COOL CAREERS IN CYBERSECURITY PROGRAMS

START A PROGRAM IN YOUR COMMUNITY
Help Increase the Cybersecurity Workforce Pipeline

Cool Careers in Cybersecurity Informal Programs allow students to explore gaming, modeling and simulation development, and robotics, within the context of **exciting careers in fields such as digital forensics, cybersecurity and cryptography** which connect science, technology, engineering and math (STEM) to real world tools and problems. Students learn about programming/computational logic, coding-decoding/cryptography, system vulnerabilities, digital forensics, and careers in cybersecurity, as well as learning more about the security clearance process and identity management strategies. Students engage in hands-on activities while learning about digital literacy (technology fluency and applications, team building, collaboration tools, problem based critical thinking). Attendees:

- Create games and simulations using software packages such as MicroWorlds, Excel, Scratch, Alice, StarLogo, GoogleSketchUp
- Explore programming using Java, Python and Raptor
- Build and program robots
- Experiment with Cryptography, Steganography and Digital Forensics
- Explore careers that use technology such as digital forensics, cryptography, and cybersecurity
- Develop an awareness of Cyberethics, Cybersafety and Cybersecurity

Cool Careers in Cybersecurity Informal Program is a turnkey cybersecurity awareness program, meaning anyone affiliated with a community organization including girls, school administrators, community leaders, and teachers can start a program!

CONTENT

Module themes are: Cryptography, Computational Logic/Programming, Digital Ethics, Safety and Security, System Vulnerabilities, Digital Forensics, and Project Management. The six areas include activities that have been developed for grade bands 3-5, 6-8, and 9-12. Students engage in hands-on STEM activities and improve digital literacy skills while learning and applying concepts through gaming, modeling and simulation development, and other programming tasks. Speakers are integrated into the program. The central focus is the field of Cybersecurity, but it is supported by the too often neglected topics of citizen awareness of cyber education; Cyberethics, Cybersafety and Cybersecurity. An interdisciplinary approach engages students and adds relevance to the traditional curriculum.

FUNDING

Funding to host a program is dependent on the host site. Some organizations (Girl Scouts, 4H, STEM efforts at school) fold this into regular STEM activities. Others have paid instructors through grants, funding from school budget or have charged attendees a small fee to cover the cost of the instructor.

EMAIL: dpruitt@edtechpolicy.org
PHONE: (301) 503 807
WEBSITE: http://www.coolcareersforgirls.org

PROGRAM RESPONSIBILITIES

- Providing a host facility with reliable access to the internet and computers for each attendee.
- Providing a qualified trained instructor. Instructors must attend C34G training in advance of the event (online options available).
- Delivering Cool Careers proprietary content onsite at the host location during a mutually agreed upon schedule. Regular program sessions typically run 1-2 hours once or twice per week for 10 weeks for two semesters.
- Fulfilling communication and reporting documents in accordance to Cool Careers Program requirements (student projects and pre/post surveys documentation).

WHY

The progression of technology these past several years has also brought an increase in cyber attacks. This problem has developed into a serious national threat, creating a growing demand in the cyber security profession. This increase is expected to continue to grow in this decade making a degree or certificate in cybersecurity and information assurance a great opportunity for job seekers. By 2020, more than 50 percent of STEM jobs are projected to be in computer science-related fields. If current trends continue, 1.4 million computer science-related jobs will be available over the next ten years.

The Bureau of Labor Statistics shows that network systems and information security professionals can expect job opportunities to grow by 53% through 2018, making it one of the fastest-growing occupations in the U.S.