STUDENT PRIVACY COMPASS

Teaching Security to Your Students

Objectives

- Understand the **need** to teach students about security.
- Recognize the myriad security **risks** students face online.
- Learn **security tips** for students and **key topics** to cover.
- Discover useful **lesson plans**, **activities**, and other **resources** to adapt for your classroom.

Why Teach Security?

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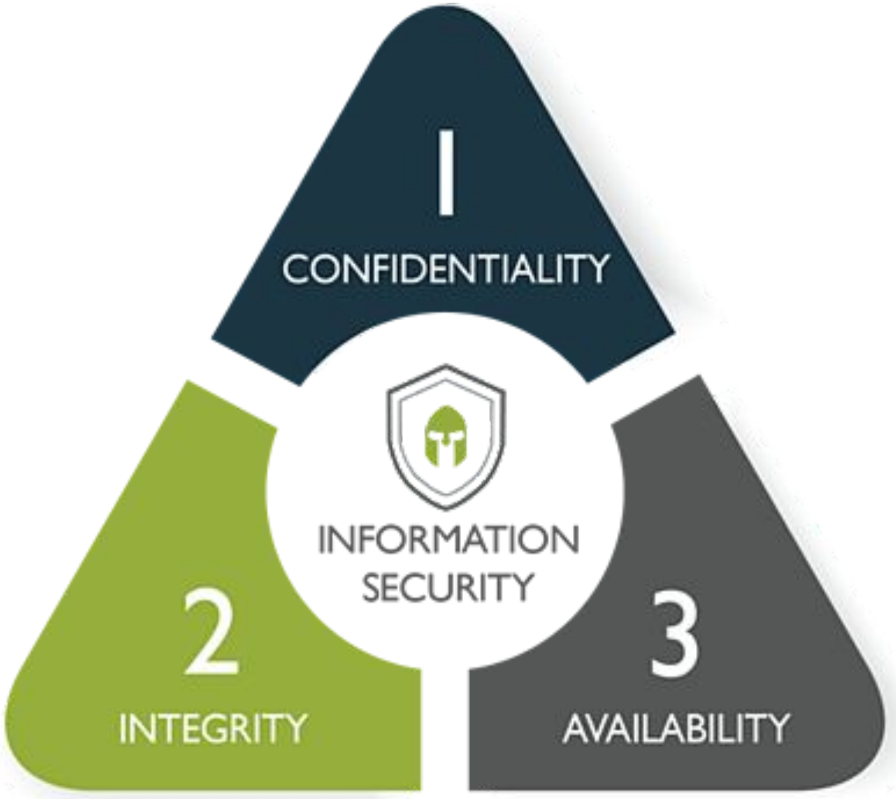
- Cybersecurity is the art of protecting networks, devices, and data from unauthorized access or criminal use and the practice of ensuring **confidentiality**, **integrity**, and **availability** of information.
- With inadequate cybersecurity protections, students risk malware erasing their entire system, an attacker breaking into their system and altering files, an attacker using their computer to attack others, or an attacker stealing their information to cause financial or reputational harm.



Source: CISA, What is Cybersecurity?

Security Risks

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When students use the Internet, they expose themselves to risks through the mere act of **accessing a web page**, **communicating online**, or **downloading data**. It's sometimes possible for websites they access, people on the same network, or even third parties to figure out their location or other information about them. Bad actors can watch their browser, location, and other usage patterns to try to figure out who they are.

Without taking the **proper precautions**, it's difficult, if not impossible, for students to fully protect themselves against online risks. New online risks also crop up all the time, so it's important to **stay vigilant**.

Potential harms of compromised accounts and information include **theft**, **reputational damage**, and falling victim to **scams**.

Source: Berkman Klein Center for Internet and Society at Harvard University, Cybersecurity, Phishing, and Spam

Guiding Questions for Students

- **What** is cybersecurity?
- **Why** is cybersecurity important?
- What are **confidentiality**, **integrity**, and **availability**?
- How can we **protect** our information from unauthorized access by hackers and other bad actors?

Source: Cisco, Anatomy of an Attack

Key Topics for Students

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- Strong **Passwords**
  - Lesson Example: Common Sense Education, Password Power-Up
- Secure **Networks** and **Devices**
  - Lesson Example: Teaching Privacy, You’re Leaving Footprints
- Beware of **Malware**
  - **Phishing and Spam**
    - Lesson Example: Common Sense Education, Don’t Feed the Phish
  - **Viruses and Trojan Horses**
  - **Scareware and Ransomware**
  - **Spyware**
  - For more information, check out the Canadian Civil Liberties Education Trust’s Peer Privacy Protector Project Section 4: When Your Watch Tells More Than Time.

Security Tips for Students I

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- **Update your apps, computer, and phone software** whenever you have the option. Almost all updates include security patches that close holes in the software that make it easier for someone to hack you. Make sure you keep your notifications on so you know when to update your software.
- **Use two-factor authentication** to access your accounts. A typical extra step of security is for your account to send a text message with a special code to enter after you try to login online.
- **Clear your cache**. Saved cookies, saved searches, and Web history could point to home address, family information and other personal data.
- **Use strong passwords** and keep them secret.
- **Turn off "save password"** feature in browsers.

Source: Canadian Civil Liberties Education Trust, Section 4: When Your Watch Tells More Than Time, Peer Privacy Protector Project

Security Tips for Students II

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- **Put a sticky note on your camera**. This might make you seem super paranoid; however, whistleblowers in the past have revealed that many organizations like the NSA can "spy" on people through the front face camera on their computers and phones.
- **Use a firewall**, which creates a barrier between your computer and the internet and only allows certain types of data to pass. It helps stop any exchange of data from happening between your computer and the internet without you knowing it!
- **Think about encrypting your data**, and using services that have end-to-end encryption. There are great ones out there: do your research and make choices based on your needs and priorities.
- **Think before leaving private data in the cloud!** Do some research to find more encrypted storage services with great privacy policies that will make sure your private data is safe.

Source: Canadian Civil Liberties Education Trust, Section 4: When Your Watch Tells More Than Time, Peer Privacy Protector Project

Activity

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1. Consider the websites, apps, platforms, devices, and networks your students **use in the traditional and virtual classrooms**.
2. Identify which of the **security tips** you can share with your students.
3. Create a plan to **integrate** security best practices into your lessons and interactions with students.

For example, if you are having students create a new account on an approved edtech tool, plan to teach them how to create strong passwords and use TFA.

Resources

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- ISTE's Digital Citizenship course for K-12 teachers
- Common Sense Education's Digital Citizenship lesson plans for K-12 teachers
- Digital Citizenship+ Resource Platform, which includes lesson plans and activities
- My Privacy UK, funded by the United Kingdom's privacy agency, with lessons, videos, and activities for children
- Canadian Civil Liberties Association's Peer Privacy Protector Project (PPPP), created for Canadian students, but useful and relevant information for American students as well
- Fordham CLIP's Privacy Educators Program includes lesson plans and visual aids for teachers
- International Computer Science Institute and the University of California-Berkeley's Teaching Privacy Project
- Google for Education's Digital Citizenship and Safety course for teachers and Be Internet Awesome lessons and activities for students