

(<http://csmatters.org/pd-new>) L - 02

0bL - 0b10

Unit 3 Lesson Preparation and Teach-Out



Unit Lesson Preparation / Teach Out

Revision Date: Sep 08, 2019

Duration: 150 50-minute sessions

Lesson Summary

Summary: In the first session, teachers review key terms and concepts about how the Internet works to prepare them to plan the lessons from the beginning of Unit 3 using the jigsaw technique. In the second session, teachers will present the core activities from the lessons that they prepared and receive feedback from other teachers. They will then have time to journal and reflect on the activities and subsequent feedback.

Outcomes: Teachers will

- Understand the importance of using precise technical vocabulary about the Internet from Unit 3 and how to introduce it to their students.
- Describe how information is requested and flows across the Internet.
- Consider what students will need to know to answer exam questions about the Internet.
- Consider how to expand lessons to be more inclusive of a diverse student body.
- Prepare lessons and teach them to the other teachers.
- Upload a copy of presentations to the shared Drive folder.
- Receive feedback on the lessons that they create.
- Differentiate instruction to meet the needs of diverse learners.

Overview:

Session 1:

(Total: 60 min)

1. Key vocabulary and communication process (15 min)
2. Overview of the lessons in Unit 3 (10 min)
3. Planning (35 min)

Session 2:

(Total: 90 min)

1. Teach-Out Activity

Learning Objectives

CSP Objectives

Big Idea - Professional development includes learning experiences and resources to ensure that teachers understand how the subject(s) they teach addresses the Maryland content standards and the relationships between the subjects they teach and other subjects in the curriculum.

- ○ LO 1a - Professional development includes learning experiences and resources to ensure that teachers understand how the subject(s) they teach addresses the Maryland content standards and the relationships between the subjects they teach and other subjects in the curriculum.

Big Idea - Professional development provides opportunities for teachers to examine, observe, practice, and receive feedback on their use of research-based instructional strategies to help all of their students master Maryland content standards.

- ○ LO 1b - Professional development provides opportunities for teachers to examine, observe, practice, and receive feedback on their use of research-based instructional strategies to help all of their students master Maryland content standards.

Big Idea - Professional development focuses on developing teachers' understanding of and disposition to acknowledge the diversity of student learning styles and needs.

- ○ LO 4a - Professional development focuses on developing teachers' understanding of and disposition to acknowledge the diversity of student learning styles and needs.

Big Idea - Professional development provides opportunities for teachers to develop and demonstrate the knowledge and skills necessary to design and implement instructional and assessment strategies that meet diverse student learning needs and help all students master Maryland content standards.

- ○ LO 4b - Professional development provides opportunities for teachers to develop and demonstrate the knowledge and skills necessary to design and implement instructional and assessment strategies that meet diverse student learning needs and help all students master Maryland content standards.

Big Idea - Professional development fosters a safe, inclusive, equitable learning community where teachers, administrators and students participate in maintaining a climate of caring and respect.

- ○ LO 5a - Professional development fosters a safe, inclusive, equitable learning community where teachers, administrators and students participate in maintaining a climate of caring and respect.

Key Concepts

Teachers must understand the vocabulary and processes about how the Internet works that are introduced and reinforced in Unit 3.

Teacher Resources

Student computer usage for this lesson is: **required**

Unit 3 Folder (<https://drive.google.com/open?id=0B5vAY-fhOT-iLTJfOFILb2tadEE>)

Lesson Plan

TOTAL: 150 minutes

Session 1 - 60 minutes

Key vocabulary and communication process (15 minutes)

First, watch a 6 minute video about how Internet communication works. Write down key vocabulary as you hear it. <https://www.youtube.com/watch?v=ZhEf7e4kopM&index=2&list=PLzdnOPI1iJNfMRZm5DDxco3UdsFegvuB7>

(<https://www.youtube.com/watch?v=ZhEf7e4kopM&index=2&list=PLzdnOPI1iJNfMRZm5DDxco3UdsFegvuB7>) (Code.org 6:41 min. How the internet works: wires, cables and wifi)

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Discuss and define vocabulary. Try to construct a diagram of the process to request a web page from a browser. Copy the diagram into journals with vocabulary definitions. Watch the video on how Internet communication works. <https://www.youtube.com/watch?v=5o8CwafCxnU&index=3&list=PLzdnOPI1iJNfMRZm5DDxco3UdsFegvuB7>

(<https://www.youtube.com/watch?v=5o8CwafCxnU&index=3&list=PLzdnOPI1iJNfMRZm5DDxco3UdsFegvuB7>) (Code.org 6:44 min. The Internet: Ip addresses and DNS) Discuss any new vocabulary.

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Overview of the lessons in Unit 3 (10 min)

Present an overview of the lessons within Unit 3 to show what the students do for each lesson and the time in which they are supposed to do it.

After that, teachers will be shown the coverage of topics by the CS Matters curriculum - specifically the topics under the Big Ideas of Creativity, Impact, and Internet.

Teachers will move into a line based on their comfort and confidence with the Big Idea: The Internet for AP CSP. They will then be divided into groups for lesson preparation based on the level of background knowledge needed for each lesson.

Lesson Preparation (35 minutes)

Teachers will prepare their assigned lessons in their groups. They will consider what can be assessed and how to assess it. They will differentiate between formative assessment and summative assessment. They also need to consider how they can expand lessons to be more inclusive of a diverse population of students.

Session 2 - 90 minutes

Teach Out (90 minutes)

Teachers will teach their lessons to the other teachers, focusing on the core activity for each lesson that teaches the concepts and vocabulary of how the Internet works.



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