

Kit's Clever Coding Planner

Learning objective: To design an algorithm and predict the outcome of a simple computer program.

Use this planner to help Kit the fox build a new computer program. First, decide what you want your program to do, then write the step-by-step instructions (the algorithm) to make it happen. Remember to look for any 'bugs' or mistakes in your plan!

Word bank: algorithm · debug · sequence · input · loop · variable · command · prediction

1. Program Goal: Describe what your program is supposed to do. Is it a game, a calculator, or a story? (2 marks)

2. Step-by-Step Algorithm: List the sequence of commands needed to achieve your goal. Use clear, logical steps. (4 marks)

3. Predicting Outcomes: What do you think the computer will do when it runs your code for the first time? (2 marks)

4. Debugging: Imagine your program didn't work perfectly. What is one 'bug' that might have happened and how would you fix it? (3 marks)

5. Refinement: If you wanted to add a 'loop' to your program to make it repeat an action, where would you place it? (2 marks)

Extension challenge: Challenge: Can you write your algorithm using 'if/then' statements? For example: 'If the user clicks the blue button, then play a sound.'