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MINUTES

Name of Organization: Advisory Council on Science, Technology, Engineering and Mathematics (STEM)

Date and Time of Meeting: Tuesday, April 18, 2017 at 3:00 P.M.

Place of Meeting: Grant Sawyer State Office Building
555 East Washington Ave,
Suite 5100
Las Vegas, NV 89101

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- I. Call to Order/Roll Call
Mark Newburn, Co-Chair
Kelly Barber, Co-Chair

Chair Newburn called the meeting to order at 3:07 p.m. He will run the meeting today.

Members Present: Mark Newburn, Kelly Barber, Richard Knoeppel, Shelace Shoemaker, Judy Kraus, Dave Brancamp, Dr. Carl Reiber, Cory Hunt, Christopher Sewell, Camille Stegman

Members Excused: Dr. Anne Grisham, Marcus Mason, Rob Elliot

Staff Present: Brian Mitchell, 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**
Mark Newburn, Co-Chair
Kelly Barber, Co-Chair

Chair Newburn welcomed everyone.

- IV. **Approval of the Minutes from the November 16, 2016 and January 11, 2017 meetings** (For possible action)
Mark Newburn, Co-Chair
Kelly Barber, Co-Chair

Mr. Knoeppel made a motion to approve the minutes of November 16, 2016 and January 11, 2017. Ms. Stegman seconded the motion. The motion passed unanimously.

- V. **Possible Vote on STEM Council Strategic Plan** (For possible action)
Brian Mitchell, Director, OSIT

Mr. Mitchell stated this is the Strategic Plan completed by the STEM Advisory Council in January 2017. He said at the last meeting of the Council on January 11, 2017, we did not have a quorum and therefore could not vote on the Strategic Plan. Chair Newburn asked whether anyone had changes or comments. There were none.

Co-Chair Barber made a motion to adopt the STEM Advisory Council's Strategic Plan. Ms. Stegman seconded the motion. The motion passed unanimously.

Mr. Mitchell pointed out the Strategic Plan will go on to the Governor, the Legislature, the State Board and the Board of Regents

VI. Discussion and Possible Vote on Governor's STEM School Designations (For possible action)

Brian Mitchell, Director, OSIT

Mr. Mitchell said over the last eight weeks, he along with members of the STEM School Evaluation Subcommittee visited schools that applied to be designated as official STEM schools. He said this group developed a rubric and understanding of what it meant to be a STEM school. Seventeen total schools applied. He added these schools consisted of Clark County, Washoe County, Lyon County and White Pine County. He said each school was visited. The Governor's STEM School Evaluation Subcommittee had a meeting April 17, 2017 and discussed which schools had met the requirements for designation and which schools did not. He said they made a determination of which schools would be designated as well as a couple that required further discussion, which we will bring forward today.

Mr. Mitchell said three schools still required a discussion, consisting of Walter Bracken STEAM Academy, Kate Smith Elementary School and Greenbrae Elementary School. Co-chair Barber, a member of the Governor's STEM School Evaluation Subcommittee, was unable to attend the meeting on April 17, 2017. Mr. Mitchell asked for her opinion and discussion for the record on these three schools. Co-chair Barber, referring to Walter Bracken STEAM Academy, said it had a good learning environment for the students, with paintings on the walls and signage about careers in STEM. She said there was teacher and principal support, with some areas of improvement needed. She suggested they could reach out to the community more for teaching and mentoring. There was not a lot of integration; it could be stronger. All in all, she said, they are a fairly strong example of what a STEM school should be.

Co-chair Barber, referring to both Greenbrae Elementary School and Kate Smith Elementary School, said they are very similar in what they do in integration of science, technology, engineering and math. She said science is taught every day in both of those schools. They both do community projects, perhaps more at Kate Smith Elementary School. She said she believes they were both fairly strong in being STEM schools. Mr. Mitchell added that other reviewer's opinions differed. The other reviews included Dave Brancamp and Shelace Shoemaker. Mr. Mitchell asked the consensus on whether these two schools should be designated. Ms. Shoemaker felt Kate Smith Elementary was a strong STEM school. Mr. Brancamp said he would be comfortable in designating Kate Smith Elementary School, but had reservations with Greenbrae Elementary School. He added he does not believe Greenbrae Elementary School is quite strong enough this year to make it and perhaps mentoring and support is needed. Ms. Shoemaker commented on STEM instruction and the learning environment at Greenbrae Elementary School, and her score was low. It was discussed that Greenbrae Elementary School is just not quite at the STEM level this year. After discussion, it was decided

that Walter Bracken STEAM Academy and Kate Smith Elementary School will be designated as STEM schools.

Mr. Mitchell said at this point we are proposing designating the following schools as STEM schools: McCaw STEM Academy, Advanced Technology Academy, Walter Bracken Middle School, Kate Smith Elementary School, Cashman Middle School, Hyde Park Middle School, Clark High School and White Pine High School. Those schools not designated as STEM schools this year include Lowman Elementary School, Hollingsworth Elementary School, Lincoln Park Elementary School, Greenbrae Elementary School, Riverview Elementary School, Adelson Educational Campus, Silvestri Middle School, Coral Academy of Science Las Vegas and Walter Long STEM Academy.

Dr. Reiber suggested several of the middle schools mentioned feed into a high school and they really work well together, and said we should make note because this is taking it beyond being a STEM school. Mr. Mitchell agreed. Chair Newburn also agreed and suggested offering guidance to schools that did not make it as Governor Designated STEM schools this year, so they can re-apply for next year.

The Council discussed possible honorable mentions for schools that got close to being designated. Some of these schools are magnet-class schools and some are serving populations by doing quite a bit with not very much. Ms. Kraus pointed out there had been lengthy discussion when the rubric for the STEM school designation was developed that if a school does not make the STEM designation, feedback and assistance would be offered rather than “watering down” the designation. She added by doing this, we will be keeping the bar as high as possible. It was discussed that an honorable mention would not be as meaningful as offering feedback to those schools in order to achieve this designation. Mr. Mitchell agreed, as this would cause a constant re-evaluation of schools moving them up and down the chart towards getting their STEM designation. He pointed out that with the work Cashman Middle School and Clark High School are doing, they are doing it right and working together. Their programs are connected, allowing flow from middle school to high school, more like a system. He suggested these schools could be highlighted, specifically in conversations with other schools. Dr. Reiber agreed and said we are looking for continuity for students to move up and those two schools demonstrate this in working together.

The Council agreed not to give an honorable mention to any school that was only close to being a STEM designated school, but rather offer feedback and pairing them up with a school that was designated as a STEM school. This way they can see how it works and understand and learn from a designated STEM school. It was also agreed not to do a designation of going above and beyond the STEM designation, but those schools could be highlighted and

used as examples to other schools. Ms. Stegman suggested by using the STEM Hub website we could feature those schools giving information and creating interest.

Mr. Mitchell said if the Council is in agreement with the aforementioned STEM school designations, a vote could be taken. Mr. Knoepfel made a motion to accept the aforementioned schools designated as STEM Schools for 2017 and the schools not designated. Ms. Shoemaker seconded the motion. The motion passed unanimously.

Mr. Mitchell said on May 17, 2017, at 12:00 noon, the Office of Science, Innovation and Technology (OSIT) is hosting a luncheon at the Governor's Mansion in Carson City in recognition of these designated STEM schools. Governor Sandoval will be presenting the STEM school designation to those schools. A digital STEM seal will be presented to each school to use as advertising on their website as well as presenting each school with a banner designating them as a STEM school. He added OSIT has a small budget set aside to use for travel stipends for those schools that are long distance from Carson City, i.e. Clark County and White Pine County. We will offer transportation for two people representing each school, to include the Principal and a STEM teacher or staff.

Chair Newburn pointed out that this Council has learned a lot in this process of what a STEM school really looks like.

- VII. Update on Senate Bill 200 (SB 200) Revises provisions relating to instruction in computer education and technology. (BDR 34-266) (For information only)
Mark Newburn, Co-Chair

Chair Newburn pointed out that a bill draft to expand computer science in K-12 has been discussed numerous times at Advisory Council meetings and has now become Senate Bill 200 (SB200). Presently it was heard in the Senate Education Committee and has now been referred to the Senate Finance Committee. He said this bill would ask all high schools to offer a high-rigor computer science course, or at least access to an online computer science course. It would add computer science state standards, and would allow to count as a fourth math credit or third science credit. He said it also asks that basic computer technology education be given in elementary schools because of on-line testing. It also looks at the half-credit graduation requirement, adding some computer science to that course.

Mr. Mitchell said SB200 has a \$1.4 million appropriation for professional development. Chair Newburn said critical decisions will be made as it goes into Senate Finance. He said this bill is part of the Democrats blueprint for Nevada and is sponsored by the Chair of the Senate Finance Committee, Joyce Woodhouse.

Mr. Mitchell said SB200 specifically relates to the STEM Advisory Council who formally created a subcommittee on Computer Science. SB200 would put that subcommittee into Nevada statutes and would require the Computer Science Subcommittee to do reporting to the State Board as well as the legislature. It will formalize, in Nevada Statutes, much of the work already going on in that subcommittee. Chair Newburn said the state will look to that subcommittee to make recommendations for professional development and teacher licensing.

- VIII. Update on Senate Bill Senate Bill 241 (SB 241) Provides for the establishment of the State Seal of STEM Program and the State Seal of STEAM Program. (BDR 34-680) (For information only)
Brian Mitchell, Director, OSIT

Mr. Mitchell said this legislation is similar to legislation that passed last session which created a seal by literacy. SB241 would create a seal of STEM or STEAM for students to add to their diploma if they meet certain requirements or recommendations. He said we have worked with Washoe County and Clark County and have solicited input from this Council to craft what those recommendations look like. He added that should this bill pass, this Advisory Council would then take the lead in publicizing and helping school districts embrace it and school counselors to become aware of what the requirements are and how they can achieve them. He added it would fall on this Advisory Council to assist in advising students of this opportunity for recognition on their diploma, that it is available, and what the requirements and benefits are.

- IX. Updates from Subcommittees (For possible action)

- Computer Science Subcommittee- Mark Newburn, Co-Chair

Chair Newburn said this subcommittee is currently fairly active. Ten members were recently sent to a conference and workshop on computer science in Cambridge, Massachusetts, sponsored by Google. We were one of ten states invited. It was a great chance to hear about what was going on around the county in computer science. It gave us a chance to hear different panels discuss certain issues arising. He said the next meeting of the Computer Science Subcommittee will be discussing what teacher licensing looks like in the new world of computer science. Currently there is a special endorsement, which was aligned with the career and technical pathway for computer science. He said there has been discussion as to what it should look like for the new generation of classes, like computer science principals and exploring computer science, as well as discussions on professional development. He added these are issues the entire country are working on.

- STEMworks Subcommittee- Brian Mitchell, Director, OSIT

Mr. Mitchell pointed out that STEMworks is a national program that rates different curriculum and programs in STEM, so better decisions can be made on what we are using in the classroom. He said that subcommittee is in the process of adding Nevada specific criteria to the national rubric. He said once that is finalized, the subcommittee will be recruiting people who will serve as program reviewers, who will receive specific training from WestEd, a nonpartisan, nonprofit organization that provides learning opportunities, consulting, and technical assistance to education. Once the training is done, a call for applications will be sent out for national programs, i.e. Project Lead the Way. These programs will be reviewed by Nevada and a list will be developed that will be a voluntary list school districts would use in making decisions about what curriculum to use, and could be used by the state for state funding. This list will become available by the Fall of 2017 for school districts to use when they make their curriculum decisions in the Spring of 2018.

- Integrating Art and Culture into STEM Subcommittee
- Community Partnerships Subcommittee
- Informal STEM Learning Environments Subcommittee

Mr. Mitchell commented that each of these three subcommittees are meeting and are very active in charting their course and producing a mission statement as well as determining what direction each subcommittee is heading. He pointed out that each subcommittee is using the Nevada Strategic Plan, created by this Council as a template to guide their efforts in developing specific action plans and strategies identified by each subcommittee.

X. Update Regarding STEM Student Recognition Events (For possible action)
Brian Mitchell, Director, OSIT

Mr. Mitchell invited all members to attend these upcoming events. The event in the North will be at Truckee Meadows Community College (TMCC), Dandini campus on Monday, May 1, 2017 at 4:30 to 7:30 p.m. and the event in the South will take place at University Nevada Las Vegas (UNLV), Tuesday, May 2, 2017 at 5:00 p.m. to 7:30 p.m. He requested assistance from the Council in sending out invites to industry professionals to attend to mingle with the students and provide feedback, thoughts and advice with no long-term commitment. He added we are reaching out to schools who submitted student projects, requesting the student names for certificates we are preparing that will be signed by the Governor. It was discussed to make changes for next year's student recognition, as it was a goal to get at least

one representative from each school. We need to get the word out about the event sooner and to more schools. Mr. Mitchell agreed.

- XI. Update on the Year of STEM (For information only)
Brian Mitchell, Director, OSIT

There were no questions or updates on the Year of STEM.

- XII. Discussion of the Future STEM Council Meeting Schedule (For possible action)
Mark Newburn, Co-Chair
Kelly Barber, Co-Chair

Chair Newburn suggested a Doodle-Poll be sent out with dates for the next meeting. Mr. Mitchell reminded the Council the next meeting is an “In-Person” meeting taking place in Las Vegas. The last “In-Person” meeting was in Reno, which the Council is required to do two of these meetings per year. He suggested the next meeting be in either June or July 2017. He said travel funds are available for those member of the Council who are in Northern Nevada. He asked whether any members of the Council would like to look at a different venue than the Grant Sawyer Building, maybe a venue that is STEM-related. He suggested perhaps the Innovation Center. It was discussed that the Las Vegas Springs Preserve is also located there.

The Council discussed dates. Middle of June is better. Middle of July some members not available. Middle-late June might be best for teachers. Dates just after the 4th of July may have options.

Mr. Mitchell suggested members from the above-referenced subcommittee’s be invited to the “In-person” meeting as well. He said there seems to be a lot of overlap between these subcommittees and it would be beneficial to all of them to meet in person.

Mr. Mitchell pointed out that for Council members in the North, who are unable to travel to Las Vegas, a conference call or video conference might be a possibility for a portion of the meeting.

- XIII. Consider Agenda Items for the Next Meeting (For possible action)

Chair Newburn suggested a legislative debrief on bills that pass and do not pass and the effects they will have on education. He said if you look at the items in the bill that originally created this Advisory Council, this is our first pass of doing everything we were obligated to do and it may be worthwhile to have feedback and reflection on what this Council has done and how we can change it, as well as new things we need to accomplish.

- XIV. 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.

XV. Adjournment

Chair Newburn adjourned the meeting at 3:58 P.M.