

Bridging Communities Governor's STEM Academy

Jointly Operated by the Counties of:
Charles City, King William, King and Queen,
Middlesex, and New Kent

Rationale

- Establish a clear pathway between participating school divisions high school programs and higher education in opportunities in Science, technology engineering and mathematics (STEM) fields.
- 37 percent of STEM jobs are in engineering and related occupations.
- Over 30 percent of Virginia STEM jobs will require an associate degree or higher.
- Average salary for all STEM jobs is 58 percent higher than the average for all jobs.

Rationale (cont.)

- Licensed Practical Nurse (LPN) and Registered Nurse (RN) opportunities will increase 21 percent over the next eight years.
- Nurse Aide employment is expected to grow 22 percent in the next eight years.
- The Nurse Aide courses will provide foundation experiences for many advanced medical occupations

Governor's STEM Academy Career Clusters and Pathways

- Science, Technology, Engineering & Mathematics Cluster
- Health Science Cluster
- Engineering and Technology Pathway
 - Engineering Technology Program
 - Modeling and Simulation Program
- Therapeutic Services Pathway

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Engineering and Technology Pathway

Engineering Technology Program

- Year one students will earn three high school credits.
- Year two will be dual enrollment providing six college credits.
- Year two will include a community-based engineering Service Learning Experience.
- Certification and NOCTI opportunity provided.

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Engineering and Technology Pathway Modeling and Simulation Program

- Two year, dual enrollment program providing six high school credits and twenty-four college credits
- Year two includes a community organization and school system-based Service Learning experience
- Certification opportunity year one and year two

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Therapeutic Services Pathway

Nurse Aide Program

- One year, dual enrollment Nurse Aide Program
- Plus four college LPN classes
- Clinical experience will be completed after school hours and during the summer
- Students will be eligible for State Board of Nursing Nurse Aide Licensure Exam

Governor's Academy Goals

- Create rigorous Career and Technical Education Programs that:
 - Include related academic content
 - Provide a direct connection to postsecondary education
 - Provide relevant work place skills in high-demand occupations
 - Focus on advanced studies diplomas
 - Increase Industry Certifications
 - Provide a college and workplace ready curriculum
 - Increase high school graduation rate

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Enrollment

Year One

- Engineering Technology 16 students
- Modeling and Simulation 18 students
- Nurse Aide 20 students

Total year one 54

Year Four

- Engineering Technology 35 students
- Modeling and Simulation 40 students
- Nurse Aide 20 students

Total year four 95

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Industry Certifications

- Data indicate that Bridging Communities school divisions tested at least 50 percent of their CTE completers using a variety of certification tests.
- Student pass rates ranged from 33 percent to 100 percent on the tests.
- In the spring of 2013, the Governor's Academy will have approximately 54 juniors eligible to take a certification test.
- At least 43 (90 percent) of the 54 eligible students will take and pass a certification test.

Governor's STEM Academy Recruitment

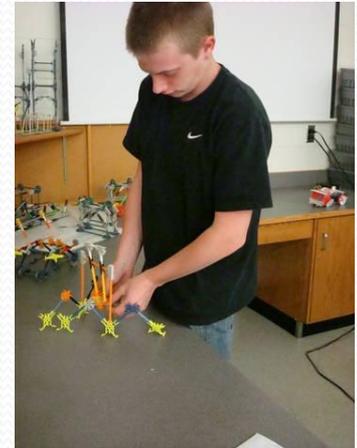
- Print materials
- Power point presentation
- Schoolwide presentations and recruitment
- Individual student contacts by school counselors
- School and community announcements
- Parent Fact Sheets

Governor's STEM Academy Admissions Process

- Completed application including:
 - Teacher recommendation
 - Transcript
 - School counselors recommendation
 - Student Interest survey
 - Parent signature
 - Completed community college or university application

Governor's STEM Academy

Student Engagement



Governor's STEM Academy Staffing

- All instructional staff will possess a valid Virginia teaching license and satisfy requirements to offer community college dual enrollment courses.

Governor's STEM Academy Transportation

- Each participating school division will transport students from their home high school to Bridging Communities Regional Career and Technical Education Center.

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Work-Based Learning

- Engineering Technology Program and the Modeling and Simulation Program will include a senior year Service Learning Experience.
 - Students will select an engineering related community or individual problem and develop a possible solution or model.
 - Community not-for-profit agencies and school divisions will provide Web, graphics, or modeling projects that students will complete.
 - Project results will be presented to a community agency or CTE Advisory Committee.

Governor's STEM Academy Work-Based Learning

- Nurse Aide clinical experience will be completed after school hours and during the summer not later than the summer following high school graduation.

Governor's STEM Academy Summer Enrichment Program

- The Center will be used for staff development by Bridging Communities school divisions providing the opportunity for all teachers to learn about the Governor's Academy programs.
- Academic teachers will use the labs and instructional resources to develop STEM-related units for use in their classes.
- An annual summer camp for middle school students will be planned beginning the summer of 2014.

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Division-Based Advanced Academic Classes

- Grade 7
- Honors English
- Algebra I
- Life Science
- Grade 8
- Geometry
- Earth Science
- Honors World History
- English
- Algebra I
- Civics and Economics
- Physical Science
- Spanish I
- French I

Governor's STEM Academy Partners



Town Council and
Chamber of Commerce



King William Sheriff's Department

Ethan Auto Clinic



Boyer Heating and Air



King William EVB Bank





Bridging Communities Governor's STEM Academy

Thank you for permitting Bridging Communities to
present our proposal for a Governor's STEM Academy.