

Lesson 0.3 - Build Your First Game

Duration

60-65 minutes

Learning Objectives

By the end of this lesson, students will be able to:

1. Understand the concept of programming as giving instructions to a computer.
 2. Identify and use basic motion and control blocks in CreatiCode.
 3. Use conditional “if then” and sensing “touching” blocks
 4. Use a loop to repeat actions.
 5. Add a score variable to track game progress
 6. Build an interactive game where a cat moves to collect apples.
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Preparation Steps

- Ensure all students have access to CreatiCode accounts.
 - Confirm internet access and working computers.
 - Tutorial Reference: “[New features of the CreatiCode playground](#)”
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Lesson Outline

1. Introduction to Programming (5 minutes)

- Programming is giving instructions to a computer to make it do what you want.

- “Today we’re going to make a game where you use the keyboard to move the dog sprite to “eat” the apple!”

2. Step-by-Step Progression (60 minutes)

- **Step 1: Reopen Last Lesson’s Project (5 mins)**
- **Step 2: Set the Start Point (5 mins)**



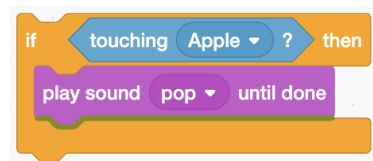
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○ Key Points:

- Each sprite has its own code area. You need to add the same blocks to both the dog and the apple.

- **Step 3: Build the Core Game for the Dog (10 mins)**

○ If...then...



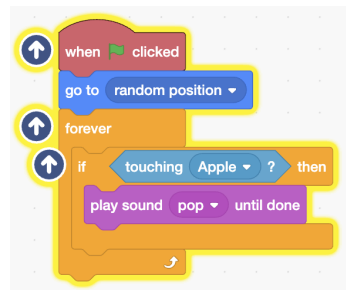
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○ *P.S. Students will find out that there is no sound played when run this code because there is a lack of a forever loop.*

- **Step 4: Add a Forever Loops (15 minutes)**

○ Introduce *loop*

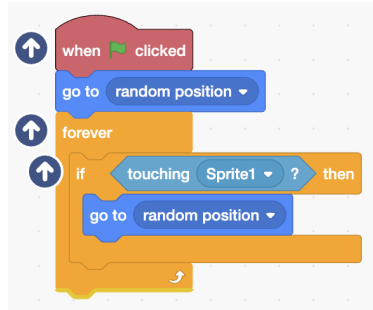
- A loop means the code runs again and again.



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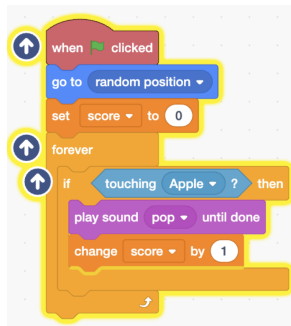
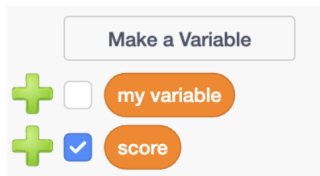
- **Step 5: Build the Core Game for the Apple (10 mins)**

○ Student activity



- **Step 6: Add a Score (10 minutes)**

- Introduce *variables*
 - A variable is a value that can change while the game is running — like a score or timer.
- Teacher's Demonstration:



- Students' Practice
 - Add a variable
 - (Optional) Students could change the variable name and how much it increases.
 - E.g. if touching Dog, then change BOOM by 200
- **Step 5: Clean-up and Feedback (10 minutes)**
 - The order doesn't matter.
 - Ask students to name, save, share their project
 - Invite 1–2 students to share or explain what they added

Assessment

Formative

- Are students able to:
 - move the dog and detect apple contact
 - use *if then*, *forever*, and *change score* blocks correctly

Student Evidence

- A working game where dog moves, apple disappears, and score updates
 - Use of motion + conditional + loop + variable blocks
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Extensions & Differentiation

For Advanced Students

- Use different sprites
- Change the size of the apple when play the game
- Change the size of the dog when play the game (snake game)
- Set a victory sound when score reaches certain amount

For Students Needing Extra Support

- Provide starting blocks as scaffolding
 - Pair programming or peer walkthroughs
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Notes for Teachers

- Guide students step by step—don't show the full code at once.
- Emphasize testing after adding each block.
- Remind students to start scripts with the green flag.
- Use errors as learning moments (e.g., "Why didn't the score increase?").
- Encourage saving and naming projects clearly.
- Provide block examples or pair students if needed.