Curriculum

Category	Topics	Example Activities
First Principles of Security	**1. First Principles of Security** • Domain Separation • Abstraction • Minimization • Layering • Process Isolation • Resource Encapsulation • Modularity • Least Privilege • Data Hiding • Simplicity	• Posters • Playing cards • Slides • Activities • Quiz with Kahoot! • Teacher presentations
Cybersecurity Ethics	**2. Ethics of Cybersecurity** • What is ethics? • Why is an ethical mindset important to a cybersecurity professional? • Codes of Ethics (samples) • Ethical Dilemmas in Cybersecurity	• Videos • Ethics-Post • Case studies • Guest speaker: Ethical hacker
Cybercrimes and Cyber Laws	**3. Cyber Bullying and Other High-Tech Crimes Involving Michigan Kids** • Cyber Harassment & Text Messaging • Cyber Bullying • Identity Theft • Child Pornography • Computer Hacking	• Invited talks • Videos • Case studies • Teacher presentations
Online Safety	**4. Correct and Safe Online Behavior** By acting responsibly and respectfully, the kids will enjoy their time online and get the best of the Internet while mostly avoiding things such as cyberbullying and inappropriate content. • Communicate appropriately • Keep private things private • Follow your family's rules • Think before you post, text, or share • Respect others • Don't lie, steal, or cheat • Be an "upstander" • Report misbehavior	• Invited talks • Videos • Case studies • Teacher presentations
Cybersecurity	**5. Overview of Cybersecurity** • What is security? • Why is it important? • What is the national response? • What are the basic components of security? • What are the attack models and countermeasures?	• Attack and defense demonstrations • Case studies • Hands-on experiments • Invited talks • Teacher presentations
	6. Principles of Cryptography • What is cryptography? • What are the key technologies? • What problems can it solve?	• Attack and defense demonstrations • Case studies • Hands-on experiments • Teacher presentations
	7. Online Social Networks: Threats and Solutions • What are the threats? • How to defend? • What are the privacy issues? • How to perform forensic investigation?	• Invited talks • Videos • Case studies