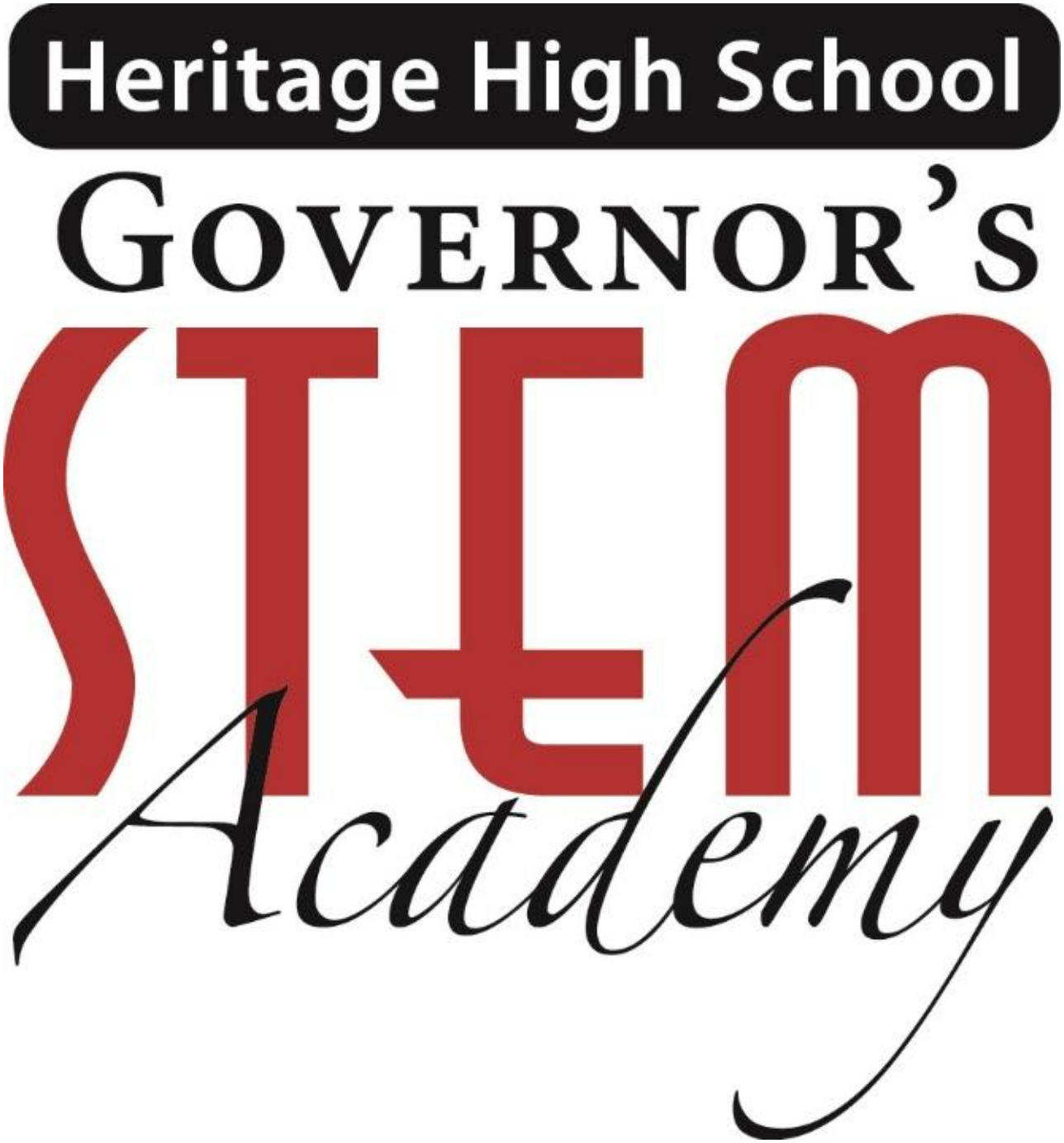
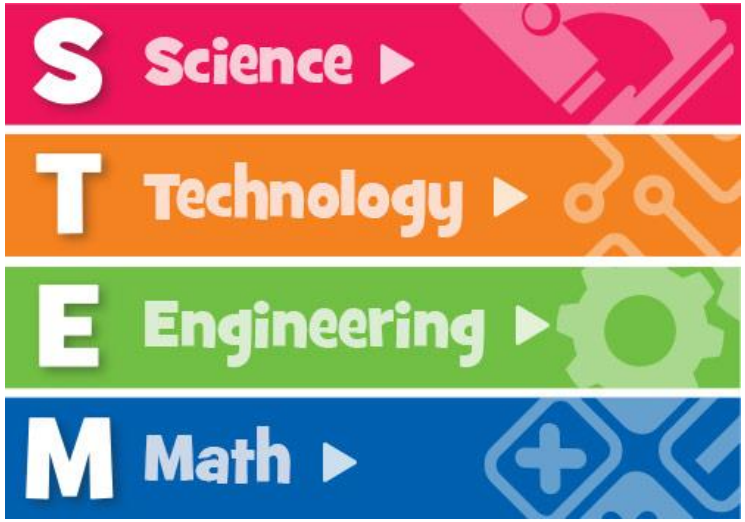

Heritage High School
Governor's
STEM
Academy

Heritage High School

GOVERNOR'S STEM Academy




# STATE & NATIONALLY RECOGNIZED

***program that combines academic coursework and research experience with a challenging environment to expand options for students to acquire skills in Science, Technology, Engineering, and Mathematics (STEM).***

# Heritage High School
# Governor's STEM Academy Goals

Promote student achievement and interest in STEM career fields

Attract more students to postsecondary education in preparation for STEM related Career Pathways

Expand internship and job shadowing opportunities

Produce better trained workers to support the recruitment needs of business and industry

Increase connections to families, community partners, and local business and industry

# GOVERNOR'S STEM ACADEMY REQUIREMENTS

- ✓ Complete an advanced mathematics course beyond Algebra II
- ✓ Take a math, science, and technology course each year
- ✓ Maintain a minimum of a 3.0 cumulative GPA
- ✓ Complete a STEM related internship or job shadowing (minimum 15 hours)
- ✓ Complete 200 hours of community service
- ✓ Earn an industry certification
- ✓ Complete a Senior STEMinar Course during 12th grade year

# PROGRAM AREAS AND COURSES

## ➢Computer Science and Game Design

- Programming
- AP Computer Science Principles
- Digital Visualization
- Modeling and Simulation Technology*

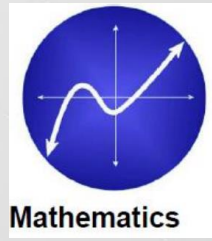
## ➢Engineering and Robotics

- Introduction to Engineering Design
- Principles of Engineering
- Digital Electronics*
- Engineering Design & Development *

## ➢Networking and Cybersecurity

- Information Technology Fundamentals
- Computer Network Operations
- Advanced Computer Network Operations*
- Cyber Security *

*Honors Course



# Computer Science and Game Design

**Students learn programming languages and computer animation. Modeling, simulation, and game development software are used to solve real-world problems in STEM.**

***Possible Careers:***

*Computer Programmer, Game Developer, Modeling & Simulation Engineer, Web Designer, Graphic Artist, Multimedia Producer, 3D Animator & Designer, Software Applications Engineer*

***Related Industry Certifications:***

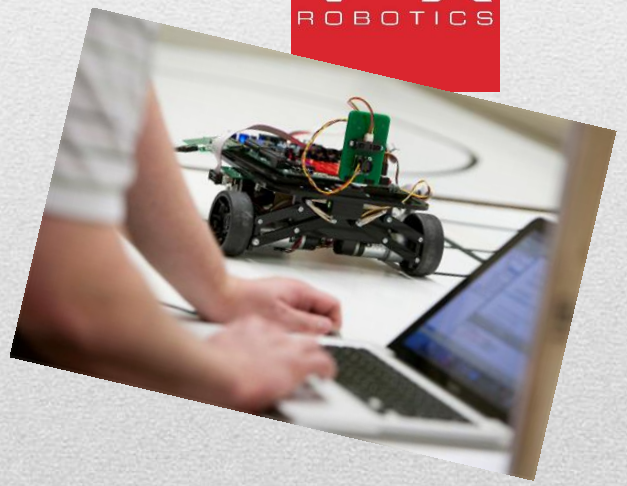
*MTA Programming, App Development, & Software Development*

# Engineering and Robotics

**Students explore careers in engineering and participate in various Engineering Design Challenges. Students are actively involved with high-tech electronic devices and study how electronic systems are used in robotics. 3D Models, systems, and projects are designed that creatively solve real-world engineering problems.**

PROJECT LEAD THE WAY
PLTW

VEX ROBOTICS



***Possible Careers***:

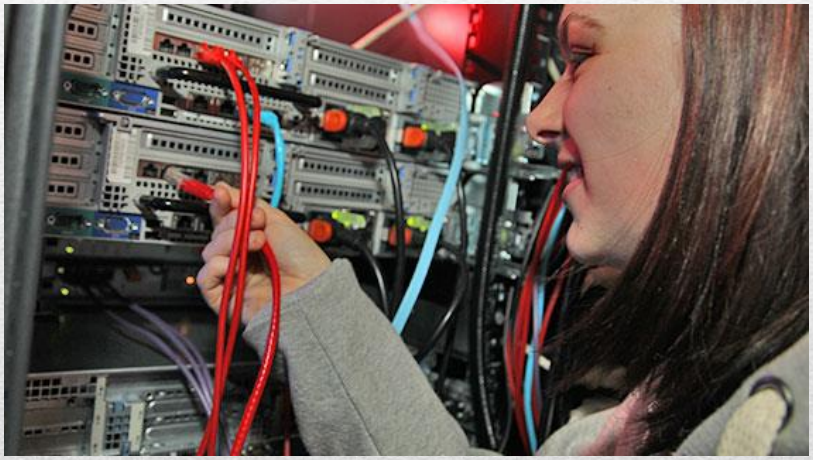
*Aerospace Engineer, Civil Engineer, Mechanical Engineer, Chemical Engineer, Architectural Engineer, Computer-Aided Drafter, Electrical Engineer, Mechatronics (Robotics) Engineer*

***Related Industry Certifications:***

*REC Engineering & Robotics Certification, Electronics Technology Assessment, PLTW Assessments*

# Networking and Cybersecurity

**Students learn to diagnose and demonstrate networking concepts, understand troubleshooting procedures, and implement and manage network security measures.**



ASSIST STUDENT HELP DESK
Advanced Students Supporting Innovative Systematic Technology

VIRGINIA STAR
Virginia Student Training and Refurbishment Program

***Possible Careers:***

*Network Administrator, PC Support Specialist, Cyber Security Analyst, Certified Ethical Hacker, Data Communications Analyst, Computer Engineer, Cryptographer, Information Technology Specialist*

***Related Industry Certifications:***

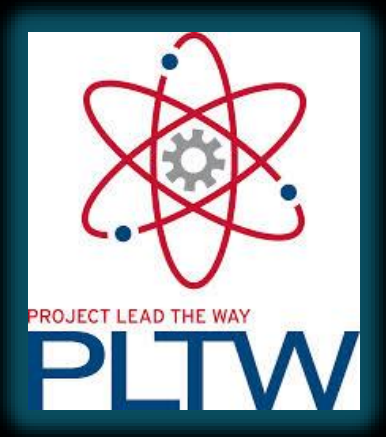
*IC3 Digital Literacy, MTA Networking & Security Fundamentals, COMPTIA A+ & Network +*

# Benefits For Students!

- Project-Based Learning
- Internships/Job Shadowing
- Mentorship Programs
- Competitive Events
- Community Service
- STEM Showcases
- STEM Summer Experience
- Industry Certifications
- Scholarship Opportunities

# STEM ACADEMY PARTNERS

# Opportunity to Earn Industry Certifications!



# STEM Focused Field Trips

Kings Dominion STEM Day
Busch Gardens “Launch Into Physics”
Virginia Modeling, Analysis, & Simulation Center Tour
Jefferson Lab “Introduce a Girl to Engineering”
NNS Egg Drop Engineering Design Competition
ODU’s Cybersecurity Center Tour
Engineering Career Day
Youth Career Expo
Mod/Sim Technology Showcase
Career Pathways Summit
STEM Community Day
NASA Game Changers Camp
Virginia Air & Space Center Visit
Girls Get I.T.

# Heritage High School Governor's STEM Academy Robotics Team

# Clubs, Organizations, & Athletics

- SeaPerch (Underwater Robotics)
- Aerial ACE Drone Team
- Student Council Association (SCA)
- National Honor Society
- Youth Volunteer Corps
- Future Business Leaders of America (FBLA)
- Band
- Chorus
- Yearbook
- JROTC
- FCCLA
- SADD
- Criminal Justice Club
- Technology Student Association (TSA)
- Math Honor Society

- Basketball
- Cheerleading
- Wrestling
- Baseball
- Softball
- Field Hockey
- Volleyball
- Track
- Golf
- Soccer
- Tennis
- Football
- Rugby
- Swimming
- Robotics

# Program Highlights

NSA “Day of Cyber” Challenge Award (presented by Governor Terry McAuliffe)
National Center for Women & Information Technology Aspirations in Computing Award
National Career Pathways Partnership Excellence Award
Virginia Math & Science “ Programs That Work” Award
Virginia STAR Best Practice Award
VDOE Career & Technical Education Exemplary Standards Award
VDOE Creating Excellence Award for Secondary Business & Industry Partnerships
Amazing Math Teacher Award - 95th District
NNPS STAND Youth Development Award
Virginia Cyber Camp Program Site
US Secretary of Education Visit
National NASA Administrator Visit
Virginia Secretary of Education Visit
NASA Cubes in Space Program Finalist
Newport News Shipbuilding Engineering Design Challenge Competition Winner
FIRST Robotics Competition Central Virginia Event Winner
STEM Academy Students featured on Virginia Tech Spotlight on Achievement
National Gates Millennium Scholar - STEM Academy Student

Click Here to View Video

# HERITAGE HIGH SCHOOL
# Governor's STEM Academy

**5800 Marshall Avenue, Newport News, VA 23605**

**Join us for our Open House or contact Chinell Callwood, Program Administrator to schedule a tour.**

chinell.callwood@nn.k12.va.us

**Open House Dates & Magnet Applications can be found at:**
www.nnschools.org/magnet

# FOR MORE INFO…

**Visit: heritage.nn.k12.va.us**

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**HHS STEM Academy**

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