

Time Frame: 3 weeks	Unit Title: Cybersecurity		Course Name: Technology and Society
Stage 1 - Desired Results			
<p>Established Goals</p> <p>NH Computer Science Standards</p> <p><i>IC – Impacts of Computing</i></p> <p>2-IC-23 - Describe tradeoffs between allowing information to be public and keeping information private and secure.</p> <p>3A-IC-29 - Explain the privacy concerns related to the collection and generation of data through automated processes that may not be evident to users.</p> <p>3A-IC-30 - Evaluate the social and economic implications of privacy in the context of safety, law, or ethics.</p> <p>3B-IC-28 - Debate laws and regulations that impact</p>	Transfer		
	<p><i>Students will be able to independently use their learning to...</i></p> <p>Protect personal data when using computing innovations in an increasingly digital world.</p>		
	Meaning		
	<p>UNDERSTANDINGS</p> <p><i>Students will understand that....</i></p> <p><i>The use of computing innovations may involve risks to personal safety and identity.</i></p>	<p>ESSENTIAL QUESTIONS</p> <p><i>Students will keep considering</i></p> <p><i>How is cybersecurity impacting the ever-increasing number of Internet users?</i></p> <p><i>Should individuals allow private companies access to their digital data?</i></p>	
	Acquisition		
	<p><i>Students will know...</i></p> <p><i>Personally identifiable information (PII) is information about an individual that identifies, links, relates, or describes them.</i></p> <p><i>Devices, websites, and networks can collect information about a user's location.</i></p>	<p>Students will be skilled at...</p> <p>Describing the risks to privacy from collecting and storing personal data on a computer system.</p> <p>Describing the different types of data that are used and collected by modern computing innovations</p>	

<p>the development and use of software.</p> <p><i>NI - Networks & the Internet</i></p> <p>3A-NI-05 - Give examples to illustrate how sensitive data can be affected by malware and other attacks.</p> <p>3A-NI-06 - Recommend security measures to address various scenarios based on factors such as efficiency, feasibility, and ethical impacts.</p> <p>3A-NI-07 - Compare various security measures, considering tradeoffs between the usability and security of a computer system.</p> <p>3B-NI-04 - Compare ways software developers protect devices and information from unauthorized access.</p>	<p><i>Technology enables the collection, use, and exploitation of information about, by, and for individuals, groups, and institutions.</i></p> <p><i>Common security risks include: phishing, keylogging, malware, rogue access points</i></p> <p><i>Methods of protecting data, including: encryption (symmetrical and asymmetrical), decryption, Caesar Cipher, Random Substitution Cipher, multi-factor authentication.</i></p>	<p>Explaining how disparate pieces of personal information can be combined to identify individuals or deduce other private information.</p> <p>Describing the warning signals for common security risks and how they target people – phishing, keylogging, malware, rogue access points, and human error</p> <p>Explaining how computing tools can be used for decryption.</p> <p>Explaining the difference between asymmetrical and symmetrical encryption.</p> <p>Identifying why Caesar Cipher and Random Substitution Ciphers are not adequate for most encryption needs</p>
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