LESSON 26

Easter Egg Catch

60 minutes | Dynamic Digital Projects

WHAT THIS LESSON DOES

In this lesson, young coders will learn to build an exciting game called 'Easter Egg Catch' using Scratch. They will create and control sprites, use loops, conditionals, and variables. The game involves catching falling Easter eggs with a bowl, keeping score, and enhancing their coding skills while having fun.

WHAT STUDENTS SHOULD BE ABLE TO DO

- Develop understanding and skills in creating and controlling sprites in Scratch.
- Gain proficiency in using loops and conditionals in Scratch to create game dynamics.
- Learn to use variables in Scratch for keeping score in a game.
- Understand the concept of cloning in Scratch and how to use it in game development.
- Enhance problem-solving and logical thinking skills through coding a game.

BEFORE THE LESSON

- Open scratch.mit.edu on the projector and check the school filter is not blocking it, and that pupils can create a project.
- One device per pupil, or per pair if devices are short.
- Download the supplied easter-egg.sprite3 file from step 5 and check pupils can reach it and upload it into a project.
- Test the finished game yourself once so you can spot where pupils are likely to get stuck.

Easter Egg Catch

HOW THE LESSON RUNS

Welcome to the Easter Egg Catch Game
Create a new Scratch project
Add a backdrop
Add the Bowl sprite
Add the Easter Egg sprite
Create clones of the Easter Egg
When a clone is created
Make them fall
Catch them
Keep score
Game Time and Conclusion

TEACHING MOVES

- 2. Create a new Scratch project. Show them how to delete the cat sprite by clicking the bin icon on the sprite. A leftover cat sprite confuses the code later.
- 4. Add the Bowl sprite. Have everyone click the green flag and test the arrow keys before moving on. If the bowl does not move, the forever loop or a key block is usually missing.
- 5. Add the Easter Egg sprite. Point out this is an upload from a file, not the sprite library. Walk the class through the upload button together.
- 6. Create clones of the Easter Egg. Explain that a clone is a copy the game makes while it runs. Warn them the egg vanishes here because it hides itself, and that is correct.
- 7. When a clone is created. Run it and watch eggs appear along the top. Stress the 'when I start as a clone' hat block is separate code, not joined to the green flag stack.
- 8. Make them fall. Point out the eggs pass straight through the bowl on purpose here. That is the next step's job, so nobody panics.
- 9. Catch them. Show that the 'if touching Bowl' block goes above the 'change y' block, inside the repeat. Placement is where most catches fail.
- 10. Keep score. Make the variable together and tick its box to show it on stage. Set it to 0 under the green flag, add 1 where the egg is caught.

WHAT TO WATCH FOR

- Pupils snap the clone code onto the green flag stack instead of starting a separate 'when I start as a clone' script. Show that a hat block always starts its own stack. Have them drag the clone code well clear of the first stack before building it.
- Pupils think the game is broken in step 8 because eggs fall through the bowl. Reassure them this is expected. Catching is coded in the next step. Read the note in the step aloud.
- The score jumps by more than one, or the touching block is placed after the movement, so catches are missed. Check the 'if touching Bowl' sits above 'change y' inside the repeat, and that 'change eggs by 1' is inside that if block, not outside it.

DIFFERENTIATION

- Emerging: Pause the class after each green-flag test so nobody falls behind on a broken step. Pair a stuck pupil with a partner who has the bowl moving.
- Developing: Have them read each code snippet aloud to a partner before building it, then explain what one block does in their own words.
- Proficient: Once scoring works, let them change the number of eggs, the fall speed or the bowl speed, and predict what each change will do before testing.