Kit's Computing Challenge: Master the Code

1. C (1 mark)

Working: Definition of an algorithm.

Selects C.

2. B (1 mark)

Working: A loop repeats actions.

Selects B.

3. A (1 mark)

Working: Definition of a bug.

Selects A.

4. True (1 mark)

Working: Definition of a sequence.

Selects True.

5. False (1 mark)

Working: Computers use binary/code, not natural language.

Selects False.

6. Variable (1 mark)

Working: A variable stores changing data.

Writes 'Variable'.

7. Debugging (1 mark)

Working: The process of fixing errors.

Writes 'Debugging'.

8. B (1 mark)

Working: Selection uses 'if' statements.

Selects B.

9. C (1 mark)

Working: Output is the result of the process.

Selects C.

10. A (1 mark)

Working: Input is data entered by the user.

Selects A.

11. Extension: 1. Move character right. 2. If character touches acorn, add 1 to score. 3. Remove acorn from screen. 4. Repeat. (3 marks)

Look for: A logical sequence of steps including a condition (if) and an action.

Good: 1. Move to the acorn. 2. Pick it up. 3. Get a point.

Better: 1. Move the character forward. 2. If the character touches the acorn, increase the score variable by one. 3. Make the acorn disappear.

Best: 1. Move character towards acorn. 2. Use a selection statement: If character touches acorn, then add 1 to the score variable and hide the acorn sprite. 3. Loop back to step 1.

What moves an answer up: Moving from simple instructions to using specific coding terminology like 'variable', 'selection', and 'loop' improves the answer.

What a secure answer looks like

A secure answer demonstrates an understanding of how code logic (sequence, selection, iteration) controls a system. Students should use the provided vocabulary correctly.

If your child is stuck

Ask your child to think about a simple daily routine, like making a sandwich, and explain it as a list of steps. Remind them that computers need every tiny detail to be included.

Common mistakes to watch for

Confusing 'Input' (what the user does) with 'Output' (what the computer shows), and thinking that a 'Loop' is the same as a 'Sequence' rather than a repeated action.