Top section:

1. ballerina-a 62 x 111
2. ballerina-b 68 x 82

Code blocks:
- when [green flag] clicked
- switch costume to ballerina-a
- repeat 5
  - switch costume to ballerina-a
  - wait 1 seconds
  - switch costume to ballerina-b
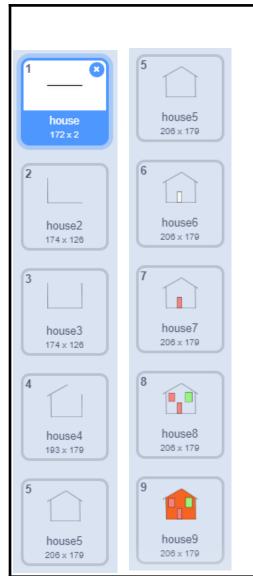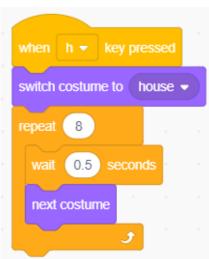 - wait 1 seconds
- switch costume to ballerina-a

I think this code makes the ballerina look like she is crouching down and then standing up five times. She starts and finishes standing up.

because it starts with a green flag followed by a standing costume before a five times counted loop and ends on the standing costume.

Predict what you think the code does and why you think it does that by referring to specific parts of the code.

Bottom section:

1. house 172 x 2
2. house2 174 x 126
3. house3 174 x 126
4. house4 193 x 179
5. house5 206 x 179
5. house5 206 x 179
6. house6 206 x 179
7. house7 206 x 179
8. house8 206 x 179
9. house9 206 x 179

Code blocks:
- when h key pressed
- switch costume to house
- repeat 8
  - wait 0.5 seconds
  - next costume

I think this code builds a house one part at a time starting from the foundation. It starts when you press the h key.

Because you can see the curved starting block at the top followed by the house costume before going into a loop that would display house pictures

Note There are lots of ways of answering this. Did they predict what would happen? Look out for pupils referencing each block without any understanding of what these will do. Did they refer to specific elements in the code? How precise are they? Did they understand that both elements include a starting picture (initialisation)?

code-it.co.uk

Investigate

Can you find the following code features and record where you found them?

1) Continuous loop Animal walking

2) A three times loop Wave and Nod

3) A green flag starting block Ballerina

4) Two keyboard inputs and the keys that they use Animal walking b house h

5) A pause for half a second house

The idea and algorithm for the animal walking is here.
Complete the idea and algorithm for the talk below.

Idea Create an animation that looks like an animal is walking by switching between pictures where the legs are in different positions.

Algorithm

Start from a key

Loop always

    Show next costume

    Pause for a bit

Idea Create an animation that looks like someone is talking by switching between pictures of someone opening and closing their mouth

Algorithm

Start when someone touches the picture

Loop 10 times

    Close mouth picture

    Wait a bit

    Open mouth picture

    Wait a bit

Close mouth picture

There are lots of ways to write an algorithm but award marks for making sense, having a start, a 10 times loop, open and closed mouth pictures or costumes, two pauses of some type, indentation of the elements inside the loop and an end position.

Modify

Can you modify the code? What did you change?

What happens when you run the code after the change?

Ballerina

1) Can you make the ballerina repeat her action more than five times?

    Changed repeat to a number more than 5

    She did the repeated action more than five times

2) Can you make the animal walk slower?

    Changed the wait to be a higher number than two tenths of a second

    The animal looks like it is walking slower

3) Can you simplify the wave to include only wave1 and wave2?

    Removed the bottom four blocks of code in the counted loop

    A simpler shorter wave

4) Can you modify the code so that girl is left with her mouth open?

    Changed bottom block to talk2

    The last picture is now the girl with her mouth open

5) Can you modify the house code so it only build the last four house pictures?

    Change switch costume from house to house x

    Removed next costume and replaced it with specific house x to house x with waits

    between them.

    Now only builds last four pictures

code-it.co.uk