

Virginia STEM Education Advisory Board
New Horizons Regional Education Centers
Woodside Lane CTE Campus
Building A
13400 Woodside Lane
Newport News, Virginia 23608
Meeting Minutes



September 8, 2023

10:00 am – 2:00 pm

In Attendance:

Board Members Present: Amy Sabarre (Chair), Dr. Padmanabhan Seshaiyer,, Amy White, Victoria Chua (ZOOM), Gary Artybridge Jr., Casey Roberts, Edward Monroe, Chris Dovi, Zaina Tarafdar,

Ex-officios and Staff: Deputy Secretary of Labor Anthony Reedy, Deborah Love (Office of Attorney General), Emily Salmon (State Council of Higher Education for Virginia), Justine Taylor-Raymond (Deputy Secretary of Education) and Ada Sue Siler (Science Museum of Virginia Staff)

Guests: Dr. Marcey Sorenson (Deputy Superintendent for Teaching and Learning), Dr. Anne Petersen (VDOE Office of STEM & Innovation Science Coordinator),

Topics:

- Review of mission and goals
- Review and approve minutes from June 23, 2023
- Vision and mission from Deputy Superintendent Sorensen
- Update from Deputy Secretary of Labor Anthony Reedy
- Where we have been, where we are going
- Legislative Ask
- Public Comment and New Business
- Motion to adjourn

Welcome and Opening Remarks

Ms. Sabarre called the meeting to order at 10:06am. She welcomed everyone and noted a quorum was present.

Mr. Casey reviewed the agenda for the meeting and shared about the mission of New Horizons. Specific highlights were made to detail the career and tech programs.

Ms. Sabarre Introduced Justine Taylor-Redmond, Assistant Secretary of Education. Ms. Taylor-Raymond was thanked for attending and for her support as an ally of STEM.

Round Table Introductions took place. Attendees introduced themselves and their affiliations, sharing their backgrounds and roles.

Approval of Minutes (June 23, 2023)

Ms. Sabarre asked for any edits to the June 23, 2023 minutes before approval. None heard.

Casey Roberts called for a motion to approve the minutes as presented. The motion was seconded by Chris Dovi. All approved, motion carried.

Presentation from Deputy Superintendent Sorensen

Deputy Superintendent Sorensen provided an update on STEM initiatives by VDOE.

Plans for revising science and computer science standards were discussed. Detailed information was shared regarding the implementation of STEM standards, including mathematics. When students are well versed in basic math, they excel in higher level concepts. Full implementation of computer science standards is underway. After implementation, assessments will take place.

The Governor has expressed that he wants to increase education rigor. Overall, expectations are higher and learning gaps need to close.

The importance of aligning education with White House priorities, including artificial intelligence was emphasized by Dr. Seshaiyer.

The need for a methodical approach to achieving STEM goals was highlighted by Dr. Sorensen.

Dr. Sorensen directed the conversation to STEM Briefs. STEM briefs are designed for students in K-5, focusing on integrating STEM disciplines and fostering problem-solving skills. The 27 STEM briefs will be available September 30 2023 at www.GoOpenVA.com (#GpOpenVA).

The importance of STEM in connecting subjects and addressing societal issues was emphasized. K-5 space is important, this is where students fall in love with Science. Ms. Sabarre said that the learning pathways enrich the collective, and lead to deeper learning. Mr. Seshaiyer STEM is crucial in developing computational thinking.

Dr. Peterson added that STEM fields tend to drift toward silos. Initiative needs to be in place to cross between discipline and create bridges.

The significance of engineering in STEM was highlighted by Dr. Seshaiyer.

The layout and format of STEM briefs were discussed between Mr. Dovi and Dr. Peterson.

Dr. Peterson shifted the focus on the Engineering cohorts. Six 75-minute sessions were held. Participants learned to apply and reflect on using interactive design processes. Over a two year span there were multiple cohorts.

Participants generated STEM engineering lessons that are housed at www.GoOpenVA.org. STEM engineering lessons are aligned to the math, science and computer science standards of learning. Collaboration and bridging between STEM disciplines were encouraged.

Dr. Seshaiyer brought up the importance of keeping in mind scientific modeling, the scientific method and computational thinking.

Dr. Sorenson mentioned the study of productive struggle. Oftentimes teachers are worried about allowing students to struggle and that might be detrimental. Struggle is need to develop problem solving skills and critical thinking.

The value of productive struggle for students' problem-solving skills was emphasized by Mr. Monroe. The balance between providing structure and allowing students to explore was discussed by Ms. Taylor-Raymond.

VDOE has established an Office of Educational Technology and Classroom Innovation. The new office added new endorsed resources on www.GoOpenVA.org.

Best Practices for technology resource teachers is published on the site as well. The office offers professional learning opportunities and support for STEM related learning opportunities.

STEM Grants and Funding

Deputy Superintendent Sorenson shared that the Virginia Department of Education VDOE recently awarded 22 competition grants in an initiative to increase STEM awareness and team building.

An established process is in development for the STEM education advisory board to request funding. The process will involve the notification and participation of the Virginia Department of Education and the Secretary of Education.

Ms. Sabarre noted that when grant opportunities present, the turnaround is short and the board must establish a workflow on how to respond.

Mr. Dovi noted that once professional staff is established, the process of getting the workflow moving and acquiring approvals will be streamlined. A paid staff member can write the grant and manage it, but the Board should offer support. Dr. Seshaiyer mentioned that administrative support will require funding. Ms. Sabarre brought up the issue that the Board must “get the ball rolling” for the initial funding for the staff position.

Ms. Sabarre stated the VDOE was approved to act as the fiscal agent of the Stem Education Advisory Board, but they will not manage any grant funding or projects. Simply put, the funding will “pass through” the VDOE to the Board.

Ms. Salmon noted concerns about a work burden placed on Ms. Sabarre in getting past the first hurdle of initial funding. Mr. Dovi suggested the establishment of a new workgroup.

A workgroup was established to address grant-related matters.

Ms. Love noted that by statute the Science Museum of Virginia is named as the agent for the Board, but the statute’s wording is broader and allows for the Board to call on other state agencies to respond as needed. Any grant application must be approved by the Governor, via the Secretary of Education.

Mr. Roberts stressed the constraints of most grant application timelines. The period to submit is short, and timing is important.

Ms. Salmon volunteered to chair the new workgroup to establish protocols for grant applications. Ms. Sabarre called for additional volunteers.

Ms. Love mentioned the importance of ensuring that the proceedings of this workgroup are following FOIA regulations and requirements.

Updates from Deputy Secretary of Labor, Anthony Reedy

Anthony Reedy discussed the Department of Workforce Development and Advancement's efforts to consolidate and focus Virginia's workforce programs. The goal is to increase workforce participation and strengthen Virginia's economy.

Plans for a one-stop resource website and comprehensive workforce development strategy were shared.

Efforts are underway to better align with the needs of business and improve delivery of resources and services to save taxpayer dollars. The comprehensive workforce development strategy needs to balance with regional specific needs and remain flexible.

Measures and metrics are collected on jobs and retainment in the workforce. Workstream activities are in development to set standards of operating procedures. The general timeline of three phases is set through FY25.

The Board took a break for lunch at 11:39am and took a tour of the New Horizons facility.

Upon returning at 12:52pm, Mr. Roberts shared a video highlighting the New Horizons and the Career and Technical Education Centers collaboration.

Where we have been, where we are going

Ms. Sabarre reviewed the mission statement: *The Virginia STEM Education Advisory Board provides continuous recommendations, establishes and aligns integrative STEM education efforts, and expands resources for all Virginians.*

Legislation HB2058 enacted on 2/24/21 formed the Board and outlined its goal. Appointments to the Board started in June of 2021. The inaugural meeting took place in Richmond during September 2021. Board elected a Chair and Vice Chair in Dec. 2021

The pace of the Boards efforts has slowed in year 2 and reevaluation is warranted.

The current definition set forth by the Board is:

Science, Technology, Engineering and Mathematics (STEM) education applies discipline-specific content-learning experiences where academic and technical disciplines intersect in complex relationships. Students engage in the design thinking process to create, and communicate solutions to a spectrum of universal human challenges. STEM literacy prepares all learners to participate in a vibrant and thriving Commonwealth of Virginia, and contribute to a STEM-enriched workforce.

The current work groups of the Board are as follows

- STEM definition: Casey Roberts
- STEM summit: Padhu Seshaiyer
- STEM careers: Chris Dovi, Emily Salmon
- STEM metric: Amy Sabarre
- STEM hubs: Amy Sabarre

STEM Careers

Mr. Dovi provided an update on current STEM careers workgroup efforts. Strategic partners were brought into discussions. A STEM workmap was outlined. The workgroup created a report that identifies STEM career fields in the commonwealth.

STEM Metric

Ms. Sabarre gave a status update on the efforts of the STEM Metric Workgroup and the development of the STEM Metric. The document has gone through multiple rounds of editing and review. At this stage, the working group is ready to pass the metric to VDOE and see what their next steps are.

Dr. Peterson shared that the VDOE can provide a formal lens and see how the metric will apply to other perspectives such as preschools, after school programs and informal education programs.

Ms. Sabarre shared the hope that the Metric will give rise to schools of excellence and help equip schools with tools to thrive.

Mr. Dovi expressed the idea of establishing a certification program to build out the STEM ecosystem network. Would need an independent entity to score and award.

STEM Hubs

Ms. Sabarre stressed how the STEM hubs are the backbone of the Boards work. Each region would be responsive to regional needs and would serve as the connector and facilitator of resources for that area. Although hubs may look different based on their regional workforce and community needs, each hub would learn from one another and share resources and professional development offerings. The hubs would collect and share data with the state and convene semi-annually with the state STEM Board.

Congressional Funding

Ms. Sabarre updated the Board on the congressional funding proposal that was submitted earlier this year. The proposal was pushed through and approved by the Senate appropriation committee. Now there is a waiting period for the Senate and House to vote on the

appropriation bills. The Board should hear back in October. There is real potential to get this funding. How does the Board prepare for collaboration with VDOE? Would a Memorandum of Understanding MOU be appropriate?

Mr. Dovie proposed that a Statement of Work might be more appropriate in this situation.

Ms. Taylor-Raymond stated that the Secretary of Education Office will need to be involved in the pulling in of VDOE. If funding is received, the SOE office will need to be central to staffing the proposed full time and part time positions.

Mr. Roberts proposed establishing some procurement policies as guardrails.

Ms. Sabarre stressed the importance of having a real in depth discussion to prepare for the funding.

Ms. Sabarre asked Ms. Love if the staff position would be hired by the SOE office.

Ms. Love responded that the staff position would be under VDOE and would then serve the board on a contract basis.

Ms. Sabarre asked Ms. Love about funding for travel expenses for the Board members. Timing is important and the Board does not want to miss considerations in the budget process.

Ms. Taylor-Raymond said conversions are underway about allocating funding through the Science Museum for providing funds to cover travel expenses for the Board members.

Logistics and Next Meeting

The location for the next meeting was discussed, with both Mr. Dovi and Ms. Sabarre offering to host. It was collectively decided to hold the December meeting in Harrisonburg.

Ms. Sabarre mentioned that nominations are needed for a new chair and vice chair. The Board's bylaws are somewhat silent on election and voting. Ms. Love noted that a verbal roll call vote will be required. The bylaws may need to be updated to elect positions closer to mid-year to account for term lengths and appointment timelines.

Mr. Roberts offered to help develop a nomination framework.

Ms. Taylor-Raymond said she would reach out to the Appointment board and check on the status of new appointments.

Attendees were reminded to sign up for STEMx.

Public Comment and New Business

Ms. Sabarre asked for any public comment. None heard.

Ms. Sabarre asked for any new business.

Adjournment

A motion to adjourn the meeting was made by Mr. Dovi and seconded by Mr. Seshaiyer, and it was carried by verbal affirmation.

The meeting concluded at 1:48pm. The next meeting will be held on December 8 2023 in Harrisonburg Virginia. The meeting notes were recorded by Ada Sue Siler.