Friendly Playground

Red Level: Unit 1, Lesson 13

Objectives

In this activity, students will:

- Program one sprite to greet another stationary sprite using movement and looks blocks.
- Initialize their programs to begin with a Start on Green Flag and Go Home (Return to X).
- Make connections between programming a sequence of movements with Bee-Bots and Scratch Jr. sprites.

Activity Description (30-40 minutes)

# 10 min.	**Welcome:** ● Celebrate beginning a new unit! ● Make the explicit connection between programming our own stories with Bee-Bots and being able to do the same, and more, in Scratch Jr. ● Discuss and practice iPad rules and procedures. **Warm-up:** ● Model how to open a new project. ● Add one more sprite. Drag the other sprite to a different part of the screen so the two do not overlap. ● Reselect Scratch Kitten and initialize it like a Bee-Bot: Start on Green Flag, Go Home (Return to X). ● Program Scratch Kitten to visit the other sprite with the blue motion blocks, then say “hi” with the purple speech block.
# 15 min.	**Main Activity:** ● Students create their own Friendly Playground projects. ● Look for students who successfully: ○ Added a second sprite. ○ Moved their second sprite to a new place on the screen. ○ Initialized their Scratch Kitten with a Start on Green Flag and Go Home (Return to X). ○ Sequenced blue movement blocks to reach their second sprite. ○ Used a purple say block to say “hi” after Scratch Kitten reaches the other sprite. ● Extensions:

	○ *Mild:* Instead of pure trial-and-error, show students the grid overlay. How can they use their background knowledge from programming Bee-Bots to program their sprites more efficiently? ○ *Medium:* Program the second sprite to respond with a hello as well. Add a When Sprite is Bumped and Speech Bubble Block. ○ *Spicy:* Students look for patterns in their code and replace identical movement blocks (e.g. 3 forwards) with a single forward, with a 3 entered beneath it. ○ *Super spicy:* Choose a background. If the second sprite is in a tree, for example, program Scratch Kitten to climb the tree. If there are rocks or benches in the way, program Scratch Kitten to go around obstacles.
# 10 min.	**Circle share**: ● How was programming in Scratch Jr. similar to programming Bee-Bots? ● If available, use an iPad dongle to project a few student projects. ● Leave space for the child programmer to speak a bit about their inspiration and process, and for classmates to provide positive feedback.

Reviewing Student Work

★ Consider student talk during not only the group share but the independent or partner/small group work time. Are certain students dominating? Is there a balance of female, male, gender-fluid, mono and multilingual students speaking?
★ What kind of language did students use to describe their process and negotiate with peers?
★ Consider reflections, either done orally or in journals. What concepts from the lesson resonated most with particular students?

Lesson Notes

➕ Consider giving students a time limit for choosing their second sprite, so they have ample time to work on their program.
➕ Consider creating a chant like "When I say iPads, you say, 'flipped over.'" to get students' attention back on you and off the device. This will be helpful if you want students to begin their projects along with you during the Warm-Up.
➕ If possible, prior to Lesson 15 coordinate with the PE teacher to do an activity called Instruction Stations so students can experience parallelism prior to programming it. There's a similar activity in the PE curriculum:
- Set-up four stations around the rug or gathering area.
- At each station, have a short program displayed that initializes with a Start on Green Flag and a Go Home (Return to X).
- When the teacher waves a green flag, or holds up a paper print-out of a Green Flag, students at all four stations begin their program simultaneously.
- When the teacher holds up the red octagon, all students stop their programs.

    - Depending on time and logistics, rotate to the next station.
- ➕ Instruction Stations was adapted from Scratch Jr.'s Animated Genre's Curriculum, Lesson 3.
- ➕ **For future lessons, check each iPad's privacy settings to make sure Scratch Jr. is allowed access to the microphone and camera.**

Extension Activities

- ➕ Debrief the content and the process orally and/or in journals. Feel free to select one or of these prompts, or create one specific to your class:
    - Who is someone you'd like to thank for working with you today?
    - Draw yourself as a computer scientist, programming with Scratch Jr. blocks.
    - What will you tell someone at home about what you learned today?

Vocabulary

- blocks
- initialize
- sprite

Standards

- CA CSS K-2. DA. 7 - Store, copy, search, retrieve, modify, and delete information using a computing device, and define the information stored as data.
- CA CSS K-2. AP. 14 - Develop plans that describe a program's sequence of events, goals, and expected outcomes.
- CA CSS K-2. AP. 15 - Give attribution when using the ideas and creations of others while developing programs.
- CA CSS K-2. AP. 16 - Debug errors in an algorithm or program that includes sequences and simple loops.
- CA CSS K-2. AP. 17 - Describe the steps taken and choices made during the iterative process of program development.