



**Virginia STEM Education Advisory Board
Minutes (Draft) December 3, 2021
Science Museum of Virginia, Dewey Gottwald Center**

Members in attendance (in-person):

Gary Artybridge Jr., Dr. Venicia Ferrell, Casey Roberts (Vice-Chair), Amy Sabarre (Chair), Dr. Padmanabhan Seshaiyer, Zaina Tarafdar, Amy White, Dr. Brendon Albon, Rich Conti, Grace Poreda (Sec. of Labor Office), Kathy Burcher (Sec. of Education Office), Emily Salmon, Omer Yousef (Chief Diversity Equity and Inclusion Office)

Members in attendance (virtual):

Dr. Damodar Ambur, Chris Dovi, Dr. Susheela Shanta,

Members not in attendance:

Guests:

First Lady of Virginia Pamela Northam, David Cary (Secretary of Education Office), Hala Al-tinawi (Secretary of Education Office)

Call to Order: A regular meeting of the Virginia STEM Education Advisory Board opened in the Dewey Gottwald Center of the Science Museum of Virginia on December 3, 2021. The meeting convened at 10:00 am with the First Lady of Virginia, Pamela Northam opening and presided by Chuck English, Virginia STEM Coordinator, in the absence of having a Chair or Vice-Chair elected at the beginning of the meeting.

General Overview:

- The meeting opened with welcome and opening remarks by the First Lady of Virginia, Pamela Northam. She discussed how she led the Virginia STEM Education Commission, which led to the legislative action that created this Advisory Board. She offered her help both now and after the current administration leaves office.
- Advisory Board members introduced themselves, including how they identify with STEM, whether more tied to science, technology, engineering, mathematics, or a combination.

- Deputy Secretary of Education Kathy Burcher discussed administrative changes and how that may impact some of the work and communications as we prepare for some transitions, including three of sixteen of our Board Members.
- Deputy Secretary of Education Kathy Burcher led the nominations, presentations, and voting for the Chair and Vice-Chair of the Virginia STEM Education Advisory Board. Ten of the people present were allowed a vote, which met quorum.
 - Chair - both Amy Sabarre and Casey Roberts were nominated to run for this position. Each person had up to three minutes to present their case on why they should be elected to this role. Amy Sabarre won the Chair vote with 7 of the votes.
 - Vice-Chair - both Casey Roberts and Dr. Padmanabhan Seshaiyer were nominated to run for this position. Each person had up to three minutes to present their case on why they should be elected to this role. Casey declined since he had already presented. Casey Roberts won the Vice-Chair with 6 of the votes.
- The meeting broke while people took a picture with the First Lady. The newly elected officers were updated on the agenda for the rest of the meeting, still being led by the Advisory Board staff member, Virginia STEM Coordinator, Chuck English.
- There was a brief discussion on how specific people on the Board represent different perspectives of STEM. An example used was Chris Dovi and Computer Science. He represents CS in his work and on the Board.
- Chuck English provided a more detailed look at the STEM Advisory Board legislation. Hence, the Board members knew what they were responsible for, including an annual report due within a month.
- STEM in Virginia recap by Chuck English. This recap included a quick review of state STEM presentations, including the Virginia School Board Association. He also mentioned work with various other content themed areas tied to STEM:
 - Environmental Education: Chuck helped facilitate discussions with various environmental education-focused entities who may have concerns about aligning efforts similar to STEM. Chuck was asked to do this on behalf of First Lady, Pamela Northam.
 - Virginia Math Pathways Initiative. Chuck is on the Leadership and Communications teams.
 - Computer Science. Virginia STEM is working to tie the efforts of CS and STEM together. CS and STEM are both looking to better integrate into the everyday curriculum, especially at the elementary level. VA STEM has been represented in several meetings/conferences connected to CS, including the Code.org

conference, and Chris is missing this meeting due to a GovsforComputerScience event in Arkansas.

- A dialogue was started on STEM. We started looking at several other state models. What makes it STEM? A committee wrote VDOE definition – so how do we break that down in more detail. Several people brought up different points. Gary Artybridge Jr. brought up the need to ensure that STEM does not explicitly point everyone to a 4-year degree program. We need to include CTE (Career and Technical Education) careers, stated Casey Roberts. Dr. Padmanabhan Seshaiyer brought up integrated, integrative concerns. The definition needs to help people understand what STEM is and what STEM is not. Venicia Ferrell brought up how specific teachers who inspired us had a passion for the topics and naturally integrated the themes. Dr. Padmanabhan Seshaiyer brought up that integration tends to focus people on disciplines, but it needs to be inclusive, which also helps address all audiences. We may need to use Inclusivity as well.
- We broke for lunch around 11:45. Board members were encouraged to think about words or phrases we should include while developing a Virginia definition of STEM.
- The Board then considered a draft of the first STEM Advisory Board report to the General Assembly. We discussed the report and made minor changes suggested by Board members. The Board then voted unanimously to approve the report given the changes proposed. *
- Came back to the definition of STEM. We started to address the audiences who would read this definition and how they would use it. These people include parents, politicians, educators, funders.
- Kathy Burcher, Deputy Secretary of Education, recommended developing a communication plan for the STEM Advisory Board more fully. This plan should include communications between Board members and how we communicate out to the public. We also need to consider developing a landing page (website) that will need to be developed with the new Secretary of Education's Office.
- What would quality STEM education look like? We looked at rubrics created by North Carolina (Attributes guide) and Texas (STEM Model Identification Guide). Texas had more detailed descriptors and examples for varying levels of STEM implementation. Casey Roberts brought up the issues with STEM dilution if we continued to add letters to the acronym. Emily Salmon brought up a need to more clearly understand the intent of our definition. Is it informational or to align others to our definition? What is the end goal, and how do we get the State to recognize that? Amy White asked what sort of resource do we want to be? Do we need a marketing plan to get the word out? Venicia Ferrell asked at what level we need to consider for the rubric. Is it general enough to be applied anywhere? Do we need to use this when teaching teachers or for students in afterschool programs? Are we going to want to be responsible for vetting STEM

programs? Dr. Brendon Albon sees a benefit for defining STEM and a STEM school. That would help with designations. This rubric could also be an excellent filter for assisting schools in growing in what they offer in STEM. Zaina Tarafder related the conversation to addressing/including what is needed for a STEM school, such as the teachers for the appropriate programs. Venicia Ferrell brought it back to the general definition of STEM because we dove deep into a school concept, leaving out other potential STEM-defined spaces, from out-of-school programs to universities. It all needs to 'echo' back to the definition we create.

- We briefly addressed the need to look into what counts as a STEM occupation. We did not have much time to address this in the current meeting; however, we will come back to this soon. It will need to be addressed. One thing to consider is the data we currently collect. SCHEV collects STEM-H data, so our changes may impact what they collect. The main Advisory Board PPT highlights what we briefed over.
- The new incoming administration was discussed. We talked about how CS and STEM were considered vital connections between education and the workforce for Governor Youngkin. We are waiting for new appointments for the Secretary of Education and the new State Superintendent. We also brought up various ways to engage and communicate with the new administration as soon as possible.
- We discussed various calendar options for our meetings. Kathy Burcher brought up that we need to set priorities first. This prioritization would help determine the schedule required. For now, we decided that we will likely meet four times in person and, as needed, address additional work in subcommittees with virtual informational meetings that would not include any voting.
- We set potential dates for two meetings. January 7 for a virtual meeting to further discuss priorities and plans and set the schedule. We will plan for the next in-person meeting for April 1, after General Assembly.
 - Workgroups needed? Definition for STEM? Priorities? Communications? Calendar? We did not finalize these considerations.
- Nobody was present for the public comment time allotted.
- The new Chair, Amy Sabarre, closed the meeting.
- The meeting adjourned at 2:00 pm by the Chair, Amy Sabarre.

*missing notes on who called for the vote and who seconded the vote – the recording was not clear.