

Virginia STEM Education Advisory Board
Rocktown High School Room B117
2970 E Kaylor Park Dr
Harrisonburg, VA 22801

Meeting Minutes

April 11, 2025

10:00 am – 2:00 pm

In Attendance:

Board Members Present: Amy Sabarre, Dr. Padmanabhan Seshaiyer, Edward Monroe, Amy Thompson (Virtual), Chris Dovi (Virtual), Rashid Farrell, Amy White (Virtual) and Victoria Chuah (Virtual), Dr. Terry Whipple (Virtual)

Ex-officios and Staff: Reagan Polarek (Office of the Attorney General), William “Billy” Reid (Secretary of Labor Office) (Virtual), Dr. Anne Petersen (VDOE Office of STEM & Innovation Science Coordinator) (Virtual), Ada Sue Siler (Science Museum of Virginia Staff) (Virtual), Michael Perez (Special Assistant for Policy in the Office of Diversity, Opportunity, and Inclusion), Michael Richards, Giovanni Sanchez-Garcia, Addison Mason, Heather Sherman (Virtual), Sherene

Topics:

1. Approval of Minutes from February 7, 2025
2. STEMX National STEM landscape
3. Updates on Federal Appropriations Funding STEM Ecosystems VDOE
 - Current grant status
 - STEM Consultant Progress: EnVision Plus
 - Lunch break (12-12:30)
 - STEM Ecosystem Webpage status: Terminal 4
 - VDOE STEM PD Update and Feedback
4. Legislative Session Updates
5. Board Chair and Vice Chair positions
6. Public Comment

Amy Sabarre called the meeting to order at 10:17am and noted that a quorum was not present in person. Ms Sabarre invited the group to introduce themselves and share about their involvement in STEM.

Ms. Sabarre introduced Heather Sherman with STEMx to present on the current landscape of STEM at a national level.

The presentation outlines Battelle's role as a key thought partner in STEM education, particularly in Virginia, where it has collaborated with the STEM Board and Anne Peterson to help develop a statewide STEM vision. Battelle, an independent research

and development organization with deep government contracting and laboratory management experience, reinvests its profits into philanthropic initiatives, notably in STEM education. Its efforts have positively impacted over 1.76 million students.

Battelle manages various educational networks and programs, focusing on professional development for educators. In 2024 alone, it trained 1,416 K–12 teachers and hosted three state and one national conference. A significant aspect of Battelle’s work includes managing state STEM networks in collaboration with departments of education. These networks support school designation processes, align with state education goals, and facilitate professional learning opportunities.

The Ohio STEM Learning Network serves as a model, connecting innovative schools, educators, and administrators with national resources. It supports communities in developing forward-thinking educational programs and fosters partnerships between schools and industry. The network offers diverse professional development programs, such as the Fostering STEM Institute, Innovative Leaders Institute, and the Rural Ohio Educator Fellowship.

Governance in Ohio includes a STEM Committee comprising representatives from the state education department, higher education, economic development, and appointed public members. Their efforts follow the five conditions of collective impact: a common agenda, shared measurement systems, mutually reinforcing activities, continuous communication, and backbone support.

As the backbone of the network, Battelle provides centralized leadership, daily management, communication, and coordination among stakeholders. It also distributes funds, gathers data, and ensures accountability. Regional STEM Hubs, partially supported through contracts or MOUs, deliver specialized professional development—including in computer science, where nearly 600 teachers have been trained. The Rural Education Program in Ohio is highlighted as a successful model worth considering for replication.

During the question and answer session, Padu expressed appreciation for the presentation and inquired about how the Ohio model reconciles various regional structures such as superintendent, governor’s office, GO Virginia, and higher education regions. Heather Sherman responded that regional alignment must be balanced, considering both existing jurisdictions and practical realities for establishing hubs.

Amy Thompson asked about the timeline for establishing a working hub system and how long it took Ohio to implement theirs. Heather Sherman explained that the process begins with defining state divisions, identifying the necessary number of hubs, and determining which organizations are best suited to serve as hubs, typically starting with an open call for interest. Amy Thompson recalled the board’s earlier idea to roll out one or two hubs initially, expanding gradually. Heather agreed that strategically placing the hubs supports more effective scaling over time and acknowledged that maturing a hub is a gradual process.

Chris Dovi proposed a phased approach with provisional hubs to initiate early activity before formalizing the structure. Heather supported the idea, noting that it allows organizations to be involved early and become part of the network's identity as it evolves.

Rashid Ferrell requested the slide deck, and Heather Sherman confirmed she would share it. Ed Monroe inquired about staffing needs to maintain network integrity. Heather Sherman detailed that the network typically includes a director to coordinate with the Department of Education and manage the budget, a communications specialist, and the involvement of educators for consultation. She emphasized the need for a strong infrastructure.

Padu asked about governance structures, mentioning collective hubs, PDC cycles, and evaluation processes. Heather Sherman noted that Ohio hubs operate under a donor objective letter that outlines deliverables. Rashid Ferrell then asked whether external organizations contributed funding to the network. Heather Sherman replied that while funding was not brought in for the network itself, sponsorships were secured for specific events like conferences, often through relationships with local companies—a responsibility largely held by the hub leaders.

Amy Sabarre asked whether each state has a flagship organization overseeing the network. Heather responded that it varies: some states have state-run networks, while others are managed by private entities like Battelle. Heather Sherman then asked participants what outcomes they would like to see from a STEM network. Anne Petersen emphasized addressing regional needs while maintaining sustainability and local relevance. Padu highlighted the importance of aligning with workforce competencies and reskilling. Amy Sabarre stressed the importance of statewide accessibility, ensuring that all regions have equal opportunities and that barriers are broken down to encourage knowledge-sharing and collaboration.

Anne Petersen provided updates on the Federal Appropriation.

The presentation provided an update on the progress of the federally appropriated STEM grant secured through the advocacy of the STEM Board, with support from Senators Warner and Kaine. Once the appropriation was granted, the Virginia Department of Education (VDOE) was designated as the fiscal agent and submitted the application with assistance from the Secretary of Education. The funds became available in September 2024, and a three-year performance period was proposed, though the original grant is set to conclude in June 2025. An extension has been sought through the U.S. Department of Education, but changes in staffing have delayed a definitive response.

To ensure compliance with state procedures while expediting progress, VDOE has increased efforts in the past month to meet grant objectives and secure payments. The first step taken was hiring a consultant, Heather Sherman, to support implementation. A workgroup was formed following the last advisory board meeting, with its first session scheduled for April 28, and an in-person meeting planned for May at the Science Museum of Virginia. Additional meetings are expected.

Terminal 4 is collaborating with the group to develop a searchable website, incorporating features such as searches by zip code and hub. A needs assessment is also underway, and VDOE is identifying potential partners and established entities to serve as hub headquarters, including those associated with lab school networks.

VDOE is concurrently developing STEM-related professional development in collaboration with its mathematics, computer science, and CTE departments. This initiative will include five rotating teacher sessions, emphasizing instructional modeling and cross-disciplinary integration through engineering. Locations have been selected, and outreach to teachers has begun, with attendance capped at 150 per site.

The department is monitoring grant-related developments closely, particularly in relation to procurement and potential impacts from federal funding uncertainties. Amy Sabarre inquired about the use of grant funds for the consultant, website, and professional development, and Anne Petersen confirmed these are covered under the grant. Anne Petersen estimated that over \$300,000 would be spent by June 15. Amy Sabarre raised concerns about the risk of losing a significant portion of the promised funds due to the current federal climate, to which Anne Petersen responded that it remains too early to determine.

Anne Petersen also clarified that expenditures over \$10,000 require a formal Request for Proposal (RFP), which typically takes ten months, preventing rapid spending or implementation. Amy Sabarre requested further details on the professional development plan, emphasizing the need for clear integration of STEM. Anne Petersen committed to sharing the plan.

Terry Whipple inquired about the website's availability, and Amy Sabarre noted that it is still under development and expected to be live by June 15. No additional questions were raised. Anne Petersen concluded by mentioning the landscape survey. When Amy Sabarre asked about using AI for screening, it was clarified that state regulations currently limit the use of AI in this context.

The group took a brief break for lunch

Chris Dovi delivered a legislative update during his presentation, highlighting two bills with potential impact on STEM education initiatives in Virginia. The first, HB2360, introduced by Delegate Tony O. Wilt, mandates that the Virginia Board of Education

recognize the high school *Seal of Biliteracy* as a high-demand industry workforce credential. This recognition will influence graduation requirements and metrics of student readiness within the state's school accountability system.

The second bill, HB2454, introduced by Delegate Sam Rasoul, calls for a revision of the state's Three "E" Readiness Framework—which stands for Employment, Enlistment, and Enrollment. The bill would require the inclusion and incentivization of work-based learning experiences as part of high school postsecondary readiness indicators. Students who complete at least 90 hours of such experiences would receive maximum readiness points. This legislation mirrors Senate Bill 784.

Chris Dovi also shared a draft bill aimed at amending the Virginia STEM Advisory Board's legislation. The proposed bill seeks to clarify the Board's ability to raise funds in support of statewide STEM initiatives under entities such as the Virginia Department of Education (VDOE), the State Council of Higher Education for Virginia (SCHEV), the Virginia Community College System (VCCS), and out-of-school time (OST) STEM programs. The draft also proposes establishing the STEM Board's fiscal agency, transitioning the Virginia STEM Advisor position from the Science Museum of Virginia to the Secretary of Education's office. The position would become a formal professional staff role, continue to advise the Secretary, and operate with the support of the Board.

During the discussion, Amy Sabarre emphasized the need for a clear fiscal structure, citing her experience of managing responsibilities alone during the grant process. She also noted that the draft bill is expected to be voted on in the June meeting. Chris Dovi expressed that regardless of whether he is reappointed to the Board, he will continue to support its work and clarified that the new staff roles would be situated within the Secretary's office.

Anne Petersen commented critically on the Science Museum's past handling of the STEM Coordinator's role, while Amy Sabarre clarified that the Science Museum no longer receives funding for that position. Rashid Farrell noted that engaging independent organizations like Battelle could avoid the limitations imposed on state agencies. He also asked Chris Dovi what support he needed to advance the legislation. Chris responded that he would value the Board's full support, and Rashid Ferrell offered his assistance.

Amy Sabarre introduced two Harrisonburg High School students.

Giovanni, a senior at Harrisonburg High School, shared his perspective as a student engaged in STEM education. His interest in STEM was sparked during middle school, and he has since pursued it actively. Students at his school can choose from three STEM pathways, and Giovanni found his freshman year particularly impactful, which led him to become more involved in related clubs and healthcare-focused STEM activities.

He spoke about STEM Connect, an afterschool program that includes study hall and mini-lessons, offering mentorship and covering topics not typically addressed in standard coursework. His involvement extended to the State Leadership Conference, and he highlighted that STEM education has taught him resilience—learning from failure and trying again.

Giovanni also participates in the school's STEM Academy, where he ran for a board seat, further deepening his passion for the field. The Academy offers numerous seminars and currently includes over 400 students, accepting approximately 60% of applicants.

In response to a question from Terry Whipple, Giovanni reflected on how his early interest in STEM began in elementary school through math and science, where he learned to understand the world through "what and why" questions. His middle school interview for the STEM Academy involved a collaborative project building a tower, which further fueled his enthusiasm. When asked how to engage young students, Giovanni recommended incorporating fun, hands-on activities with embedded STEM concepts to spark early interest.

Addison shared their personal journey into STEM, noting that they did not initially consider themselves a "STEM kid" and originally aspired to become a lawyer, with interests rooted in building things and art. Their perspective changed upon taking a STEM biology class, where they retained information easily and became deeply engaged due to the fast-paced, enriching content.

They later pursued the engineering pathway, which emphasized innovation and hands-on building projects. This experience highlighted the creative aspects of STEM, which they found especially fulfilling. Addison credited inspiring teachers for making these classes impactful and emphasized the importance of the design thinking process, particularly learning through failure.

They also spoke about the inherent connection between art and STEM, noting that design is an artistic process. Diversity is a core value in both the STEM Academy and STEM Connect programs. For instance, a spring social event includes a panel of women in STEM and activities aimed at encouraging young women to explore STEM fields.

Ultimately, Addison believes the STEM Academy equips students for success in any career by fostering critical life skills, such as resilience in the face of failure and effective communication.

Amy Sabarre shifted discussion to discussion of Board Chair and Vice Chair positions. Amy Sabarre, Chris Dovi and Padu roll off of the board in June. It is important that at the

next meeting, people interested in running for chair or vice chair should be prepared to speak and express interest. A vote will be taken at the meeting.

Amy Sabarre invited those in attendance to take a tour of the facility

Meeting concluded at 1:22pm.