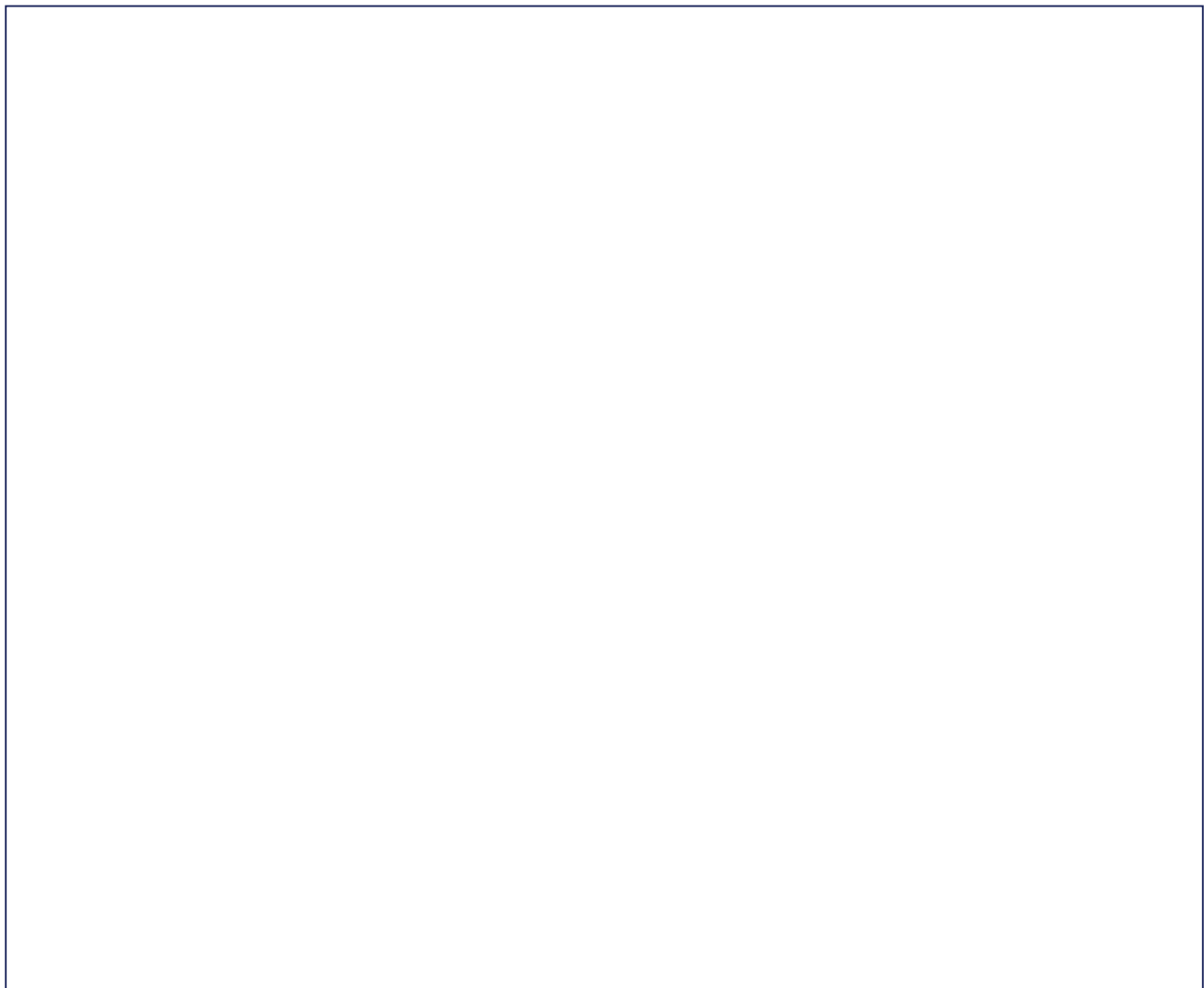


Nova's Night-time Circuit Challenge

Learning objective: To identify common appliances that run on electricity and construct a simple series circuit diagram.

Help Nova the owl light up her stargazing observatory! Follow the steps to design a safe electrical system and label the components required for the bulb to glow.

Draw: Draw a large, cosy owl observatory inside a tree trunk. In the centre of the room, draw a desk with a lamp. Provide a clear, technical diagram of a simple series circuit on a notepad sitting on the desk. Use clean, straight lines for the wires and distinct symbols for the cell, bulb, and switch. Ensure the drawing style is neat, academic, and clear for a scientific record.



Label words: Cell · Battery · Bulb · Switch · Wires · Conductor · Insulator

Steps:

1. Step 1: Draw a simple series circuit consisting of one cell, one switch, one bulb, and the necessary wires connecting them.
2. Step 2: Label your drawing using the words from the word bank provided.
3. Explain why the bulb would not light up if there was a gap in the wires. Use the term 'complete circuit' in your answer.

4. Compare and contrast the function of a switch in a circuit to a gate in a fence. Justify your answer.
5. What might happen if you replaced the metal wire in your circuit with a piece of string? Explain your scientific reasoning.
6. Justify why it is important to keep electrical appliances away from water.