



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
 - o 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.

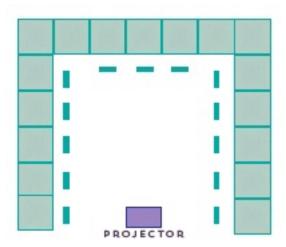


MATERIALS

Projector

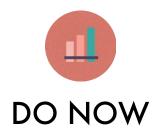
- Idea Journals
- Computers (class set)
- Pencils (class set)

Ideal Desk Setup



Resources

Powerpoint:Lesson 4





Length: 5 minutes

Prep:

- Computers
- Idea Journals
- Pencils

Teacher Actions	Student Actions	
Circulate room to assist students in logging-in to their Scratch accounts If necessary, review the computer usage expectations.	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
Read "If You Give a Mouse a Cookie" to students (3 min)	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 3. Ask for a straw 4. Go to straw 5. Ask for a napkin 6. Go to napkin	 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." 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

- 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
 - 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 students understand the sequence.

 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



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
 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 Change color Next costume Write out the 5 dance moves in order on your planning chart 	Students volunteer 5 dance moves from the list to choreograph their dance.



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"
 - o Click "Remix"
 - Re-title your work

Code

 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

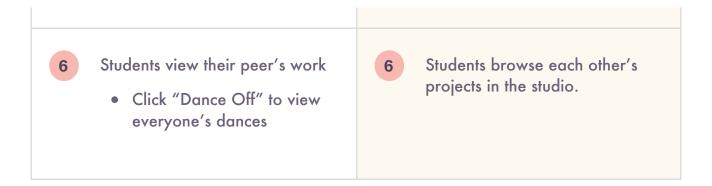
Adjust

 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

2 Students follow along on their computers as they code the dance for the first sprite.

 Copy and paste the blocks using the stamp tool so that it repeats the actions multiple times. 	
 Students plan and code dances for Khalid (10 min) (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 	3 Students plan in their idea journals their dance.
 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
 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 No negative comments 	Students read norms and share additional norms they would like their peers to adhere to.





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		