

Kit's Coding Project Planner

Learning objective: To design an algorithm for a computer program by breaking down a task into small, logical steps.

Help Kit the fox plan a new computer program! Think of a simple task, like making a sandwich or brushing your teeth. Use this template to break the process down into a logical sequence (an algorithm) that a computer could follow. Remember to look for potential bugs (errors) and explain how you would fix them.

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

1. Project Goal: What is the specific task you want your program to complete? Describe the final result you want to achieve. (2 marks)

2. Step-by-Step Algorithm: Write the sequence of instructions for your program. Remember, a computer needs very clear, simple steps to follow. (5 marks)

3. Identifying Bugs: What is one thing that could go wrong (a bug) while the program is running? How would you fix it? (3 marks)

4. Loops and Repetition: Is there a part of your algorithm that needs to repeat itself? Explain which part should loop and why. (2 marks)

5. Testing: If you were to run this program, what is the 'Input' (what you give the computer) and what is the 'Output' (what the computer produces)? (2 marks)

Extension challenge: Imagine your program needs to track the price of items. If a user buys three items costing £2.50, £1.20, and £0.80, write the calculation you would need to include in your code to find the total cost.