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Brian L. Mitchell
Director

PUBLIC MEETING MINUTES

Name of Organization: Informal STEM Learning Environments (ISLE) Subcommittee

Date and Time of Meeting: Wednesday, February 17, 2021 @ 1:00 PM

Place of Meeting: Per the Declaration of Emergency Directive 006 Section 1, the requirement contained in NRS 241.023(1)(b) that there be a physical location designated for meetings of public bodies where members of the public are permitted to attend and participate is suspended. Members of the public may submit public comment by logging into the ZOOM webinar by accessing the following link:

<https://us02web.zoom.us/j/89751760065?pwd=T2l6NEdlc3VGUUQ0eXcyQ1phRGJuZz09>

Meeting ID: 897 5176 0065; Passcode: 752977

To submit public participation or to participate in an agenda item or for supporting material submissions, email Debra Petrelli at dpetrelli@gov.nv.gov or by calling 775-687-0987 at least 24 hours in advance of the meeting.

1. Call to Order / Roll Call

Tracey Howard

Informal STEM Learning Environments (ISLE) subcommittee was called to order by Tracey Howard at 1:02 P.M. on February 17, 2021, at the above meeting. She will be running the meeting today.

Members Present

- Caitlin Aitchison
- Kristoffer Carroll
- Mauricia Baca
- Nancy Maldonado
- Sean Hill
- Tracey Howard

Members Absent

- Aaron Leifheit
- Amy Page
- Craig Rosen
- Judy Kraus

Staff Present

Brian Mitchell
Debra Petrelli

Guests Present

None

A quorum was declared.

- 2. Public Comment** (No action may be taken upon a matter raised under public comment period unless the matter itself has been specifically included on an agenda as an action item.)
Tracey Howard

There was no public comment.

- 3. Welcoming Remarks and Announcements** (For information only)
Tracey Howard

Ms. Howard welcomed everyone and thanked them for their input during recent one on one meetings to set this agenda. She welcomed new member Caitlin Aitchison who is the new Youth Education Coordinator for Keep Truckee Meadows Beautiful. She commented that the bulk of today's meeting will be to discuss resources, specifically evaluations of informal programs, to assist in determining what is specifically needed in Nevada.

- 4. Approval of the Minutes from the September 1, 2020 ISLE Subcommittee Meeting** (For possible action)
Tracey Howard

Ms. Howard asked if there were any corrections to the September 1, 2020 Minutes as written. None were made. Ms. Maldonado made a motion to approve the Minutes of September 1, 2020, as written. Mr. Hill seconded the motion. The motion passed unanimously.

- 5. Discussion on Ways to Support Informal STEM Programs in Nevada based on Survey Data** (For possible action)
Tracey Howard

Ms. Howard commented on past discussions regarding survey data that went out and trends requiring evaluation support. She said since that time she has received a plethora of information on resources regarding informal STEM evaluations. She said the task here is to synthesize that information to specifically determine what is needed in Nevada and how that information can be shared in an effective way. She pointed out specific trends she found including what the format might look like, i.e. a tool, a pamphlet, or resource bank. She also commented that she had spoken with several members of this group about potentially hosting some training for informal STEM programs regarding how to evaluate a program, or what to look for in a program or evaluation tool. Mr. Hill agreed these are potential topics to consider and possibly build resources for. Ms. Howard asked what the focus should be if a resource is created for informal programs to use. Mr. Mitchell pointed out that rather than reinventing the wheel and since there is already numerous, valuable resources out there,

perhaps finding resource programs that are high-quality then compiling that into something useful for everyone would be most beneficial. This way, he said, it would greatly assist informal STEM programs in not having to go out and pick through the myriad of existing resources on their own. Ms. Maldonado asked what the purpose is for the evaluation or what the need is, and what the intended purpose of the results are for. She pointed out this would determine what type of evaluation should be used.

Ms. Howard commented on the background of this topic since those surveys had gone out. She said first a survey was sent out to informal STEM programs in Nevada which asked about their needs and what support was needed. She added that within the evaluation there were subcategories, which included whether help was needed to find an evaluation, or whether help using the information from their evaluation was needed. She added that at the last meeting of ISLE there were a lot of requests for support around evaluation. She said the topic was very broad, which brings the question of where to start. Ms. Maldonado agreed this is a big topic. She said in her own experience she found by evaluation that most of what her organization does has been beneficial by sharing with donors/funders for the effectiveness of their programs. Mr. Hill commented that Sierra Nevada Journeys (SNJ) tells a similar story, in that the evaluation is very useful for funders or investors. He said they found it is most beneficial in that they can design program evaluation that internally allows them to use it to improve programs and have those stories for funders. Ms. Baca agreed that program evaluations are very persuasive for funders and added that evaluations are also critical in that the right thing is being done and staff and program are being correctly allocated in the best way possible. She said this way if something is found not to be working, it can be retooled. She said it is also persuasive in engaging with someone you have never engaged with before and find it is necessary for them to understand how your program can add value to what they are working on. Basically, she pointed out, an evaluation is good for your program, funders, and to establish value to potential partners.

Ms. Howard discussed the organization of the results of the survey responses. She added there were many responses around evaluation; creating evaluations, creating reports to share with others, and programs based on evaluation data. She said the different reasons and different aspects of an informal program can be enough. She pointed out that all information can be synthesized and given to a program to help. She suggested taking the route of putting together a series of tools and start at the beginning by asking, “why do I evaluate, what do I evaluate, and who is it for?” She said thereby creating a bank of tools that could be used by the program. Ms. Maldonado asked what tools have been shared. Ms. Howard replied some of those tools already shared include links to websites, reports, and research regarding different topics including InformalScience.org, which has a bank of research around high-quality informal STEM program components. She said it includes a lot of research specifically around evaluation tools and what they should look like and what they should focus on. She added that other websites shared with her actual evaluation tools already created that other programs could use and offered to share those links with the subcommittee. She said with so many options out there, she thought it best to run all options past the subcommittee and get more input on what the focus should be and what this group is most passionate and excited about.

Mr. Carroll agreed that some sort of tool kit would be helpful. He said he thinks about times when his organization wanted to get more serious about a program evaluation and felt the

need to engage with professional program evaluators, which they have done over time. He mentioned there are useful resources out there. He pointed out that having something curated for Nevada informal STEM organizations would have been helpful to them and perhaps there is a way to suggest vetted program evaluation consultants to be a part of that. He added there are a lot of phases to this topic. He suggested that some of the intro information on Ms. Howard's list could be helpful if organizations use this to chart their path. Ms. Howard asked the group generally, what, as experts in this field, they need and what would be helpful for their programs. Mr. Mitchell suggested each member look back to the start of each of their own informal STEM programs when evaluation was first thought of to be used to find out how those programs were working and asked what would have been most useful and how that could be curated. Mr. Carroll pointed out that as time goes on, that target changes within an entity based on where they are and how they are progressing. He said the tools are important, however the knowledge and experience, of which many in this group have already had to go through, greatly helps to make decisions on which tool is needed and why. He added that the pathway of reasoning then becomes essential. He said as a program provider he feels a decision could then be made in terms of trade-offs, making more decision as you go. He said there are multiple potential pathways to go through. He said a part of the benefit is the institutional knowledge of this team and knowing what is necessary and not necessary and in what order to be done. He suggested leveraging that learn and grow aspect and maybe have a type of overarching tool that helps people narrow down some of those choices, or at least make them aware of the "smart-choices" they could be making based on past experiences of ISLE members and their organizations.

Ms. Maldonado said it would be helpful to have a roadmap of who you might reach out to depending on what type of evaluation you are looking for in these different situations. She commented on her organizations first attempt at an evaluation, which was through the College of Education at UNR in their counseling and guidance program. She said UNR has PhD students that partner up with non-profits to help with some type of evaluation of a program and have now expanded to work with the Cooperative Extension. She said the PhD candidate student then has the research they can follow up with for their degree requirement and the program benefits from having that extra hand. She added that some programs may not be sure how to conduct their own evaluation, so having an outside third-party can be very beneficial.

Mr. Mitchell asked whether a first step would be to create some type of questionnaire identifying what is wanted, then based on it, calculate the type of resources that will help depending on the stage the program is at. He added that questions will need to be identified to produce a type of map/chart which will help in determining what is needed on the backend, i.e. compiling resources on how to do a self-evaluation, a list with contact information of people in Nevada that can assist.

There was further discussion on a talk-activities flowchart showing how teachers work with students to get the students to be the driver of a conversation and decision points that lead to another question which splits at the end to a final strategy for consideration based on definition of the need. Mr. Mitchell agreed with using a similar process for the evaluation of informal STEM programs and said in following this basic plan, it would point programs towards their needs. He then asked the subcommittee for their opinions in developing something similar as a starting point for informal STEM programs to identify their needs. He

said then from the many resources available, figuring out where the best place would be to point programs to start. The subcommittee agreed that would be a good starting place and this would be a helpful tool. Mr. Carroll commented that by producing something similar in structure to this talk-activities flowchart, those tools and what they look like can be described, allowing programs to make a variety of selections and dive deeper into understanding the need and outcome of available resources for informal STEM programs. He pointed out the usefulness of a map/chart similar would be ideal, especially with such a large number of quality tools that currently exist and would really assist with programs who have not identified their needs.

Ms. Howard said from here she can take all the existing resources already shared with her today and from past conversations with each member of the subcommittee and outline a flowchart. She said she will then share it with the group for feedback. She pointed out that from there tools could be added into the flowchart, such as additional links to websites. She asked that anyone interested could certainly assist her in this endeavor. Mr. Mitchell suggested cycling an email with the draft for feedback as it is being put together prior to the group meeting again. Mr. Carroll asked whether the survey information shared earlier gives this group some of the endpoints of that organized tool, and whether any tools are missing, as this would assist in mapping. Ms. Howard pointed out the category areas included under “Evaluation” are:

- 1) Creating program evaluations
- 2) Creating reports about my programs to share with others
- 3) Improving my programs based on evaluation data collected, and
- 4) Finding third party evaluators.

The group discussed questions that might fall under each category including why, accountability, reasons, how often, what aspects, how many people participated, am I looking at demographics, curriculum and content, standards, etc. Mr. Mitchell commented that some questions, such as “why should I do this” or “what I want to do” seem to be the right types of questions for the flowchart discussed. He added that once the “why” is figured out, then questions like, “how often should I do this,” or “how do I get demographic information,” would go under the “how” of what the program is trying to do. Mr. Carroll suggested arranging it based on goals like metrics, time, or product. Ms. Howard reminded the group to please share any additional resources with her so she can add to their list. Mr. Hill suggested another avenue that could be on the list of choices for a group would be to pursue a National Science Foundation (NSF) grant and further commented that NSF has their own evaluation framework.

6. ISLE Subcommittee Member General Announcements (For information only)

Tracey Howard

Ms. Maldonado, Vice President of Education at PBS Reno, informed the subcommittee that they are still conducting all informal workshops virtually due to Covid-19, and are still in seven different school districts in Northern Nevada and Northeastern California which has helped. She commented their participation is less this year than last and are currently at about 60% of where they were this time last year. She added that January 2021 did see some gains in participation, which were not seen in October, November, or December. She said they are looking forward to being back in the classroom and with their robotics instruction

they now have lessons for pre-school through fourth graders with coding and programming familiarity with robots called “What is a Robot,” which she pointed out, is real introductory. She added that their goal is to have three levels of lessons and they have completed two so far. She said they are happy to provide schools with robots, so the expense is not on the schools and are proud of that work. She added they just need to get back into the classroom.

Mr. Hill, Education Director at SNJ, said that during this “down” time they are rebuilding program suites, specifically their Classroom Unleashed program, which they are trying to design for equity. He pointed out they want to design a program for historically marginalized individuals who have the most to gain and will get the most benefit and value from their program. He added that SNJ is currently conducting a community needs assessment by going out into the community talking to community-based organizations, parents, teachers, and students to amass a pool of qualitative data.

7. Consider Future Agenda Items for the Next Meeting (For possible action)

Tracey Howard

Ms. Howard said the next meeting of the subcommittee will most likely be in May or June of 2021. She anticipates the flowchart tool will be done by that time and the subcommittee can begin working on what those linked tools look like and go from there. She added that any further input or assistance in helping put this together is always appreciated and welcomed everyone to email ideas and/or information to her along with any other suggestions for agenda items at the next meeting.

8. Public Comment (No action may be taken upon a matter raised under public comment period unless the matter itself has been specifically included on an agenda as an action item.)

Tracey Howard

There was no public comment.

9. Adjournment

Tracey Howard

Ms. Howard adjourned the meeting at 1:51 P.M.