

04_Why do we need Computer science?

Lesson Plan

Unit: LET'S POWER ON EQUITY FOR CS UNIT

Objective

Students will gain an understanding of how computer science impacts various industries, why it is important that all students have access to learn it and use computer science (Scratch) to spread awareness of this issue to their community.

Standards

4-6.IC.1 Describe computing technologies that have changed the world, and express how those technologies influence, and are influenced by, cultural practices.

2-3.IC.3 Discuss and explain how computing technology can be used in society and the world.

4-6.IC.3 Explain current events that involve computing technologies.

2-3.IC.7 Identify a diverse range of roles and skills in computer science.

2-3.DL.2 Communicate and work with others using digital tools to share knowledge and convey ideas.

4-6.DL.2 Select appropriate digital tools to communicate and collaborate while learning with others.

2-3.DL.4 Use a variety of digital tools and resources to create digital artifacts.

4-6.DL.4 Use a variety of digital tools and resources to create and revise digital artifacts.

Resources/Materials:

- [Power on book by Jean J. Ryoo and Jane Margolis](#)
- Pre-planned student partnerships/groups
- Devices connected to Internet (Chromebooks, laptops, or iPads, etc.)
- Links to Google CS First assignments on Google Classroom

Mini-Lesson Read Chapters 3-4 Reread Stop and Discuss: What is computer science? How is CS changing different fields? (i.e. entertainment, health care, sports, education, fashion, climate change, space exploration, etc.) What was the counselor's response when Christine requested to enroll into the Intro to Computer Science course? Jon has a new ally in his Computer Science class. What do you think the role of an ally is?

Turn and Talk: Why do some students lack access to computer science education?

Hint: Think about the people discussed in this chapter and how different aspects of their identity affected their access to computer science.

Let's think about some activities that we see Jon doing during this chapter. How was he an ally? Throughout the chapter, different characters step up in different ways to support each other. Share out: What examples of allyship did your group find?

*Students share out/Teacher will record answers on the board/chart paper.

Teacher: We learned and discussed different ways that students lack access to computer science education. Then we learned how people identifying with certain groups lack access to CS even more than others because of characteristics that have nothing to do with computer science. These patterns in lack of access is a big part of what we refer to as the "**Digital Divide**".

We are going to watch a video about the digital divide in real life and hear about the digital divide before and after the COVID pandemic remote learning, quarantine, and closures.

[Video](#) Focus: As you watch, I want you to identify, (if possible: display questions during video)

What are the reasons/causes for the digital divide?

What groups of people are impacted?

Share out/discussion: jot bullet points under "**Digital Divide**".

Connection: If you remember earlier doing your turn into work, you identified licensed students like computer access, access to computer science education from the chapter power on, thumbs up with thumbs down as we go through the first via the night now of what the issues were

Partner/Independent work (In class exercises): How can you become an ally and bring awareness to access for CS? Working with a partner or independently you will create a digital poster/collage or remix a scratch project to bring awareness to support all students having access to CS without the fear of bullying.

Wrap-up/Share out: What are different ways we can share our posters and projects to spread awareness to our school and community?

Assessment:

- Student discussion (thoughts/ideas shared)
- Student-created Scratch poster or digital collage
- [Plickers questions](#)