Idaho STEM Ecosystem End-of-Year Report

January 1, 2024 – June 30, 2024

1. **Please describe how the EcosySTEM has built awareness of and ensured access to STEM education and opportunities and STEM careers.**

The Idaho STEM Ecosystem (EcosySTEM) has maintained a comprehensive approach to increased awareness and accessibility to STEM education and career opportunities throughout Idaho. Our key initiatives and achievements from January 2024 to June 2024 include:

IBE Membership Meeting Road Trip: The EcosySTEM team joined Idaho Business for Education (IBE) on visits to seven sites during the spring IBE Membership Meeting Road Trips, engaging with over 125 partner organizations and 130 individuals. The Hub Coordinators presented information about the EcosySTEM, fostering collaboration and inviting participation in our Community Platform. Additionally, EcosySTEM Director, Erica Compton, Program Coordinator, Trisha Mick, and SWISH Hub Coordinator, ReBekha Lulu, attended the January Legislative Academy session hosted by IBE to engage with legislators on the importance of education in Idaho.

Statewide and Regional Meetings and Events: The EcosySTEM team actively participated in various working groups, leadership committees, and regional/statewide meetings to promote STEM education and workforce development. Key meetings included community-led STEM event planning meetings, United Way of North Idaho's Asset Limited, Income Constrained, Employed (ALICE) Task Force meetings, Women Innovators (W.IN) programming committee, State Department of Education's (SDE) regional math meetups, Southeast Idaho Council of Governments (SICOG) community-based economic development meetings, Semi-Conductor for All program at Boise State University, Idaho Women in Tech social, Idaho Technology Council's (ITC) Capital Connect and State of Technology events, among others. Additionally, we hosted several events to support our partners, such as the ISEE STEM's second annual She Can STEM event for 6th grade female and female-identifying students, the first SWISH End-of-Year Celebration at Boise State University's Micron School of Materials Science and Engineering, and the second STEM INNC in-person partner meeting at the DeAtley Center in Lewiston. During the Advanced STEM Research Teacher training, hosted by STEM Action Center, Hub Coordinators were able to meet with and engage with their regional teachers to initiate conversations about the upcoming Idaho Science and Engineering Fairs transition and support needed.

Conferences: Our team attended, presented, sponsored, and exhibited at numerous conferences statewide and nationally. Highlights include presenting at and hosting the annual SWISH Maker Room at Idaho Education Technology Association (IETA), attending the virtual Ready STEM Go conference, Southeast Idaho Leadership Summit, Science for All Summit, Girls

Build Solutions presented by Million Girls Moonshot and STEM Next, sponsoring and/or exhibiting at Project Green Teacher's Summit, Idaho Association for Education of the Young Child (IDAEYC) Professional Development Institute, Lewis-Clark State College's Dream It Do It Conference, University of Idaho's Childhood STEAM Conference, and hosting the inaugural ISEE STEM Regional Convening and the 4th annual statewide EcosySTEM Convening. Hub Coordinators also had a presence at five i-STEM Institutes across the state, with ISEE STEM Regional Hub Coordinator, Ashley Schaffner, hosting a strand at the College of Southern Idaho Institute and STEM INNC Hub Coordinator, Erin Lanigan, participating in the STEM Panel at the North Idaho College Institute.

STEM Competitions: Spring 2024 was busy with STEM competitions where the EcosySTEM team played pivotal roles by volunteering, judging, and presenting at various events across the state. Our involvement helped us connect with students, parents, and educators, building awareness of STEM careers and opportunities. Events included FIRST FLL and FRC competitions, Eastern Idaho Regional Science Fair, Youth Water Summit, Invention Convention, Botball Regional Tournament, and a keynote address at Invent Idaho. The EcosySTEM also hosted three Idaho Exhibition of Ideas (IDX) Showcases across Idaho.

Community Platform: Since launching the Community Platform in October 2023, we have received overwhelmingly positive feedback. As of June 30, 2024, the platform boasts 701 users, with 595 activated accounts, averaging 3,900 visits monthly between January and May. Over the nine active months, 213 events have been created and 166 live feed posts generated 450 comments.

Communications: We continued to leverage multiple communication channels to build awareness of STEM resources, education, and careers. Our efforts included monthly statewide e-newsletters reaching over 3,700 subscribers, regional newsletters for SWISH (315 subscribers), STEM INNC (219 subscribers), ISEE STEM (71 subscribers), and the IBE monthly e-newsletter (over 300 subscribers), along with active social media accounts for statewide and regional activities.

These efforts illustrate our dedication to enhancing STEM education and career opportunities, building on the foundations laid in the first half of the year.

2. **Please describe how the EcosySTEM has aligned STEM education with Idaho workforce needs of today and tomorrow.**

The EcosySTEM team has demonstrated a strong commitment to aligning STEM education with the current and future workforce needs of Idaho. Our key efforts and outcomes over the past six months include:

Partnership Engagement: Since January 2024, the EcosySTEM team has dedicated over 600 hours, collectively, to meetings with industry and educational partners to understand workforce and educational needs and identify gaps and solutions. We have cultivated a robust network of partners, increasing engagement numbers from our mid-year report. Additionally, we have proactively engaged partners in deeper, more meaningful collaborations. Notably, we created a

space on the Community Platform to better serve libraries and out-of-school professionals with their STEM and Maker programming. This includes partnering with the Idaho Commission for Libraries to expand their "Make it at the Library" program and with the Think-Make-Create (TMC) Lab to host their Live Binder activities on the Platform, further establishing our Community Platform as a one-stop shop for all STEM education and workforce development in Idaho.

Professional Development: Recognizing the demand for high-quality, comprehensive professional development training for formal and informal educators, we continued the Educator Preparation and Support Working Group. This dedicated group of statewide partners works together to better understand the current professional development landscape and identify needs, gaps, and opportunities. Through the Community Platform, partners share resources and professional development opportunities for educators, such as the "Applying STEM Concepts: The Student Invention Process" course, Code.org Boise Workshop, "Pathway to Funding: A Grant Workshop for OST Providers," ION regional spring roundhouses, TMC trainings, and several non-credited webinars.

The EcosySTEM has also partnered with the Teaching Institute for Excellence in STEM (TIES) to provide an EcosySTEM-dedicated IBM SkillsBuild platform, offering several strands of career and technical online courses and credentials. This platform, available free of charge to all Idahoans, will enable us to partner with organizations to provide individualized and tailored learning plans for employees, apprentices, and students.

STEM Discovery Workshops: To address the rapid advancement of artificial intelligence and evolving educational needs, the EcosySTEM is working to launch a redesigned STEM Discovery professional development workshop for teachers in partnership with STEM Forged, an Idaho-based company. The new workshop will utilize the robust platform developed by STEM Forged and will facilitate the creation, curation, and sharing of lesson plans to utilize Artificial Intelligence (AI), supporting STEM-integrated lessons throughout the K-12 classroom. This initiative aims to ensure that our educators are equipped to meet the dynamic needs of their students and the future workforce.

Through these efforts, the EcosySTEM continues to align STEM education with Idaho's workforce needs, ensuring that our educational programs and initiatives are responsive to industry demands and technological advancements.

Programmatic Updates

Please provide a programmatic update and project goals for each of the following supported projects:

3. **Please explain coordination of EcosySTEM hubs and how they have supported STEM Action Center (STEMAC) and statewide efforts.**

In January 2024, through the Industry Sector Grant from the Idaho Workforce Development Council (WDC), the EcosySTEM hired an additional ISEE STEM Hub Coordinator, Sonya Haines, to support and engage partners in Region 4. Sonya works in tandem with Ashley and ISEE STEM

partners in a coordinated effort, enabling us to further deepen our engagement with educators, industry and business professionals, and students in Region 4. Ashley will continue as ISEE STEM Hub Coordinator for Regions 5 and 6, while Sonya will continue as ISEE STEM Hub Coordinator for Region 4.

All four Hub Coordinators have continued to actively engage with and support their respective communities. While the first six months of this year were dedicated to raising awareness of the EcosySTEM and our team, the past six months have focused on providing hands-on support and fostering connections.

The EcosySTEM has been engaging in a dynamic strategic planning process, facilitated by external contractors, to ensure we remain proactive and integral in future STEM education and workforce development opportunities in Idaho. We have updated our mission, vision, and core values and developed five overarching, statewide strategic priorities. We have also initiated the formation of a statewide Advisory Committee to advance our strategic plan and contracted with Partnerships in Education and Resilience (PEAR) to develop a comprehensive two-year evaluation plan. Each Hub Coordinator will collaborate with the contracted strategic planning team and their individual steering committees to develop hub-level strategic objectives that align with the statewide strategic plan.

These efforts illustrate our commitment to enhancing STEM education and workforce development in Idaho, ensuring our initiatives are coordinated and impactful statewide. This coordination of the EcosySTEM Hubs directly supports the work of the Idaho STEM Action Center in their mission to provide statewide STEM education and activities to enhance opportunities for educators, students, communities, and employers in their work. Question number 9 further outlines the specific STEM Action Center programs and materials the EcosySTEM has promoted.

4. **Has the EcosySTEM maintained its active membership in the STEM Learning Ecosystems Community of Practice?**

   Yes, we are actively involved in SLE CoP on many levels as outlined below.

5. **Please describe all the activities regarding the EcosySTEM's membership in STEM Learning Ecosystems Community of Practice national network.**

The EcosySTEM has maintained an active and influential presence in the national STEM Learning Ecosystems Community of Practice (SLE CoP) network. Key activities over the past six months include:

National Meetings Participation: The EcosySTEM team consistently attended national SLE CoP meetings, webinars, and informational sessions, including the monthly Wild West Ecosphere Community of Practice. These gatherings provided opportunities to exchange ideas, share best practices, and collaborate with other ecosystems across the nation.

Practice Group Participation: Erica and Trisha were selected to participate in a six-month practice group alongside 13 other STEM Learning Ecosystems (SLEs). This group is focusing on exploring and identifying funding opportunities for Ecosystems, helping to enhance the financial

sustainability and impact of SLE initiatives. Through this work, Erica and Trisha hope to learn strategies to boost fundraising activities and explore opportunities for possible national/federal grants and funding opportunities to support Idaho EcosySTEM initiatives.

LEAD STEM Fellowship Program: The entire EcosySTEM team was selected to participate in the SLE CoP LEAD STEM Fellowship program, an 18-month initiative designed to empower current and aspiring leaders of SLEs. Through this program, the Idaho STEM Ecosystem has engaged with 34 other SLEs nationwide, fostering a collaborative environment for learning and growth. Participation in this Fellowship has ignited several new initiatives and communication practices. Examples include the creation of the EcosySTEM At-a-Glance marketing document and the development of value-creation stories with our partners. These efforts will further enhance the EcosySTEM's ability to communicate our strengths and values to new and potential partners and donors.

Leadership Coordinating Council (LC2): Erica was selected to join the Leadership Coordinating Council (LC2), a representative group of 17 SLE leaders. The LC2 works alongside TIES to advocate for, communicate with, sustain, and expand the STEM Learning Ecosystems Community of Practice. Erica's involvement in this council has positioned the Idaho STEM Ecosystem at the forefront of national conversations and strategic planning within the STEM community.

Through these activities, the EcosySTEM has strengthened its connections within SLE CoP, contributing to and benefiting from collective efforts to advance STEM education and workforce development across the country.

6. **Please describe the activities for Idaho Exhibition of Ideas (IDX), including but not limited to outreach to increase participation, training, team support, etc.**

The EcosySTEM hosted three Idaho Exhibition of Ideas (IDX) Showcases in the spring of 2024, centered around the theme of Veterinary Science. Students were tasked with designing solutions to issues within veterinary science, represented through prototypes incorporating 3D printing. They could choose from four research categories: one-health approach, conservation and biodiversity, animal health and welfare, or general veterinary science, allowing for creativity beyond predefined subtopics.

Awards and Prizes: The showcases awarded first, second, and third place prizes to junior and senior division teams in Southwest and East Idaho, while North Idaho awarded prizes to junior division teams only. First-place teams were awarded a new 3D printer and $250 for their organization's 3D printing club or class. Second-place teams received $300, while third-place teams received $250. Each showcase also selected a Student's Choice Award, voted on by participating students, with the winning teams receiving $250.

Southwest Idaho Showcase: The Southwest Idaho showcase was held on February 24, 2024, at Boise State University's Micron Center for Materials Research. Four junior division teams and two senior division teams participated, involving 27 students and 9 educators. ReBekha recruited four judges, including a retired materials engineer, an equipment engineer from

Micron, a certified veterinary technician, and a BSU engineering graduate student. The first-place junior division winner was Pepper Ridge Elementary's 3DPV team for their innovative design of a 3D-printed duck boot for ducks experiencing bumblefoot. The first-place senior division winner was Kuna High School's Kuna Komets team for their 3D-designed erosion reversal net to address erosion damage caused by nutria.

Southeast Idaho Showcase: The Southeast Idaho showcase was held on March 8, 2024, at Idaho State University's Eames Complex. Ten junior division teams and eleven senior division teams participated, involving 108 students and 24 educators. Ashley recruited 15 judges from various organizations, including Idaho State University, Simplot, BOTE Innovations, Glanbia, IT professionals, and veterinary technicians. The first-place junior division winner was Aberdeen Middle School's The Kids Who Harnessed the Poop team, who designed a biodigester to separate methane from carbon dioxide, addressing greenhouse gas emissions from cow manure. The first-place senior division winner was Pocatello Community Charter School's Wolf Pack team, who created animal enrichment and treat dispenser toys to alleviate animal anxiety during veterinary visits.

North Idaho Showcase: The North Idaho showcase was held on March 8, 2024, at Potlatch Jr/Sr High School. Eleven junior division teams participated, involving 79 students and 17 educators. Erin recruited six judges, including staff from Idaho State University, Idaho Public Television, and Gizmo Makerspace. The first-place junior division winner was Twin Lakes Elementary School's TLE Tinkers for their creation of a cooling hut for the pika, inspired by the mechanics of termite mounds.

Outreach and Preparation for 2025: Planning and preparation for the 2025 IDX Showcase are already underway. The theme for 2025 will be Agricultural Science, with educators presented with four challenge topic areas: food science, security, and access; sustainable agricultural practices; technology in agriculture; and an open, custom agricultural science-related topic of their choosing. Two IDX strands were presented at this year's i-STEM Institutes to further engage and prepare educators and students for the upcoming challenges. The EcosySTEM team is planning to host webinars this fall to further support educators leading IDX clubs in their school or organization. Due to the increase in participation in the Eastern Idaho showcase, we will be adding a fourth showcase serving Region 4 participants in South Central Idaho.

7. Please describe activity related to Chief Science Officers (CSO).

The 2023-24 school year started strong for the Chief Science Officer (CSO) program, maintaining momentum throughout the last semester. All 93 students across 13 sites in Idaho continued their participation, with Hub Coordinators actively involved through regular site visits. Four senior CSOs graduated from high school, with two in East Idaho and two in Southwest Idaho.

4th Annual EcosySTEM Convening: At the 4th Annual EcosySTEM convening, 36 CSO students attended and participated, addressing the crucial need for student voice and leadership at educational conferences. The CSOs hosted a table in the partner exhibit hall and presented a 45-minute session on the program. They also attended an industry tour of Micron, where they learned about major STEM career opportunities in Idaho and networked with Micron leaders.

Micron staff reported back their positive impressions of the students with their insightful questions and engagement during the guided tour and hands-on exploration of Micron's work.

Action Plans: Throughout the last half of the year, CSOs continued to work on and complete their individual action plans. Notable projects included St. Maries STEM night, where CSOs facilitated STEM activities for their school and community. At Galileo STEM Academy, CSOs inspired younger students through a Three Little Pigs STEM lesson in elementary classrooms. American Heritage Charter School CSOs held their 2nd annual school-wide STEM night (K-12), organizing and running the event, including collaborating with local industries, securing food for attendees, and hosting STEM activities. Temple View Elementary CSOs engaged students in grades K-6 with holiday STEM take-home activities and organized and led STEM activities for Field Day at the end of the school year.

SciTech Institute Changemakers in STEM Virtual Youth Congress: Idaho had three CSOs serve as representatives on the SciTech Institute Changemakers in STEM Virtual Youth Congress. These CSOs spent two months exploring challenges in sustainability, tech for good, aerospace engineering, and AI. They heard from STEM professionals in each field, chose a focus area, and worked with students from across the US to design and present solutions to these challenges. Idaho students provided unique perspectives and insights, contributing significantly to the work being done.

Transition to Idaho EcosySTEM Student Ambassadors (IESA): Due to the overwhelming positive feedback and increased interest in the CSO program, the EcosySTEM has decided to transition from the national Chief Science Officer program to an Idaho-grown student leadership program called Idaho EcosySTEM Student Ambassadors (IESA). This new program will officially launch with the start of the new school year in August 2024 and will allow the EcosySTEM to support the increased participation and interest in the program. The EcosySTEM team is already in the initial planning stages and has held multiple meetings with individuals and organizations interested in being mentors or industry partners.

Through these activities, the CSO program has demonstrated substantial impact, fostering student leadership and engagement in STEM, and paving the way for the new IESA program to build on this success.

8. **Please discuss the process that has been put in place for grants/sponsorships that prioritize matched funds to support STEM education, including challenges, successes and changes that will be made in the future.**

The EcosySTEM had a successful year supporting local communities and advancing STEM education and workforce development through four rounds of grant funding. In total, the EcosySTEM awarded $313,532.45 in grants across 71 projects.

Grant Distribution: Statewide grants supported 10 projects totaling $80,188; STEM Competition Travel grants supported 12 programs totaling $47,870; STEM INNC grants supported 12 projects totaling $47,959.05; SWISH grants supported 20 projects amounting to $68,347.62; and ISEE STEM grants supported 17 projects totaling $69,170.78. Although final reports for Round 1 are

not due until November 15, we have begun collecting them and have received overwhelmingly positive feedback regarding the EcosySTEM's grant process. Detailed information on all awarded grants is included in the End-of-Year Data spreadsheet.

Successes: The EcosySTEM achieved several milestones with this year's grant process. We developed a robust grant platform using Survey Monkey Apply, which streamlined communications between the EcosySTEM team and grant writers/organizations, ensuring a smooth transition and process. Other notable successes included implementing a transparent grant evaluation rubric and involving regional leadership teams in reviewing and making final funding decisions alongside their Hub Coordinator.

Challenges: Despite the successes, we encountered challenges, such as insufficient funding and processes to provide matching funds for grant applications. Consequently, the EcosySTEM strategically focused on cultivating robust collaborations and prioritizing grants with strong partnerships, recognizing the value of time, talent, and treasure in collaborative efforts. This focus was integrated into the grant rubric, where additional points were allocated for strong partnerships. Other challenges included a compressed timeline for offering four rounds of grants, as we did not start until October, three months into the fiscal year. Additionally, there was confusion and conflicting information among grant applicants regarding changes in funding and grant opportunities, learning a new process and system, and the usual challenges associated with implementing a new process. Furthermore, the EcosySTEM was unable to fund all STEM competition travel requests received.

Future Improvements: For the fiscal year 2024-2025, the EcosySTEM team plans to implement several changes and improvements to the grant process. These include a more transparent grant process with clearly posted deadlines, project timeline eligibility, notification processes, and reporting requirements. These details will be outlined in an EcosySTEM Grant Outline document available on our website and Community with the first grant round of the fiscal year, scheduled for July 15, 2024. Additionally, based on feedback from applicants, STEM Competition Travel grant applications will be reviewed on a rolling basis instead of through the rigid four rounds of regional Hub grants. Through these adjustments and learnings, the EcosySTEM aims to enhance the grant process, ensuring it continues to effectively support STEM education and workforce development in Idaho.

STEM Education Promotion

Please describe and provide examples of the STEM EcosySTEM's promotion of the use of:

9. STEM AC Programs and Resources (i.e. i-STEM Libraries, i-STEM, Externship, etc.)

The EcosySTEM team consistently promotes and distributes STEM AC materials and programs at outreach events, conferences, and partner meetings, ensuring educators and community members can access pertinent resources and opportunities. During outreach events and partner meetings, Hub Coordinators encourage partners to participate in i-STEM Institutes, checkout i-STEM Library resources, apply for STEM Externships, and volunteer during Hour of Code classroom visits. At conference exhibits, the team actively engages with attendees,

providing information on Learning Blade, i-STEM Libraries, i-STEM Institutes, STEM School Designation, and STEM Diplomas.

i-STEM Libraries: Regional Hub Coordinators consistently leverage and advocate for i-STEM Libraries during their outreach events and partner meetings, facilitating educators' access to targeted and valuable resources. The EcosySTEM team remains committed to highlighting i-STEM Libraries as a valuable asset. Each Hub Coordinator utilized and showcased i-STEM Library items at each respective IDX Showcase.

STEM INNC: Direct outreach was done to promote Externships to partners, including the Silver Valley Economic Development Council and Post Falls Parks and Recreation. STEM INNC also reached out to Region 2 organizations to help place an extern at Cobblestone Landscaping LLC in Genesee, ID, and these organizations connected them with additional resources in the area. Erin Lanigan, connected STEM AC with Lewiston, Post Falls, Lakeland, and Coeur d'Alene School Districts to find districts interested in participating in the CS for ALL SCRIPT Training.

SWISH: The monthly SWISH newsletter features a dedicated STEM AC space and highlighted STEM AC during STEM Matters Month. To promote externships, direct outreach was done to partners including the US Forest Service, and potential externs were connected with those organizations. At CWI's i-STEM institute, information about the i-STEM library was shared with participants where ReBekha navigated through the catalog to make it more accessible.

ISEE STEM: During ISEE STEM Monthly Working Group and Steering Committees, there is time set aside for partner updates, often including STEM AC Programs and Resources like CS Education Week Support, Externships, Sawtooth Educator Award, i-STEM, and more. As programs, opportunities, and resources are shared with ISEE STEM Hub Coordinators, specific outreach is done to educators, industry, out-of-school organizations, and other partners who might be a good fit for those programs. For example, when i-STEM registration opened Ashley reached out to a member of the Boys and Girls Club of Southeast Idaho board to have her sign up for a strand. ISEE STEM Hub Coordinators have also supported STEM AC staff in finding school districts for CS for ALL SCRIPT Training. Sonya also shared information about Externships during various Economic Development, Leadership, and Society for Human Resource Management (SHRM) meetings.

10. ION's Think Make Create Trailers

Hub Coordinators actively promote and integrate Idaho Out of School Network's (ION) Think Make Create (TMC) Labs and resources into their outreach events and partner engagements, facilitating educators' access to tailored and beneficial resources, as well as social media and newsletter communications. They often foster connections between community partners and TMC Lab hosts to encourage ongoing collaboration. The creation of the Maker Learning Idaho group on the Community platform, which will soon include a Hands-On Science group, aims to promote collaboration and connection using resources such as TMC and i-STEM Libraries. This group will replace the unused ION-hosted Discord, and all TMC Live Binder activities will be moved to the Community Platform for additional usage.

Each Hub Coordinator regularly attends TMC's monthly Shop Talk meetings to learn from host sites and discuss the Labs' utilization. Hub Coordinators were also invited to participate in the regional TMC Trainings and worked with ION staff to recruit additional attendees and find future partners and hosts for trailers.

STEM INNC: Erin introduced Lewiston School District's Summer Learning Educators to a TMC Training opportunity, enabling them to utilize the trailer during their summer programming. TMC Lab activities engaged students between presentations at IDX at Potlatch Jr/Sr High School, at UpRiver Family Engagement STEM Night in Fernwood, Heyburn Family STEM Night in St. Maries, during a STEAM visit activity at Prairie Elementary School in Cottonwood, and at the 21st Annual Environmental Education & Cultural Knowledge Day for Lapwai Elementary.

SWISH: SWISH funded a grant application for a project titled, "Unhitched" a collaborative program between TMC and Boise State's OnRamp program. This is an effort to further utilize the TMC Labs and reach populations currently without access to a Lab. TMC Events were highlighted in newsletters and on social media to amplify that work further.

ISEE STEM: For the second year in a row, TMC Labs was highlighted at the Eastern Idaho IDX showcase, with the trailer hosted by The United Way of Southeastern Idaho attending and hosting an activity for students. ISEE STEM supported continued outreach of the trailers through their Regional Hub grants. One grant was specifically tied to TMC outreach through the United Way of Southeastern Idaho's Read Talk Play Summer Program, while another worked to host Family STEM Nights in Leadore utilizing the TMC Lab from Salmon, Idaho, a recommendation from Ashley.

11. What other programs is the EcosySTEM promoting or providing?

Utilizing a variety of communication channels, including the Community Platform, social media, monthly e-newsletters, meetings, presentations, conference exhibits, and outreach events, the EcosySTEM team consistently promotes quality partner materials and programs. Beyond the previously mentioned initiatives, the team actively promotes a diverse array of materials, including but not limited to: Youth Apprenticeship Program, Idaho Connect, National STEM Challenge, and W.IN Events such as SheTech and TechGirlz. They also support programs like FIRST Robotics, Idaho LAUNCH, Hispanic Youth Leadership Summit, Invent Idaho, and BSU's Partner in Science Program for secondary science teachers. The Inspiring Science Teachers podcast, Million Girls Moonshot 2024 Flight Crew opportunities, Project Learning Tree professional development opportunities and student competitions, PCS Edventures resources, and LEGO educational resources are also highlighted. Additionally, the EcosySTEM promotes various grant opportunities for educators, volunteer opportunities, and many other programs.

The following is a non-exhaustive list of all the programs and resources we have promoted: Club for the Future by Blue Origin, Be Athenian programs, Science Olympiad, DiscoverE Engineering, Civil Air Patrol, University events such as BSU's Material Science Camp for Teachers, ISU's STEMx and STEM Up, and U of I's STEM Expo, EcosySTEM grantee programs such as UWSEI Read Talk Play and STEAM Days in Lakeland School District, DataBot, ICTM Regional Math Meet Ups, Idaho Science Coaches, SDE's Science Pathways Project, INL program and events, Idaho

Rangeland Commission, Farm Bureau Ag in the Classroom, Palouse Pathways, Pitsco, Birds of Prey Northwest, Selkirk Outdoor Leadership and Education, Camp Wittman Outdoor Center, McCall Outdoor Science School, Invent Idaho, and more.

General Questions

12. Please describe best practices the EcosySTEM has identified outside of the state and how they are being incorporated into program delivery, and include practices, promotion, and results.

The EcosySTEM's commitment to excellence extends beyond our state borders. Our key initiatives and achievements from January 2024 to June 2024 include:

STEM Learning Ecosystems: The EcosySTEM team consistently attended national SLE CoP meetings, including the monthly Wild West Ecosphere meetings. These gatherings provided opportunities to exchange ideas, share best practices, and collaborate with other ecosystems across the nation. Erica and Trisha were selected to participate in a six-month Practice Group alongside 13 other STEM Learning Ecosystems (SLEs). This group is focusing on exploring and identifying funding opportunities for Ecosystems, helping to enhance the financial sustainability and impact of SLE initiatives. Through this work, Erica and Trisha hope to learn strategies to boost fundraising activities and explore opportunities for possible national/federal grants and funding opportunities to support Idaho EcosySTEM initiatives. The entire EcosySTEM team was selected to participate in the SLE CoP LEAD STEM Fellowship program, an 18-month initiative designed to empower current and aspiring leaders of SLEs. Through this program, the Idaho STEM Ecosystem has engaged with 34 other SLEs nationwide, fostering a collaborative environment for learning and growth. Participation in this Fellowship has ignited several new initiatives and communication practices. Examples include the creation of the EcosySTEM At-a-Glance marketing document and the development of value-creation stories with our partners. These efforts will further enhance the EcosySTEM's ability to communicate our strengths and values to new and potential partners and donors. Erica was selected to join the Leadership Coordinating Council (LC2), a representative group of 17 SLE leaders. The LC2 works alongside TIES to advocate for, communicate with, sustain, and expand the STEM Learning Ecosystems Community of Practice. Erica's involvement in this council has positioned the Idaho STEM Ecosystem at the forefront of national conversations and strategic planning within the STEM community. Members of the EcosySTEM team also meet individually with other SLEs, such as Utah STEM Action Center, Montana STEM Ecosystem, LA STEM, and Maine Ecosystem, to engage in a collaborative learning process together.

National Webinars and Conferences: The EcosySTEM team remains active in attending national webinars and meetings led by SLE CoP, STEMconnector, STEMx, and Million Women Mentors. Trisha attended the Science for All Summit presented by Morehead Planetarium Science Center and the University of North Carolina at Chapel Hill in February 2024. This summit engages educators, practitioners, researchers, thought leaders, and other change agents in conversations and knowledge-building around emerging issues and innovative strategies related to advancing access in STEM. Erica was invited by the Idaho Out of School Network to attend the

Girls Build Solutions conference, a showcase event of STEM Next's Million Girls Moonshot in San Diego, California. This conference focused on actively building solutions together, mixing intergenerational, cross-network teams to create "Design Charrettes" with youth, industry and philanthropy partners, and state leaders, considering big challenges and designing solutions in four sectors: next-level tech, climate action, health & life sciences, and space & Earth learning.

Through these opportunities, the EcosySTEM team has connected and collaborated with other state and regional ecosystems, identifying and incorporating best practices into program delivery. Idaho is continuously recognized as a leading SLE in its partnership model, hub structure, and overall effectiveness in supporting STEM learning and workforce development.

13. Please describe any collaborations with neighboring states, and what those states are doing in the area of STEM education.

The EcosySTEM actively collaborates with neighboring states to amplify its impact on STEM education. Regular attendance at Wild West Ecosphere meetings fosters continued connections with Colorado, Utah, Oregon, and Montana ecosystems.

Montana Afterschool Alliance: The Montana Afterschool Alliance reached out to Erica and Trisha Mick to better understand how the Idaho STEM Ecosystem was formed and how we utilize our hub-structure model to better engage with and support Idahoans across the state. They have begun the process of creating and hosting the Montana STEM Ecosystem. Erica was invited back to sit on a virtual panel during the Montana STEM Ecosystem's initial member meeting, introducing Montana to the STEM Learning Ecosystems Community of Practice.

Utah STEM Action Center: The Utah STEM Action Center is currently engaging its community through Maker learning and has requested the EcosySTEM's participation in their upcoming Maker Conference in November 2024. This collaboration aims to share best practices and enhance Maker learning initiatives in both states.

LA STEM: Trisha has been meeting with the Program Coordinator of LA STEM in Los Angeles County, California, a connection made by the LEAD STEM Fellowship. LA STEM reached out to Trisha to learn about Idaho's structure and processes for supporting STEM across the entire state. Like Idaho, LA STEM started as a group of partners collaborating in 2019 and has recently been formally recognized as a non-profit organization with a parent organization.

Through these collaborations, the EcosySTEM not only shares its successful models and practices but also learns from neighboring states to continuously improve and innovate in the area of STEM education.

14. Please describe how the EcosySTEM has introduced research-based methods that support student achievements in STEM areas.

The EcosySTEM has introduced several research-based methods to support student achievement in STEM areas:

STEM Integration: The EcosySTEM promotes the integration of STEM subjects rather than teaching them in isolation. This approach reflects research showing that interdisciplinary learning fosters a deeper understanding and application of STEM concepts. Specific examples include promoting attendance at i-STEM Institutes, showcasing STEM-integrated activities during professional development conferences like SWISH Maker Room at IETA and IDAEYC's Professional Development Institute, and sharing STEM resources and opportunities through newsletters and social media. Additionally, the EcosySTEM utilized interdisciplinary activities utilizing the i-STEM Libraries and Think Make Create (TMC) Trailers, such as "Wearable Circuits," "Speedy Shelters," and "Bristlebots" for STEM Nights.

Use of Technology: Leveraging educational technologies enhances learning experiences and facilitates personalized learning. Research supports the effectiveness of technology in improving engagement, accessibility, and achievement in STEM subjects. The EcosySTEM partners with tech companies such as Code.org, STEM Forged, Learning Blade, and PCS Edventures to support various technologies that facilitate personalized learning. The Idaho Exhibition of Ideas (IDX) showcase supported the integration of technology in classrooms and maker clubs in schools and libraries.

Collaboration with Industry and Community Partners: Creating opportunities for students to engage with professionals in STEM fields and apply their learning in authentic contexts is another promising practice. Research highlights the benefits of such partnerships in motivating students, promoting career readiness, and bridging the gap between classroom learning and real-world applications. The EcosySTEM facilitates this through the Chief Science Officer (CSO) Program and student participation at statewide convenings, the TechGirlz and SheTech events, STEM Day at the Fair, and career fairs where industry representatives present and engage with youth. Partnerships with organizations like Schweitzer Engineering Labs, TechHelp, Selkirk Outdoor Leadership and Education (SOLE), and the University of Idaho Engineering Design EXPO further exemplify this collaboration.

Focusing on Underrepresented Groups: The EcosySTEM works to increase participation among underrepresented and underserved groups in STEM. By providing targeted programs and support, the EcosySTEM helps create a more inclusive and diverse STEM community. Specific examples include the inaugural Owyhee STEM Fair, which brought STEM experiences to students of the Shoshone Paiute tribe and surrounding communities through SWISH's partnerships with Johanna Jones at the State Department of Education and Cathy Ammirati with Micron Gives. Additionally, the EcosysTEM has developed a deeper partnership with organizations serving underserved and underrepresented populations such as Women Innovators, African Community Development, Black Community Alliance, Latino Conservation Committee, Idaho Association for Education of the Young Child, Growing the STEM, Idaho Division of Vocational Rehabilitation, and all five Idaho tribes.

By integrating these research-based methods into its programs and partnerships, the EcosySTEM aims to enhance student achievement in STEM areas by fostering curiosity, critical thinking, collaboration, and practical application of knowledge.

15. Please describe opportunities where the STEM AC was able to address the EcosySTEM membership.

The partnership between the STEM Action Center and EcosySTEM has remained strong during this first year after the transition. The STEM Action Center has been providing content and opportunities for educators to explore through the four EcosySTEM e-newsletters, social media accounts, and postings on the Community Platform. The STEM Action Center was provided a partner table at the 4th Annual EcosySTEM Convening in April, facilitating direct engagement with EcosySTEM members and other stakeholders.

There have been several opportunities where the STEM Action Center has either spoken about EcosySTEM membership or invited EcosySTEM staff to speak. These opportunities include i-STEM Strand Provider Training, Educurious Leadership Training, Advancing STEM Research Teaching training, and i-STEM Institutes. Through these platforms, the STEM Action Center has effectively communicated the benefits and resources available through EcosySTEM membership, ensuring continued collaboration and support for STEM education in Idaho.

16. Please describe the opportunities STEM AC will have to address the EcosySTEM membership in the following two quarters.

The EcosySTEM anticipates and welcomes ongoing collaboration with the STEM Action Center in the upcoming quarters. Opportunities for engagement include future conference exhibits, promotion through the Community platform, and active participation in partner and hub meetings. A notable opportunity for collaboration is the co-sponsorship of the ICTM, IDEEA, and ISTA STEM Conference in North Idaho, where Trisha and STEM AC's Nate Dean will co-present about the upcoming Idaho Science and Engineering Fairs. This event will allow both organizations to address and engage with EcosySTEM members directly, highlighting the importance of these fairs and promoting further involvement.

The EcosySTEM will continue to coordinate attendance and table exhibiting options at upcoming conferences with the STEM Action Center. These conferences include the CTE Connect Conference, IASA, Waypoint, ISBA, and the ION Power Up Summit. Through these events, the STEM Action Center will have multiple platforms to address EcosySTEM membership, share resources, and foster stronger connections within the STEM community.

A representative from STEMAC will be a member of the EcosySTEM's statewide advisory committee to engage with EcosySTEM partners and help advise and recommend additional ways the EcosySTEM's collaboration can expand.

17. Please describe sustainability plans that the EcosySTEM is hoping to implement in 2024-2025.

The EcosySTEM will be implementing a multi-faceted approach to sustainability in 2024-2025, and beyond, focusing on securing sustainable funding and building organizational capacity. To capitalize on the national momentum in STEM and workforce development, the EcosySTEM has identified securing sustainable funding as a strategic priority. This involves diversifying funding

sources by increasing outreach to businesses, foundations, and individual donors. The initiative aims to broaden its financial base by exploring avenues for member contributions or establishing a paid membership structure. In addition to these efforts, the EcosySTEM will actively connect its partners with internal and external funding opportunities that align with their specific needs.

Erica will play a pivotal role in these endeavors, working to diligently increase donor support and engagement throughout the next year. The EcosySTEM will continue to write and submit grant proposals that align with the organization's objectives and needs. Moreover, through the SLE CoP Practice Group-Focus on Funding, Erica and Trisha will collaborate with other STEM Learning Ecosystems (SLEs) to identify and pursue nationwide and federal funding opportunities. Through this work, Erica and Trisha hope to learn strategies to boost fundraising activities and explore opportunities for possible national/federal grants and funding opportunities to support Idaho EcosySTEM initiatives.

In addition to focusing on funding sustainability, the EcosySTEM is also prioritizing the development of organizational capacity. This strategic priority involves creating and refining internal structures, processes, and documentation to ensure the EcosySTEM operates efficiently and effectively. By establishing robust internal systems, the EcosySTEM aims to enhance its operational efficiency, enabling it to better serve its mission and stakeholders.

Representation and Sharing

The awardee shall use the language "Founding Member" when referring to the relationship between STEM AC and the Idaho EcosySTEM. Awardee shall ensure STEM AC is recognized as a "Founding Member" on all relevant public-facing communications, including but not limited to: press releases, public marketing, websites, communications, fliers, social media, presentations, swag, attire, and at any EcosySTEM events, etc.

18. **Describe any distribution of materials related to STEM AC programs, and the estimated reach.**

The EcosySTEM team consistently promotes and distributes STEM AC materials and programs at outreach events, conferences, and partner meetings, ensuring educators and community members can access pertinent resources and opportunities.

STEM INNC: Monthly Zoom and Steering Committee meetings averaging 15 participants each from various sectors, with a greater indirect reach as information is disseminated further. Outreach events including STEM Nights and Conference/Expo table exhibits equate to an estimated 5,489 interactions. STEM INNC newsletter has 219 subscribers, STEM INNC Facebook has 23 followers and STEM INNC Instagram has 81 followers.

SWISH: Monthly Action Groups and Steering Committee averaging 15 participants each from various sectors, with a greater indirect reach as information is disseminated further. Outreach events including STEM Nights and Conference/Expo table exhibits equate to an estimated 4,210 interactions. SWISH newsletter has 315 subscribers, SWISH Facebook has 193 followers and SWISH Instagram has 94 followers.

ISEE STEM: Monthly Working Groups and Steering Committee meetings averaging 15 participants from various sectors, with a greater indirect reach as information is disseminated further. Outreach events including STEM Nights and Conferences/Expo table exhibits equate to an estimated 9,034 interactions. ISEE STEM newsletter has 71 subscribers, ISEE STEM Facebook has 214 followers and ISEE STEM Instagram has 57 followers.

Statewide: Erica and Trisha promote and share STEM AC materials and resources at statewide conferences and meetings. Total reach estimates 4,563 interactions. The Statewide newsletter has 3,545 subscribers, EcosySTEM Facebook has 149 followers, EcosySTEM Instagram has 230 followers, and EcosySTEM Linked In has 310 followers.

Budget

19. How much has the EcosySTEM expended to date?

As of June 30, 2024, the EcosySTEM has expended $1,152,809.

20. How much does the EcosySTEM anticipate expending through June 30, 2024?

As of June 30, 2024, the EcosySTEM has expended $1,152,809.

21. What funding has been secured outside the STEM AC Sponsorship to support the EcosySTEM?

Total funding secured through grants, donations, and sponsorships equals $62,809. Workforce Development Council (WDC) Industry Sector Grant (2-year grant) equals $515,350 total to be reimbursed after expenses paid. As of June 30, 2024 the EcosySTEM has received $0.00 from the WDC Grant through the reimbursement process. We are expecting to be reimbursed for expenses paid in FY2024 in FY2025.

22. How much cost savings is the EcosySTEM expecting, and how will those funds be used?

The EcosySTEM will have $18,727 in cost savings. We will likely hold these funds aside and determine where they can be best used to support STEM education in Idaho. Potential uses include increasing regional grants through our existing rounds of grant funding, or increasing travel grants as we had more requests than funding in FY24.

23. Please email a spreadsheet that includes:

- Total funding awarded through grants
- A list of awards made
- Amounts of awards
- Matches of awards
- The intended outcomes for each grant
- Metrics that will be collected from each grant including: demographics, numbers served, and newly discovered best practices.

Please refer to the attached document End-Year-Data July 1-June 30 for all data requested above.

Data

Please send via an email an excel file with the following information:

- EcosySTEM Membership numbers by group (PreK-12, higher education, out of school education, industry, nonprofits, state and local government agencies, parents, and the legislature), and by region (based on Idaho's six regions).
- IDX team participation information **by showcase location and age level**
- CSO program data including **student growth, outreach, and activities or events**
- Number of interactions with **students and educators (list separately) outlined by programmatic area**
- Results from surveys of programs and members including quantitative and qualitative data
- A list per HUB on: **Events and/or activities**

Please refer to the attached document End-Year-Data July 1-June 30 for all data requested above.

24. Please give us the appropriate information to highlight a Brightspot from the EcosySTEM's work (no graphics or design work, just content)

STEM INNC: Industry Sponsor of the University of Idaho Engineering Design EXPO

STEM INNC celebrated its partnership as an industry sponsor of the University of Idaho Engineering Design EXPO, an event that brought together over 350 K-12 students, community college students, educators, and industry professionals. Hosted by the university's Interdisciplinary Capstone Design Program, this expo showcased industry-sponsored projects, highlighting real-world applications of engineering. By fostering connections between academia and industry, STEM INNC contributed to advancing STEM innovation in the region, inspiring students and strengthening educational pathways.

SWISH: End-of-Year Celebration

SWISH marked its successful year with its End-of-Year Celebration on June 6, 2024, highlighting grant recipients, program participants, and community partners across Region 3. The event included graduate student-led lab tours at the Micron Center for Material's Research, speeches from SWISH grant recipient and key partners on SWISH's impact, and recognition of key contributors including Action Groups and the Grant Review team. This celebration underscored SWISH's collaborative spirit and commitment to advancing STEM education in the region.

ISEE STEM: Regional Convening (Region 4)

ISEE STEM Regional Hub Coordinators, Ashley Schaffner and Sonya Haines, organized the first regional convening in Twin Falls on February 26, 2024, bringing together local partners from Regions 4, 5, and 6 to discuss STEM education and workforce gaps and opportunities. "Our steering committee had a vision to bring together the three regions for a convening since we started our Hub in 2020, and four years later, we finally made it happen," exclaimed Ashley.

Through engaging breakout sessions and thought-provoking panel discussions, attendees explored strategies for enhancing STEM education and addressing community needs. This convening exemplified ISEE STEM's proactive approach to fostering collaboration and driving impactful initiatives across Idaho.

ISEE STEM: STEAM Day at the Idaho Falls Zoo (Region 6)

Idaho Falls Zoo hosted its annual STEAM Day at the Zoo event, a vibrant event that exposed hundreds of second graders to STEM through interactive activities and themed stations. This year ISEE STEM was pleased to join presenters from Teton Auto Group, Idaho National Laboratory, Idaho Public Television, Museum of Idaho, and many more to bring these experiences to the students in attendance. This event is a shining example of the power of partnership in engaging students and providing them with the opportunity to find their love of STEM!

Materials

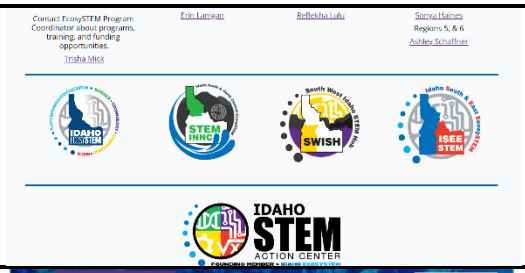
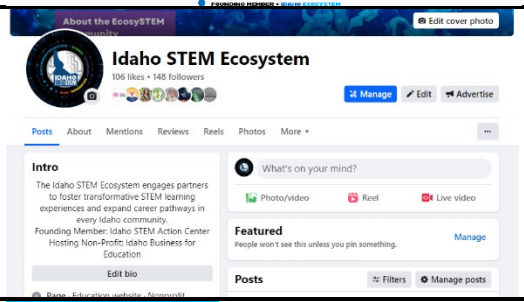
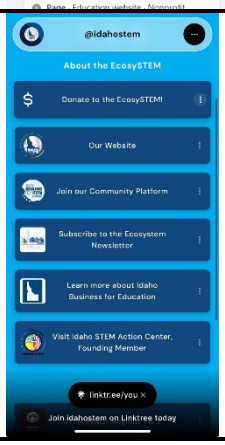
The awardee shall use the language “Founding Member” when referring to the relationship between STEM AC and the Idaho EcosySTEM. Awardee shall ensure STEM AC is recognized as a “Founding Member”” on all relevant public-facing communications, including but not limited to press releases, public marketing, websites, communications, fliers, social media, presentations, swag, attire, and at any EcosySTEM events, etc.

25. Please describe and send samples via email how and where the STEM Action Center was referred to in the Idaho EcosySTEM’s materials, events, and online presence.

The STEM Action Center has been recognized as the Founding Member of the EcosySTEM, with the corresponding logo displayed if applicable, in multiple locations including: Tablecloths, banners, and all printed materials, EcosySTEM website (idahostem.org) and Community Platform (community.idahostem.org and community.idahostem.org/page/welcome), IBE website (idahobe.org/ecosystem), Statewide and regional EcosySTEM newsletters, Social Media about sections and Link Tree with link to STEM AC’s accounts if available, and all formal conference and meeting presentation slide decks.

Please see images and links below for examples of how the STEMAC is recognized as Founding Member of the EcosySTEM.

A) EcosySTEM’s website: https://www.idahostem.org/ , added as a footer to all webpages	

B) EcosySTEM newsletters, added as a footer to statewide and regionals newsletters.	
C) EcosySTEM Community Platform: community.idahostem.org, welcome page	
D) EcosySTEM social media site bios, including Facebook, Instagram, and LinkedIn. STEM AC accounts are tagged where available.	
E) EcosySTEM Linktree	
F) EcosySTEM Tablecloths, each hub has a regionally branded tablecloth but follows the same format as below.	

G) Marketing banners, each hub has a regionally branded banner but follows the same format as below.