

Transforming your Curriculum: A Cyber Security Toolbox for Teachers

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Module Learning Outcomes:

- #8: Engage in scenario-based learning that allows them to make educated decisions and take deliberate action online to prevent things from going wrong in the first place.
- #12: Apply the knowledge gained in solving real-world, scenario-based problems.
- #13: Remember the important role humans play in the digital world and understand how to minimize accidental and intentional human errors.

The Module addresses the following First Principles:

- #4: Least Privilege
- #5: Layering
- #6: Abstraction
- #7: Information Hiding
- #9: Simplicity of Design
- #10: Minimization

Description:

As digital devices like iPads and cell phones gain popularity with teens and young adults' educators need to become better informed about how they can teach students how to use these devices as learning tools. This module will provide middle and high school teachers with essential content related to digital citizenship. They will be provided with access curricular developed by three different groups, provided with an opportunity to examine and test out the material, and create a Google Site that includes grade and subject specific content that they can use with their students.

Upon completion of the teachers will:

- ❖ Describe Ribble's nine elements of digital citizenship.
- ❖ Describe the benefits of using interactive digital games to enhance students' cyber security skills.
- ❖ Locate free resources (interactive games, articles, videos etc.) developed by cybersecurity experts and educators that they can use in their classrooms.
- ❖ Describe how they will use these resources in their classroom.

Learner-Centered Classroom:

The instructor will create a highly interactive environment that provides middle and high school teachers with an opportunity to interact with the content and each other. She will use direct

instruction, structured discovery and informal instruction to deliver the content. She will include whole group activities as well as small group activities structured within and across instructional levels (middle and high).

During the first hour the instructor will use an interactive web-based software to (a) engage teachers in a self-evaluation of access to and use of digital tool (b) facilitate a discussion of Ribble's essential elements of digital citizenship. She will then use a modified version of the jigsaw approach to provide teachers with an opportunity to (a) individually test out an interactive digital game that involves decision making (b) discuss the outcomes of the different games and how these games can be integrated into the curriculum. During the second hour the instructor will engage students in a Digital Scavenger Hunt for cyber security curriculum resources. This will require teachers to (a) visit the websites provided by the instructor (b) identify resources that they can use with their respective classes (c) create a Google Site page that includes grade specific resources they plan to use with their students. They will be invited to share their Google Site page with peers during the last ten minutes of the session.

Assessment:

She will formatively assess teachers in a number of ways during the first hour. First, with the help of the interactive web-based software the instructor will evaluate the ways in which teachers integrate digital citizenship into the curriculum. She will then informally observe teachers' engagement in the digital game and the discussion that follows. She will use a whole group format to elicit teachers' reactions to the different games and the ways in which they plan to integrate them into the curriculum. During the second hour the instructor will informally observe teachers' as they engage in the Digital Scavenger Hunt. She will formally assess the Google Site pages that teachers create and present during the last ten minutes.

Suitability to various groups:

This module includes a wide range of cyber security resources relevant to the needs of middle and high school students. The Google Site page that each teacher creates will target the level that he/she teaches. Teachers will benefit from viewing the different Google Site pages created by their peers.

How the Teachers and Students Groups will be Interacting:

Not applicable. This session does not include students.

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