

Kit's Coding Adventure: Writing Your Own Program

Learning objective: To design and explain a simple algorithm for a computer program using logical steps.

Kit the fox needs your help! Imagine you are designing a computer game where a character must navigate a maze. Use this frame to write your code plan. Think about the order of your instructions and how you will solve any bugs.

To make my character move through the maze, I have written a sequence of clear instructions that the computer must follow.

Word bank: firstly · subsequently · then · if · otherwise · repeat until · debug · algorithm · sequence · input · output

1. What is the goal of your program? Start by saying: The objective of my game is... (2 marks)

2. What are the first three steps in your algorithm? Start by saying: To begin the sequence, the character must... (3 marks)

3. How will your program use an 'if' statement to handle a challenge? Start by saying: If the character touches a wall, then... (3 marks)

4. What might go wrong (a bug) and how would you fix it? Start by saying: A possible error in my code could be..., which I would debug by... (3 marks)

5. Why is it important for the steps to be in the correct order? Start by saying: The order of the algorithm is important because... (2 marks)

Extension challenge: Draw a flowchart on the back of this sheet showing the path your character takes, including one 'decision' box (e.g., 'Is the key collected?').