REGIONS 5 & 6 MEETING NOTES

Idaho STEM Ecosystem September Convening

September 17-18, 2020

DAY 1

IN ATTENDENCE

Melinda Davis, Jennifer Lopez, Angie Good, Brenda Greenhalgh, Sarah Penney, Sarah Childers, Sharon Cates, Chloe Doucette, Sunshine Shepard, Chris Torgesen, Cathy Beals, Sonia Martinez, MaKayla Guthrie, Cindy Thorngren, Alyssa Brigs, Angela Hemingway, Crispin Gravatt, Erica Compton, Finia Dinh, John McFarlane, Kaitlin Maguire, Teresa Vail

NOTES

Welcome & Introduction

Angela Hemingway, Executive Director of Idaho STEM Action Center, welcomed and thanked the group for being on the call, reminded them that the meeting will be recorded, discussed the agenda, mentioned the list of attendees that they received, and introduced STEM AC team.

Nick Aldinger, from IBL Events, went over the Basic Zoom Tips and Controls. His team was available for any technical issues during the call.

Angela went over the meeting norms, emphasized that STEM AC is here to learn from attendees, recognized that STEM AC has blind spots, and asked for honest feedback.

Crispin Gravatt, Data Analyst for STEM AC, introduced an ice breaker on Sli.do

- Question: In one word, what have you learned since February?

  Responses – patience, flexibility, adaptable, resilience, compassion, tenacity, ignorance, understanding, boundaries.
- Question: What are you most looking forward to in 2021?

  Responses – traveling, a new start, the new norm, less chaos, normal activity, compassionate leadership, seeing people, hugging, Biden, reset, relief, vaccine, hope, getting out, building stronger connections, being able to meet in person

Angela went over the Intended Outcomes, the Idaho Ecosystem Timeline and Overview

EcosySTEM Aspiration

Angela read the EcosySTEM aspiration statement that was developed during the January convening to refresh everyone's memory. A poll was launched - How does this statement resonate with our ecosystem aspirations? 33% Agree, 67% Strongly Agree

What do you like about this statement, what resonates with you, and what might we improve?

Summary: Members like that the statement covers all age groups from PreK-career. Although some members are nervous that it says "all Idahoans" which can be too lofty and unachievable, and are also concerned about the one size fit all approach to reach them all. Other members felt it was fine to

think big for an aspirational statement. There was a suggestion to work through if we want the statement to be broad or focused on a specific audience or purpose. There was discussion to remove the word "education" to be inclusive of STEM outside education and include all STEM experiences and be more inclusive of businesses; however, some members felt it was inclusive and should be left in. There was a suggestion to provide clarity on the definition of STEM so that it is used in a broad sense that is inclusive.

Second poll: what do you hope the ecosystem can do for you, your organization, and/or your region?
- Funding 50%
- Networking 80%
- Connections between In- and Out-of-School education opportunities 70%
- PK12 education and higher ed/career opportunities 50%
- Policy and Governance 50%
- Other 10%

Why did you make the decisions you did, what was going through your mind?
Summary: many valued networking because it has helped them boost their own programs which has been especially important during the pandemic. The opportunity to collaborate with people around the state has been powerful, valuable and allows them to think big. It is great to normalize speaking collaboratively.

Statewide Survey Data
Crispin introduced and presented the statewide survey data. Thoughts and comments were added to the [Eastern Idaho Sept. 17 Padlet](#)

This data is a snapshot in time, and STEM AC is still gathering responses. This survey will be supplemented with focus groups and interviews in the near future. This data is based on 110 respondents.

Who gave input? Lots of organizations located in region 3, but service areas are much more spread out (incl. statewide). We have a good spread of the kinds of orgs that gave input, and most serve the Pre-K – 12 populations.

Nearly 1/3 of the STEM 'power players' in communities across Idaho are industry. Other major players are higher education and out-of-school organizations. STEM AC was commonly named, which reinforces our role as the ecosystem backbone org.

Respondents shared confidence that the communities they serve know what STEM means, are interested in it, and value the skills and careers they bring. Many barriers still exist to STEM success across Idaho, including infrastructure, technology, funding, human power, and leadership.

Reminder: The survey will remain open, please share far and wide with your network. This survey is meant for anyone to take so that we get a full picture of the STEM landscape in our state The data will be available on the [EcosySTEM website](#) through the PowerPoint presentation.

Initial Thoughts?
Summary: We seem to do a good job about awareness (people know what STEM is and are excited about it), but there are barriers to infrastructure, tech, funding, human power, leadership. There

was a question on whether there were similar trends in the regional data and Crispin responded that yes, the statewide data is consistent with regional data with some nuances and variations. It was emphasized that more input is needed to get at robust outcomes from the regional data.

Erica introduced the **Think Make Create (TMC)** project as an EcosySTEM initiative. This project will be providing STEM trailers to communities throughout the state to do hands-on making and STEM learning. The first trailer is being constructed at the Gizmo Makespace at North Idaho College in Coeur d'Alene. The project is being led by the Idaho Out-of-School Network and 4H. Claire Sponseller from 4H and U of I, made the video. During the 5 minute break, a video of the project was shown.

After the break there was a giveaway. Winner of the giveaway received a 3D printed picture.

Discussion and Feedback on Survey Findings
Initial Thoughts:
Summary: There was significant discussion on the definition of STEM and how others think of STEM. Most people think of STEM careers as more traditional STEM careers rather than thinking more broadly. Many STEM career pathways are crossing now and people don't often think of the wide application of STEM skills. One participant found it noteworthy that the interest numbers were higher than the infrastructure categories. Funding being the lowest percentage may indicate that people think they need fancy resources to do STEM, however, there is so much STEM in everyday life in Idaho. There is a disconnect in seeing STEM opportunities and resources. This ties into the STEM definition discussion and suggests there is an education piece needed on what is STEM. Also, how do we empower people to do STEM with what they have? It might help to have communities approach this by looking through the resource lens rather than a deficit lens. And it was mentioned that we have a lot of STEM resources available now due to the pandemic and they can use what they have already.

How much does the pre-baked definition of STEM play a role into the responses for the infrastructure/resources questions in the survey?:
Summary: One participant explained he/she had a limited lens/scope when they themselves took the survey. They also explained how their network partners did not see how their input to the survey was valuable. There was discussion on how STEM AC can communicate better and advertise that STEM is inclusive and broad (including CTE, etc.), and highlight cheaper STEM approaches. Discussed the "This is STEM" video that may help with this communication. One participant noted that responses may have been influenced one way or another given current global and national issues going on.

What was missed in the survey questions?
Summary: There was a suggestion to add the question "What does STEM mean to you?" and a suggestion to rework the aspirational statement to define STEM. This discussion highlights the need for common terminology of what STEM is and a need for common vocabulary definitions in general when we promote STEM. There was a suggestion to create PPT type presentation that defines STEM and resources that we could share with other interested parties, school administrators, etc. There was the suggestion to have an exercise during the Oct. 30th meeting to broaden our own definitions of STEM.
There was also discussion of Sammy Matsaw's work on indigenous knowledge of our environment and how this knowledge and way of thinking is not included in current work/efforts. How do we introduce this into our education systems because it will be beneficial to everyone, not just indigenous and underrepresented populations? Without it, we are missing out on scientific ways of thinking because they are not part of the way we teach. The following STEM teaching tools were

provided that have several resources specifically build around indigenous ways of knowing and teaching: [Resource 1](), [Resource 2]().

Working Groups
Angela provided updates on each working group. Crispin provided update on the Asset Mapping working group which has taken a break because the asset and needs survey is underway and because TIES, the national ecosystem organization, is working on developing an asset mapping software that we can use. If you want to join or change working groups, please reach out to us. Overall, the group likes the working groups.

Communication and Communication Strategy Discussion
- How often do you want to hear from the ecosystem –
    o   Monthly was best for most participant. Overall, the group thinks the newsletter and monthly working groups meetings are good.
- What would make communication between partners and with us best for you –
    o   All felt that a monthly newsletter would be better than every other month. There was a suggestion for quick email announcements of pertinent data or accomplishments with link to shared Google Doc folder where we can go and get more details or see slides. Keeping the Padlet open and accessible could be a helpful way to communicate. There was a suggestion to have a common place to put resources/items for parents and teachers. INL may be developing something like this. Others chimed in that email and zoom meetings work best for them, and there was a suggestion to have meetings plan a year out and have them be more focused.

Crispin recapped the meeting and discussed what will happen during tomorrow's meeting.

DAY 2

IN ATTENDENCE
Jennifer Lopez, Melinda Davis, Sarah Childers, Brenda Greenhalgh, Angie Good, Sarah Penney, Chris Guthrie, Sharon Cates, Chris Torgesen, Sunshine Shepherd, Chloe Doucette, Sonia Martinez, Tony Harrison, Cindy Thorngren, Alyssa Briggs, Angela Hemingway, Crispin Gravatt, Erica Compton, Finia Dinh, John McFarlane, Kaitlin Maguire, Teresa Vail

NOTES
The meeting started with the ["This is STEM" video]().

Welcome
Angela welcomed the group. The "This is STEM video" is available on STEM AC website and can be shared publicly so please share.

Ecosystem Commitments
Crispin introduced the Ecosystem Commitments concept. Commitments are powerful in showing our collective work and can help support funding efforts and bringing on partners. Each year STEM AC makes commitments to national organizations/movements (e.g. CSforAll, MakeforAll). Commitments are measurable, large or small, may not require funding or time, and do not need to be new. Commitments help us leverage each other's work, find funding, and bring on new partners.

STEM AC identified four commitment categories based on the EcosySTEM's aspiration – education, partnerships, equity, and ecosystem infrastructure. These commitments should support the Ecosystem's aspirational statements. Commitments may fall into one or more of these categories – there is overlap between categories. Commitments can be small with individual commitments (e.g. educator) to large lofty commitments for larger organizations. STEM AC envisions a broad range of commitments that will be posted on the EcosySTEM website.

Angela went into details on the four categories of commitments and examples of each (see slides).

Angela introduced STEM AC's draft ecosystem commitment: Idaho STEM AC commits to serving as the backbone organization of the Idaho STEM Ecosystem and through this work will bring together partners from across the state to work towards an equitable STEM education plan for PreK-20.

This is just an introduction to the commitment concept and there will be more discussion about it at the Oct. 30th meeting. STEM AC is not asking for commitments now, just want participants to start thinking about it.

Participants can put their thoughts in the Sept. 18th Padlet.

Initial thoughts and questions about the commitments:
Summary: STEM AC will ask for these commitments sometime in the spring and then they will be on the ecosystem website to show how broad and diverse the ecosystem work is from individual educators to large lofty goals of large organizations.
It was discussed that it is not good to depend on any one organization/agency to be the equity/diversity entity. Inclusion and access needs to be part of overall effort and not any one group's responsibility.

The Padlet will remain open for members to discuss their commitments.

What are some of your initial ideas that you may be interested in exploring for you or your organizations:
Summary: All members agreed that they would like to meet regularly with one another in their region and work collaboratively. This will help with sharing information about opportunities and limit duplicating efforts. STEM AC can support this through arranging regular meetings. College of Eastern Idaho may be able to host these meetings.

Survey Data – Regions 5 and 6
How was community defined:
- Rural, low population, remote
- Almost everyone mentioned agricultural
- Hispanic/indigenous populations
- Socioeconomic divides create/reinforce educational divides within STEM education

What are the existing assets/needs:
- Available
   o Industry support through support and volunteer expertise (e.g. INL, ON Semiconductor)

- o   Higher education students and professional volunteers involved in STEM
- o   Clubs/extracurriculars define the STEM education landscape
  - Missing
    - o   Consistent leadership model across the region
    - o   Additional human power because of out-of-school activity time is a key component in the region. This help is needed for the success of programs and therefore the success of STEM in the region. Not just volunteers – includes lack of staff positions and funding for these positions.
    - o   Connection and communication strategies – connectors across economic and geographic divides.
    - o   Funding

Initial Thoughts on this Information:

Summary: Organizations may not recognize how much time it takes for their paid positions to develop a strong and robust STEM program. Transportation is not in the data but is an issue for rural and lower SES communities – it can be a defining characteristic of a community. Geography is a huge barrier, however, COVID has given us a great opportunity to identify ways to provide STEM activities in a virtual way. Getting together as a regional group will provide opportunity to make a real difference and develop a leadership model.

How do partnerships occur in Eastern Idaho?
- Focus on events and extracurriculars
- Funding to support these events and extracurriculars
- Strong volunteer base from higher ed and businesses
- Some organizations have partnerships, or they do not. There is a group of organizations that have barriers to partnerships and resources.

List of achievements (most common):
- Highly successful events with eager participation
- Establishment of new competition teams (e.g. FIRST Robotics Competition)
- ISU's investment in STEM – funding, human power, hosting, getting the word out about STEM and opportunities, etc.

Measure of Success (most common):
- Headcount/enrollment because focused on events and activities
- Surveys – to see what kinds of impact these events/activities have
- Certification/go-on rate/other standardized metrics – go-on rate had many examples

Regulatory/Policy Needs (most common):
- Organization:
  - o   Guidance from policymakers – how do we implement the science standards, how do we meet policy
  - o   Unknown – often on the ground practitioners don't operate on the level of policy so they don't know.
- Community:
  - o   Would like more guidance from industry – what are their future workforce needs to ensure they can prepare their students.

     o Internet access can be spotty which can limit access to resources in the region

What are barriers to your success:
- Barriers to participation (e.g. transportation (distance, rural), language (diversity), registration fees (socioeconomic), etc.)
- Cultural attitudes toward STEM – some communities have high retiree population so can't get funding passed because of limited buy in. The population doesn't know what STEM is, what does STEM education look like and what does STEM mean for their community.
- Geography – vast disconnection, transportation to access resources.

How does your org approach equity and what is needed to support equity?
- Approach Taken:
  - Free/reduced cost programming
  - Partnerships with industry and higher education
  - Population is largely underrepresented so many organization practice equity in order to serve their community
- Supports Needed:
  - Cultural shifts need to happen in organizations outside the communities that are already bought into equity.
  - Guidelines on best practice and policy with underrepresented communities.

Initial thoughts on this data:

    Summary: STEM AC/Ecosystem can help with the supports needed such as providing equity training. Participants would like to hear how other organizations have tried to increase access and reach underserved communities during COVID (e.g. mailing STEM kits). There was discussion on asking organizations to contribute to the next newsletter on ways they are doing outreach during the pandemic. There was discussion about the i-STEM libraries as a good resource during COVID. i-STEM libraries are at six locations and they have been underutilized and underfunded, however, STEM AC recently received funding to increase the resources, make the catalogs accessible online, and improve them with curricula and instructional videos. There was also discussion on how native students and parents may have a technology barrier that can take up time when accessing resources/learning opportunities. Internet is extremely expensive in some rural communities. In terms of equity, everything needs to be accessible in English and Spanish. There was a suggestion to translate the This is STEM video and provide closed captioning.

5-minute break with "This is STEM" video, followed by a giveaway

Regional Discussions Based on Survey Data and Needs

- What are you doing?
  - SDE has new science coaches that will help with science education/literacy and help with science standards. Looking to have a coach in eastern Idaho – job information at https://www.sde.idaho.gov/contracting-opportunities/. The coaches have developed a resource website with monthly webinars (https://sites.google.com/view/idsciencecoach/). Idaho Science Grant is available for 2021 – funding to help STEM programming in out-of-school organizations – link to more information https://www.sde.idaho.gov/academic/science/. Science coaches can

help disseminate information. They have a database of science educators contacts to communicate with. SDE is also looking for outstanding educators to nominate for the Presidential Awards for Excellence in Math and Science - https://paemst.org/.

- o ISU is working with STEM Hispanic students to conduct outreach to rural communities. They are distributing STEM books in Spanish from the INL. If there are other STEM resources in Spanish for parents, please let them know.
- o INL has several STEM resources in Spanish such as STEM Help Wanted and the Parents Guide to STEM - https://inl.gov/inl-initiatives/partnering-with-inl/k-12-stem/resource-library/
- o Check out the Padlet for addition things that participants are doing.
- What has been successful?
  - o CyberCore at CEI – funding was lost when COVID hit, community partners stepped up and figured out ways to partner with ISU, BSU, CEI. It was a success because of the collaboration with the colleges and industry. Also a positive event was important during this time and so there was a lot of excitement. Lesson learned – good to collaborate!
  - o ISU did host a camp this summer and found there was a lot of support for it. A plus was that they could have non-local and non-Idahoans participate virtually. Exciting and successful event and showed that they can reach rural communities with the lessons learned.
  - o These short-term wins are good at getting buy-in and investment from supporters. How can STEM AC and the Ecosystem best work with you to get these short-term successes to reach our long-term goals?
    - Encourage collaborative grant applications.
    - Foster collaboration. It's important, when expanding a program to another campus to make sure it works for them on their campuses. Determining this only happens through a collaborative approach.
    - STEM AC/Ecosystem can support scaling successful scales, they just need to understand what are those successful programs that can be supported.
  - o Temple View Elementary started a robotics club for 1st-6th grades (Lego WeDo for 1st and 2nd, Lego Robotics FIRST program for 3rd-6th). It took community partners to make it happen. INL provided a grant for iPads to drive the robots. Community partners and parents volunteered their time to come and facilitate. District provide free transportation so kids could stay after school. 100 students participated November-March. It was a whole community effort to make it happen.

General Comments –
- There is concern that programs will be lost forever, even when things are back to normal. Sharing creative ways to provide programming now is important.
  - o ISU College of Engineering does a STEM night that is so successful they have to turn people away. They are also going to host a Hispanic Day. Both of these were interrupted with COVID.
  - o Many groups have to online and are providing resources through new avenues (e.g. STEM AC professional development, Micron's CHIP Camp, Museum of Idaho shipping STEM kits, i-STEM libraries, summer NASA program).

- o Important to share and stick together during this time because as some programs are cancelled, we can send them to other programs that are online. We can learn from other states such as Utah that did a hybrid model in which they are socially distanced in a park and then also online.
  - o Crispin added a column in the Padlet for Successful Program Examples for those to share what is working during COVID or what they want to scale.
- It would be great to have regional "techies" to help families connect and help their students with online learning. Even without COVID issues - help with access is something that will continue.
  - o Idea that each region has a cohort of mentors, coaches, techies etc. that are there to support educators, students, and parents. It is my hope that these can develop through our ecosystem work.

All slides and notes will be available next week via the EcosySTEM website, including links to the Padlets.

Crispin went over Oct 30th whole group meeting that will focus on setting goals, metrics, a communication plan and leadership plan. Please invite anyone that should be involved in this discussion.

Angela introduced the Regional Ecosystem Planning Grants – during the Oct. 30th meeting there will be regional meetings to discuss this opportunity. $5-10k per region to support determining next steps for your region.

STEM AC will send out a survey next week about this meeting, please fill out.