New Horizons
REGIONAL EDUCATION CENTERS

THE GOVERNOR'S SCHOOL
for
SCIENCE AND TECHNOLOGY

Charting Paths to Excellence

Program of Studies
2026-2027 SY

THE GOVERNOR'S SCHOOL for SCIENCE AND TECHNOLOGY

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New Horizons Regional Education Centers

Gloucester County Public Schools

Poquoson City Public Schools Virginia

Hampton City Schools Hampton, Virginia

Isle of Wight County Schools

Newport News Public Schools

Williamsburg James City County Public Schools

York County School Division

THE GOVERNOR'S SCHOOL for SCIENCE AND TECHNOLOGY

Academic-Year Governor's Schools (AYGS)
Virginia State Gifted Programs

The Virginia Department of Education, in collaboration with localities, sponsors regional Academic-Year Governor's Schools that serve advanced high school students during the academic school year. Currently, nineteen Academic-Year Governor's Schools provide students with opportunities for acceleration and exploration in various fields, including the arts, government and international studies, and STEM (Science, Technology, Engineering, and Mathematics). The New Horizons Governor's School for Science & Technology focuses on science, technology, engineering, math, programming, and scientific research.

Founded in 1985, the Governor's School for Science & Technology is one of nineteen Governor's Schools in Virginia that serve as regional magnet programs for gifted students. Students are drawn from nineteen high schools across seven school divisions: Gloucester County Public Schools, Hampton City Schools, Isle of Wight County Schools, Newport News Public Schools, Poquoson City Public Schools, Williamsburg/James City County Public Schools, and York County School Division.

Students spend half of their school day at the Governor's School located on the New Horizons Butler Farm campus in Hampton, where they take college-level coursework in math, science, and research. These courses are taught by faculty with advanced degrees in STEM fields and offer college-level content enriched by hands-on labs, real-world projects, and collaboration with highly motivated peers. Seniors complete a year-long capstone project, guided by science professionals. In addition to coursework, students participate in multiple competitions and extracurricular activities.

For more information, please visit our website at https://nhrec.org/gsst/

Program Course Prerequisites

Elevate your path with precision—choose the right courses at the right time.

7th Grade
Algebra I

8th Grade
Algebra 1 or Geometry

9th Grade
Geometry or Algebra II/Trig
Biology

10th Grade
Algebra II Trig or Pre-Calculus
Chemistry

If you're interested in Engineering, make sure to successfully complete Math Analysis (Pre-Calculus) by the end of 10th grade.

THE GOVERNOR'S SCHOOL for SCIENCE AND TECHNOLOGY

Program Model 2026-2027 SY

Year	Science	Research	Math
Engineering		**Prerequisites: Biology, Chemistry, and Math minimum of PreCalculus**	
11	**Calculus-based Engineering Physics I** *HS Science (2)* VPCC: PHY 241 (4)	**Research Methodology & Ethics** *HS Elective (1)*	**Calculus** *HS Math (1)* VPCC: MTH 263 (4) & MTH 264 (4)
			MultiVariable & Linear Algebra *HS Math (1)* VPCC: MTH 265 (4) & MTH 266 (3)
12	**Calculus-based Engineering Physics II** *HS Science (2)* VPCC: PHY 242 (4)	**Honors Research & Mentorship** *HS Elective (2)*	**Differential Equations** *HS Math (1)* VPCC: MTH 267 (3)
			MultiVariable & Linear Algebra *HS Math (1)* VPCC: MTH 265 (4) & MTH 266 (3)
Biological Science		**Prerequisites: Biology, Chemistry, and Math minimum of Algebra II / Trig** **Recommended students take Physics at their home school division**	
11	**Advanced Chemical Analysis** *HS Science (2)* VPCC: CHM 211 (4) & CHM 212 (4)	**Research Methodology & Ethics** *HS Elective (1)*	**PreCalculus** *HS Math (1)* VPCC: MTH 161 (3) & MTH 162 (3)
			Calculus *HS Math (1)* VPCC: MTH 263 (4) & MTH 264 (4)
			MultiVariable & Linear Algebra *HS Math (1)* VPCC: MTH 265 (4) & MTH 266 (3)
12	**Advanced Biological Analysis** *HS Science (2)* VPCC: BIO 101 (4) & BIO 102 (4)	**Honors Research & Mentorship** *HS Elective (2)*	**Calculus** *HS Math (1)* VPCC: MTH 263 (4) & MTH 264 (4)
			Differential Equations *HS Math (1)* VPCC: MTH 267 (3)
			MultiVariable & Linear Algebra *HS Math (1)* VPCC: MTH 265 (4) & MTH 266 (3)
Computational Science		**Prerequisites: Biology, Chemistry, and Math minimum of Algebra II / Trig**	
11	**Computational Physics** *HS Science (2)* VPCC: PHY 201 (4) & PHY 202 (4)	**Research Methodology & Ethics** *HS Elective (1)*	**PreCalculus** *HS Math (1)* VPCC: MTH 161 (3) & MTH 162 (3)
			Calculus *HS Math (1)* VPCC: MTH 263 (4) & MTH 264 (4)
			MultiVariable & Linear Algebra *HS Math (1)* VPCC: MTH 265 (4) & MTH 266 (3)
12	**Engineering Design, Innovation & Entrepreneurship** *HS Science (2)* VPCC: CSC 221 (3) & CSC 222 (4)	**Honors Research & Mentorship** *HS Elective (2)*	**Calculus** *HS Math (1)* VPCC: MTH 263 (4) & MTH 264 (4)
			Differential Equations *HS Math (1)* VPCC: MTH 267 (3)
			MultiVariable & Linear Algebra *HS Math (1)* VPCC: MTH 265 (4) & MTH 266 (3)

THE GOVERNOR'S SCHOOL for SCIENCE AND TECHNOLOGY

2025 Graduating Class Profile

520 ButlerFarm Road Hampton, VA 23666
Phone (757) 766-1100 ext. 3326
Fax: (757) 766-3591
Website: www.nhrec.org/governorsschool

Community The Governor's School for Science and Technology (GSST) serves the approximately 490,000 residents of the Virginia peninsula, reaching from the Chesapeake Bay to the historic Williamsburg area. The region is home to NASA Langley Research Center, Thomas Jefferson National Accelerator Facility, Northrop Grumman Newport News, Canon Virginia, Huntington Ingalls Newport News Shipyard, Veterans Administration Medical Center, Hampton University, The College of William and Mary, Christopher Newport University, Virginia Institute of Marine Science, and installations of all branches of the United States Military.

High School GSST was founded in 1985 and is one of nineteen Governor's Schools in Virginia that serve as regional magnet programs for gifted high school students. GSST provides high-achieving students with a community of peers taking advanced courses in math, science, and technology, along with a rigorous grounding in research methodology. Students are drawn from nineteen high schools in seven school divisions (Hampton, Newport News, Poquoson, Williamsburg-James City County, York County, Gloucester County, and Isle of Wight County) and spend approximately half of their school day (3.25 hours) at the GSST. In addition to rigorous, college-level course work, seniors conduct an Honors Research/Mentorship project outside school hours. Students completing the program earn a Virginia Governor's Seal.

Faculty The rigor of the GSST program rests on the exceptionally strong math and science backgrounds of its thirteen faculty members. All hold degrees in mathematics, science, or computer science; six hold masters degrees and six hold doctorate degrees.

Curriculum All courses are taught at a college level and many are accredited as dual enrollment courses by local colleges. Curricula promote active scientific learning through extensive laboratory investigations which incorporate advanced scientific technologies. Commu- nication skills are developed through multimedia presentations to peers and professionals.

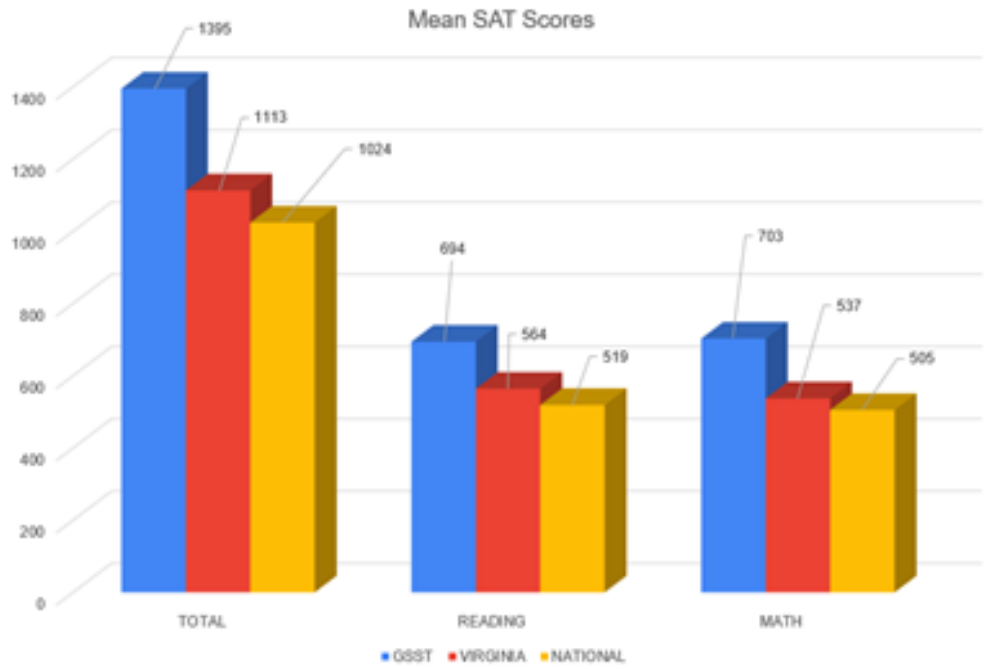
Admissions The admissions process is a competitive one based on mathematics and science achievement, teacher recommendations, and standardized test scores.

The Governor's School at New Horizons is a currentand a founding member of the National Consortium of Secondary STEM Schools.

2025 Graduating Class Profile

85 Seniors

SAT Score Comparisons



This reflects both Virginia and National averages in 2024 compared with 2025 results of GSST seniors. Due to students being able to opt out of the SAT, this data reflects 95% of senior test score data.

Colleges Being Attended by Class of 2025

Barnard College	1	Rochester Institute of Technology	1
College of William & Mary	6	St. Louis University	1
Cornell University	1	United States Air Force Academy	1
Case Western Reserve University	1	United States Military Academy	1
Georgia Institute of Technology	3	University of California Berkeley	1
Johns Hopkins University	2	University of California San Diego	1
Liberty University	1	University of Virginia	25
Old Dominion University	3	Virginia Commonwealth University	6
Princeton University	2	Virginia Polytechnic Institute & State University	18
Purdue University	2	Virginia Peninsula Community College	1
Randolph Macon College	2	Washington & Lee University	2
Rensselaer Polytechnic Institute	2		

Scholarship Awards Offered:
$3,982,039

Biological Science

About the program:

Advanced Chemical Analysis: Experience hands-on chemistry with our lab-based course, integrating theoretical learning with practical experiments using advanced equipment like spectrophotometers. Covering both inorganic and organic chemistry, students will explore topics such as stoichiometry, bonding, kinetics, and electrochemistry. Designed at a college level, for chemistry majors, this course provides a strong foundation for future studies in science.

Advanced Biological Analysis: In senior year's fall semester, delve into cell and molecular biology, exploring biological macromolecules, cellular processes, and vital functions like communication and photosynthesis. In spring, focus shifts to gene expression, evolution, and diverse life forms. Hands-on lab experiences cover research, medical, and forensic techniques, including spectrophotometry, PCR, and animal dissection. This course preps students for college-level biology, mirroring first-year majors' studies.

Prerequisites:

- Biology
- Chemistry
- Math minimum of Algebra II/Trig

Appropriate for:

Students considering careers in -

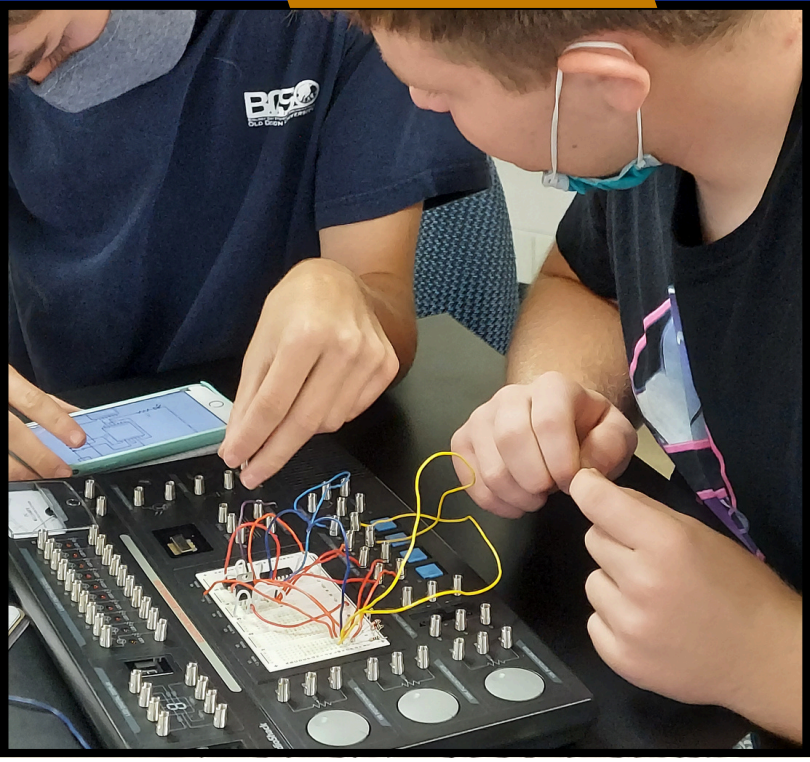
- Health sciences
- Life sciences
- Biology or chemistry research or engineering

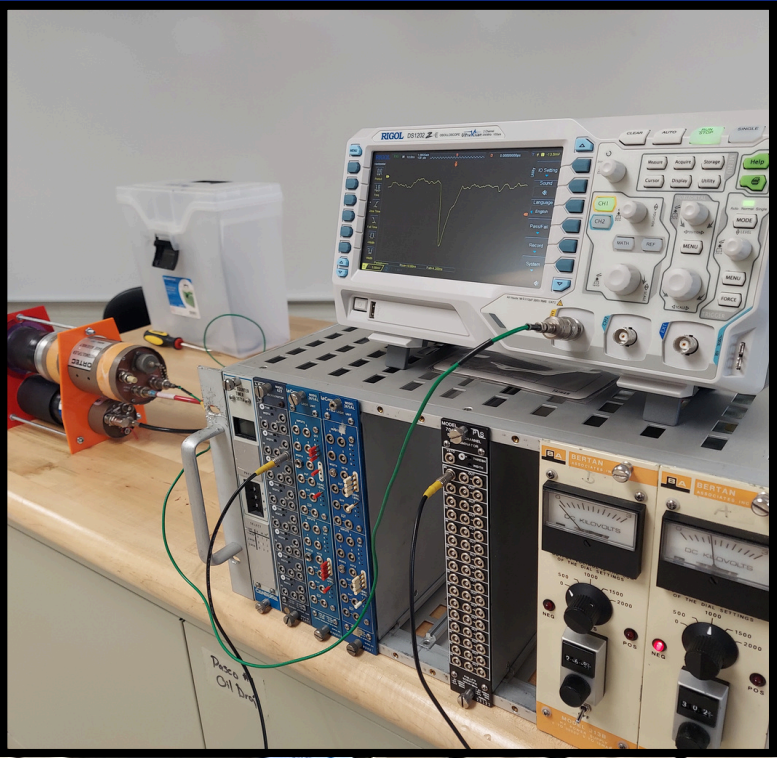
Unique opportunities:

Extensive lab work, including -

- Spectrophotomety
- Restriction enzyme analysis
- PCR, CRISPR/Cas
- Dissection Labs - Comparative physiology of aquatic, amphibian, and terrestrial mammals

Physics/ Engineering





About the program:

Calculus-based Engineering Physics I is a rigorous course focusing on classical mechanics and thermodynamics, providing foundational skills in problem-solving and quantitative reasoning. It lays the groundwork for further studies in physical sciences and engineering.

Calculus-based Engineering Physics II builds upon the first-year principles, delving deeper into advanced topics while integrating theory with practical application. Emphasizing problem-solving and engineering skills, students engage in computer programming and hands-on design of electronic systems, preparing them for real-world engineering challenges.

Prerequisites:

- Biology
- Chemistry
- Math minimum of Pre-calculus

Appropriate for:

Students interested in-

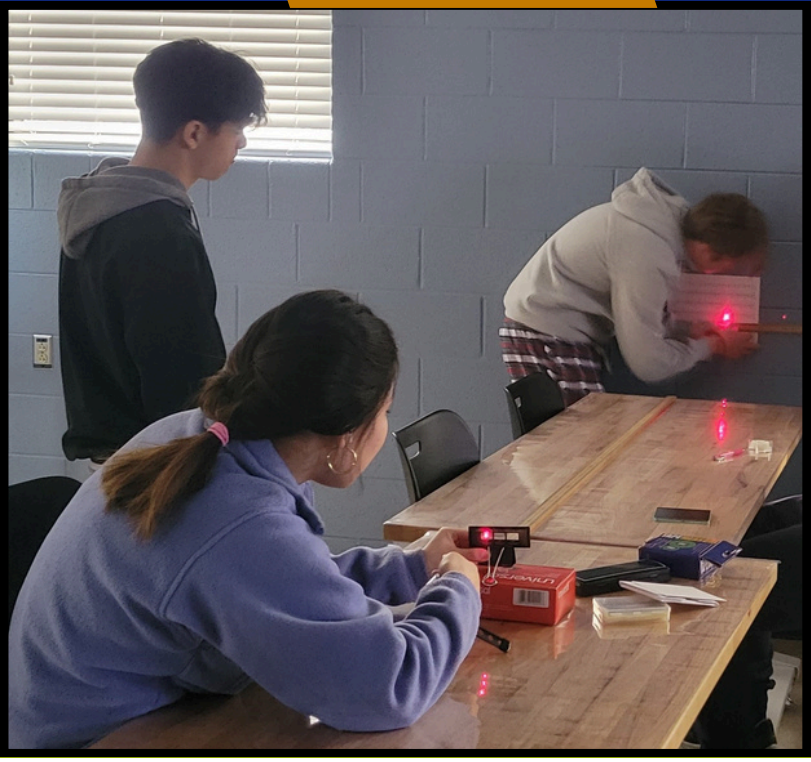
- Engineering
- STEM careers

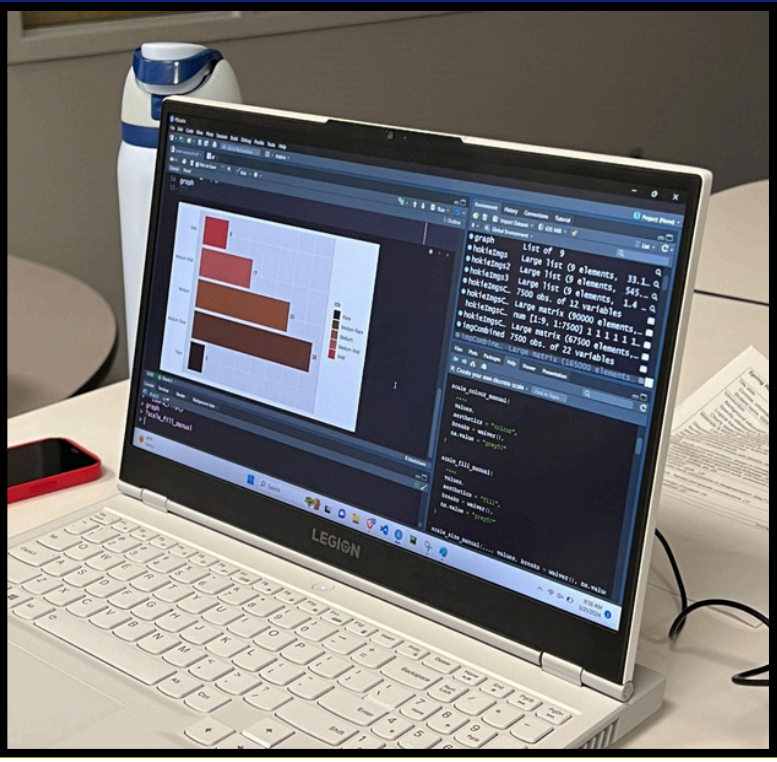
Unique opportunities:

EDIE (Engineering Design, innovation and Entrepreneurship) Lab

- Digital electronic systems
- CAD (Computer Aided Design)
- Engineering design process
- Collaborative project with computational science students

Computational Sciences





About the program:

Computational Physics, delve into the principles of physics while mastering scientific programming in Python. Covering topics from kinematics to special relativity, the course integrates programming skills with physics concepts. In the first semester, students tackle physics and programming separately, then merge them in the second semester to solve physics problems through coding. Labs, contests, and projects reinforce learning.

Computation Science: Engineering Design, Innovation & Entrepreneurship is a comprehensive course delving into advanced programming in C++ and data science using R. Through project-based learning, students acquire and apply skills in STEM, utilizing industry-standard software and fabrication systems. Keystone projects challenge students to identify real-world engineering problems, propose solutions, and demonstrate their innovations, fostering entrepreneurial spirit and practical engineering expertise.

Prerequisites:

- Biology
- Chemistry
- Math minimum of Algebra II/Trig

Appropriate for:

Students interested in-

- Computer science
- Software engineering
- Data science
- Related fields

Unique opportunities:

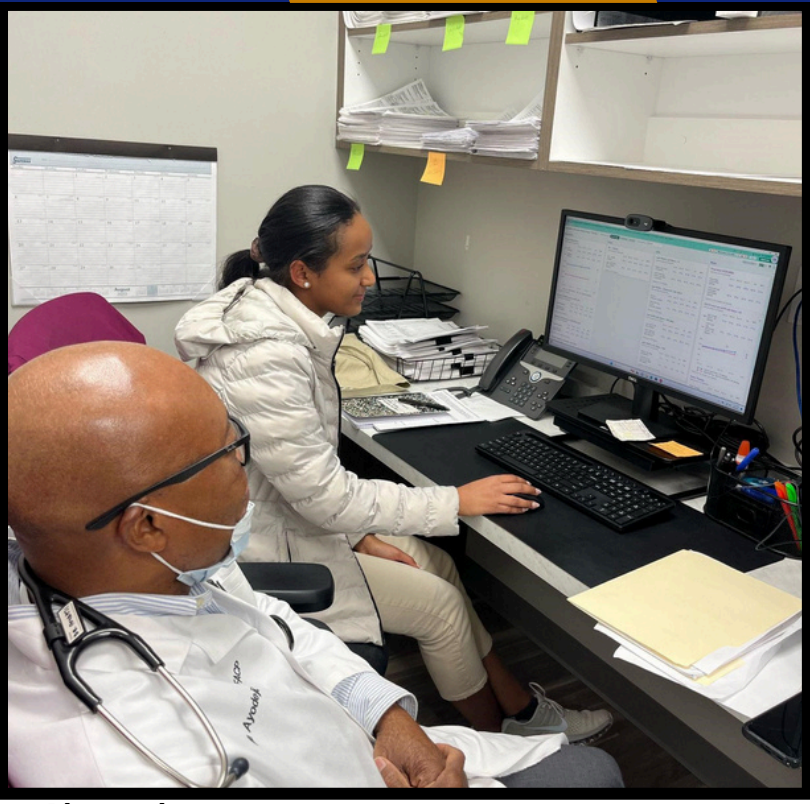
First year course -

- Fundamental principles of physics
- Computational programming in Python.

Second year course -

- C++ programming
- Data science (collaboration between GSST and Virginia Tech)
- EDIE Lab collaborative project with engineering students

Honors Research & Mentorship



About the program:

The GSST prioritizes fostering serious scientific research among its students. In the junior year, all students undertake a course in Research Methodology and Ethics, focusing on research techniques, statistics, critical thinking, and scientific communication.
In their senior year, students embark on a year-long research project under professional mentorship, supported by coursework guiding them from problem selection to final presentation. Each student receives guidance from a faculty advisor alongside their outside mentor. Many students showcase their research at various science competitions and symposia, with outstanding work often being published in professional journals.

The Project:

- Preparation of a formal written project proposal
- Oral presenation of proposal
- Mid-Year Status Report to GSST faculty
- Final Research document
- Presentation of final results at Senior Symposium

Research Sites:

Research sites that have participated in the GSST Mentorship program include:

- NASA Langley Research Center
- Thomas Jefferson National Acceleration Facility
- Virginia Institute of Marine Science
- MITRE Corporation
- College of William & Mary
- Virgina Tech Extension Center
- Hampton University
- Christopher Newport University
- Virginia Living Museum
- Local engineering firms, hospitals, and a variety of individual medical and professional firms.

HOW TO APPLY - 10th Graders Only

10th Grade students complete an online application available on the GSST website from the beginning of November until mid-February.

The information students are asked to provide includes:

- Selection of academic strand (Biological Sciences, Engineering, or Computational Sciences).
- Demographic information such as student and parents' names and address
- Names and email addresses of the counselor, a math teacher, and a science teacher.

The home school counselor provides information on high school transcripts, including details on courses, grades, and test data. Math and science teachers complete online recommendations.

Go to https://nhrec.org/gsst/home/how-to-apply/ or use the QR Code

Sign up for our Prospective Student Pipeline Newsletter

What is PSP and how does it help Prospective Students and families stay informed?

The goal of our Prospective Student Pipeline (PSP) program is to disseminate information about the Governor's School to as wide an audience as possible.
If the Governor's School seems like something your student might be interested in,
please sign up to receive our newsletters using the QR Code or at https://bit.ly/GSST-PSP
Scroll down to Prospective Student Pipeline Newsletter and provide your contact information.

Follow us on X (formerly Twitter)
@NHREC_GSST

Follow us on Instagram
@nhrec.gsst

GLOUCESTER COUNTY PUBLIC SCHOOLS

POQUOSON CITY PUBLIC SCHOOLS VIRGINIA

Isle of Wight County Schools

HAMPTON City Schools HAMPTON, VIRGINIA

York County School Division

NEWPORT NEWS PUBLIC SCHOOLS

WILLIAMSBURG JAMES CITY COUNTY PUBLIC SCHOOLS