NEW AMERICA

What can K-12 educators do to bring more women and girls into and up through cybersecurity?

Ask Better Questions:

Ask students, "what kinds of problems would you like to solve?" rather than, "what do you want to be when you grow up?" to help encourage thinking about technology and cybersecurity career paths. Such questions will help students who value contributing to communal goals and helping others reflect on the social impact of career paths in technology. Consider using strong female characters from fictional technology roles, like on the TV show NCIS or Bones, to depict the problems that can be solved.

Cybersecurity Is Everywhere:

Incorporate cybersecurity as an element of popular extracurriculars like sports or drama. Does the team have a social media presence or a payment system for tickets? Encourage students to investigate how those systems are secured and what improperly secured systems might mean for their team. In order to shape and deliver content, partner with organizations familiar with youth activities, like 4-H or the Girl Scouts, that have experience developing computer science or cybersecurity-specific programs and badges for young learners. Understanding how cybersecurity contributes to the group's overall goals can help create enthusiasm for careers in the field.

Earn College Credit in Cybersecurity:

Encourage high schools to develop advanced courses in cybersecurity, using language in course descriptions and other course materials that is in line with best practices for how to attract and engage more women students. Work with the College Board and the International Baccalaureate to design exams to award college credit for these courses.

Teachers are Learners Too:

Sponsor teachers to attend cybersecurity courses or earn certificates, so that they are equipped with the latest information to teach students. Make resources about coding clubs and cybersecurity camps available to students, too.

Expand the Cybersecurity Club:

Create a new cybersecurity club if your school does not yet have one. Task the students with figuring out how to engage more of their peers in the club. Exposure to the subject in a socially supportive environment—and early in education—can create excitement for careers in the field among students who might otherwise dismiss the possibility. Simple things like cool graphics and a name that echoes themes from popular culture can be used to attract participants.

Show Cybersecurity's Impact on Communities:

Turn a real-world community problem into a cybersecurity competition. This encourages students to explore the link between the technology, its impact on people's lives, and the ability to be creative. Give prizes to students who win intramural programs, or work with existing programs (for example, eCybermission) to compete with teams from other schools.

Cultivate Growth Mindsets:

Research suggests that girls sometimes need different kinds of feedback to succeed in STEM classes and can get discouraged if they fail. Consider training teachers in how to encourage a growth mindset among those students. In other words, teaching them that their abilities in math and science are not innate, but can be developed over time, and that failure is not weakness, but an opportunity to get stronger.

Introduce Female Role Models:

As the saying goes, you cannot be what you cannot see. Show students what women in cybersecurity look like by bringing in guest speakers, integrating women's stories into history lessons, or even featuring video clips of fictional female technologists from TV solving relevant problems.

Women make up less than one-quarter of the cybersecurity workforce, which can lead to less innovation, inferior design, seriously underutilized human potential, and needlessly unfilled jobs in a growing field. In short, this lack of gender diversity means poorer security.

To counter this trend, we convened a diverse group of experts from corporate, academic, nonprofit, and government backgrounds. Their job was to generate new ideas, share emerging efforts, and consider strategies to bring women into and up through cybersecurity careers. This series of one pagers features these ideas, efforts, and strategies.