

Nova's Bright Ideas: Exploring Electricity

Learning objective: To identify common appliances that run on electricity and construct simple series circuits, including cells, wires, bulbs, switches, and buzzers.

Read each question carefully and use your scientific knowledge to answer. Remember to use the word bank to help you with your spelling.

Word bank: cell · circuit · conductor · insulator · appliance · switch · component

1. Nova the owl is looking at her home. List three common household appliances that need mains electricity to work. (3 marks)

2. What is the difference between a main electricity supply and a battery-operated device? Give one example of a device that uses a battery. (2 marks)

3. Max the monkey is building a simple circuit. Why will the bulb not light up if there is a gap in the wires? (2 marks)

4. Look at these materials: a plastic ruler, a metal paperclip, a wooden spoon, and a copper coin. Which two would be good conductors of electricity? (2 marks)

5. Explain the purpose of a switch in a simple circuit. What happens to the flow of electricity when the switch is 'off'? (2 marks)

Draw: Draw a simple circuit that includes a cell, a wire, and a bulb. Label each part clearly using the words from the word bank.



Extension challenge: Max has a circuit with a bulb that is very dim. If he adds another cell to the circuit, what do you predict will happen to the brightness of the bulb? Explain your reasoning.