Standard: NI.C.02   Grade: 5

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Discuss real-world **cybersecurity** problems and explain how personal information can be protected (e.g., **antivirus software**, backing up data, strong passwords).

Essential Skills

Describe examples of **cybersecurity** issues

Outline ways **personal identifiable information** can be protected

Essential Questions

What are some of the dangers of **cybersecurity** attacks?

What are some effective ways to defend against cybersecurity attacks?

Explanation

Students should be made aware that cybersecurity breaches are not uncommon and that **phishing**, **hacking** and **ransomware** attacks can occur at any time. **Personal identifiable information** (PII), such as a person's name, phone number, address, social security number, bank account and credit card numbers are often stored on personal computers, in the **cloud**, and by companies and institutions that provide services. A breach of privacy, whether caused by a technical problem, human error, or deliberate act, can put this sensitive information in the hands of people who may use it to cause harm. Students should feel empowered with knowledge of how to protect their personal information including keeping login information private, logging out of devices appropriately, using strong passwords, using updated **anti-virus** software, and not opening emails or clicking on links from people they don't know.

Think of this as similar to….

There are a number of ways you protect your home from being invaded by strangers including not sharing your address, not hiding the key in an obvious place, not leaving windows or doors open when you're away, and not letting strangers in when they ring your doorbell.

Implementation Examples—What would this look like in the classroom?

Title	Description	Link	Content Connection & Notes
Cybersensibility: Cybersecurity	**Grade 5**--Students will learn the basics of securing their device from outside interference and cyber-criminals, in order to protect their data and identity online. Students will understand the state of current cyber-threats occurring in our world and explain how to manage their own risk to help reduce this global loss.	[Cybersensibility: Cybersecurity](#)	
Communication: Information Sharing and Phishing	**Grade 5**--Students identify how information online may be collected, what types of information they should be careful about sharing online, and why it is important to slow down, verify links and look for clues to determine if a website is secure.	Download the lesson on [Information Sharing and Phishing](#) from Module 2.	Free account on Cyber Aces necessary to download lesson.
You Won't Believe This!	**Grade 5**-- Students will develop strategies to recognize and avoid potentially dangerous clickbait links.	[You Won't Believe This!](#)	This lesson also aligns to **CS** IC.SI.01. Free account on Common Sense Media necessary to download lesson.

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These annotations are a collaboration between [Maryland Center for Computing Education](#) and the [Maryland State Department of Education](#).