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**PUBLIC MEETING MINUTES**

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

Date and Time of Meeting: Thursday, May 31, 2018 @ 11:00 AM

Place of Meeting: Southern Nevada Conservancy  
6755 W. Charleston Blvd, Suite D  
Las Vegas, NV 89146

Please use the following numbers to join the conference Call:

North: 775-687-0999 or

South: 702-486-5260

Access Code: 70987 push #

**I. Call to Order/Roll Call**

Aaron Leifheit – Co-Chair

Amy Page – Co-Chair

The Informal STEM Learning Environments (ISLE) subcommittee was called to order by Chair Aaron Leifheit at 11:00 a.m. on May 31, 2018, from the Southern Nevada Conservancy, listed above.

**Members Present**

Aaron Leifheit

Amy Page

Craig Rosen

Andy Hart

Sean Hill

Jessica Snaman

**Members Absent**

Kristoffer Carroll

Judy Kraus

Brian Mitchell

**Staff Present**

Debra Petrelli

A quorum was declared.

**II. 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.)

There was no public comment.

**III. Welcoming Remarks and Introductions** (For information only)

Aaron Leifheit – Co-Chair

Amy Page – Co-Chair

Chair Leifheit welcomed everyone since the last meeting of ISLE in December 2017. He said springtime was a busy time of year for many ISLE members, but now the subcommittee can resume working on projects already started.

**IV. Approval of the Minutes from the December 7, 2017 ISLE Meeting** (For possible action)

Aaron Leifheit – Co-Chair

Amy Page – Co-Chair

Chair Leifheit asked if there were any corrections to the December 7, 2017 Minutes as written. None were made. Aaron Leifheit made a motion to approve the Minutes of December 7, 2017, as written. Amy Page seconded the motion. The motion passed unanimously.

**V. Overview of Best Practices** (For information only)

Aaron Leifheit – Co-Chair

Jessica Snaman

Chair Leifheit said the group has been working on two items; Best Practices and a Logic Model. He added that the group has since had discussions of how to adopt best practices of informal education and what those best practices should look like. He added the first accomplishment of the subcommittee was the white paper, which outlines the strengths of informal education.

Ms. Snaman said that after a deeper look into STEMWorks Change the Equation's (CTE) best practice rubric, her conclusion of how ISLE should adopt best practices has come from CTE's best practice rubric, which outlines highly effective STEM learning programs. She said by comparing that document to ISLE's white paper, the familiarity and overlap between the two documents stood out. She pointed out there would need to be very clear differences between ISLE and CTE to warrant ISLE to create another separate rubric for best practices. She said she recommends looking more closely at the ten measurable fields within the CTE rubric for best practices. Chair Leifheit pointed out there has been past discussions of whether informal educators should aspire to meet the CTE principles or whether ISLE should create a separate document with best practices. He said that after Ms. Snaman's extensive investigation, he suggests ISLE adopt CTE's best practices, as a guiding document, to measure best practices of informal education as opposed to creating a totally brand new document. Mr. Hart agreed and said this should help to alleviate organizations from being excluded from consideration of being a model informal STEM program provider, based on whether or not they go through the entire process in the CTE rubric to become accredited. Ms. Snaman said she does not

necessarily feel that all organizations should or need to go through the rigorous CTE process, but rather should be provided with a set of guiding principles. She said this way some providers could self-assess and evaluate their own programs internally. She added she does not believe it is ISLE's role as a subcommittee to be evaluating informal education programs and determining whether they are a high-quality provider. She said this process should identify what Nevada's informal educators are doing really well, areas where improvement is needed and how ISLE can provide the resources to improve their programs. Mr. Rosen commented that CTE has a very rigorous process and it takes a long time to go through the rubric, including gathering the amount of materials required to be approved. He said he agrees to hold CTE's rubric as the "gold-standard," but realistically, some informal STEM programs may not be able to achieve that standard. He pointed out that at one time the group discussed using a less stringent rubric. Ms. Snaman said she agrees it is not feasible that all organizations go through the CTE rubric, ISLE should prepare a less stringent or "light" rubric. She said with ISLE's best practices, they could create a self-assessment rubric that organizations could use by asking how well their program is benefiting the community, and include an evaluation of the program, and its sustainability. It was further discussed whether ISLE should create an adaptation of CTE's rubric, and not necessarily adopt it as it currently stands. Ms. Snaman said CTE's rubric is the highest standard in STEM learning and has been adopted by the state for other STEM programs. She added for the informal STEM community, it should be a goal to make the rubric less challenging for agencies and groups, by providing a pathway or toolkit in working towards CTE's certification.

#### **VI. Logic Model Update (For possible action)**

Aaron Leifheit – Co-Chair  
Sean Hill

Chair Leifheit said ISLE's first year was spent defining best practices and now needs to decide or agree upon what practical tasks should be undertaken by taking into consideration what the group has the capacity for. He said Mr. Hill has been working very hard to define some of those items. He said the logic model is not quite finished and the group still needs to make some additions and changes. Mr. Hill discussed the Logic Model and updated the group on the following anticipated Impacts that will occur with the associated outputs and outcomes:

##### **Impacts:**

- 1) Nevadans understanding of science is measurably enhanced as a result of informal STEM experiences/providers;
- 2) Nevada's Informal STEM providers have a pathway to recognition, certification and funding; and
- 3) Nevada has a formalized network for informal STEM education providers.

Mr. Hill said the following Outputs will produce the below Outcome:

**Output 1:** Develop a list of contacts from ISE providers in Nevada;

**Output 2:** Develop and disseminate a needs assessment survey for ISE providers and recipients in Nevada with respect to the proficiency's identified in STEM Works/CEQ.

**Outcome:** Identify and support the best informal and out-of-school STEM learning opportunities that challenge students to develop critical thinking, problem solving, collaboration, and teamwork skills.

Mr. Hill said the following Outputs, will produce the below Outcome:

**Output 1:** Identify ISE development needs and strengths based on proficiency survey.

**Output 2:** Create/curate resources to address community needs, (i.e. PD opportunities, guides, best practice examples, etc.)

**Output 3:** Informal educators create a regional set of standards they agree to adhere to, relevant to shared priorities.

**Outcome:** Provide a pathway and resources for becoming STEMWorks certified, in order to increase the number of high-quality informal/after school STEM programs.

Mr. Hill said with the following Output, will produce the below Outcome:

**Output:** Coordinate committee efforts between statewide groups.

**Outcome:** Creation of an inclusive, statewide Professional Development Learning Community, made of informal and formal representatives.

Chair Leifheit pointed out that much of this information came from the STEM Advisory Council's 2017 Nevada STEM Strategic Plan, which demonstrates ISLE is trying to align with other statewide groups. The subcommittee continued the discussion on the logic model and state funding. The group agreed this logic model is achievable and would be beneficial. Chair Leifheit suggested this work could be accomplished within the next 1-1/2 to 2 years by the ISLE subcommittee. Mr. Hill pointed out this work will not only benefit the state, but will also benefit each of ISLE's member's individual organizations in a variety of different ways. Chair Leifheit said he and Mr. Hill will make a few more minor adjustments to the document before it is presented to the subcommittee at the next meeting for its formal adoption as ISLE's work plan.

## **VII. Update on STEM Advisory Council, New Subcommittees (For information only)**

Debra Petrelli – OSIT

Ms. Petrelli gave a brief update of each of the STEAM Advisory Council's subcommittees:

### **Computer Science:**

The Computer Science subcommittee's last meeting was May 29, 2018. In August 2017, through an NSF Grant with ECEP, they assembled a Computer Science Standard Writing Team who met for three days in Las Vegas and prepared the new Computer Science Standards in accordance with SB 200, and are currently going through the regulatory process and will be going before the State Board of Education in June 2018. Through an NSF Grant, the Computer Science subcommittee is hosting a Computer Science Summit at UNLV in Las Vegas- June 18, 2018 to answer questions and to support the new Computer Science Standards. Registration closed in early May for the summit, with 161 registered to attend. They are also preparing a Guidance Document and FAQ Document outlining recommendations for SB 200, to include graduation credit requirements and prescribed courses of study for graduation, as well as suggested changes to teacher licensure requirements for computer science.

### **Community Partnerships:**

The Community Partnerships subcommittee last met in March, 2018. They are currently refining their "Community Partnership Manual" outlining benefits for learning through meaningful community partnerships and assist with student engagement activities through community partnerships that provide a learning experience (such as field trips, job shadows,

mock interviews). It also identifies best community partnership practices and successful models for both businesses and educators. Once the manual is finalized, the subcommittee intends to break it down into several simple pieces targeting specific audiences, as an informational guide. The Community Partnership subcommittee is currently looking to expand membership.

**STEAM (formerly: Integrating Arts and Culture into STEM- IACS):**

The STEAM subcommittee last met on May 25, 2018. They recently voted and changed their name from Integrating Arts and Culture into STEM (IACS) Subcommittee to STEAM Subcommittee. The Chair of their subcommittee, Aimee Allen, recently stepped down due to other obligations. Marissa Cooper was nominated and voted as the new Chair of the subcommittee. The STEAM subcommittee is currently taking recommendations for new membership. They hosted their first annual NV STEAM Conference on Saturday, Feb 24, 2018 at the Nevada Museum of Art in Reno. Seven Nevada school districts attended. A Proclamation from Governor Sandoval was presented during the conference designating Feb 23, 2018 as “Nevada STEAM Day.” The STEAM subcommittee had been working on a position paper, and introduced it to the public for suggestions and feedback during the STEAM Conference. The position paper is now ready to go before the STEM Advisory Council for ratification. They are also working alongside the new STEM/STEAM Seal subcommittee on a PR Pamphlet promoting the STEM and STEAM Certificate programs, as outlined in SB 241 (created to allow for an endorsement or seal to be affixed to a high school diploma showing a student has met certain requirements for either STEM or STEAM).

**STEM/STEAM Seal (SB 241):**

This is the newest subcommittee of the STEM Advisory Council. Their first meeting was in March, 2018. They are tasked with coming up with a way to help the public understand the opportunity and take advantage of the STEM or STEAM seals. Their target audiences include students, parents and families, principals and counselors, school district personnel, and the higher education community. They are currently preparing an informational flyer for distribution at the start of the 2018-19 school year, which will contain information on the SB 241 STEM and STEAM seal programs and requirements.

**VIII. Consider Agenda Items for the Next Meeting (For possible action)**

Aaron Leifheit – Co-Chair

Amy Page – Co-Chair

Chair Leifheit suggested the Logic Model be added to the agenda for adoption as ISLE’s work plan at the next subcommittee meeting, as well as distribute tasks and assign timelines to members. He said a discussion and vote on the adoption of ISLE using STEMWorks CTE Best Practices should be included. Mr. Hill suggested adding strategies to consider for the group to remain strong, such as recruitment of membership. He added that with new tasks, the subcommittee will need more people from school districts to become involved including teachers, which will greatly help with logic model tasks.

**IX. Next Meeting Date Will be Determined at this Meeting (For possible action)**

Aaron Leifheit – Co-Chair

Amy Page – Co-Chair

Chair Leifheit suggested the next meeting be in either July or August, 2018. After discussion, the group decided on Wednesday, July 11, 2018 at 1:30 pm.

- X. 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.)

There was no public comment.

**XI. Adjournment**

Chair Leifheit adjourned the meeting at 11:52 A.M.

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