

Cybersecurity Outreach and K-12 Education Opportunities



CAMPS

CAREER EXPLORATION

COMPETITIONS

CURRICULUMS

GRANT AND SCHOLARSHIP OPPORTUNITIES

RESEARCH RESOURCES

STUDENT RESOURCES

TEACHER RESOURCES

Cyber.Org 🍏 🏆 🔍

<https://cyber.org/>

Provides Cyber education resources to empower educators as they prepare the next generation to succeed in the cyber workforce of tomorrow.

DoD STEM 📦 🍏 🏆

<https://dodstem.us/>

DoD STEM supports a wide variety of activities including after-school programs, competitions, and internships for students and professional development and training for educators.

GenCyber 🏕️ 🍏

<https://gen-cyber.com/>

The GenCyber program strives to be a part of the solution to the Nation's shortfall of skilled cybersecurity professionals. Ensuring that enough young people are inspired to utilize their talents in cybersecurity is critical to the future of our country's national and economic security as we become even more reliant on cyber-based technology in every aspect of our daily lives. To ensure a level playing field, GenCyber camps are open to all student and teacher participants at no cost.

National Cryptologic Foundation 📦 🍏

<https://cryptologicfoundation.org/what-we-do/educate>

Founded to provide support to the National Cryptologic Museum to inspire students to consider STEM fields and provide students, teachers, and parents with valuable cybersecurity resources.

Netsblox 📦 🍏

<https://netsblox.org/>

Free curriculum with supporting technologies to introduce students to the exciting field of cybersecurity. Enable K-12 educators and students to understand the methods of hacking and defensive solutions by experimenting on wireless controlled robots. Curriculum uses NetsBlox based on Scratch and Snap, for students with no programming experience to learn cybersecurity skills. Curriculum available upon request.

USA Mathematical Talent Search 🏆
(USAMTS)

<https://www.usamts.org/>

The USA Mathematical Talent Search (USAMTS) is a free mathematics competition open to all United States middle and high schools students. USAMTS allows students a full month to work out their solutions. Carefully written justifications are required for each problem. The problems range in difficulty from being within the reach of most high school students to challenging the best students in the nation.

STARTALK 💰 📦 🍏

<https://www.startalk.info/>

STARTALK is a federal grant program funded by the National Security Agency. STARTALK grants fund innovative programs with strong language learning outcomes for K-14 students and support three important goals: increasing the number of students enrolled in critical language studies, increasing the number of highly effective critical language teachers in the U.S., and increasing the availability of quality teaching and learning materials. STARTALK grants currently support programs offered in the following critical need languages: Arabic, Chinese, Korean, Persian, and Russian.

Commercial entities or materials may be identified in this list. Such identification is not intended to imply recommendation or endorsement by NSA, nor is it intended to imply that the entities or materials are necessarily the best available for the purpose.

Air Force Association's CYBERPATRIOT

<https://www.uscyberpatriot.org/>

The National Youth Cyber Defense Competition, the nation's largest cyber defense competition that puts high school and middle school students in charge of securing virtual networks. Other programs include AFA CyberCamps, an elementary school cyber education initiative, a children's literature series, CyberGenerations – a senior citizen cyber safety initiative, and a Tech Caregivers program designed to encourage cyber-savvy volunteers to give back to their communities.

Society of American Military Engineers (SAME)

<https://www.same.org/STEMCAMPS>

Camps held in conjunction with the U.S. Army, the U.S. Air Force, U.S. Navy and the U.S. Marine Corps, designed for high school students who excel in math, science and technology courses and are interested in pursuing engineering, architecture, or a related field in college.

CREDC

<https://credc.mste.illinois.edu>

Cyber Resilient Energy Delivery Consortium (CREDC) focuses on the power engineering field offering interactive lesson plans and activities designed to link researchers, educators, consumers, and students.

CyberStart America

A free national program for high school students to master cybersecurity as a gateway to the industry, up their digital skills, and compete for college scholarships through the National Cyber Scholarship Foundation.

Major League Hacking (MLH)

<https://mlh.io/>

Official student hackathon league that powers over 200 weekend-long invention competitions that inspire innovation, cultivate communities and teach computer science skills to more than 65,000 students around the world.

High School Administrator's Guide to Hackathons:
[//mlh.io/high-school-administrator-hackathon-guide](https://mlh.io/high-school-administrator-hackathon-guide)

PicoCTF

<https://picoctf.org/>

picoCTF is a free computer security education program with original content built on a capture-the-flag framework created by security and privacy experts at Carnegie Mellon University. Gain access to a safe and unique hands on experience where participants must reverse engineer, break, hack, decrypt, and think creatively and critically to solve the challenges and capture the flags.

National Initiative for Cybersecurity Education (NICE)

<https://www.nist.gov/itl/applied-cybersecurity/nice/resources/online-learning-content>

Links to free and low cost online cybersecurity learning content.

NICE K-12 Cybersecurity Education Conference

<https://www.k12cybersecurityconference.org/>

Annual conference that brings together a diverse community to address the challenges and opportunities of cybersecurity education in elementary and secondary schools.

Teaching Privacy

<https://teachingprivacy.org/>

Teaching Privacy aims to empower K-12 students and college undergrads in making informed choices about privacy, through hands-on educational tools and other classroom materials.

Teach Cyber

<https://teachcyber.org/>

Teach Cyber is a non-profit dedicated to developing, supporting, and stewarding excellent cybersecurity education at the secondary level. Their mission is to provide resources, training, and support to secondary school educators teaching cybersecurity.

GHIDRA

<https://ghidra-sre.org/>

A software reverse engineering (SRE) suite of tools developed by NSA's Research Directorate in support of the Cybersecurity mission. This SRE framework includes high-end software analysis tools that enable users to analyze compiled code on a variety of platforms including Windows, Mac OS, and Linux. Capabilities include disassembly, assembly, decompilation, graphing, and scripting, along with hundreds of other features.

IMPACT Cyber Trust

<https://impactcybertrust.org/>

Publicly available, legally collected, distributed repository of large-scale datasets containing real network and system traffic that could be used to advance state-of-the-art cybersecurity research and development.

Student use is welcomed; access requests must be through your local instructor or mentor.