

Governor's STEM Academy Brief



Office of Career, Technical, and Adult Education

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The purpose of the monthly brief is to provide information, resources, and a networking vehicle to support the Governor's STEM (science, technology, engineering, and mathematics) Academies in Virginia.

GOVERNOR'S STEM ACADEMIES SPOTLIGHTS

The eighth annual summer week-long cybersecurity camp was held June 2016 at Chantilly Governor's STEM Academy in Fairfax County Public Schools. Eighty-five (85) students in grades 7-12 from 18 different middle and high schools in Fairfax, Prince William, and Loudoun County Public Schools, as well as students from private and home school institutions participated in the camp.

Instruction was provided by industry cybersecurity experts from Northrop Grumman and teachers from Chantilly Academy. Students learned about computer ethics, basics of computer systems, and security threats. The highlight of the day came from Ms. Diane Miller, the director of Operations for Northrop Grumman's Cybersecurity Group and program director for the Air Force Association CyberPatriot competition. Her message was exciting, discussing the high-need for trained cyber professionals for our nation's defense across all industries. She encouraged each student to apply for a paid internship at Northrop Grumman when they enter high school. The core curriculum and program design for this camp is based on the Air Force Association CyberCamp Program and was supplemented with advanced instructional material from Northrop Grumman Cyber Academy.

CURRENT DEVELOPMENTS IN INFORMATION TECHNOLOGY

[Why System Administrators Are So Crucial ... - Security Intelligence](#) article exploring the duties of a system administrator and why those duties are so important to the IT world.

[Salary Differences Between a Web Designer and a Web Developer](#) - exploring the differences between the two careers.

[Information technology tool for pest management - Phys.org](#): article illustrating how IT can help the agriculture community use technology to improve their methods and decisions.

[Diversity in Information Technology and Higher Education](#) - a look at the pros and cons of diversity in IT education.

[Thriving in the Information Age: Building a Long – term Future](#): a roundtable of how technology is important to the success of any business, along with personal examples.

[Granite Creek: UNH on the Frontlines of Software Developed Networking](#) - an explanation of some of the jobs that computers occupy that humans previously held.

[Building a Career on the Foundations of the Internet Revolution](#) - article about Maggie Wilderotter, who has constantly pushed for the progression of technology in the business world.

[Five reasons to consider a career in Network Administration](#) - article that opines what is appealing about a job as a network administrator.

INSTRUCTIONAL STRATEGIES— INFORMATION TECHNOLOGY

[Issues in Informing Science and Information Technology](#) - scholarly journal with many articles related to science and information technology.

[Multimedia - Digital Wish - Lesson Plans](#) - lesson plans focusing on multimedia.

[National Initiative for Cybersecurity Careers and Studies](#) - ways for educators to include cybersecurity in lesson plans.

[Web Design Lesson Plans & Worksheets | Lesson Planet](#) - lesson plans for high school teachers focusing on web design.

[Colleges, Boot Camps Join Forces to EQUIP Students with Coveted Job Skills](#) - article detailing a new initiative from the DOE to help meet the needs of the IT community.

[U.S. State Department Tackles Gender Gap in STEM Participation](#): a program targeting “TechGirls” from all over the world in an effort to engage more females in STEM.

CAREERS IN INFORMATION TECHNOLOGY

[Computer and Information Technology Occupations](#) - Career information for someone interested in the IT field.

[Explore Computer Science Careers - Computer Science Online](#) - An in-depth guide about various careers in the computer science field.

[Homeland Security](#): A view of the U.S. Department of Homeland Security’s Information Technology department.

[Network Systems and Data Communications Analysts - Big Future](#): Crucial questions and answers for someone interested in a career in network systems and data communications.

[Network and Computer Systems Administrators](#) - An in-depth guide to a career as a network and computer systems administrator.

[Computers & Technology - Army](#): Examples of the types of careers available to someone who chooses a career in IT in the U.S. Army.

[Learn How to Become a computer programmer](#) - Instructions on becoming a computer programmer.

[Software Developer](#): An in-depth guide to a career as a software developer.

[What is Software Engineering? - Software Engineer Insider](#)

[What does a Computer Software Engineer Do? - TryEngineering](#) Detailed explanations of a software engineer’s responsibilities and what preparation is required to become one.

[Job Requirements for Database Management](#): A short explanation of a database manager’s responsibilities and what preparation is required to become one.

[Multimedia Artists and Animators](#): An in-depth guide to a career as a multimedia artist and animator.

[Digital Communications Specialist: Education and Career Roadmap](#): Instructions on becoming a digital communications specialist.

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