

Lesson 4:
How Many Blocks
You Need?

Lesson 4 Overview: Lesson 4 introduces how parameters can make code more concise and efficient. Children will create ScratchJr programs that use the fewest number of blocks to achieve a goal.

Powerful Ideas from Computer Science: Algorithms, Modularity
Powerful Ideas from Literacy: Sequencing, Editing and Audience Awareness

I. Warm Up: Pictures of Programmers

- Illustrate that programmers can be of all different backgrounds (gender, race, ethnicity, age) with pictures (including one of yourself)!
- Ask children: "What do you think these people have in common?" Answer: "They're all programmers." Explain that today, everyone will be a programmer!

II. Opening Tech Circle: Programmer Says

- This activity is played like the traditional "Simon Says" game, in which children repeat an action if Simon says to do something. Use ScratchJr Block Cut Outs for this activity to focus on step-by-step instructions and that order matters.
- Have the class stand up. Hold up one big ScratchJr icon at a time and say, "Programmer says _____."

III. ScratchJr Time: What is a Parameter? & Free Play

- Explain that a parameter tells a computer how many times to do an action. Using a parameter can make your code more efficient by doing the same action with fewer blocks.
- Demonstrate how to change parameters in ScratchJr.
- Children have free-play time to explore motion blocks and parameters.

IV. Closing Tech Circle: Share Creations

- Ask for volunteers to share their projects.
- Discuss sharing procedures (e.g., listening while others are presenting).
- Remind children to use helpful ScratchJr interface features such as the presentation mode while sharing.

Vocabulary:
Parameters

ScratchJr Blocks:
Start on Green Flag
Motion Blocks
Go to Start
End

