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How Does Technology Impact Your Life?

Unit 0. Introduction

Revision Date: Jul 22, 2019
Duration: 1 50-minute session

Lesson Summary

Summary: This optional lesson can be used as a brief preview to the course on the first day of class when teachers typically have many classroom administrative tasks to accomplish, but teachers also want to set the stage for the class. Students begin thinking about the influences of technology as they engage in a Think-Pair-Share strategy about the computing innovations that have impacted their lives. In addition, this is an opportunity to set beginning expectations about interacting with classmates in collaborative activities and to model writing in the content area.

Outcomes:

- Students will provide examples of how technology makes a difference in their lives.
- Students will describe both the positive and negative impacts of the computing innovation that has had the most impact on their life.

Overview:

1. Getting Started (5 min) - Journal Activity
2. Guided Activities (40 min) - Students Think-Pair-Share and engage in independent writing
3. Wrap Up (5 min) Summary and Homework Assignment

Source: This lesson is adapted from Code.org (Unit 1 Lesson 00)

Learning Objectives

CSP Objectives

- *EU CRD-1 - Incorporating multiple perspectives through collaboration improves computing innovations as they are developed.*

- LO CRD-1.A - Explain how computing innovations are improved through collaboration.

- *EU IOC-1 - While computing innovations are typically designed to achieve a specific purpose, they may have unintended consequences.*
    - LO IOC-1.A - Explain how an effect of a computing innovation can be both beneficial and harmful.
    - LO IOC-1.B - Explain how a computing innovation can have an impact beyond its intended purpose.
    - LO IOC-1.F - Explain how the use of computing can raise legal and ethical concerns.
- *EU IOC-2 - The use of computing innovations may involve risks to your personal safety and identity.*
    - LO IOC-2.A - Describe the risks to privacy from collecting and storing personal data on a computer system.

Common Core ELA:

- WHST 12.1 - Write arguments on discipline specific content

Key Concepts

Innovation is an important theme of this course. Students will become more aware of how innovation in technology has affected their lives.

Essential Questions

- How does computing enhance human communication, interaction, and cognition?
- How does computing enable innovation?

Teacher Resources

Student computer usage for this lesson is: **none**

Student journals, if they are ready. Otherwise, paper for students to write on.

Lesson Plan

Getting Started (5 min)

This short activity can be used after any required first-day administrative duties.

Introducing Journals and "Think-Pair-Share" (5 min)

Each lesson in the course will start out with a brief prompt for students to respond to in their journals. They will pair off to discuss their answers, then share their findings with the class.

If you have the journals ready, have students write the answer to this prompt in the journal: Identify technological innovations that you and/or your families use. (At LEAST four, how many can you name?)

If Clarification is Needed:

- Invention: a completely new product or idea
- Innovation: an improvement to an existing idea
- Possibly use http://www.pbs.org/idealab/2012/03/the-difference-between-invention-and-innovation086/ (http://www.pbs.org/idealab/2012/03/the-difference-between-invention-and-innovation086/) (Read the 2nd section)

Guided Activities (40 min)

Activity - Think-Pair-Share (20 min)

1. Have students share journal ideas in pairs. Each student should circle the four most interesting ideas in their journal.
2. Have pairs combine into groups of 4-6 and write 4-6 unique, interesting ideas from their group on post-it notes or paper.
3. Display student ideas at the front of the room on a board or poster using pen, chalk or post-its.
   (Suggestion: Take turns letting each group contribute one thing at a time and explain how it's used in their lives. Either disallow duplicates or notice how many groups choose the same things.)
4. Challenge students as a group to think of at least 10 more things that are not on the list and add them.

Activity - Independent Activity (20 min)

1. Tell students to complete this sentence: "The computing innovation that has had the most impact on my life is .... because ....".
2. Write the completed sentence and describe both the positive and negative impacts of the innovation in a short paragraph in your journal.
3. Allow students a few minutes to independently and silently think and write.
4. Point out that many devices communicate over the internet. They use sensors to gather data about the world. Sensor networks facilitate new ways of interacting with the environment and with physical systems. Have students think of a connected device that has had, or could have, impact on their lives. This is the fastest growing area of the internet: connected devices. (traffic lights, self-driving cars, cell phone GPS, activity trackers, etc.)
5. If there is time, join each student pair with another pair for a second round of sharing and discussion.
6. *Suggestion: A large-group class discussion can replace the second pair-share portion of the activity if it is more appropriate for the class setting or the time available.*

Note: Written communication is an important skill. This curriculum provides a variety of opportunities for students to develop the skills that they will need to perform well in the Performance Tasks.

Wrap-Up (5 min)

Summarize the various ways that computing innovation has affected our lives. Assign the following homework.

Homework

Ask students to interview an adult and ask, "What computing innovation has had the most impact on your life? In what ways has your life been affected?"

Students will record the adult's answer and compare and contrast the answer with their own original answer in a brief paragraph.

Options for Differentiated Instruction

Optional Extension:

Suggest that students create timelines showing the years when the various innovations were invented or became available to consumers. (They could make their best guesses as a class and reorder the ideas on the board.)

Evidence of Learning

Summative Assessment

Paragraph about the positive and negative impacts of the innovation that has had the most impact on the student's life in journal at the end of class.

Paragraph for homework that compares and contrasts an adult's answer to their own journal entry answer after conducting a discussion with an adult at home.

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Authored by: CS Matters in Maryland
Website: csmatters.org (http://csmatters.org)
Email: csmattersinmaryland@gmail.com (mailto:csmattersinmaryland@gmail.com)

by University of Maryland, Baltimore County (http://umbc.edu) and University of Maryland, College Park (http://umd.edu).