

Max's Electronic Invention Log

Learning objective: To design a functional electronic product by identifying components, circuit paths, and the intended user's needs.

Max the monkey loves solving puzzles, and he thinks that electronics are the best puzzles of all! Use this template to plan your own electronic invention. Think carefully about what your device does, how the circuit connects, and how you will keep the user safe.

Word bank: circuit · battery · switch · component · insulator · conductor · voltage · prototype

1. The Invention Concept: What is your electronic device, and which problem does it solve for the user? (2 marks)

2. Circuit Requirements: List the components you will need (e.g., battery, bulb, buzzer, or motor) to make your invention work. (3 marks)

3. Path of Power: Describe how the electricity will travel through your circuit. Where will you place the switch? (4 marks)

4. Material Choices: Which materials will you use for the casing? Explain why these are good choices for protecting the internal components. (3 marks)

5. Safety First: Max wants to ensure your invention is safe. What steps will you take to prevent short circuits or overheating? (2 marks)

Extension challenge: On a separate piece of paper, draw a circuit diagram for your invention using the correct scientific symbols for batteries, bulbs, and switches. Can you label the path of the current?