

Curriculum

Category	Topics	Example Activities
First Principles of Security	1. First Principles of Security <ul style="list-style-type: none"> • Domain Separation • Minimization • Process Isolation • Modularity • Information Hiding • Abstraction • Layering • Resource Encapsulation • Least Privilege • Simplicity of Design 	<ul style="list-style-type: none"> • Posters • Playing cards • Slides • Activities • Quiz with Kahoot! • Teacher presentations
Ethics of Cybersecurity	2. Cyber Bullying and Other High Tech Crimes Involving Michigan Kids <ul style="list-style-type: none"> • Cyber Bullying • Cyber Harassment and Text Messaging • Child Pornography • Computer Hacking • Identity Theft 	<ul style="list-style-type: none"> • Invited talks • Videos • Case studies • Teacher presentations
Online Behavior	3. 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. Here are some basics that will be covered: <ul style="list-style-type: none"> • Communicate appropriately • Keep private things private • Respect others • Don't lie, steal, or cheat • Be an "upstander" • Report misbehavior • Follow your family's rules • Think before you post, text, or share 	<ul style="list-style-type: none"> • Invited talks • Videos • Case studies • Teacher presentations
Cyber Security	4. Overview of Cyber Security <ul style="list-style-type: none"> • 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? 	<ul style="list-style-type: none"> • Attack and defense demonstrations • Case studies • Hands-on experiments • Invited talks • Teacher presentations
	5. Principles of Cryptography This module will introduce cryptography and its applications. The following questions will be answered: <ul style="list-style-type: none"> • What is cryptography? • What are the key technologies? • What problems can it solve? 	<ul style="list-style-type: none"> • Attack and defense demonstrations • Case studies • Hands-on experiments • Teacher presentations
	6. Online Social Networks: Threats and Solutions <ul style="list-style-type: none"> • What are the threats? • What are the privacy issues? • How to defend? • How to perform forensic investigation? 	<ul style="list-style-type: none"> • Attack and defense demonstrations • Case studies • Teacher presentations