

Kit's Computing Challenge: Designing a Scratch Project

Learning objective: To explain the design process and algorithmic thinking behind a computer program created in Scratch.

Use this writing frame to describe your Scratch project. Focus on how you used loops, variables, or selection (if/then statements) to make your code work. Ensure you use technical vocabulary to explain your sequence of events.

My Scratch project is an interactive animation designed to demonstrate a sequence of movements triggered by user input.

Word bank: algorithm · sequence · repetition · loop · condition · variable · debug · event-driven · initialise · consequently · furthermore · in addition

1. Project Overview: What is the primary purpose of your program, and how does your character interact with the Stage? Start by saying: The aim of my project is... (2 marks)

2. Algorithmic Logic: Explain the sequence of your blocks. How do you ensure the program runs in the correct order? Start by saying: To create the sequence, I used... (3 marks)

3. Using Loops and Selection: Describe where you used a 'Repeat' loop or an 'If/Then' statement. Why was this necessary for your project? Start by saying: I incorporated a loop to... (3 marks)

4. Debugging Challenges: Describe a problem you faced while coding and how you solved it. Start by saying: During the construction of my code, I encountered a bug which caused... (3 marks)

5. Evaluation: Compare your project to a simpler version. How would adding a variable change the way a user interacts with your game? Start by saying: If I were to introduce a variable, it would allow... (4 marks)

6. Justification: Why is it important to keep your code organized with clear names and groups? Start by saying: Organising my code is vital because... (3 marks)

Extension challenge: Design a 'pseudocode' flowchart for a new feature you would like to add to your project. Explain why this planning stage is more efficient than jumping straight into dragging and dropping code blocks.