



Mrs. Gentile's Lesson Plan

I.U.P. GenCyber Combination Camp

Wed., June 20, 2018 11:00-11:50, 1:00 to 1:50

Lesson Title: Perfect the Plan I

Summary: Camp teachers have tested out their draft lessons which incorporate cyber security principles in their respective classrooms on camp students. Students provided feedback each teacher and together they hunted for resources to create engaging lessons (videos, games, articles, examples, etc.). This session is for teachers to reflect upon all educational strategies and resources learned about to this point in the week, and to solidify their lesson plans for NSA submission. We will share our ideas aloud, brainstorm together how best to incorporate additional cyber-security principles, and submit our work to a shared Google folder for ongoing reference and revision.

Grade Band:

PK – 12 Teachers

Time Required:

Two 50-minute sessions

Lesson Learning Objectives/Outcomes:

Upon completion of this lesson, teachers will be able to:

- Finalize one engaging lesson to practice the Cyber Security Principles, which will be submitted to the NSA for its national database of GenCyber lesson plans
- Share respective lesson plans in a shared Google folder among participants

Materials List:

Teachers' draft plans

Computers

Notes from the morning's merged session

How will you facilitate the Learning?

Session 1:

- 1) Teachers will be given an opportunity to discuss the morning's merged session and its outcomes. I will encourage brainstorming and support of one another's lesson ideas.
- 2) Next, I will provide notes about what I noticed for each teacher, especially in regard to which cyber-security principles were addressed, and which remain to be covered.
- 3) Discussion can follow as we look to incorporate the non-tech games and activities discussed on Day 1, the on-line teaching strategies discussed on Day 2.
- 4) An example of a hyperdoc will be shared to provide inspiration to "tech-up" their lesson plans in a way that is differentiable for a variety of learners, possibly using Kidsdiscover.com or my own examples from algebra class.

Session 2:

This will be an opportunity to create a Hyperdoc for each teacher's plan, or simply to create a Google doc to be placed in our shared Team Drive. Hyperdocs can include teacher-made games, vocabulary building through Marzano's 6 step process, on-line explorations for acquiring new information or on-line games for building retention of concepts. Hyperdocs practice *minimization* where students are guided to explore only certain areas of the Internet.

Mapping to ALL Cyber Security First Principles (ideally):

Domain Separation	Abstraction
Process Isolation	Data Hiding
Resource Encapsulation	Layering
Modularity	Simplicity
Least Privilege	Minimization

Assessment of Learning:

TYPE:

Observations

Oral Questioning

Lesson Plan

Name/Description:

As teachers share and collaborate

Teachers ask for clarification on principles, and others offer good examples or clarification without me

Tested out on students today, revised now, submitted Day 5, possibly as a Hyperdoc

Accommodations:

Some teachers' districts do not have a contract for GAFE, but still have access to Google Docs. These teachers can just email attachments and make copies to share their knowledge gained from camp.

Description of Extension Activities: It would be wonderful if we would all continue to contribute to our team drive and add lesson plan ideas and resources

Acknowledgements:

Gen-Cyber.com

Hyperdoc Handbook – Lisa Highfill, Kelly Hitton, Sarah Landis