas Middle School HOC/ CS Ed Week events
Bear Lake Middle School HOC/ CS Ed Week events
Meeting with Chris Guthrie
ISEE STEM Working Group Meeting
ISEE STEM Event Planning Committee Meeting

Name of Activity/Outreach- Statewide

Waypoint Conference
Idaho Library Association Conference
IBE Twin Falls Member Meeting
IBE Pocatello Member Meeting
IBE Idaho Falls Member Meeting
Wild West Ecosphere Meeting
OnRamp STEAM Day- Early STEM Activity
OnRamp STEAM Day- Networking Event
CSO Leadership Training Institute
Women in STEM Panel- WICON
STEMx Member Meeting
STEM Educator Prep & Support Working Group
IBE Southwest Member Meeting
Digital Access for All Idahoans Coalition Call
Make It at the Library Conversation
ISBA Annual Convention Exhibit Show
LITT Makerspaces Meeting
TMC Leadership
HOC- White Pine Elementary
HOC- Whittier Elementary
HOC- Riverside Elementary
HOC- White Pine Elementary
STEM Educator Prep & Support Working Group
HOC- Whittier Elementary
HOC- Monroe Elementary
Early Childhood STEM Working Group
Wild West Ecosphere Meeting
TMC Shop Talk
BSU-REP4 competition
STEMAC/Ecosystem Webinar
SLECoP
STEMx
Shoshone-Perpetua Meeting
ION Policy Workgroup
ICfL - Makerspace Webinar
Micron/FIRST Robotics
Ecosystem Working Group
BSU-Evaluation Project
University of Idaho
Jeff Stratton/Francesca Bessey
STEMAC/Ecosystem Webinar
STEM Day at the Fair
CBS2
ION Steering Committee
REDI Conference
Idaho Falls CAB

STEMx
ION Power Up Summit
AT&T Event Meetings
Gizmo
IBE Board Meetings
IBE Executive Team Meetings
ION - TMC Leadership Team
Jeff Stratton
Lisa Blank -
PEAR Institute - Evaluation meetings
STEMAC/Ecosystem Check Ins
Waypoint Conference
Dee Mooney meeting
ATT Laptop Distribution
IBE Member Meetings
IBE Member Meetings
LCSC-President Meeting
IBE Member Meetings
STEMx
ITC-i-HUBS meeting
Early Childhood Apprenticeship Meeting
Micron - Workforce Consortium
ISBA Conference
Molly Auclair-Learning Ecosystems NE
TMC Leadership meeting
Sid Sullivan Meeting
Ruralite Interview
Early Childhood Apprenticeship Meeting
David Pennock - IF Zoo
Riverside Elem Hour of Code
Whittier Elem Hour of Code
TIES - NSF Planning Meeting
INL-Jennifer Jackson meeting
TMC - Shop Talk
Wild West Ecosphere
Peter Risse - BSU

Organization Awarded	Region/Statewide	Amount of Award	Intended Outcomes	Metrics Collected	Matching Funds
Jerome High School	Region 4	\$ 5,000.00	<p>Goals and Objectives:</p> <ol style="list-style-type: none"> Increase STEM awareness: The primary goal of the program is to enhance students' awareness and understanding of STEM disciplines, particularly in the context of robotics. By participating in the program, students will develop a deep appreciation for the application of STEM principles in real-world scenarios. Team Expansion: The program aims to expand the number of robotics teams from 4 to 6, accommodating the growing interest and demand among students. Each team will consist of a maximum of 7 students, ensuring an optimal learning environment and promoting effective collaboration. Comprehensive and Innovative Indicators: The program will utilize comprehensive and innovative indicators to measure the progress and success of the teams. These indicators will include factors such as team performance in competitions, student engagement and enthusiasm, growth in technical skills, and the ability to apply STEM knowledge to solve complex challenges. Alignment with EcoSTEM Commitment: The goals and objectives of the robotics program align strongly with the EcoSTEM's commitment to promoting STEM education and fostering a culture of innovation. The program will actively seek opportunities to connect with the broader EcoSTEM initiative, collaborating with other schools and organizations to share resources, best practices, and innovative ideas. 	<p>To measure the goals outlined for the robotics program in the Jerome School District, we will implement the following strategies:</p> <ul style="list-style-type: none"> 1. Goal: Develop a comprehensive plan for measuring the program's impact on students grade. Objective: Create a detailed framework for collecting and analyzing data to assess the effectiveness of the robotics program. Objective: Identify relevant metrics that align with the program's objectives and define them clearly. <p>Measurement Strategies:</p> <ul style="list-style-type: none"> - Develop surveys or questionnaires to gather feedback from students, mentors, and other stakeholders about their experiences and perceptions of the program. - Collect data on student engagement, learning outcomes, and team performance through observations, assessments, and competitions. - Analyze pre- and post-program assessments to measure student growth and progress. <p>2. Goal: Utilize findings of the impact on students grades to inform decisions and improve the project.</p> <ul style="list-style-type: none"> Objective: Develop a plan for analyzing and interpreting the collected data to gain insights into the program's strengths and areas for improvement. Objective: Use the findings to make informed decisions about resource allocation, curriculum enhancements, and professional development opportunities for program staff. Objective: Implement a continuous improvement process that incorporates feedback from stakeholders and adjusts program strategies based on the data-driven findings. <p>Measurement Strategies:</p> <ul style="list-style-type: none"> - Conduct data analysis to identify trends, patterns, and areas of success or improvement. - Share findings with program stakeholders and engage in collaborative discussions to determine appropriate actions. - Regularly review and update program strategies based on the data-driven insights and feedback received. <p>By implementing these measurement strategies, the Jerome School District's robotics program will be able to effectively assess its impact, gather high-quality data, establish a timeline for evaluation, and utilize this data to make informed decisions and improve the program.</p> <p>This is a project-based program. Formative work includes the study of the atmosphere, the physics of gases as pressure and temperature change, and the movement of air and water around the globe. Students will pass a test prepared by the National Weather Service. Project-based scoring will be based on the successful completion and launch of two weather balloons, and the successful construction of our weather station.</p>	
Wood River High School	Region 4	\$ 1,106.78	<p>Our project is unique in that we will leave a legacy for the school and the community. The weather information provided will be real-time, and all will have access. This is a great project as students study the measurements and share their observations via the internet. The balloons are fantastic for student engagement. Designing the platforms, studying how gases work in the atmosphere, and coordinating with government agencies are aspects of science most students do not experience.</p> <p>Goal 1 - The students will construct platforms that will attach to a weather balloon. Once launched the balloon will be tracked by GPS. When recovered, the students will download and analyze the data.</p> <p>Goal 2 - The students will construct a weather station and place it on campus. This portion of the project asks students to understand all of the measurements the station can make and how our local weather is influenced by global weather patterns. It opens the door to many aspects of life around the planet including climate change.</p>		
Hillcrest High School	Region 5, Region 6	\$ 1,600.00	<p>This fair will align with the EcoSTEM's goals in the following ways:</p> <p>Building awareness of and ensuring access to STEM education opportunities and STEM careers</p> <p>As students design and carry out a science fair project, they learn that science can be applied to any career or interest. In addition, they have an opportunity to interact with practicing scientists to learn about what scientist might do on a daily basis.</p> <p>Aligning STEM education with Idaho workforce needs of today and tomorrow.</p> <p>While learning content is undeniably important, it is also important that students learn to think independently and be able to communicate their thinking to others. By completing and presenting a science fair project, students learn science concepts, scientific writing, and speaking skills. Whether a student plans to enter a STEM field or not, it is important to be able to create and present a coherent argument.</p> <p>Creating successful metrics for STEM education and programming.</p> <p>A science fair provides an opportunity for STEM professionals to interact with students who will someday be working with and for the current work force. The STEM professionals can help a student recognize their strengths and how those strengths might be valuable in the future.</p> <p>Building STEM momentum within the state and nationally</p> <p>Participation in previous science fairs have been growing and as students see the work that other students can do, they have been able to improve their own work. It would be a shame to lose the IDIX and the Artemis/ROADS challenge have project-based learning components that will allow students to research problems and find solutions.</p> <p>In the IDIX challenge students will be researching a problem in the animal science field. They will be using the engineering design model as they problem solve in their groups, find a solution, design a blueprint and model, check with experts, and test their ideas. Janie from Birds of Prey will be presenting for the students, along with our local forestry service and our local vet. The students are very excited about brainstorming ideas for this challenge. They will get to tinker with a 3D print and create a model to showcase at the IDIX challenge. The students will participate in this challenge but they are needing more filament to create our models.</p> <p>The Artemis challenge will be our next hands-on experience. Students will use new technology to design a mission patch, create a habitat on the moon, test out ideas to grow plants on the moon, design and blast off rockets and create a Lego rover that will move supplies on the earth. Students will have an actual visitor that worked on the Apollo to help them with building their</p>	<p>A survey will be sent to participating students and educators to determine the strengths and weaknesses of this fair. The information will be used to improve a future grass roots fair or can be provided to the STEM Action Center if they choose to sponsor a regional fair next fair.</p>	
Lakeland School District 272	Region 1	\$ 1,020.00	<p>Participation in previous science fairs have been growing and as students see the work that other students can do, they have been able to improve their own work. It would be a shame to lose the IDIX and the Artemis/ROADS challenge have project-based learning components that will allow students to research problems and find solutions.</p> <p>In the IDIX challenge students will be researching a problem in the animal science field. They will be using the engineering design model as they problem solve in their groups, find a solution, design a blueprint and model, check with experts, and test their ideas. Janie from Birds of Prey will be presenting for the students, along with our local forestry service and our local vet. The students are very excited about brainstorming ideas for this challenge. They will get to tinker with a 3D print and create a model to showcase at the IDIX challenge. The students will participate in this challenge but they are needing more filament to create our models.</p> <p>The Artemis challenge will be our next hands-on experience. Students will use new technology to design a mission patch, create a habitat on the moon, test out ideas to grow plants on the moon, design and blast off rockets and create a Lego rover that will move supplies on the earth. Students will have an actual visitor that worked on the Apollo to help them with building their</p>	<p>I really like both of these challenges because it is easy to see the step-by-step process that the students are going through.</p> <p>Students have 8 lessons to complete before their Artemis challenge in April. If they miss any lessons they can't attend the challenge and they are super excited to go. Students are already working on ideas for the IDIX challenge. 3 groups were able to go to Moscow last year and they can't wait to attend this year. They are already working on ideas, problem solving and designing a model. We are pulling in experts from our community and the students love it! We will have students present and then pick winning teams to go to the competition. We just had an amazing presentation from Birds of Prey to get the students excited and the girls that won last year presented to teachers and students that will be doing the challenge.</p>	
Children's Museum of Idaho	Region 3	\$ 5,000.00	<p>The Children's Museum of Idaho seeks to expand its STEM Education programming with the completion of the Reach for the Stars Planetarium. Providing STEM field trip for Title 1 schools will expanded learning for additional K-3rd grade students in our community.</p> <p>The Planetarium STEM field trips will dramatically impact students in a holistic transformation, enriching their knowledge base, enhancing skills, influencing behaviors, and shaping positive attitudes toward science. The Planetarium STEM field trips will enhance the astronomy understanding and deepen understanding of Earth and Space Science. Students will gain observation and critical thinking skills. The planetarium visit can ignite curiosity and environmental awareness. And a student's attitude will be impacted by gaining an appreciation for science, cultural and historical perspectives learning about constellations, and create a sense of wonder and awe.</p> <p>Goal: To inspire future scientists and critical thinkers and cultivate a sense of adventure and life-long learning.</p> <ul style="list-style-type: none"> o Objective #1: Support and enhance experiential learning for over 4,500 students through a field trip to the Reach for the Stars Planetarium and its interactive hands-on exhibit. o Activity #1: Offer planetarium shows that introduce children to the wonders of the universe and inspires them to learn more about astronomy and science. o Activity #2: Establish and supervise a creative hands-on exhibit beyond the planetarium to inspire curiosity and wonder while engaging in scientific learning. o Objective #2: Enhance the Reach for the Stars Planetarium exhibit and education activities focused on space exploration, astronomy, astrology, and other science skills. o Activity #1: Provide specialized training for Children's Museum Educators and Program Staff. o Activity #2: Promote the planetarium field trip experience and engage with local school partners to inform teachers of this hands-on experience for their students. o Activity #3: Continually build and develop planetarium and interactive exhibit that engages young learners and offers opportunities for problem-solving and critical thinking. <p>The Children's Museum of Idaho seeks to reach more than 4,500 students in the traditional 9-month school calendar offering 3 field trips per week for 33 weeks for 45-60 students each session. The Children's Museum of Idaho is partnering with local schools, STEM organizations and corporate sponsors to create shared resources to benefit the children in our community. With a grant of \$5,000 from the Idaho STEM Ecosystem, the Children's Museum of Idaho will support 625 students from approximately 15 schools.</p>	<p>The project goals for the planetarium STEM field trip experiences for young children are to inspire curiosity, provide hands-on learning, create real-world relevance, support teamwork and problem-solving, and broaden a student's horizon for future career opportunities.</p> <p>The program outcomes projected for this project will include:</p> <ul style="list-style-type: none"> • Increase Hands-On Learning and Student Engagement: Through interactive exhibits and activities, students will actively engage with STEM principles, conduct experiments, and explore STEM subjects in a dynamic and immersive way. • Enhance Career Awareness: The museum showcases real-world careers, such as pilots, astronauts, farmers, mechanics, doctors, and veterinarians, through interactive exhibits to inspire students to consider future career paths. • Engage Students in Problem-Solving and Critical Thinking Opportunities: Field trips will encourage students to apply analytical and critical thinking skills to solve challenges and explore innovative solutions, promoting intellectual growth. • Offer Environmental Awareness: Through exhibits on Earth and Space science, environmental science, and outdoor exploration, students will develop a deeper understanding of environmental issues and the significance of sustainability. • Provide Long-Term Impact: By providing resources, hands-on activities, and interactive engaging instruction, the museum helps support brain development that will make a lasting impact well beyond the visit. <p>Measuring the learning outcomes of a field trip experiences at the Children's Museum will be done using various methods, as detailed below:</p> <ul style="list-style-type: none"> • Pre- and post-program surveys: Educator and Program Staff will conduct pre-program surveys to gather information about the children's existing knowledge and interest. Similarly, staff will conduct post-program surveys to assess the knowledge gained, interest level, and satisfaction of the children, teachers, and volunteers. • Observation and assessment: Educator and Program Staff at the Children's Museum of Idaho will observe children during the program to gauge their engagement, understanding, and participation. • Teacher feedback: The Children's Museum of Idaho will collect feedback from teachers, support staff and volunteers who participate in the planetarium exhibit. This will be done through surveys, interviews, and comment cards. • Collaboration with schools and educational organizations: The Children's Museum of Idaho has established partnerships with local schools and educational organizations and can request feedback and assessments from teachers or educators. <p>The Children's Museum of Idaho will collect statistics on the number of children and teachers engaging in the field trip alongside the surveys, assessments, feedback, and partner input collected for program evaluation.</p> <p>Outcomes:</p> <ul style="list-style-type: none"> Number of unique schools represented at each event Number of rural/small schools represented at each event Number of companies that provide volunteers Specifics of enrichment activities/speakers at each event All of the above outcomes are easily measured, and can be reported on immediately after the event. Each year we use the numbers to see how we improved from the year before, and how we can improve in the next year. <p># of STEM activities (goal = 30 activities)</p> <p>Student reflections to assess student interest in subject, student impact and determine how to build upon current activities and what new activities to try in future programs (regularly scheduled reflection times at the end of a themed unit will allow us to collect this data)</p> <p>Student portfolios to demonstrate learning (collected as part of activity process)</p> <p>Nampa School District requires parent approval for all non-curricular surveys administered to children. Therefore, we will work into our permission slips to have parents approve students taking the same STEM interest survey before and after attending their field trips. We will work with school and district administration to find a district-approved, research-based STEM interest survey from research literature. This will assess our goal of students developing a stronger interest in STEM. We will work with MOSES to include in our curriculum journaling about how students' lives relate to the natural world. For SnowSchool, we can use journaling in our classroom the day after the experience to allow students to make further connections and share the experiences with their families through journals written home.</p>	
Idaho Quiz and Academic Teams	Region 3	\$ 500.00	<p>The goal of this project is to provide a meaningful, national academic competition opportunity to as many students as possible. We strive to recruit teams from rural areas and smaller communities. We are required by the National Science Bowl to have a minimum of 10 unique schools represented for each event. We recruit volunteers from donor companies and beyond, giving the students exposure to professionals in a variety of companies and STEM fields. We invite speakers/presenters to the events who will broaden students' STEM experiences and encourage them to pursue a STEM career.</p>		
Cascade Public Library	Region 3	\$ 3,500.00	<p>To engage 25 4th-5th grade students/week in after-school STEM enrichment</p> <p>To hold a STEM family engagement night at the library with our after-school partners (Cascade After-School Program and Cascade Cultural Arts Center)</p> <p>To incorporate STEM mentors (natural resource professionals, engineers) into our programs to provide participants with exposure to natural resource careers</p>	<p>Student reflections to assess student interest in subject, student impact and determine how to build upon current activities and what new activities to try in future programs (regularly scheduled reflection times at the end of a themed unit will allow us to collect this data)</p> <p>Student portfolios to demonstrate learning (collected as part of activity process)</p>	
East Valley Middle School	Region 3	\$ 4,437.30	<p>Our goals are to lean on strong, existing outdoor science education programs to get our students experience in the outdoors. We hope that students will develop an interest in STEM related fields from the experiential learning they will have at MOSS and Bogus Basin. For many of our students, access to the outdoors, let alone outdoor education, is not available to them in their everyday lives. Through these field trip experiences, our students will be able to develop an understanding of how their lives relate to the natural world around them. This connection will foster a relationship with STEM where students feel a sense of belonging in a field that is often inaccessible to many of our students.</p>		

Idaho City MS/HS	Region 3	\$ 4,958.90	<p>Goal 1: Embed this technology in my classroom. By the end of May, I will effectively implement at least 1 lesson utilizing databots in each of my four science courses.</p> <p>Goal 2: By the end of December 2024, I will use databots to implement place-based and project-based learning in all 4 of my science courses.</p> <p>Goal 3: By the end of May 2025, students will use their familiarity and comfort with the technology in order to create self-driven, authentic opportunities for research-based problem-solving.</p> <p>Goal 4: The use of databots will improve student understanding of cross-cutting concepts such as patterns and cause and effect relationships. This will be measured using a pre- and post-assessment of students' ability to interpret data.</p> <p>Goal 5: The use of databots will improve students' understanding of mathematical considerations through algebraic relationships that can be revealed and supported through real world applications. By use of the accelerometer I can convey that all the factors involved in a system are proportional to one another such as force = mass x acceleration. This will be evaluated through performance-based assessment in order to see how effective students manipulative, observational, and interpretive skills are. Pre and post-based questions will ask students to predict and define how factors are related within systems such as the movement of an object. Mathematics will become more practical and logical with long-term use of databot 2.0 devices.</p>
Invent Idaho	Statewide	\$ 10,000.00	<p>The Invent Idaho objectives are to: 1) teach and encourage entrepreneurship thinking and real-world problem solving, 2) provide a network of student invention recognition, awards and events in 3 regions in Idaho, 3) provide a culminating Invent Idaho State Finals event and forum for students to showcase their inventions as winners from previous levels of competition, 4) train educators in the student invention process and to apply these concepts in STEM education, 5) seek and include under-represented and underserved students, and 6) provide an opportunity for young inventors to attend the Idaho Regional events and Invent Idaho State Finals.</p> <p>The specific goals and targets for the program are: To have at least 150 participants at the North Idaho Regional competition and 100 at each of the Southeastern and Southwestern Regional events in January 2024, as well as at least 100 young inventors at the Invent Idaho State Finals in April, 2024; to connect to at least 10 young inventors with University of Idaho mentors; and 3 attendees at IUI of EXPO 2024; to train at least 3 new teachers and/or after-school facilitators in each of the 3 regions prior to the Regional events; to ensure overall participation includes at least 2% underrepresented and underserved students; to provide at least 10 travel scholarships to students/parents who demonstrate financial need on an application to attend their Regional competition or State Finals;</p> <p>The teacher training opportunities directly align with the EcoSysSTEM's commitment to boosting awareness of STEM and specifically, invention education. The PR and media attention for creative, inventive kids is phenomenal and strongly exhibits for Idahoans the success of STEM in their communities. For example, one second grader with her invention from Idaho Falls was recently featured in the October issue of "Woman's Day" magazine, which certainly showed success for her community! In addition, two Idaho young inventors who recently won major awards at the National Invention Convention were featured on an Idaho Education radio broadcast. Finally, two Southwestern Regional 2023 winners were featured in Education News, which is a statewide publication that certainly gave huge recognition to the Boise and Nampa areas for their success.</p>
Idaho Future City Proj (Travel)	Statewide	\$ 10,000.00	<p>The goal of the Future City Program is to foster an interest in STEM and future STEM careers to schools throughout Idaho. Future City combines an engineering challenge with a "hands-on" application as students present their vision of a city of the future by working in teams along with their teacher and a volunteer engineer mentor. Fundraising is done to waive the registration fee as well as \$100 stipends and travel funds are provided to schools to remove financial barriers from participation.</p> <p>Schools have the option to participate as a single classroom or in teams of 3 students with each school allowed to have up to 3 teams compete at the Idaho Regional Competition. Teachers have the flexibility to offer the program as part of a class curriculum or before or after school project as well.</p> <p>Efforts are made to recruit mentors to assist teachers in the program as well as to connect students to STEM professionals in the community. Fundraising is done with Idaho engineering companies including technical and professional societies with sponsors encouraged to create and judge special awards related to their STEM field. More than 150 STEM professionals participate either in advance or on competition day in supporting this outreach program.</p>
Boise State University	Statewide	\$ 10,000.00	<p>Our goal is to have 30 Idaho teachers attend the camp which in turn will provide materials science education to at least 750 children from K-12 all over Idaho. Graduating this camp gives Idaho teachers continuing education credits, professional development hours, and content/supplies and curriculum activities to bring back to their schools and students. This camp brings together the national-level STEM activities and curriculum from the ASM foundation, the amazing learning facilities at BSU including ample and well-equipped classroom and laboratory space so that each teacher can actively participate, and interested STEM teachers from across the state that would not otherwise be able to collaborate and learn from other teachers, in-person.</p> <p>Materials Science is a less-known field of science and engineering, even some of the previous participant STEM teachers did not know much about the field of Materials Science. However, many current technological and societal issues require innovations in materials to help solve - including battery development, resource utilization and extraction, fossil and alternative energy, transportation and space systems, infrastructure reliability, microelectronics, water purification, etc. By attending this camp, teachers gain a new awareness of the science behind materials properties and performance, and are provided a chance to see Boise State University research facilities and equipment, hear about current materials research at BSU, and also learn about related regional industries. The teachers build on their background science training and are then able to help spread awareness to their own students of the opportunities in the field of materials science and to help interested students see what a career in materials science means.</p>
University of Idaho, College of Engineering	Statewide	\$ 10,000.00	<p>Our grant goals and objectives include:</p> <ol style="list-style-type: none"> 1. Access: Access to STEM for participants in rural, low socio-economic schools, and traditionally underrepresented populations in engineering and in Idaho, including women and Hispanic populations. 2. Increase opportunities for K12 traditionally underrepresented populations to access STEM related activities & class visits. The population includes girls, participants with low socioeconomic status, and rural schools. <ol style="list-style-type: none"> a. Introduce elementary, middle/jr. High and high school age students to the engineering design process, engineering concepts, and computer science concepts. 3. Connection to Real-World: <ol style="list-style-type: none"> a. Introduce K12 students to real-world applications of engineering and computer science through hands-on STEM activities in the classroom. 4. Go-on Rates: Increase in pursuing STEM in high school, college and beyond <ol style="list-style-type: none"> a. Increase interest of K12 students to pursue engineering and computer science in high school, college and beyond. CoE ambassadors collect Tell Me More interest cards and respond to student questions via email to share about U of I scholarships, Idaho LAUNCH scholarship, and general college readiness questions, in addition to questions about engineering and computer science college and career questions. 5. K12 Educator and Parent Engagement <ol style="list-style-type: none"> a. Engage K12 educators in building connection with the U of I College of Engineering for future collaboration at STEM outreach events. b. At CoE sponsored STEM outreach events, CoE staff meet with parents/educators to provide STEM resources through the collaboration, promote the EcoSysSTEM and the Idaho STEM Action Center grants and resources, and promote resources like Idaho's EmpoweringParents.com initiative. We piloted a parent/educator info session at our annual CoE Women in Engineering Day and had positive feedback.
Bulbotts Robotics	Region 3 (Travel)	\$ 2,000.00	<p>Our main objectives in travel is to give our students the opportunity to test their robot before the Idaho regional competition. The better our robot is, the more recognition we bring to STEM.</p>

I will use pre and post tests, surveys, and performance-based assessments to evaluate students' comfort with this technology, advancement towards previously stated goals, and likelihood of entering future careers within the STEM industry.

January to February 2024: receive grant funding and promptly purchase databots and iPads.

March to June 2024: Implement technology in all four classes. Survey students based on ease of navigating devices and exposure to interpreting data effectively. By June, performance-based and standards-based end-of-course assessments will be administered in all four courses.

August - December: Implement place-based and project-based learning in all 4 of my science courses. The success of these projects will be measured using performance-based assessments and formative assessments. This will determine whether they are effectively design, carry out, and interpret the findings of their investigations.

January-May: Students implement self-generated, authentic opportunities for research-based problem-solving projects. The goal of this is for students to see themselves as STEM-capable and competent which will allow them to be competitive within the industry. This will be measured by administering the "STEM Career Interest Questionnaire" from Stear STEM Learning and Research Center both before and after to calibrate changes in STEM career interest.

Future and periodic check-ins with past participants will reveal whether students pursued educational opportunities and STEM careers. Similar trends have been tracked by the district previously and would be a feedback from parents and student participants is essential for maintaining and improving the high quality of the Invent Idaho experience. Parents and students are surveyed each year following the events and will continue to receive open-ended surveys in 2024. Parents of the young inventors (including National attendees and parents of students who did not qualify to move on to higher levels of competition) provide responses which are analyzed to assess the opinions of those highly successful inventors and those who may have needed more scaffolding and support to be successful. Sample questions on the survey include standard prompts such as "What did you like best/least about the invention process?" and "What did you like best/least about the Regional (or State) event?" In addition, parents and students are asked "What could Invent Idaho (or the National Invention Convention) have done differently to make your experience more rewarding?" Thematic analysis of the subjective feedback from the surveys has enabled Invent Idaho to adjust and fine tune the program each year in the spirit of continuous improvement. The most common responses from students recognize the ice cream social at the State Finals as being one of their favorites, while the amount of writing in the inventor's journal is one of their least favorite items. Despite this feedback, Invent Idaho participants are regularly scored very highly for their utilization of their journals at the National Invention Convention, so we are interested in retaining this important component to challenge participants to document their invention process and evolution of thinking. Interestingly, parents who have attended the National Invention Convention overwhelmingly respond that it was a fabulous experience, even if their child did not place. Most indicate they would definitely attend again if their child qualifies, and that it was worth the money (even though it is tremendously expensive for families to attend Nationals). Analysis of parent responses regarding the Invent Idaho State Finals at the U of I indicate that the awards ceremony and the Science and Engineering Demonstrations were motivational to inspire their children to attend college, and they hope to qualify next year because it was such a positive experience. Feedback surrounding the "product pitch" portion of the competition informed us to rearrange the presentation schedule and location to ensure that the younger first and second grade inventors can present early in the evening before bedtime. This also led to establishing meeting locations for the little ones to safely reconnect with parents after their "pitches" were the National Invention Workshops throughout the State, assessing the number of new and returning schools and districts through the state, through the quality and success of Idaho young inventors at the National Invention Workshops as evidenced by the number of awards received; and finally, through anecdotal stories and feedback from parents and young inventors. Each of the quantifying measurements are simple comparisons of 2024 numbers to 2023 numbers. The analysis of under-represented and underserved populations, as well as rural opportunities to participate is gathered through optional self-identification by parents during the registration process on questions such as male/female/prefer not to answer and size of town/city/rural areas. Interestingly, for many years, the number of female student inventors has out-numbered male participants with approximately 54% female to 46 % male, thus indicating Invent Idaho is reaching the female population. Further analysis is pursued to determine why some schools do not return, which is gathered by emails contacting previous school facilitators. The anecdotal stories and feedback give the most realistic picture. For example, one high school student's quote after attending the National Invention Convention stated, "It was a life-changing experience." This student then applied to be a National Invention Convention student reporter and was selected as one of only 3 student reporters for the 2024 National. Science teachers will improve their technical skill levels to such an extent that they will be sufficiently knowledgeable and empowered to successfully advocate for systemic curricular change.

Overall, the camp met my expectations. Overall, the camp met my professional development needs as a teacher. New ideas and approaches to teaching were gained. Prepared to implement new labs/demonstrations. Materials science concepts can and will be used in my classroom. More prepared to engage learners at all levels of understanding.

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Surveys are done of students, educators, mentors, judges and volunteers every year to provide feedback on how to improve the experience for all participants and are utilized in the planning of future programs. Past surveys have shown that as a result of participating in the Future City program students discover engineering, can see themselves becoming engineers and want to keep doing more engineering activities or clubs. Educators report that through the Future City program their students learned how to use engineering to solve real-world problems by applying math and science and students reported that Future City helped them see math and science are important to their future. Students also learn how their communities work and become more informed citizens and report that Future City helped them to appreciate all of the engineering that goes into a city as well as made them more aware of civics issues like politics and taxes.

ASM collects surveys of all participants following the week-long camp. These surveys and 6-month follow-up data are collected from all camps in all states nationally and contribute to the annual program assessment conducted by the ASM foundation to effectively promote STEM in K-12 education. From previous ASM assessment of outcomes, the camp has a broad impact - Short-term: 90% of attendees will increase their knowledge of materials science concepts and teaching strategies. 90% of attendees will feel more confident to teach materials science concepts in the classroom. 80% of attendees will reproduce at least one demonstration or lab in their classrooms in the year following the Camp. 70% of attendees will implement at least four modules into their existing science classroom curricula.

Long-term: Science teachers will improve their technical skill levels to such an extent that they will be sufficiently knowledgeable and empowered to successfully advocate for systemic curricular change. Ultimately, the program endeavors to increase the human pipeline in STEM post-secondary education and technical careers. Teachers will create environments that promote high levels of learning, and a more students become aware of and excited by engineering and technology career options, the number of students entering related post-secondary programs will increase.

The BSU organizers (including staff, MSE professors, student volunteers) will also meet with the ASM foundation organizers to go over feedback and implement improvements for the next offering. For example as a result of feedback from the 2023 camp we have decided to offer a housing option for 2024 to enable access to this opportunity for teachers beyond the treasure valley. Further, in the post camp evaluation, if we fall below 70% on the following answers, we will no longer host the camp in the future:

Overall, the camp met my expectations.

Overall, the camp met my professional development needs as a teacher.

New ideas and approaches to teaching were gained.

Prepared to implement new labs/demonstrations.

Materials science concepts can and will be used in my classroom.

More prepared to engage learners at all levels of understanding.

The meaningful impact the CoE Ambassador program has had on growing the STEM pathway from K12 to college continues to be successful and our goal is to strengthen and develop new connections statewide. This program applies best practices for inspiring K12 students to engage in and pursue STEM including mentorship and connection through near-peer interactions - showing kids the diverse career paths and meaningful reasons for pursuing STEM as a career. Each year we continue to improve our tracking system to evaluate impact. 2022-23 academic year highlights include:

- 38% of high school student seniors who attended the 2022 Women in Engineering Day (Region 2) enrolled in the University of Idaho College of Engineering or College of Science Fall 2023
- 800+ middle school and high school students participated at K12 STEM Outreach events
- 65% of the 2022-23 CoE Ambassador team represented by women
- 36 Idaho schools reached, and 500+ students mentored by the CoE Ambassador team through small group work and stem club activity

For the 2024 calendar year, the CoE Ambassador team has a new process for class visits that we will pilot to better measure outcomes. During each class visit we will collect data on STEM learning objectives, student interest in STEM in college through Tell Me More interest cards, and we will send educators a follow-up survey to for formative evaluation and impact.

At the end of each semester, we will create impact reports to determine touchpoints throughout the state and report on our goals, objectives, and metrics; quantitative output results -- number of schools and students we interact with, number of educators, and number of outreach events, and qualitative outcome results -- changes in attitude, behavior, and/or knowledge of STEM related metrics.

- Methods
- Activity Engagement: Ambassadors will track student engagement and learning by the activity outcomes -- as students learn about specific engineering concepts, by the end of the class, they'll have designed a prototype of a STEM activity, built the activity, and tested the activity.
 - Engineering Design Process and Reflection: For all K12 classes, students use worksheets to complete activities using the engineering design process. Part of this process is to reflect on learning and what to do differently the next time. These reflections will be collected to gain insight on student understanding, engagement and learning of concepts. Reflections will vary depending on the age level, yet ambassadors will work in small groups to help students practice their reflecting skills.
 - Tell Me More Cards: CoE Tell Me More cards will be completed by middle and high school students to share their interest in engineering and computer science majors, and their interest in attending the U of I for college. Students will be given the option to complete these on a device via QR code or on a hard copy form.
 - Post Educator Evaluation: After each class visit, educators will be sent a survey to complete providing feedback on the visit, program improvement, and evaluation of student learning from their perspective as educators.

Metrics

Access

- a. Track K12 class visits, STEM outreach events, and individual student participation and educator engagement (quantitative).

Testing the robot in an actual competition helps the students pinpoint any problems in their design and coding of their robot. They then can fix these problems before the next competition. The travel is a large part of analysis and improvement in the engineering process. Success in this is easily measured by the robot's performance in the next competition.

Homedale High School Robotics Team Region 3 \$ 2,000.00 Homedale robotics has two primary goals that focus this season's efforts. One is that by the end of the season, all students will have spent time in all the roles the team designates. This ensures that every participant is able to see the many facets of STEM and gain confidence in their ability to navigate STEM career choices based on their lived experiences. This goal aligns with the EcoSTEM's commitment to leveraging shared resources and equal access because it builds the expectation from the beginning of the season that students will be welcomed into all parts of the program and they will grow across all STEM disciplines rather than just the ones they are most comfortable with. Having baseline knowledge about electrical, mechanical, coding, maintenance, design, transportation and the many other tasks that are analogous with FIRST robotics and the greater STEM community allows the club to raise STEM awareness within the high school, but also enrich the outreach efforts the club participates in because of the depth of conversation students are able to have.

Our second goal is to recruit new members that comprise 30% of the team each season. Homedale High School Robotics has built a program over the last 5 years that retains many students throughout their high school career, but we know that there are more students in the community who are interested in STEM careers or might have an aptitude for the work we do that we have not met yet. To reach our goal that 30% of the team are new members this season, we dedicate time during the off season to hosting "Get to know the Club" events, participating in career fairs, demonstrating the robot at the Teens and Tweens Night at the library, demonstrating the robot at the school wide assembly, and seeking out students through the science and math departments during school.

Like EcoSTEM, Homedale High School Robotics wants to leverage the hard work students have put into a season and their enthusiasm to continue with the program to reach more students who might need encouragement pursuing an interest in STEM. All students should have access to and the knowledge of opportunities in STEM and placing an emphasis on recruitment each season grounds the team in what values we share.

Ada Community Library Region 3 \$ 5,000.00 1) Prioritize Outreach to Underserved Communities: Our primary focus is on reaching underserved regions in our catchment area, specifically Title 1 schools, to address the unmet needs within these communities. Currently, we're actively engaged with one Title 1 school, and our collaboration with the Salvation Army Boise Corp, which is situated near this school, enhances our joint efforts.
2) Ensuring Multilingual Advertising: To effectively reach these underserved areas, it's imperative that our advertising materials are available in multiple languages. This strategic approach will facilitate broader engagement and inclusivity within these communities.
Inspire
3) Engagement and Exploration: Over the next four months, our goal is to develop at least five captivating hands-on STEM learning experiences customized for elementary students and families, to be presented in upcoming and future Family STEM activities. These meticulously crafted experiences will act as immersive gateways into various STEM fields, nurturing curiosity and promoting interactive learning among young learners and their families.
4) Enhance Learning in Science and Math: Expand students' comprehension in science and mathematics aligned with Idaho's curriculum standards for grades K through 6, employing evidence-based educational approaches.
5) Showcase Local Science and Technology: Promote local businesses involved in science and technology, uniting the community by highlighting science education opportunities, local industries, government agencies, schools, and community organizations engaged in STEM initiatives.
6) Community Interaction: Facilitate positive community interactions, allowing high school volunteers to engage with diverse community members
7) Empower Parents/Guardians: Develop a comprehensive set of accessible resources, including toolkits and guides, aimed at empowering parents/guardians with effective tools and strategies to engage and support their students' educational journey actively. Compile and finalize the resource set, consisting of at least one toolkit and accompanying guides for each of the grade levels of pre-k thru 6th. Ensure the resources cater to various learning styles and educational needs, providing practical guidance for parents/guardians to actively support their students' educational growth. Distribute the finalized resource set to parents/guardians through community outreach programs this spring.
8) Develop Sustainable STEM Stations: Create evidence-based, high-quality STEM education stations that can be utilized not only at current events but also serve as resources for future STEM programs and initiatives.
9) Diversify STEM Curriculum: Expand our existing curriculum by integrating at least three new STEM topics that specifically highlight and celebrate the innovative contributions of underrepresented cultures. Align the new curriculum topics with established educational standards while emphasizing the significance of diverse perspectives in STEM fields by February 24, 2024.

Syringa Middle School Region 3 Denied- does not meet grant qualifications (asked for \$5,000) As our educators design this capstone field experience, there are many goals and objectives that we want our students to meet. These include:
Goal 1: Deepen Understanding of STEM Concepts
Objectives:
1. Students will identify and explain key astronomical phenomena observed during the night constellation activity, connecting theoretical knowledge to real-world experiences.
2. Students will analyze coastal geological processes, including erosion and weathering, through hands-on exploration at Devil's Punchbowl, fostering a deeper understanding of Earth's natural history.
3. Students will engage in water quality testing at the D River in Lincoln City, connecting the scientific method to environmental sciences and demonstrating proficiency in data collection and analysis.
Goal 2: Foster Environmental Awareness and Appreciation
Objectives:
1. Students will explore coastal ecosystems, specifically tidepools around Yaquina Head lighthouse, to observe and document the diversity of marine life, enhancing their understanding of ecological systems.
2. Students will visit the coastal temperate rainforest ecosystem in Oswald West State Park, identifying and appreciating unique flora and fauna, emphasizing the importance of biodiversity in maintaining healthy ecosystems.
3. Students will participate in a marine science experience in Newport Harbor on a fishing boat, gaining firsthand knowledge of marine biology and the interconnectedness of ecosystems.
Goal 3: Connect Classroom Learning to Real-World Applications
Objectives:
1. Students will apply concepts learned in the classroom to interpret coastal processes observed during the field trip, reinforcing the relevance and applicability of STEM education in everyday life.
2. Students will synthesize information from visits to the Oregon Coast Aquarium and Hatfield Marine Science Center, connecting classroom knowledge to practical career and college applications in marine science and biology.
3. Students will compare and contrast coastal processes in Oregon with those in their home state of Idaho, demonstrating an ability to relate regional scientific phenomena to broader scientific knowledge.
Goal 1: Reliable Staffing. ABC aims to maintain a 10:1 teacher-student ratio, well below what is required of us through our state licensure with the Idaho Department of Health and Welfare. We feel this ratio is essential for giving ABC students the individualized instruction and behavioral support they need. Your funds allowed us to hire three additional staff members and admit more students into our after school program.
Goal 2: Affordable Sliding Scale Fees. We offer our programming on a sliding scale and at an affordable rate for all families. Based on household income, families pay as low as \$2/day for after school. Your funding allowed us to admit low-income families who are at highest risk of learning gaps. The average cost ABC families pay per year is \$5.
Goal 3: High-Quality STEM Programming. Your funding would support our efforts to provide high-quality STEM programming. We will purchase program supplies and equipment that will engage learners in STEM projects and activities, such as robotics materials, MAKER materials, 3D pens, open-ended building kits, etc.
Goal 4: Teacher Professional Development. Your funding supported staff time and other costs related to STEM program instruction and professional development training.

ABC Above and Beyond the Classroom in Teton Valley Region 6 \$4,900 (Funded by STEM AC ESSER Grants) ABC will collect weekly data with sign-in and sign-out sheets to accurately measure student participation. ABC also collects survey data from parents at the end of each program session. A survey will be sent to families in August 2024 requesting feedback on the STEM portion of the program.

The program's impact can be viewed through students impacted and the greater community impacted. In order to measure the program's impact on students, Homedale Robotics saves and records the amount of time students spend in each role, collects pictures and artifacts for a portfolio of students practicing career development skills and their volunteer hours spent during outreach events. Because we are an afterschool program, one of our greatest resources is time with students. The time they dedicate to the aforementioned tasks is a meaningful way to measure students' dedication to growing their skillset throughout a season or over the course of high school. The number of hours participants spend is then compared to the total instructional hours available to students. If a student is involved in other extracurriculars and still able to commit to at least 50% of programming or if robotics is their central focus and they are able to commit to at least 75% of programming, then the organization is successful in encouraging students and making the content meaningful. If the number of hours falls, then the organization uses that measurement to reevaluate barriers of inclusion or of interest to the students such as changing what day of the week or time we meet or pivoting content being covered. Making a welcoming environment where students spend their free time is an important first step in ensuring they are receiving career development training, are trying different roles and building community.

The second measurement of success comes from the amount of time the program spends speaking to the community and the quality of their conversations. The club has historically been active in outreach events in Homedale and at larger functions like STEM at the Fair Day (Western Idaho Fair) in the summer. These events are important to our outreach efforts because they allow students to build confidence speaking about STEM topics, encourage more people to join and inspire interest from a young age. The metrics we use to measure success in this category are the number of events we participate in and the number of robotics members who participate. In order for us to attend multiple events, it means that our funding is adequate to support our goals and that we are building intentional opportunities for students to reflect on their purpose for being in STEM. If we are not attending many events, we evaluate what areas might better be served and network with more industry professionals. Additionally, if students are not involved in outreach events, then our program evaluates how we communicate our mission statement. Our organization culture is an ever-changing dynamic and moments for reflection are worthwhile when it comes to examining our purpose in the program.

Evaluation Criteria for STEM Events:
At In-house and School STEM Night:
1) Participant Tracking: Documenting attendee numbers, grade levels, and school affiliations (if not part of a specific school-sponsored event) for each station visit during Family STEM Events. This data aids in understanding the demographics and engagement levels, informing future event planning.
2) Resource Distribution: Recording the quantity of resources taken home by students and families during the event. This assessment helps refine resource selection for improved relevance and effectiveness.
3) Informal Observations: Noting Participant verbal feedback on their learning experiences at stations such as sharing what they learned or their favorite part of the station. This evaluation method assists in gauging station effectiveness and engagement levels.
4) Feedback from Volunteers: Document conversations with volunteers about station performance and suggestions for enhancements. This feedback offers an alternate perspective on station setup, information delivery, and overall effectiveness.
5) After-action report: Review all the feedback and determine changes that could be made to improve the hands-on STEM station.

Additionally, at the Family STEM EVENT with the Salvation Army:
1) Exit Surveys: Providing a voluntary survey with Likert scale questions, available in multiple languages, for attendees. This survey aims to gather feedback on favorite stations, desired future STEM topics, and suggestions for improving event experiences. It enriches understanding by capturing attendee preferences and improvement ideas.
2) Presenter Feedback: Offering a concise survey for presenters to share their perspectives on event effectiveness and station quality. This feedback provides valuable insights from the presenters' standpoint.
3) After-action Report: A comprehensive self-evaluation report assessing, participant movement, station quality, interaction levels, and demonstrators. This report highlights strengths, encountered issues, and proposed changes for future events, allowing for refined instructions, supplies, or provided resources based on feedback and observations.

Our program's impact will be measured in both qualitative and quantitative ways These include:
-Pre and post-trip assessments measuring students' knowledge and understanding of astronomy, ecosystems, geological processes, and environmental science.
-Completion of a reflective journal documenting personal growth, insights, and connections made during the trip.
-Participation in and contribution to group discussions and activities, demonstrating active engagement and collaboration.
-Successful completion of water quality testing and data analysis at the D River, showcasing practical application of scientific methods.
-Evaluation of adaptability and resilience, considering students' ability to navigate and engage positively in diverse settings encountered during the trip.
Each year, the chaparral team meets to debrief the experience and make note of areas to improve upon before the next trip. Each of the above impact areas are considered when making decisions about upcoming field experiences so that students get the most from the capstone trip.

ABC will collect weekly data with sign-in and sign-out sheets to accurately measure student participation. ABC also collects survey data from parents at the end of each program session. A survey will be sent to families in August 2024 requesting feedback on the STEM portion of the program.

Liberty Elementary PTA	Region 3	\$5,000 (Funded by STEM AC ESSER)	<p>The goals and objectives of the Liberty STEAM program, supported by this grant, are designed to be specific, measurable, and directly aligned with EcoSTEM's commitment to leveraging shared resources for promoting STEM awareness and fostering connections within the community.</p> <p>Enhanced Utilization of STEAM Supplies: Specific Goal: Increase the utilization of new STEAM supplies within Liberty Elementary School. Measurable Objective: Track the usage of the acquired supplies across various classrooms and grade levels, ensuring that a minimum of 6 classes and 200 of students directly benefit from the enriched STEM resources. Alignment with Shared Resources: By centralizing the STEAM program, teachers can collectively leverage shared resources, promoting collaboration and ensuring equitable access to high-quality STEM materials across the school.</p> <p>STEM Night Participation: Specific Goal: Boost attendance at the STEM Night event from both the school and local community. Measurable Objective: Achieve a target attendance of 500 individuals, with representation from diverse stakeholders, including students, parents, teachers, and community members. Alignment with Shared Resources: STEM Night serves as a platform for sharing knowledge and experiences, creating a shared space where the community can come together to celebrate and explore STEM opportunities. This event encourages collaboration and networking, strengthening the connection between the school and the broader community.</p> <p>Parental Engagement and Education: Specific Goal: Foster active engagement between parents and their children's STEM education. Alignment with Shared Resources: Providing parents with insights into the school's STEAM programming enables them to actively support their child's education. This shared understanding promotes a collaborative approach to learning, creating a supportive ecosystem within the community.</p> <p>Community Involvement and Advocacy: Specific Goal: Encourage families and communities to actively participate in STEM initiatives. Measurable Objective: Establish 5 new partnerships with local organizations and companies through STEM Night connections. Alignment with Shared Resources: By showcasing the Liberty STEAM program to the wider community, we aim to catalyze interest and involvement, creating a network of support and collaboration that extends beyond the school walls.</p> <p>In summary, the Liberty STEAM program's goals and objectives, supported by this grant, align with EcoSTEM's vision by promoting the shared use of resources within the school, fostering community connections, and enhancing awareness of STEM opportunities for all stakeholders. The specific and measurable targets outlined above demonstrate our commitment to making a tangible impact on STEM education within Liberty Elementary School and the broader Idaho community.</p>	<p>We would measure the program's impact in the following ways: Metrics and Data Collection Methods:</p> <p>Teacher Impact Statements: Metric: Qualitative feedback from teachers on how the new STEAM supplies have enhanced their existing classes. Data Collection Method: Conduct surveys with teachers to gather insights into the specific ways in which the supplies have been integrated into their curriculum.</p> <p>Student Surveys: Metric: Student perception of the impact of the new supplies on their learning experiences. Data Collection Method: Administer surveys to students, gauging their engagement, interest, and understanding of STEM concepts facilitated by the new materials.</p> <p>Usage Tracking System: Metric: Frequency of use and variety of classes utilizing the new STEAM supplies. Data Collection Method: Implement a tracking system, either through a digital platform or a manual sign-out system, to record which classes are utilizing the materials and how often.</p> <p>Check-out System for Additional Classes: Metric: Number of classes outside of the formal STEAM program that borrow the new items. Data Collection Method: Establish a check-out system where teachers from various disciplines can temporarily borrow the supplies. Track participation and gather feedback on the impact of these materials in non-STEAM classes.</p> <p>Free Exploration Sessions: Metric: Participation and engagement levels in free exploration sessions. Data Collection Method: Offer scheduled sessions where classes can use the new items for free exploration. Collect feedback on the outcomes and observe the level of interest and creativity displayed by students during these sessions.</p> <p>STEM Night Attendance and Feedback: Metric: Number of attendees and community engagement during STEM Night. Data Collection Method: Monitor and record attendance at the STEM Night event. Collect feedback through surveys from attendees, including parents, students, and community members.</p> <p>Timeline for Evaluation: All participants will complete a pre and post- survey to measure levels of interest, knowledge and attitudes toward STEM topics and STEM-related fields. Surveys will be administered to participants on site and their survey results will be reviewed by Girl Scouts STEM staff. Program outcomes will be measured using a Likert scale. Results will be evaluated after the workshops. The debrief will inform decision making for future year programming and modifications will be made as needed.</p> <p>During the workshops girls will participate in hands-on activities that ensure learning objectives are met through project completion. Attendance and participant grade level will also be collected.</p>
Girl Scouts of Silver Statewide		\$ 9,418.00	<p>The goal of the program is to create STEM awareness and interest for rural Idaho girls, better equipping them to pursue STEM in school and career. The program will provide Out-of-School time STEM workshops to 175 K – 8 girls and 25 adults in rural, underserved communities.</p> <p>Objectives for the workshops are:</p> <p>Participants will gain awareness of STEM fields and how STEM is utilized in daily life Participants will learn the real-world applications of STEM and how it can help others Participants will have increased appreciation for STEM in their natural environment Participants will be excited to share their new knowledge with their community, friends and family</p>	
William Thomas Middle school	Region 5	\$5,000 (Funded by STEM AC ESSER)	<p>Some specific measurable goals and objectives for this project are how many students we are able to involve in the robotics program. The beauty of the robotics club is the ability for what the students are learning to overlap in other classes as well as the option for teachers to use a kit if they would like. By having kits that are both high school and middle school level we are able to challenge the middle school students and create an opportunity that might not have otherwise been available for students at the high school. Creating this program helps create an atmosphere of STEAM learning at both the middle school and high school level. We are also looking forward to students being able to use their knowledge from this club to help others in STEAM classes they might be in.</p>	<p>For the first year, our metrics will be measured by how many students at the high school and middle school participate in the club and if they are able to successfully participate in the competitions they attend. In the following years the lessons learned at the competition will inform us on what changes need to be made to improve the knowledge and success of the students.</p>

Idaho STEM Ecosystem Grant Rubric

Project Goals and Objectives: (x2)

Question: What are the specific, measurable goals and objectives of this project, and how do they align with the EcosySTEM's commitment to leveraging shared resources to boost awareness of STEM opportunities and

Exceeds Criteria (3)	Meets Criteria (2)	Does Not Meet Criteria (1)	Did Not Answer (0)
The project's goals and objectives are exceptionally clear and specific. The purpose and intended objectives demonstrate a deep understanding of STEM awareness. Includes exceptionally comprehensive and innovative measurable indicators. Goals and objectives exhibit a strong alignment with the EcosySTEM's commitment and connection to the broader initiative is robust and innovative.	The project's goals and objectives are clear and specific. The purpose and intended objectives of the project are well-defined. Includes measurable indicators. Goals and objectives demonstrate a reasonable alignment with the EcosySTEM's commitment and connection to the broader initiative is evident.	The project's goals and objectives lack clarity and specificity. The purpose and intended objectives of the project are not well-defined. Does not include measurable indicators. Goals and objectives do not demonstrate a clear alignment with the EcosySTEM's commitment and connection to the broader initiative is weak or absent.	No project goals or objectives provided.

Evaluation and Metrics (x2)

Question: How will the program's impact be measured? Please provide details on metrics, data collection methods, and a timeline for evaluating and assessing the project's success. How will the findings be used to inform

Exceeds Criteria (3)	Meets Criteria (2)	Does Not Meet Criteria (1)	Did Not Answer (0)
The application presents an exceptionally clear, detailed, and	The application presents a clear plan for measuring the	The application lacks a clear or detailed plan for measuring the	No evaluation or metrics

Inclusion (x1)

Question: What specific methods and strategies will be used to ensure wide inclusion in the program? Provide methods and strategies to specifically reach underrepresented, underserved, and/or non-traditional

Exceeds Criteria (3)	Meets Criteria (2)	Does Not Meet Criteria (1)	Did Not Answer (0)
The application presents an exceptionally clear, detailed, and	The application presents a clear and detailed plan for ensuring	The application lacks a clear or detailed plan for ensuring wide	No inclusion strategies

Partnerships (x1)

Question: How are you partnering with other organizations or groups to make this program successful and enhance outcomes? This may include other sponsors, volunteers, mentors, industry experts, and parents/families,

Exceeds Criteria (3)	Meets Criteria (2)	Does Not Meet Criteria (1)	Did Not Answer (0)
The application presents an exceptionally clear, detailed, and comprehensive plan for partnering with other organizations or groups, showcasing a deep commitment to leveraging partnerships that enhance the program's success and outcomes. Proposed partnerships are highly relevant to the program's goals and objectives and relevance is clear and compelling. Provides highly specific and actionable details about how the partnerships will be established and maintained, demonstrating a sophisticated approach. The plan includes a diverse range of partners, demonstrating a comprehensive and creative approach to program enhancement.	The application presents a clear and detailed plan for partnering with other organizations or groups to enhance the program's success and outcomes. Proposed partnerships are relevant to the program's goals and objectives and relevance is reasonably explained. Provides specific details about how the partnerships will be established and maintained, demonstrating a thoughtful approach. The plan includes a diverse range of partners, reflecting a comprehensive approach to program enhancement.	The application lacks a clear and detailed plan for partnering with other organizations or groups. If partnerships are proposed, they do not appear relevant to the program's goals and objectives, or their relevance is not explained. If partnerships are proposed, the application does not detail how partnerships will be established or maintained. If partnerships are proposed, the plan relies on a single type of partner or does not consider a diverse range of partners.	No partnerships provided.

Sustainability (x1)

Question: What strategies will be used to ensure the project is sustainable? This includes how the project's benefits will continue beyond the grant period, how it may integrate into existing programs, and/or how the

Exceeds Criteria (3)	Meets Criteria (2)	Does Not Meet Criteria (1)	Did Not Answer (0)
The application presents an exceptionally clear, detailed, and comprehensive plan ensuring the project's sustainability, showcasing a commitment to long-term success. Strategies are well defined, innovative, and create opportunity for maximum sustained impact.	The application presents a clear and detailed plan for ensuring the project's sustainability, with well-defined strategies that ensure a thoughtful approach.	The application lacks a clear and detailed plan for ensuring the project's sustainability. If provided, strategies are ill-defined or lack a thoughtful and holistic approach.	No sustainability plan provided.

STEM Career and Awareness (x.5)

Question: How does this program incorporate age appropriate STEM career awareness and/or workforce development.

Exceeds Criteria (3)	Meets Criteria (2)	Does Not Meet Criteria (1)	Did Not Answer (0)
The application presents an exceptionally clear, detailed, and comprehensive approach for incorporating age-appropriate STEM career awareness and workforce development, demonstrating a deep commitment to preparing participants for future STEM careers. Strategies are well defined and relevant to the program's goals and objectives as well as the future needs of the local workforce. The application outlines a visionary plan for age-appropriate workforce development, including but not limited to skill-building and career preparation.	The application presents a clear and detailed approach for incorporating age-appropriate STEM career awareness and workforce development. Strategies are well defined and relevant to the program's goals and objectives as well as future needs of the workforce. The application outlines a plan for age-appropriate workforce development, including but not limited to skill-building and career preparation.	The application lacks a clear and detailed approach for incorporating age-appropriate STEM career awareness and workforce development. If provided, strategies are ill-defined or irrelevant to the program's goals and objectives and disconnected from future needs of the workforce.	No STEM career awareness or workforce development integration provided.

Materials and/or Resources (x.5)

Question: Provide an overview of materials and resources requested. Include how these align with the project's objectives and if they have the potential to benefit an organization or community for an extended period.

Exceeds Criteria (3)	Meets Criteria (2)	Does Not Meet Criteria (1)	Did Not Answer (0)
The application presents an exceptionally clear, detailed, and comprehensive overview of the requested materials and resources, including their purpose and relevance to the project. Requested materials and resources align exceptionally well with the project's objectives, serving as integral components that directly support the intended goals and are consistent with what was submitted in the budget template. The application not only explains how the requested materials and resources have the potential to benefit the organization or community for an extended period but also provides innovative ideas or strategies to maximize their long-term impact.	The application presents a clear and detailed overview of the requested materials and resources, including their purpose and relevance to the project. Requested materials and resources align reasonably well with the project's goals and objectives and are consistent with what was submitted in the budget template. The application explains how the requested materials and resources have the potential to benefit the organization or community for an extended period, demonstrating a reasonable consideration of sustainability.	The application lacks a clear and detailed overview of the requested materials and resources. Requested materials do not appear to align well with the project's goals and objectives, or are inconsistent with what was submitted in the budget template. If provided, the application does not convincingly demonstrate how the requested materials and resources have the potential to benefit the organization or community for an extended period.	No materials or resources overview or alignment provided.