

LESSON 1

Introduction to Coding

10 minutes

Introduction to Coding

WHAT THIS LESSON DOES

Embark on a journey to understand coding, starting with its basic definition and significance. Discover how coding is integrated into everyday life by identifying household items that utilise computer instructions. Finally, test your understanding by playing a game that requires precise and orderly instructions.

WHAT STUDENTS SHOULD BE ABLE TO DO

- Understand the concept of coding or programming as giving step-by-step instructions to a computer.
- Identify examples of household items that contain computers and can be given instructions.
- Recognize the importance of precise and correct order of instructions in coding.
- Practice giving specific instructions in a sequential order to achieve a desired outcome.

BEFORE THE LESSON

- Open and test the step 1 video and the step 3 interactive game in advance, and check the school filter is not blocking them.
- Have sound on, and a large screen for the video if you plan to watch it together.
- Decide whether pupils use their own device or work in pairs for the game in step 3.

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HOW THE LESSON RUNS

What is coding?

Computers in your house

Giving instructions

TEACHING MOVES

- 1. What is coding? Play the video on the big screen together first. Anchor the idea with the sandwich line: clear instructions, right order. Then take a few everyday examples from the class before moving on.
- 2. Computers in your house. Ask for three home devices before revealing the examples. Push past phone and TV to microwaves and games consoles, and name how each one is given instructions.
- 3. Giving instructions. Let pupils try the game, then deliberately model one wrong order so they see it fail. Ask what went wrong and how they would fix the sequence.

WHAT TO WATCH FOR

- Pupils think the computer will work out what they meant, filling in gaps or fixing the order for them. Show a jumbled instruction sequence in the game and let it produce the wrong result, then talk through why the computer only does exactly what it is told.
- Pupils assume only phones and laptops are computers, missing everyday devices. Widen the discussion to microwaves, TVs and games consoles, and ask how each one is given instructions.

DIFFERENTIATION

- Emerging: Give the sandwich example again with two clear steps and ask them to add the third out loud before trying the game.
- Developing: Ask them to say each instruction aloud in order before they place it, so the sequence is deliberate rather than trial and error.
- Proficient: Ask them to explain why the order matters, or to invent their own set of step-by-step instructions for a home device and test a partner on it.