BITS & BOTS
TECHNOLOGY CURRICULUM

Lesson Plan 2-3.IC.7

BACKGROUND INFORMATION

LESSON TITLE: Skills to the Gills
STANDARD(S): 2-3.IC.7 Identify a diverse range of role models in computer science.
HOW THE LESSON FITS INTO AN INSTRUCTIONAL SEQUENCE: This lesson is in the career paths sub-concept. It builds on the K-1 lesson that asks students to identify careers that use computing technologies. In this lesson, students are asked to identify skills commonly used in computer science related jobs. In the 4-6 grade band, students will identify a diverse range of role models in computer science.
MATERIALS NEEDED: Activation Activity Career Skills Slides (forced copy) or Career Skills Slides (view), and Application Activity Breakout Room sent through Google Classroom or other LMS.
PRIOR PREPARATION NEEDED: Student grouping considerations for application activity (digital breakout).
SAFETY CONSIDERATIONS: Students should never be asked to provide any personally identifiable information.

LESSON SUMMARY

SUMMARY OF THE LESSON: Students will learn about the different skills needed in computer science related jobs and then will complete a digital breakout activity that requires many of those skills.
OBJECTIVES:

- I can describe the skills needed in computer science related jobs.

ESSENTIAL VOCABULARY:

- Skill - A learned ability.
- Career - A person's job or profession.
- Communication - The exchange of information between people.
- Collaboration - Working together with someone.

ACTIVATE PRIOR KNOWLEDGE

PRESENTATION OF INTERESTING PHENOMENON (IF APPLICABLE)/HAVE STUDENTS THINK AND DISCUSS PRIOR KNOWLEDGE/HAVE STUDENTS ENGAGE IN A SKILL THAT THEY HAD PREVIOUSLY LEARNED

DIALOGUE PROMPT: Think about the skills, or learned abilities, that it takes to be successful in elementary school. Whether it's listening, reading, or even just taking turns, there are many skills that we learn and practice at school. Skills are important for careers, too! In this next activity, let's think about what skills might be needed for certain jobs.

Whole group, individually, or in partners, students complete the matching activity in Jamboard. While the correct answers were intended to be Construction worker=collaboration, plumber=problem solving, and teacher = communication, multiple correct answers should be considered - it's more important that students understand what the skill is and that they can justify why the career would require said skill.

Career Skills Slides

VIDEO INSTRUCTION

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APPLICATION ACTIVITY

WHAT STUDENTS WILL BE DOING TO ENACT THE INFORMATION GAINED IN THE VIDEO INTO CREATING THEIR OWN UNDERSTANDING OF THE CONCEPT/CREATING SOMETHING WITH THE KNOWLEDGE GAINED/SOLVING A PROBLEM

In small groups, students will visit the Breakout Room to complete a digital breakout activity.

Note THIS WILL BE CHALLENGING FOR 2nd and 3rd GRADERS. Expect them to struggle and resist the urge to give them the answer (teamwork). If their struggle remains unproductive for several minutes, consider giving hints (e.g. "I notice that the answer is supposed to have 8-letters and her class schedule has 8 classes. Or "I notice that the letters in the alphabet chart are in numbered rows and columns"). The goal of this activity is not necessarily to get the correct answer but to engage in the communication, collaboration, and critical-thinking skills described in the lesson.

CLOSURE

DESCRIPTION OF CLOSURE EXERCISE:

- Who was able to help Cora?
- How did that feel?
- What did we learn?

EXTENSION AND SPACED PRACTICE IDEAS

How can the teacher keep this concept recurring in their classroom to make sure that students remember and internalize the concepts presented in this progression?

Materials Needed: Student Chromebooks

Sequence: Ongoing computer science skill related challenges can be easily found and implemented at https://hourofcode.com/us/learn