

Kit's Clever Coding Quest: Perfecting the Algorithm

Learning objective: To understand that algorithms are sets of precise, step-by-step instructions and to be able to sequence them to complete a task.

Kit the fox is designing a computer game where a robot needs to navigate from the start of a garden to a patch of sunflowers. Below is a list of steps in the wrong order. Your task is to re-order them into a logical sequence (an algorithm) so the robot reaches the flowers safely. Number the steps from 1 to 6 in the correct order.

Word bank: Algorithm · Sequence · Input · Output · Debug · Instruction

1. 1. Turn left at the stone bench. (1 mark)

2. 2. Move forward 10 steps. (1 mark)

3. 3. Stop at the sunflowers. (1 mark)

4. 4. Move forward 5 steps. (1 mark)

5. 5. Start at the garden gate. (1 mark)

6. 6. Turn right at the oak tree. (1 mark)

Draw: Draw a map of the garden showing the path the robot takes based on the numbered steps you created. Include the garden gate, the oak tree, the stone bench, and the patch of sunflowers.



Extension challenge: Imagine the robot encounters a puddle in the path after step 2. Write a new 'IF' statement instruction to help the robot get around it (e.g., 'IF there is a puddle, THEN jump over it').