



What is Virginia STEM?

In the past 10-15 years, STEM has emerged as a universally recognized acronym in the education community to represent the subjects of science, technology, engineering, and mathematics. The use of STEM has evolved into a strong, nationwide, motivating initiative to strengthen those critical fields of education that have a strategic impact on our future. STEM has been adopted, not just as an acronym but as a concept of integrating instruction effectively in multiple key fields. These critical fields form a foundation for many disciplines and career paths, but more importantly, the foundation of a strong economy. Over the past couple of years, the Virginia STEM Coordinator, out of the Science Museum of Virginia, has collaborated with other stakeholders to advance STEM in Virginia. In 2018 a [STEM Commission](#) was created and culminated in STEM Education Commission's [Final Report](#), submitted in September 2020. The 2021 General Session unanimously passed STEM legislation ([HB2058](#)) to create a more permanent STEM Education Advisory Board. The Final Report's primary recommendation was this legislation, creating a focal point for state STEM and creating a more unified vision and STEM goals.

STEM Education Advisory Board

The Virginia STEM Education Advisory Board met for their inaugural meeting at the Science Museum of Virginia on October 1, 2021. The Board meeting included 14 of the 16 representatives. They kicked off conversations looking at what preceded the STEM Advisory Board and some first steps to ensure an engaged and active Board ready to help create a unified STEM vision and mission for the Commonwealth. The meeting provided some great insight into the Board's challenges and how collectively they can help align the various STEM efforts across Virginia. The Board's second meeting was on December 3, 2021, where they continued their work on creating a common language for STEM and STEM initiatives across the Commonwealth. The Board Chair, Amy Sabarre, and Vice-Chair, Casey Roberts, were voted into their roles.

Work Started by the Board

The initial work of the STEM Education Advisory Board will be to help establish some common language around STEM, STEM education, and what we should consider as a STEM career. Many of the excellent programs across Virginia use variations of these definitions and rubrics, making it hard to collect reliable and valid data when looking at different metrics. It is an ambitious yet attainable start for this newly appointed Board. This work continues as we consider other state

models and perspectives from various stakeholders, including the Virginia Department of Education, Higher Education, businesses, and informal education partners.

Virginia STEM Education Advisory Board Representation

- Chair: Amy Sabarre, Director of STEM Education PK-12 and Science Coordinator PK-5, Harrisonburg City Public Schools
- Vice-Chair: Casey Roberts, Executive Director, New Horizons Regional Education Centers
- Staff: Chuck English, Virginia STEM Coordinator, Science Museum of Virginia

16 Board Members

10 Citizen Members:

- Dr. Damodar Ambur
- Gary Artybridge Jr.
- Chris Dovi
- Dr. Venicia Ferrell
- Casey Roberts (Vice-Chair)
- Amy Sabarre (Chair)
- Dr. Padmanabhan Seshaiyer
- Dr. Susheela Shanta
- Zaina Tarafdar
- Amy White

6 State Members:

- Virginia Department of Education: Dr. Brendon Albon
- Science Museum of Virginia: Rich Conti
- State Council of Higher Education for Virginia: Emily Salmon
- Secretary of Labor Office
- Secretary of Education Office
- Chief Diversity, Equity, and Inclusion Officer

Attached you will find:

1. Agenda October 1, 2021
2. Agenda December 3, 2021
3. Legislation (HB2058)





**Inaugural STEM Education Advisory Board Meeting
October 1, 2021 - Science Museum of Virginia, RF&P Forum**

- 10:00am - Welcome
 - Chief Wonder Officer Rich Conti, Science Museum of Virginia
- 10:05am - Opening Remarks
 - Secretary of Education Atif Qarni
- 10:10am – Advisory Board Member Introductions
- 10:20am - Presentation on Rules for Public Bodies & FOIA
 - Ramona Taylor, Senior Assistant Attorney General
- 10:50am - STEM Advisory Board Legislation & Charge
 - Deputy Secretary of Education Kathy Burcher
 - Assistant Secretary of Education Tori Feyrer
- 11:05am - Current Landscape for Statewide STEM Efforts
 - Amy Sabarre, Director of PK-12 STEM Education at Harrisonburg City Schools
- 11:30am - STEM Advisory Board Goals
 - Virginia STEM Coordinator Chuck English

Lunch is served

- 12:15am - Definition of STEM
 - Dr. Padmanabhan Seshaiyer, Professor at George Mason University
 - Chris Dovi, Executive Director of CodeVA
- 12:45pm - Virginia STEM Coordinator Role
 - Virginia STEM Coordinator Chuck English
- 1:00pm - Roundtable Discussion
 - In-School and Out-of-School Study of STEM
 - Equity in STEM
 - The Importance of STEM in Higher Education
 - STEM in the Workforce Workforce
- 1:45pm - Next Steps
 - Virginia STEM Coordinator Chuck English
- 1:50pm - Public Comment
- 1:55pm - Closing Remarks
 - Chief Diversity Officer Dr. Janice Underwood
- 2:00pm - Adjourn



**Virginia STEM Education Advisory Board
Meeting December 3, 2021
Science Museum of Virginia, Dewey Gottwald Center**

- 10:00 am Welcome and Opening Remarks
- First Lady of Virginia, Pamela Northam
- 10:15 am Administrative Changes
- Deputy Secretary of Education Kathy Burcher
- 10:30 am Chair and Vice-Chair Options and Voting
- 11:00 am Detailed look at Expectations in STEM Advisory Board Legislation
- Includes a preview of the *General Assembly Report* draft
- 11:20 am STEM in Virginia: a recap of recent work
- Virginia STEM Coordinator Chuck English
- 11:30 am Definition of STEM
- State models
 - VDOE in more detail
 - Rubric for Quality STEM Experiences/Programming
- 12:00 pm *Lunch is Served, working lunch in groups*
- 12:30 pm Review and sharing of lunch work on STEM definitions and quality programming
- 1:00 pm Look into STEM Career Delineations
- What should Virginia count as a STEM career/pathway?
- 1:30 pm Preparations for New Administration
- 1:40 pm New Business
- Meeting schedule for 2022
- 1:50 pm Public Comment
- 1:55 pm Closing Remarks
- 2:00 pm Adjourn Meeting

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HOUSE BILL NO. 2058

Offered January 13, 2021

Prefiled January 12, 2021

A *BILL to amend the Code of Virginia by adding in Title 22.1 a chapter numbered 26, consisting of sections numbered 22.1-364 through 22.1-368, relating to Virginia STEM Education Advisory Board; established; report.*

Patrons—Simonds, Austin, Guzman, Keam, Mugler and Runion

Referred to Committee on Education

Be it enacted by the General Assembly of Virginia:

1. That the Code of Virginia is amended by adding in Title 22.1 a chapter numbered 26, consisting of sections numbered 22.1-364 through 22.1-368, as follows:

CHAPTER 26**VIRGINIA SCIENCE, TECHNOLOGY, ENGINEERING, AND MATHEMATICS EDUCATION ADVISORY BOARD.****§ 22.1-364. The Virginia STEM Education Advisory Board; purpose.**

The Virginia Science, Technology, Engineering, and Mathematics (STEM) Education Advisory Board (the Board) is established as an advisory board, within the meaning of § 2.2-2100, in the executive branch of state government. The purpose of the Board is to advise the Governor, Cabinet members, and the General Assembly on strategies to align STEM education efforts and report STEM education challenges, goals, and successes across the Commonwealth.

§ 22.1-365. Membership; terms; quorum; meetings.

A. The Board shall have a total membership of 16 members that shall consist of 10 nonlegislative citizen members and six ex officio members. Nonlegislative citizen members to be appointed by the Governor shall represent or have STEM experience with the public and private sector, industry partners, environmental organizations, and both formal and informal STEM educational organizations. The Director of the Science Museum of Virginia, the Superintendent of Public Instruction, and the Director of the State Council of Higher Education for Virginia, or their designees, shall serve ex officio with full voting privileges. The Secretary of Education; the Director of Diversity, Equity, and Inclusion for the Commonwealth; and the Chief Workforce Development Officer for the Commonwealth, or their designees, shall serve ex officio without voting privileges. Nonlegislative citizen members of the Board shall be citizens of the Commonwealth.

B. Ex officio members of the Board shall serve terms coincident with their terms of office. Appointments to fill vacancies, other than by expiration of a term, shall be for the unexpired terms. Vacancies shall be filled in the same manner as the original appointments. All members may be reappointed. After the initial staggering of terms, nonlegislative citizen members shall be appointed for a term of four years. No nonlegislative citizen member shall serve more than two consecutive four-year terms. The remainder of any term to which a member is appointed to fill a vacancy shall not constitute a term in determining the member's eligibility for reappointment.

C. The Board shall elect a chairman and vice-chairman from among its membership. A majority of the members shall constitute a quorum. The meetings of the Board shall be held at the call of the chairman or whenever the majority of the members so request.

§ 22.1-366. Compensation; expenses.

Members shall receive such compensation for the performance of their duties as provided in § 2.2-2813. All members shall be reimbursed for all reasonable and necessary expenses incurred in the performance of their duties as provided in §§ 2.2-2813 and 2.2-2825. Funding for the costs of compensation and expenses of the members shall be provided by the Office of the Secretary of Education.

§ 22.1-367. Powers and duties of the Board; acceptance of gifts and grants.

A. The Virginia STEM Education Advisory Board shall have the following powers and duties:

1. Create a unified vision regarding STEM education initiatives, language, and measures of success to promote a culture of collaboration for STEM programming in the Commonwealth.

2. Develop the infrastructure for creating STEM Regional Hubs and naming STEM Champions in communities across the Commonwealth to facilitate partnerships between organizations across regions and populations that will lead to increased cross-sector opportunities.

3. Advance and disseminate STEM curricular and professional development resources for formal and informal education.

INTRODUCED

HB2058

59 4. *Submit an annual report to the Governor and the General Assembly for publication as a report*
60 *document as provided in the procedures of the Division of Legislative Automated Systems for the*
61 *processing of legislative documents and reports. The chairman shall submit to the Governor and the*
62 *General Assembly an annual executive summary of the interim activity and work of the Board no later*
63 *than the first day of each regular session of the General Assembly. The executive summary shall be*
64 *submitted for publication as a report document as provided in the procedures of the Division of*
65 *Legislative Automated Systems for the processing of legislative documents and reports and shall be*
66 *posted on the General Assembly's website.*

67 *B. The Board may apply for, accept, and expend gifts, grants, or donations from public or private*
68 *sources to enable it to carry out its objectives.*

69 **§ 22.1-368. Staffing; cooperation from other state agencies.**

70 *The Virginia STEM Coordinator at the Science Museum of Virginia shall serve as staff to the Board.*
71 *All agencies of the Commonwealth shall assist the Board upon request.*

72 **2. That the initial appointments of nonlegislative citizen members shall be staggered as follows:**
73 **two members for a term of one year, two members for a term of two years; three members for a**
74 **term of three years; and three members for a term of four years.**