



Virginia STEM Education Commission Final Report

August 2020

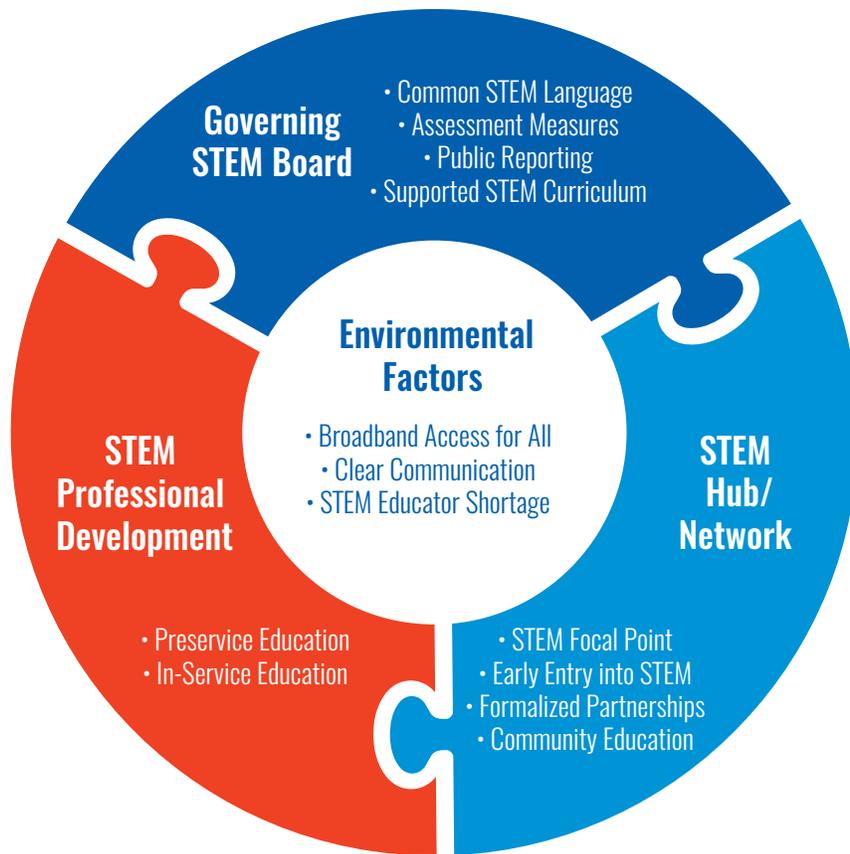


Science, Technology, Engineering, and Mathematics (STEM)

EXECUTIVE SUMMARY

The Governor's STEM Education Commission was established by Governor Ralph Northam on July 17, 2019, to create a unified vision for STEM Education in the Commonwealth and adopt a set of shared goals to strategically inform how Virginia prepares students for STEM jobs of the future. Since its establishment last year, the Commission has conducted a cursory landscape analysis of Virginia's STEM programs, opportunities, and growth.

During this time, the Commission has worked across sectors and regions to develop a robust set of recommendations to make STEM education in the Commonwealth more inclusive, accessible, and collaborative. Virginia has numerous initiatives designed to engage and encourage youth to seek opportunities in STEM fields once they depart the PK-12 setting; however, the number of students that demonstrate interest are lower than the number of students that enroll into and graduate from these rich and plentiful STEM opportunities. This disparity is partially explained by inequities of opportunities and experiences accessible to all Virginia youth. Some providers can work more collaboratively to impact youths' comfort and confidence in STEM as well as help them recognize the relevance of STEM within their very own communities. With a streamlined effort, Virginia's STEM stakeholders can create programming to help students, their supporters, and their broader communities collectively foster the development of STEM literacy for all.



This document highlights key data collected, identifies challenges, and outlines a pathway forward to align the state’s various efforts and create a unified STEM Plan for the Commonwealth. This proposal features three key elements: a Governing STEM Board, regional STEM hubs, and a robust, cooperative STEM educational model.

- **The Governing STEM Board** would be responsible for continued efforts in creating a common language; rubric for expectations; facilitated efforts statewide; and reporting on our next challenges, goals, and successes. It would also work to support some common exemplars in STEM curricular resources for both formal education as well as resources for settings outside of the classroom, whether they are after school programs or for parents.
- **Regional STEM hubs** would help create a local vision for STEM. The Hub Network would coordinate information sharing efforts within communities to deconstruct misconceptions about STEM. Additionally, the Hub would identify STEM champions within communities across the Commonwealth. These efforts would improve educational STEM literacy, with the goal of enabling youth to see themselves as STEM capable from preschool onward.
- **The STEM professional development** model would include opportunities not just for educators, but for informal educators as well. A useful model helps scaffold the opportunities for youth to see STEM as something more than just a classroom concept, but something woven through their everyday lives. The importance is to ensure that this model helps bridge the variety of STEM programming, language, and experiences in Virginia to help create a unified vision and expectation.

In the time of COVID-19, we have seen the immense relevance of STEM in our daily lives. The ability to gather with friends, go to work, attend school, and even participate in worship is now predicated on a basic understanding of technology. This unique period in history has shown us that STEM literacy is vital for survival, growth, and success in an increasingly technology reliant, virtual world. As we seek to improve the STEM literacy of all communities in the Commonwealth, the unified vision and thorough recommendations of the STEM Education Commission should serve as a roadmap for policymakers, educators, and community leaders alike as they determine next steps and identify opportunities to align efforts.