

LESSON 15

Balloon Pop Game

40 minutes

Exploring Coding

WHAT THIS LESSON DOES

This lesson guides students through creating an interactive 'Balloon Pop' game using Scratch. Students will learn how to create and manipulate clones of a sprite, make them appear at random positions, move around the screen, and disappear upon clicking, all while incorporating sound effects.

WHAT STUDENTS SHOULD BE ABLE TO DO

- Understand the concept of creating and controlling clones in Scratch programming.
- Learn how to make sprites appear at random positions on the screen.
- Develop skills to make sprites move and bounce around the screen.
- Understand how to add interactivity to a game by making sprites respond to mouse clicks.
- Learn how to add sound effects to enhance the gaming experience.
- Develop creativity and problem-solving skills by designing and coding a simple game.

BEFORE THE LESSON

- Confirm the Scratch website opens on class devices and pupils can create a new project.
- Have devices ready (one per pupil or pair) with sound enabled so the Pop effect is audible.
- Be ready to point pupils to Balloon1 in the Scratch sprite library.

Balloon Pop Game

HOW THE LESSON RUNS

Introduction

Creating a Scratch project

Adding the balloon

Creating more balloons

Make the clones appear

Make the clones move

Pop the balloons

Wrap Up

TEACHING MOVES

1. Introduction. Pitch the finished game in one line: balloons keep appearing, drift about, and pop on click. Ask how one balloon could become many without drawing each one.
2. Creating a Scratch project. Check every pupil opens a new project and deletes the cat sprite before adding code or other sprites.
3. Adding the balloon. Send pupils to the sprite library for Balloon1 only. Wait until each project shows that single balloon on the stage.
4. Creating more balloons. Call clones live copies of one sprite. Have them put set size to 50% and hide on the green flag, then add the create clone of myself timing on the original.
5. Make the clones appear. Stress that clone set-up sits under when I start as a clone. Check go to random position comes before show so balloons do not flash in the wrong spot.
6. Make the clones move. Add forever glide to random position and if on edge, bounce under show. Run once so the class sees the drift before popping.
7. Pop the balloons. Build when this sprite clicked with start sound Pop, then delete this clone. Click one together so they hear the pop and see the clone go.
8. Wrap Up. Ask two pupils to name one block that made copies and one that removed a balloon. Celebrate working games over perfect stacks.

WHAT TO WATCH FOR

- Students may think: Pupils keep the original balloon visible or add many balloon sprites from the library instead of using clones. What to do: Point to hide on the green flag and create clone of myself. Remind them only clones should show.
- Students may think: The click stack uses hide, or sits on the wrong sprite, so balloons return or never react. What to do: Confirm when this sprite clicked is on the balloon and ends with delete this clone, not hide.
- Students may think: Movement or show code is only on the green-flag path, so clones appear still or never appear. What to do: Have them read the when I start as a clone stack aloud and check forever glide sits under show.

DIFFERENTIATION

- Emerging: Build the green-flag hide and size blocks with them first, then let a partner help snap create clone of myself. Run the project after each short stack so they see one change at a time.
- Developing: Ask which stack runs for the original and which runs for each clone before they add movement. If balloons cluster, prompt them to check go to random position is inside the clone hat.
- Proficient: Let them adjust glide time or how often clones are created so the game feels fairer to play. Ask them to explain to a neighbour why delete this clone fits this game better than hide.