Lesson created by the GMU-ODU CSforAll Team. For more information about
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Pre-Unit: Preparing for Coding in Scratch

3rd and 4th Grade

Concept: Getting Ready to Code

Vocabulary:
- Commands
- Code
- Computer science
- Sprite
- Backdrop

Summary:
In this lesson, students will explore what Computer Science is and the basics of Scratch.

Lesson Objectives: I can…
- Identify objects in Scratch (add Sprites, add backdrops)
- Recognize that commands in Scratch are represented by blocks
- Describe characteristics of Computer Science (CS)
- Explore Scratch
- Log into Scratch and practice adding a project to teacher's studio

English Standard(s)	Computer Science Standard(s)
The student will read and demonstrate comprehension of nonfiction texts. The student will write in a variety of forms to include narrative, descriptive, opinion, and expository. a)Engage in writing as a process. c) Use a variety of prewriting strategies. d) Use organizational strategies to structure writing according to type g)Use transition words to vary sentence structure	The student will construct sets of step-by-step instructions (algorithms), both independently and collaboratively a) using sequencing; b) using events.

Materials

Lesson materials:
- Teacher Unit 1 Optional Pre-Unit Lesson slide deck (with links to relevant activities embedded)

Lesson Structure and Activities

(5 min) Warm-up:

NOTE: All slides for this lesson are scripted so that, if needed, you can see exact definitions and instructions for teaching this lesson in the notes at the bottom of the teacher slide deck.

1. Optional: Introduce lesson, learning goals, and resources (Slides 2-4)
2. Ask students to share what they know about the following words:
    a. Computer Science (slide 6)
    b. Coding (slide 7)
    c. Programming (slide 8)
3. Next, explain that we are going to be learning more about Computer Science and share the video (watch until 1:09) (slide 9)

(3 min) Introducing Unit Purpose:

1. Introduce what a computer scientist does (slide 10)
2. Introduce vocabulary slides
    a. Commands (slide 11)
    b. Code (slide 12)
3. Introduce Scratch - Explain that Scratch is a program that you can use to code and create interactive stories, games, and animations. (Slide 13)

(15-20 min) Direct Instruction & Guided Practice:

1. Introduce Scratch Terms (Slide 17)
    a. Blocks
    b. Sprites
    c. Backdrops
2. Model how scratch commands are blocks that can be dragged and “snapped” together (slides 18-20)
3. Guide Students through the main areas of the Scratch page (slides 21-29)
4. Introduce and explain to create/add Sprites and Backdrops (slides 30-38)
5. Model how students can share Scratch creations to their teacher’s studio (slide 39-40)

(10-15 min) Independent Practice:

1. Students will practice logging into Scratch and adding a Sprite and Backdrop (slide 41)
2. Students should also practice sharing their Scratch project with their teacher’s studio (slide 41)

(5 min) Wrap up:
Share the “Careers in Tech” Video and remind students that anyone can be a computer scientist! (slide 42)

Assessment Strategy: