LITERACY & LEARNING
TEXAS WOMAN'S UNIVERSITY

Activity Instructions	Video Instructions	Codespark Tool Summary
https://drive.google.com/file/d/1YaGwZ4GSKHsZg6awQSrsZEMRKZJEr6_F/view?usp=drive_link	https://www.loom.com/share/7aeb77d8a3d94f2ab1d1a175de290556?sid=cc4d6016-4fa6-4c63-a435-ebdcb08fbacf	https://drive.google.com/file/d/1FAPh72zc2XycksvlBmu2t6E2scP2XPzp/view?usp=drive_link

Practice Coding Skills with "Codespark Academy" Puzzles

DESCRIPTION: The students participate in solving puzzles that begin with practice algorithms using sequencing and loops for students to decipher the codes needed to solve each puzzle. The puzzles continue increase in difficulty over time, but build on previous steps including offering feedback and scaffolding to students during their practice.

AMOUNT OF TIME: 15-20 minutes

MATERIALS NEEDED:

- Login to a teacher account at Codespark and create a classroom of students by generating a classroom code to log on the iPads for your students to use, https://dashboard.codespark.com/login OR if you want to use the desktop version, www.codespark.com/play (TEACHER ACCOUNT ONLY)

- iPad with installed Codespark app OR computer to log in to Codespark for student accounts

OBJECTIVE(S):

1. The student will be able to follow directions on Codespark to complete sequencing puzzles.
2. The student will be able to problem solve when a new puzzle is introduced on Codespark to complete increasingly advanced puzzles.

STEPS TO COMPLETE THE ACTIVITY:

1. **Introduce the app and lesson**
    a. Ask the students if they remember the unplugged coding activities we practiced before: handwashing, brushing teeth, baking a cake, etc. and how each had specific steps to complete in a specific order.
    b. Ask if they remember the "fancy word" for completing specific steps in a specific order—*algorithm.*
    c. There is a new game of puzzles that you are going to play on the iPad that needs to be completed or coded in specific steps.
        i. The objective of this lesson is to follow the directions on Codespark to complete the sequencing puzzles.
        ii. AND to problem solve when a new puzzle is introduced with increasingly advanced sequencing skills needed.
2. **Modeling of Activity**
    a. Please get your iPad out and click on this image to log on to a classroom I created for you OR log on to the website.

b. Click the green arrow button that is blinking.
c. Click on our classroom "STEM Learning Centers Presentation" in the left menu area
d. Click on the name assigned to your iPad.
e. Choose an image for your avatar and then click on the white arrow button that is blinking.
f. Spin each of the three wheels until you like the names it created to use as your username and click on the green checkmark at the bottom of the screen (this username helps students remain safe online instead of using their name).

3. The Activity:

a. Click on the puzzles image on the left side of the screen.
b. You will begin with the first sequencing puzzle when you click on the green arrow at the bottom of the screen and choose the first space on the menu.
c. Follow the hand image to move the Foo (the purple character) to the first coding square.
d. Now touch the Green Foo character to make it follow the code just input. Anytime you get three stars that means you were the most efficient in creating your code.
e. Click on the purple arrow blinking at the bottom of the screen.
f. Continue solving puzzles and trying to earn 3 stars since you can always click the refresh button in the top right corner to try to solve a puzzle again.

4. The Recap

a. Were you able to follow directions on Codespark to complete sequencing puzzles?

b. How many of you were able to get three stars for every puzzle?

c. Were you able to problem solve when a new puzzle was introduced on Codespark to complete?

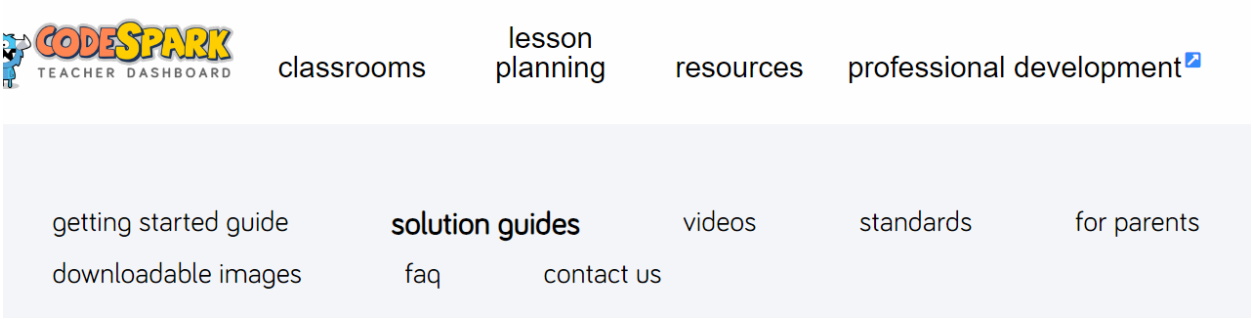
d. If you didn't get three stars, do you know why you didn't get three stars?

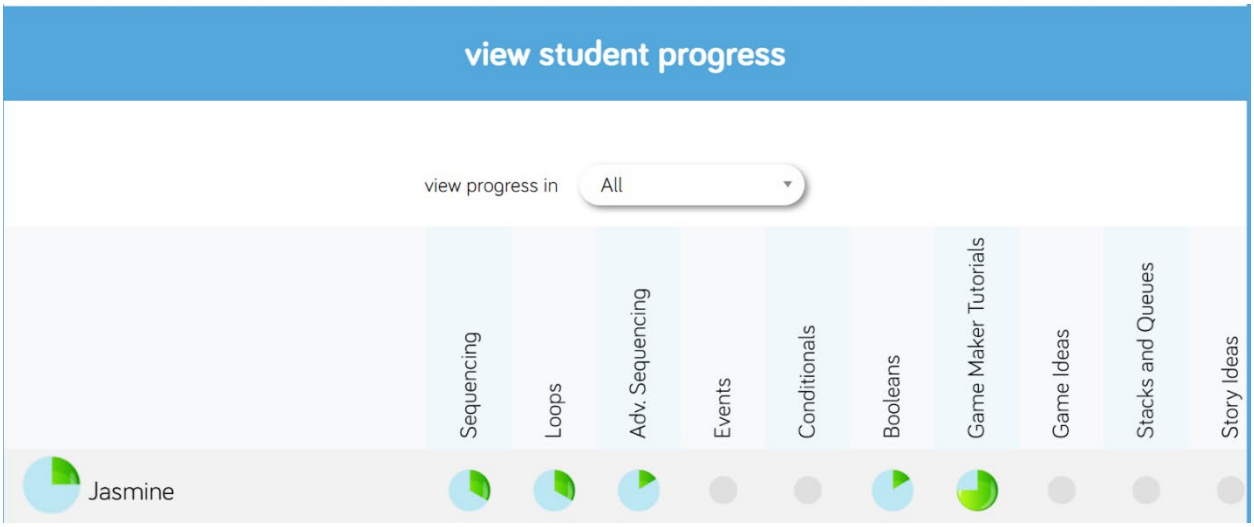
e. Review the definition of sequencing again.

VOCABULARY:
Algorithm—steps to complete a task
Bug—a mistake or error in an algorithm that causes the computer to do something we don't want it to do
Command-a single instruction in coding
Debug—find and fixes errors in programs/coding
Event—an action that causes something to happen
Loop—repeat a sequence of instructions
Persistence—continue trying to do something even when it is hard
Sequence—steps that need to be completed in a specific order.

EXTENSION ACTIVITIES:

As the teacher of your own classroom there is a Teacher Dashboard to support your understanding of students skills and progress:




view student progress
view progress in
All
Sequencing
Loops
Adv. Sequencing
Events
Conditionals
Booleans
Game Maker Tutorials
Game Ideas
Stacks and Queues
Story Ideas
Jasmine

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