

Max's Circuit Masterclass

Learning objective: To identify the components of a simple circuit and understand how they work together to create an electrical system.

Max the monkey is building a secret gadget to help him organise his fruit collection! He needs your help to label his circuit design. Use the word bank to correctly label each component on the diagram and explain what its function is in the circuit.

Word bank: Cell · Switch · Bulb · Wires · Circuit

1. 1. Label the component that provides the energy (the power source) for the circuit. (1 mark)

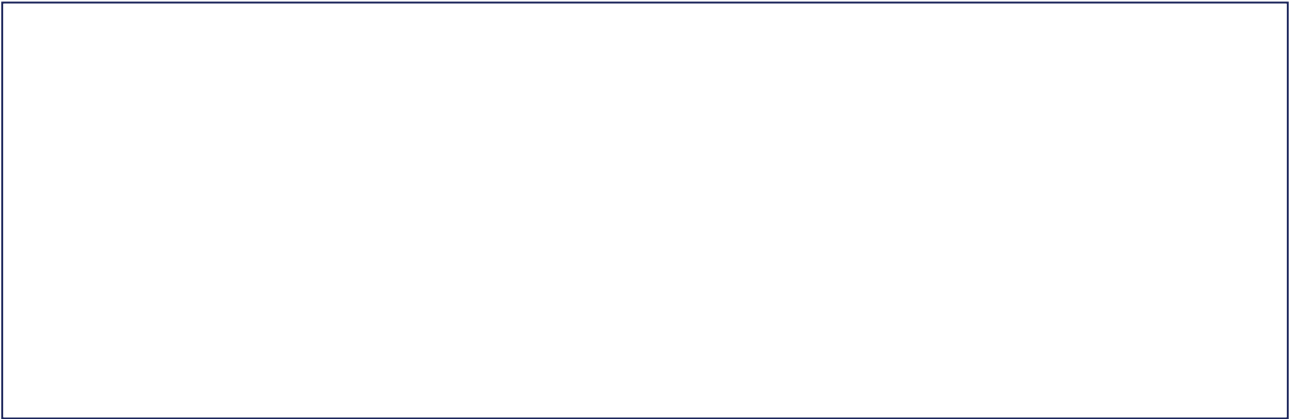
2. 2. What is the purpose of the 'switch' in Max's circuit? Explain what happens to the flow of electricity when the switch is open compared to when it is closed. (2 marks)

3. 3. If Max adds a second bulb to his circuit in a series, what do you think will happen to the brightness of the bulbs? Why? (2 marks)

4. 4. Why must the circuit be a 'complete loop' for the bulb to light up? (2 marks)

5. 5. Max wants to buy some extra parts. A pack of 5 spare wires costs £2.50. How much does one wire cost? (2 marks)

Draw: Draw a circuit diagram for Max. Include one cell, one switch, and one bulb, all connected by wires. Use standard scientific symbols for each component.



Extension challenge: Max wants to build a buzzer circuit instead of a bulb circuit. Research or predict how changing the output component (the bulb) to a buzzer would change the way we interact with the circuit. Write a sentence explaining your idea.