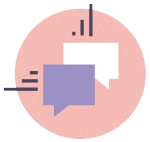
Lesson 4: Dance Off

Online



OVERVIEW

In this lesson, students learn how to plan, code, and validate their work by creating a dance off with their sprites on Scratch.

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OBJECTIVES

- I can code a sequence of actions in the order I want them performed.
- I can use the editor, block palette, and stage in Scratch to code my program.

AGENDA

Do Now (5 min) - logging in

- Code Along (15 min): If You Give a Mouse a Cookie
  - Plan - read "If you give a mouse a cookie" instructions
  - Code - code along to the story
  - Debug - add wait blocks to debug
- Code Along (25 min): Dance Off *Plan - write out directions to your dance* Code - code your dance *Debug - add wait blocks to debug
- EXTENSION (15 min): Coding Challenges

VOCAB

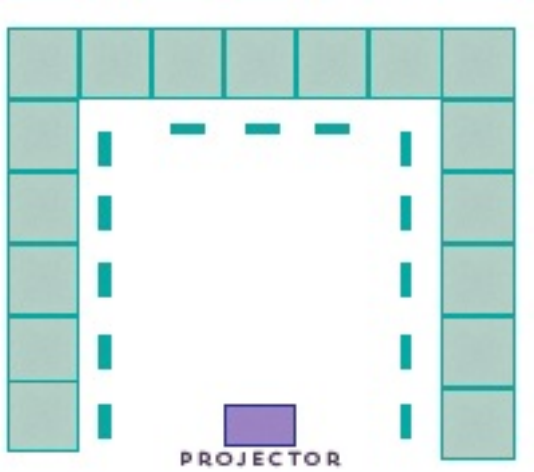
- Editor: A program designed for editing computer code by coders.

MATERIALS

- Projector

- Idea Journals
- Computers (class set)
- Pencils (class set)

Ideal Desk Setup



Resources

Powerpoint:Lesson 4

DO NOW

Length: 5 minutes

Prep:

- Computers
- Idea Journals
- Pencils

Teacher Actions	Student Actions
1 Circulate room to assist students in logging-in to their Scratch accounts • If necessary, review the computer usage expectations.	1 Students log-in to their Scratch accounts.

CODE ALONG: IF YOU GIVE A MOUSE A COOKIE

Length: 15 minutes

Students code along with the teacher for 15 minutes. Stop the activity at 15 minutes to ensure time for inidividual coding with the Dance Off activity.

Prep:

- Computers
- Plan Chart
- "If You Give a Mouse a Cookie" book or audiobook Use this Scratch Project for student code along.

Teacher Actions	Student Actions
1 Read "If You Give a Mouse a Cookie" to students (3 min)	1 Students sit facing teacher, computers closed.
2 Show the step by step plan (2 min) *Ask students to identify connection between a step and what happened in the story. Mouse Will: 1. Ask for a glass of milk 2. Go to Milk	2 Students identify that: • Steps 1 & 2 are "... it's going to want a glass of milk." • Steps 2 & 3 are "... it's going to ask for a straw."

3. Ask for a straw
4. Go to straw
5. Ask for a napkin
6. Go to napkin
7. Look in the mirror
8. Go to mirror
9. Ask for a pair of scissors
10. Go to scissors

Code Along (10 min)

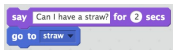
- Setup
    - Navigate to “My Classes”, “Exploring Scratch” studio, and open project “If You Give a Mouse a Cookie”
    - Click the green flag to show that the project doesn’t do anything yet… we need to code it!
    - Click “See Inside”
    - Click “Remix”
    - Re-title your work
- Coding

- Steps 3 & 4 are "…it's going to ask for a napkin."
- Steps 5 & 6 are "…it's going to ask for a straw." Continue until you feel students understand the sequence.

- The events block indicates when the sequence should begin:

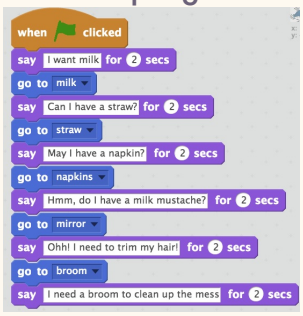
- Code the first 2 steps of the plan:

- Pause to run the program and check it is making sense
- What do you think the next two blocks will be?



- Continue to code and pause to check after every 1-2 lines you add. Check off the plan as you go through it. Every time you re-run it you will need to move the mouse

		back to its starting point.	

3	Check student work.	3	Students turn to their computers and follow the steps in the code along, giving thumbs up when ready for a next step.
			• Remind students to:
			  ◦ Code the correct sprite
			  ◦ Choose the "say for 2 sec" block
			  ◦ Move the mouse back to its starting point before re-running the code
			Finished program:
			 

CODE ALONG: CHOREOGRAPH A DANCE!

Length: 25 minutes

Students code along witht the teacher until they are ready to plan, code, and validate their dance off code.

Prep:

- Idea Journals
- Computers
- Pencils

Teacher Actions	Student Actions
1 Plan 3 step dance (5 min) • Introduce activity: "We are going to choreograph a dance for our Sprite." • Pick 5 dance moves for our sprite to execute (prioritize using the highlighted blocks): ◦ Say ◦ Move ◦ Turn ◦ Think ◦ Change size	1 Students volunteer 5 dance moves from the list to choreograph their dance.

	◦ Change color ◦ Next costume • Write out the 5 dance moves in order on your planning chart	
2	Code Along (10 min) • Setup ◦ Navigate to "My Classes", "Exploring Scratch" studio, and open project "Dance Off" ◦ Click the green flag to show that the project doesn't do anything yet... we need to code it! ◦ Click "See Inside" ◦ Click "Remix" ◦ Re-title your work Code	2 Students follow along on their computers as they code the dance for the first sprite.

- We will begin when the green flagged is clicked:

- Drag coding blocks to represent the 3 actions and test code by pressing the green flag

Adjust

- Play with what happens when you change numbers in each block. After each adjustment run the code gain to see how it affected the dance.

Repeat

- Copy and paste the blocks using the stamp tool so that it repeats the actions multiple times.

3 Students plan and code dances for Khalid (10 min)	3 Students plan in their idea journals their dance.

• (2 min) In idea journals have students write out their 5 step dances using the given blocks • (8 min) Students delete the code we have and create their own	
4 Share dances (5 min) • Click "Share" • Click "Studios" under your project • Click the check mark next to "Dance Off"	4 Students put their projects into the shared studio
5 Go over norms for viewing peer's work • Constructive Feedback: "It would be cool if..." • Positive Speak: Tell someone what you like about their program before giving any constructive feedback	5 Students read norms and share additional norms they would like their peers to adhere to.

• No negative comments	
6 Students view their peer's work • Click "Dance Off" to view everyone's dances	6 Students browse each other's projects in the studio.

EXTENSION ACTIVITY

Length: 15 minutes

If you have an 60 minute block for class, try this extension activity.

Prep:

- Computers

Teacher Actions	Student Actions
1 Students can continue to improve upon their dances	1 Lab time
2 Or students navigate back to the "Explore Scratch" studio and attempt to solve the 3 challenge projects	