

Kit's Coding Challenge: The Logic Lab

Learning objective: To test understanding of algorithms, debugging, sequence, and basic programming concepts as outlined in the Year 5 Computing curriculum.

Help Kit the fox solve these coding puzzles! Read each question carefully and select the correct answer or provide the one-word solution.

Answer Key: 1. A (Algorithm), 2. True, 3. Debugging, 4. B (To repeat instructions), 5. False, 6. Sequence, 7. Variable, 8. C (Input), 9. True, 10. Bug. All questions worth 1 mark each.

Word bank: Algorithm · Debug · Sequence · Variable · Loop · Input · Output · Bug

1. 1. What do we call a precise set of step-by-step instructions designed to complete a task? A) Algorithm* B) Story C) Guess D) Drawing (1 mark)

2. 2. True or False: In programming, the order of instructions is called the sequence. (1 mark)

3. 3. What is the process of finding and fixing errors in a computer program called? (One word) (1 mark)

4. 4. Why would a programmer use a 'loop' in their code? A) To stop the program B) To repeat instructions* C) To delete files D) To change the colour (1 mark)

5. 5. True or False: Computers are very clever and can understand human jokes without specific instructions. (1 mark)

6. 6. If you want a robot to walk forward, turn left, and then jump, this specific order is known as a _____. (1 mark)

7. 7. What do we call a container used to store a value, like a score in a game, that can change while the program runs? (1 mark)

8. 8. When you press a key on a keyboard, what is this action called in computing? A) Output B) Processing C) Input* D) Storage (1 mark)

9. 9. True or False: A 'bug' is a mistake in the code that causes the program to behave unexpectedly. (1 mark)

10. 10. If a program prints 'Hello!' on the screen, what is that action called? (One word) (1 mark)

Draw: Draw a flowchart that shows the steps to make a piece of toast, using diamonds for decisions (like 'Is the bread toasted?') and rectangles for actions (like 'Put bread in toaster').



Extension challenge: Imagine you are Kit the fox. Write a short algorithm (a list of 5 steps) to teach a robot how to make a cup of tea, ensuring you include a loop for stirring the tea.