**Lesson created by the GMU-ODU CSforAll Team. For more information about**

**this lesson and our CSforAll initiative, contact Dr. Amy Hutchison at** [achutchison1@ua.edu](mailto:achutchison1@ua.edu)

|  |  |
| --- | --- |
| **Pre-Unit: Preparing for Coding in Scratch**  5th and 6th 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…**   * Describe key characteristics of Computer Science (CS) * Self-identify all familiar Scratch features (add Sprites, add backdrops) * Recognize that commands in Scratch are represented by blocks * Log into Scratch and practice adding a project to teacher's studio * Create/upload your own backdrop or Sprite | |
| **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 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:    1. Computer Science (slide 6)    2. Coding (slide 7)    3. 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    1. Commands (slide 11)    2. 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)    1. Blocks    2. Sprites    3. Backdrops 2. Model how scratch commands are blocks that can be dragged and “snapped” together (slides 18-20)    1. *Note: you may choose to explain this to students using slides 17-19 and the accompanying script or you can play :44 to 2:45 in this* [*video demonstrating how to choose a sprite and backdrop in Scratch*](https://www.dropbox.com/s/knpn1t216yt5zw0/Step%202_%20Add%20Backdrop%20and%20Sprite.webm?dl=0)*. If you use the video, please be aware that it mentions CoCo the graphic organizer, which will not be introduced to students until later lessons.* 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)    1. Model how to upload your own Sprite and Backdrops (slide 40) 5. Model how students can share Scratch creations to their teacher’s studio (slides 41-42) |
| **(10-15 min) Independent Practice:**   1. Students will practice logging into Scratch and adding a Sprite and Backdrop-create or upload their own (slide 43) 2. (Optional) Challenge students to create/upload a Sprite and Backdrop that shows 1) a scene they would like to visit or 2) a scene/setting from a favorite story (slide 44) 3. Students should also practice sharing their Scratch project with their teacher’s studio |
| **(5 min) Wrap up:**  Share the “Careers in Tech” Video and remind students that anyone can be a computer scientist! (slide 45) |
| **Assessment Strategy:**  Did the student…   * Describe key characteristics of Computer Science (CS) * Self-identify all familiar Scratch features (add Sprites, add backdrops) * Recognize that commands in Scratch are represented by blocks * Log into Scratch and practice adding a project to teacher's studio * Create/upload their own backdrop or Sprite |