Lesson Plan

LESSON TITLE: Module 4: Cybersecurity Student Engagement and Lesson Plan Design

SUMMARY:

While GenCyber teacher camps have proven effective at teaching the teacher, the broader impact is blunted if instruction is underemphasized. This module provides a broad overview of instructional strategies, followed by a survey of educational resources specific to the cybersecurity domain.

GRADE BAND:

☐ K-2   ☐ 6-8

☐ 3-5   ☐ High School

Time Required:

180   minutes

Lesson Learning Objective/Outcomes: Upon completion of this lesson, students will be able to:

- Understand the role of cybersecurity in the classroom;
- Create an engaging lesson plan with activity;
- Engage students on topics in cybersecurity.

Materials List:

- Lecture Presentation
- Lesson Plan Template and Sample

How will you facilitate the learning?

- Describe the Warm-up Activity/Focused Activity/Closure and/or Reflection
- Describe the Teacher Instruction

  - Delivery method - participatory lecture
  - Formative assessment (web-based student response system and "Fist-to-Five")
  - Gamification (periodic quizzes, leaderboard)
  - Group discussion after activity

This lesson includes:

☒ Mapping to Cyber Security First Principles   ☒ Learning Objectives

☒ Assessments

Mapping to Cyber Security First Principles:

☒ Domain Separation   ☒ Abstraction

☒ Process Isolation   ☒ Data Hiding

☒ Resource Encapsulation   ☒ Layering

☒ Modularity   ☒ Simplicity

☒ Least Privilege   ☒ Minimization

Assessment of Learning:

TYPE (Examples Listed Below)	NAME/DESCRIPTION
Writing Assignment Presentation Other Choose an item. Choose an item. Choose an item. Choose an item.	Participants will design their own lesson plans, then present them at the workshop. Follow-up discussion will help educators refine their lessons for the classroom in the fall.

Accommodations: (Examples may include closed captioning for hearing impaired students; accommodations for students with disabilities.)

Reference YouTube videos will include annotation and/or closed captioning as appropriate. Google Doc presentation can be modified for large font size and high contrast.

Description of Extension Activity(ies):

After the lecture portion, participants will design their own lesson plans based on the GenCyber lesson plan template. Each participant will then present their lesson at the workshop. Follow-up discussion will help educators refine their lessons for the classroom in the fall, which will support more numerous and engaging classroom application.

Acknowledgements: