

Nova's Circuit Lab: Investigating Electricity

Learning objective: To identify, construct, and label the components of a simple series circuit and understand how to represent them using standard scientific symbols.

Follow the drawing prompt to create your circuit diagram. Once drawn, use the labels from the word bank to correctly identify each part of your circuit. Ensure your lines are clear and your symbols are accurate.

Draw: Draw a clear, two-dimensional circuit diagram on a blank space. Use straight, sharp lines for the wires. Use a standard 'circle with an X' symbol for the bulb and a 'long line/short line' symbol for the cell. Ensure the switch is drawn as a small gap between two points to show it is open or a apartment line to show it is closed. The style should be clean and technical, like a diagram in a science textbook.



Label words: Cell · Wire · Bulb · Switch (open) · Switch (closed) · Circuit

Steps:

1. Step 1: Draw a simple circuit consisting of one cell, one closed switch, and one bulb connected by wires. Label each component using the word bank.
2. Step 2: If you were to replace the bulb with a buzzer, what would happen to the circuit when the switch is closed? Explain your answer.
3. Step 3: Draw the scientific symbol for an open switch next to your circuit diagram.

4. Step 4: Why is it important to use wires that are covered in plastic insulation?
5. Step 5: If you added a second bulb into the same series circuit loop, what would you notice about the brightness of the bulbs? Why?