



Steve Sisolak
Governor

STATE OF NEVADA

GOVERNOR'S OFFICE OF
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Brian L. Mitchell
Director

PUBLIC MEETING MINUTES

Name of Organization: STEAM Subcommittee

Date and Time of Meeting: Thursday, December 10, 2020 at 3:00 PM

Place of Meeting: Pursuant to Governor Sisolak's March 12, 2020, Declaration of Emergency Directive 006, 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 in order, to mitigate the possible exposure or transmission of COVID-19 (Corona Virus). Accordingly, members of the public may submit public comment by logging into the ZOOM webinar by accessing the following link:

<https://us02web.zoom.us/j/88385904106?pwd=bVZVUINKQ3d5SWtseFVtbnNCVnhEZz09>

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

The STEAM Subcommittee was called to order by Ms. Howard at 3:00 p.m. on Thursday, December 10, 2020.

Members Present:

Andrew Snyder
Candy Schneider
Claire Munoz
Craig Rosen
Mary Holsclaw
MaryJane Dorofachuk
Sue Dehart
Tia Flores

Members Absent:

Alisha Kerlin
Jen Johanson
Laura Christian

Staff Present:

Tracey Howard
Brian Mitchell
Debra Petrelli

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 to the meeting and thanked them for their participation in recent one-on-one meetings in which visions and concerns for the subcommittee were shared. She said data has been compiled and OSIT is ready to work with the subcommittee and feels confident about where this subcommittee is heading.

4. Approval of the Minutes from the June 2, 2019 STEAM Subcommittee Meeting (For possible action)

Tracey Howard

Mr. Mitchell asked if there were any corrections or additions to the June 2, 2020 Minutes as written. None were made. Ms. Schneider made a motion to approve the Minutes of June 2, 2020 as written. Ms. Dorofachuk seconded the motion. The motion passed unanimously.

5. Discussion on Regional STEM Network Strategic Plans, Subcommittee Vision, and Next Steps (For possible action)

Tracey Howard

Ms. Howard said after meeting with everyone and discussing the subcommittee's vision for the future, she put together some discussion topics. She pointed out that the subcommittee's past focus has been to expand access to STEAM, engage students in STEAM, and professional development (PD) for teachers and increasing high quality STEAM instruction. She added that the annual STEAM conference is one product of that focus. She said in speaking with each member of the subcommittee, one-on-one, there was a common theme of shifting that focus to other topics including increasing awareness, access, and equity in STEAM, and added she does not believe the subcommittee should allow PD to completely drop-off of the radar. Other topics discussed in these conversations were to shift from arts integration to STEAM, and expanding subcommittee membership to include STEM experts, teachers, schools, etc. She pointed out that currently the subcommittee has no representation by a STEAM teacher and suggested that adding that representation might also be helpful in making this shift. She said that other specific projects were discussed during those one-on-one conversations including; 1) the STEAM designation for schools interested in becoming a STEAM school; 2) the STEAM policy paper with suggestions that stakeholders can make in order to increase access to quality STEAM education; 3) a resource evaluation tool that stakeholders can use to evaluate their STEAM curriculum or programs to make sure they are offering high-quality STEAM; and 4) a shared community resource bank where many topics can be shared and resources can be accessed by the community, which they may not be aware of.

Mr. Mitchell commented that one common discussion was the annual NV STEAM Conference which takes place at the Nevada Museum of Art. He said because the conference has been such a big focus for this subcommittee in the past, the ownership of that conference was brought up by members. He said members have asked whether it is an initiative by the museum and supported by the subcommittee, or whether it is an initiative by the subcommittee that is largely carried out by the museum. He pointed out that it has always

been his opinion the conference was an initiative by the museum and is supported by this subcommittee. He said in talking with the Nevada Museum of Art, they agree. He pointed out that one focus of this subcommittee has always been on teacher PD, and the NV STEAM Conference offered a statewide STEAM PD opportunity. He said it is his hope that other initiatives can also be identified that meet that same objective, providing high-quality STEAM professional development. He pointed out that it seems to be unanimous this is something the subcommittee wants to provide and still include support to the museum with assistance in carrying out the annual NV STEAM Conference. He added that the consensus of the group is to provide the same kind of support or assistance to other similar initiatives that help achieve the subcommittee's goals.

Ms. Munoz, Sr. Director of the Nevada Museum of Art, said she would like to acknowledge the help and support that Mr. Rosen and Desert Research Institute (DRI) as a co-host contributes to the NV STEAM Conference. She added she fully agrees with Mr. Mitchell that the conference is a joint initiative by the Nevada Museum of Art and DRI, supported by this subcommittee. Mr. Rosen commented as a historic perspective, the conference started prior to the beginning of the STEAM subcommittee. He said the conference was originally an initiative of the museum and the Smith Center, which ultimately grew and welcomed additional organizations but demanded a voice, which became the STEAM subcommittee. He pointed out that each member of this subcommittee contributed from the beginning at the first NV STEAM Conference. He said he believes this is a good time to move the conference outside of these meetings and keep it separate so this subcommittee can work collaboratively towards the greater STEAM initiatives.

Ms. Howard commented that discussions to put together several working groups for other STEAM initiatives as well as a group dedicated to the NV STEAM Conference is forthcoming. She said a couple questions were raised during the one-on-one discussions, which included, what the ultimate STEAM goal for Nevada is; what this subcommittee can do to support the work of the three regional networks; and who is needed at the table. She pointed out that last spring, the three Regional STEM Networks were created and have been doing work creating regional strategic plans and have identified regional specific STEM needs. She added that most of this group attended the Regional STEM Summit that took place in October 2020, and as a group should continue discussions on supporting regional STEM goals and see where STEAM fits in. She pointed out that this subcommittee consists of all talented experts in the field and wants to be sure that all aspects of STEAM education are being represented.

Ms. Howard asked Mr. Rosen, who was an attendee at the Regional STEM Summit, for comments he received from the event and the outcomes of each regions strategic plan. Mr. Rosen said the three STEM networks (Southern, Northwestern, and Rural) have each come up with their own unique ultimate outcome making each very regionally focused. He added that each region's alignment is very similar with each other. He said the question is how these ultimate outcomes will be achieved for the state what work needs to be done to get to that place. He said there are three main themes to be targeted; 1) STEM and STEAM equity for all Nevadan's; 2) awareness of STEM and STEAM opportunities and careers; and 3) high-quality STEM and STEAM educational programming. He commented if those three intermediate outcomes are produced, then it will lead to the ultimate outcome for each

region. Ms. Howard added that each region's Strategic Plan can be found on the OSIT website at: https://osit.nv.gov/STEM/Regional_STEM_Networks/

Ms. Howard pointed out the original Mission and Objectives of the STEAM subcommittee, were as follows:

MISSION: The STEAM subcommittee is a civic advisory working group and permanent subcommittee to the Nevada STEM Advisory Council, consisting of both Arts and STEM professionals and community advocates committed to supporting arts integration across all disciplines of study.

OBJECTIVES: The STEAM subcommittee is supporting professional development programs for preK-college educators, increasing access to high quality STEAM opportunities for students throughout the state, and targeting stated goals put forth by the Nevada Office of Science, Innovation, and Technology.

She commented that after meeting one-on-one with each member it is apparent that the vision and goal of the subcommittee has changed. She pointed out that it is important there be a discussion as a group on the ultimate STEAM goal for Nevada and what this subcommittee can do. She said a couple of items mentioned included the goal of getting STEAM into all schools, increasing access to STEAM, and whether kids are being engaged in informal STEAM programs. Ms. Schneider said perhaps there needs to be an adjustment in the subcommittee's goal of "integrating the arts in and across STEM so that it was representative as STEAM," which may have been stated improperly by saying "supporting arts integration across all disciplines of study." She pointed out in this case it speaks specifically in the areas of STEM and integrating the arts within STEM and helping make that connection for students.

Ms. Flores commented that all study and research shows in the STEM field, when the arts component is introduced it makes it more equitable across minority groups, gender groups, and those less fortunate in low-income settings. She said she agrees the goal should be directed more towards the STEM field and not so broadly stated as "in every subject matter." Ms. Schneider added it is not only for those areas underrepresented but is an encouragement to find an entry for those underrepresented in the STEM field. She said the idea of the creativity, the collaboration and problem solving, and everything that goes with the arts and parallels in science, technology, engineering, and mathematics are the pieces that takes kids on a different learning path and gets them to that end. She said this adds to the idea of being more open and finding a variety of opportunities when the arts are present within STEM education fields. Ms. Howard said the conversation sounds like the goal for STEAM in Nevada is that all students have access to high-quality STEAM education.

Ms. Howard, referring to the STEM Regional Networks, suggested a discussion on the three intermediate outcomes and the importance of how this community can help support those networks in these ultimate goals and ensure all students in Nevada have access to high-quality STEAM:

Goal 1: STEM Stakeholders employ evidence-based strategies that lead to increased participation in high-quality STEM programs from all groups, with a particular focus on students that are traditionally underserved.

Goal 2: All Nevadans, especially families, students and job seekers are aware of the benefits of STEM education and opportunities for STEM careers.

Goal 3: High quality STEM education programs with knowledgeable educators and engaged business partners exist in all counties, cities, and districts.

Ms. Munoz asked what the responsibility is of the STEAM subcommittee to execute these goals. She said if the goal is to ensure access to high-quality STEAM education for all students, what is the role of the subcommittee and who is responsible for that; how it happens; and how it is executed across the State with regards to equity, and how this team makes that assurance. She said in looking at the PD side, she feels confident that she along with other subcommittee members can provide that PD. Ms. Schneider commented that PD is certainly key to changing anything in education. She pointed out that PD is critical, but also for the awareness component, both for educators, as well as for parents and industry. She said those in the field of STEM understand how the arts support and enhance that learning and bring others who are possibly marginalized in those opportunities to find a way in. She added that she believes it is bigger than just PD for teachers but is also awareness. She said she thinks more awareness is also needed in the Governor's STEM Advisory Council. She said the name "STEAM subcommittee" somewhat marginalizes the importance or the awareness of including the arts in STEM and she believes there is an awareness of the importance and acceptance of moving forward with the Governor's STEM Advisory Council. She added that in her opinion there is not even an acknowledgement of the importance or the power of STEAM within the STEM Advisory Council.

Ms. Dehart commented that the awareness component is going to be huge because it is what creates that demand. She said if the subcommittee wants to get to students, the other side of that as opposed to going with PD for teachers, is to hold student events and engage students in that work which will create awareness and the demand to increase the programs in schools.

Mr. Mitchell said it is fair there are questions asked while setting the goal that all students have access to high quality STEAM programs. He added this subcommittee is a small but mighty subcommittee of about ten people working to accomplish this goal and pointed out that the NV STEAM Conference put on by the Nevada Museum of Art and DRI is most definitely a big part of that. He said, in his opinion, the STEAM subcommittee alone does not have the manpower to solely accomplish these goals and perhaps a better way to go about this would be to influence or create conditions whereby more STEAM happens throughout the state, rather than try to accomplish this alone. He suggested the subcommittee develop and design a high-quality guide with the components needed to achieve a high-quality STEAM professional development, which could be distributed to other organizations that specialize in professional development. He pointed out different ways this subcommittee could bring about awareness of STEAM and leverage relationships with other organizations, and to encourage others to help in this work. He also addressed the question of whether the STEM Advisory Council is aware of the work of the STEAM subcommittee or whether this subcommittee is inherently marginalized by STEAM versus STEM. He pointed out that the

STEM Advisory Council was reconstituted by the legislature approximately 6 years ago, and OSIT was created with the mission to grow STEM education in the state. He explained the beginnings of the council and the decisions made regarding STEM versus STEAM and the reasons the STEAM subcommittee, along with 3 other subcommittees were created, each consisting of experts in their fields to make recommendations to the STEM Advisory Council. He pointed out that OSIT supports both STEM and STEAM. He clarified that the NV STEAM Conference was an existing effort running parallel to the creation of the STEAM subcommittee. The advocates who originally presented to the STEM Advisory Council recommended most of the members currently on this subcommittee to become charter members and with many members already involved in the conference it melted into a subcommittee event. He pointed out that in the distant past, before this subcommittee was so focused on the NV STEAM Conference, a white paper was written and vetted through the conference for feedback from teachers who attended. He said afterwards the white paper was finalized and was presented to the STEM Advisory Council for ratification. He said after endorsing the definition for STEAM regarding high-quality STEAM programs, the STEM Advisory Council may have been more aware of what this subcommittee was doing. He said as this subcommittee goes forward and presents more to the council, the council will be made even more aware of STEAM initiatives of the subcommittee. He said he believes that in order to raise awareness of STEAM by the subcommittee, recommendations or helpful resources be created that can be endorsed and distributed by the broader STEM/STEAM ecosystem and STEM Advisory Council.

Ms. Schneider asked whether it is possible to have representation from the STEAM subcommittee on the STEM Advisory Council as well as a member of the council be a part of the STEAM subcommittee. Mr. Mitchell responded that STEAM subcommittee member, Andrew Snyder, Education Programs Professional, State of Nevada Department of Education, Office of Standards & Instructional Support is a member of the STEM Advisory Council and is Superintendent Jhone Ebert's designee on the council and is the STEM Advisory Council liaison/representative on the STEAM subcommittee. He added the membership of the STEM Advisory Council is statutory and members of the council are appointed by various legislative leaders and the Governor. He added there is always an open invitation for any member of the STEAM subcommittee to request an agenda item or present at any STEM Advisory Council meeting. He said he will inquire whether any other STEM Advisory Council member(s) would be interested in joining this subcommittee along with Mr. Snyder.

Ms. Howard suggested they discuss the Regional Network goals and look at them in the STEAM perspective rather than the STEM perspective and determine what this subcommittee can do to help the Networks reach those goals.

1) STEAM stakeholders employ evidence-based strategies that lead to increased participation in high-quality STEAM programs from all groups, with a particular focus on students that are traditionally underserved.

Ms. Dorofachuk asked whether as a group, they need to describe what a high-quality STEAM program is. Ms. Howard replied that it does. Ms. Dorofachuk also pointed out the STEAM school designation, which was discussed at the last subcommittee meeting, and what it means down the road for schools to get designated as a STEAM school. Ms. Schneider

said she believes it requires a stronger voice within the Department of Education related to the power and importance of STEAM education and defining it in the educational language that would be represented by the state. She said she believes it is incumbent upon the State Department of Education as opposed to representatives of arts organizations. She asked whether the subcommittee could help in vetting that language. She pointed out that the subcommittee could help support STEAM education in the classroom as one of the components in the community, but stated she was unsure whether the subcommittee could state what STEAM is in educational language representing the state. Mr. Mitchell responded that responsibilities of the STEM Advisory Council include making recommendations to the State Board of Education, Department of Education, Board of Regents, and other education bodies including local school boards, etc. He added that this subcommittee may not necessarily have the authority to make that definition on its own.

Ms. Howard directed attention to the next two intermediate outcomes:

- 2) *All Nevadans, especially families, students and job seekers are aware of the benefits of STEM/STEAM education opportunities for STEM/STEAM careers.*

Mr. Mitchell suggested that because each of the 3 Regional STEM Networks will be taking on different initiatives to make more people aware of STEM, the subcommittee could work with the different network directors to insert STEAM into their initiatives by adding what is already being done. He said it would be important that the STEAM voice is heard within the networks' projects. Ms. Schneider said the goal of the subcommittee is not to create something separate and it makes sense to combine the idea of the arts being trickled to STEM education rather than to propose something separately. Ms. Howard pointed out that subcommittee member Craig Rosen is also the Director of the Regional STEM Networks and can act as liaison between them and the subcommittee.

- 3) *High-quality STEM/STEAM education programs with knowledgeable educators and engaged business partners exist in all counties, cities, and districts.*

Ms. Howard commented that this outcome consists of several parts; training of educators and business partners; and making sure they exist throughout the state to include rural along with the larger urban areas. Ms. Munoz said in terms of providing access and equity across the state, and because of distance learning due to COVID-19, new school formats are opening many possibilities and suggested the subcommittee take the responsibility that all counties, both rural and urban, know these new opportunities exist. Ms. Schneider commented on the universal use of online meetings and how it connects experts in their fields. She said the idea of being able to expand the subcommittees reach in so many ways, basically removes "rural" and "urban," since all areas can now combine as one if interested in the content focus.

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

Tracey Howard

Ms. Munoz said she and Mr. Rosen have been meeting weekly to discuss the upcoming NV STEAM Conference and announced that this year's theme is "Design Thinking Process." She pointed out it involves solving big problems through creative processes. She said this year's presenters include designers from NASA's Jet Propulsion Labs and artist Paul D.

Miller, aka DJ Spooky. She said the registration will open next week and encouraged participation by all members of the subcommittee and to support the efforts of the conference by sharing within each members' networks. She added it is a free conference and is looking forward to statewide registration.

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

Tracey Howard

Ms. Howard asked that members please email her with any suggestions for next steps that were discussed during the quarterly share-out, and if anyone is working on a project they would like to share with the subcommittee at the next meeting. She asked for suggestions in finding new members for the subcommittee to further diversify the group since there is a lack in STEM representatives at this time. She added that she will put together an outline for possible working groups and requested that volunteers email her for any of the initiatives discussed today. She suggested the next subcommittee meeting take place in the spring of 2021.

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 4:02 p.m.