

Practice with Conditionals Part 1

[Lesson Video](#)

Objectives: *Students will be able to...*

- Explain what a conditional is in programming.
- Create a program that uses conditionals.

Prerequisites

- Computer Science: Students should have experience with the if/then conditional.

Materials & Tools

- [Ready-to-Go Slides](#) or [Teacher-led Slides](#), ([Spanish version](#))

Vocabulary

Word	Definition
Conditional	A command that tells a program how to make a decision if something is true or false
Boolean	A value that can only be true or false

Computer Science Explanation

Conditionals enable computers to make decisions based on if a condition is true or false. Conditionals are a foundational control structure that determine when specific commands are executed. In this lesson, students will use conditionals to create their program.



Lesson Agenda

- Conditionals Review (10 mins)
- Program Creation (20-30 mins)
- Showcase and Closing (5-10 mins)

Lesson Details


Conditionals Review (10 mins)

Use the slides to review key ideas about conditionals.

Program Creation (20-30 mins)

Students will create a game. Something different should happen for every square. Students will choose what will happen.

Common Challenges and Questions

Question/Challenge	Answer
How do I add a condition if the cat is touching a specific part of the backdrop?	You can use the sensing “touching color” block. Click on the color to change the color. Then, use the color dropper to choose the color of the desired part of the backdrop.
How do I add a condition if the cat is touching another sprite?	You can use the sensing  block. Use the drop-down to choose the desired sprite.
Does the order matter for my “if/then” blocks?	The computer will check the “if/then” conditions from top to bottom. Because we’re writing a simple program that has the cat move around and react as it touches them, the order doesn’t matter much. However, it’s always important to keep the sequence of our commands in mind, especially as we begin to write more complex programs.

Extensions

- Add additional sprites to the Conditional Color Boxes Game.
 - Add a variable that updates whenever the sprite touches one of the boxes.
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Closing (5-10 mins)

- Give students time to share their program with a partner or the class. If students complete an extension, this is a great opportunity to showcase the different ways to use conditionals.
 - Students can share how they used conditionals in their program.
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Resources

Assessment Rubric

Category	4	3	2	1
	Advanced: demonstrates superior performance	Proficiency: demonstrates consistent performance	Moving toward proficiency/expectations	Experiencing significant difficulty
Create a program using conditionals.	Student completes the lesson and goes beyond the program requirements to create a unique program using multiple conditionals.	Student completes the program requirements by using multiple conditionals.	Student completes part of the project using conditionals.	Student needs significant support to use a conditional.