



Parallel Circuits

Activity 1

In your notebook, draw a circuit with three parallel branches connected to a battery. Measure the voltage across each branch and across the battery. The voltage through a circuit is different in different branches. Measure the current in a circuit between different points in the circuit. This will be known as **Ohm's Law** and is written as $V = IR$.

Draw a circuit diagram of a parallel circuit as per the diagram in the battery. The voltage measured from the battery is the total voltage. If you divide the resistance and voltage, you can find the current. $I = \frac{V}{R}$.

Activity 2

1. Use the parallel circuit diagram to answer questions 1-3.

- What is the voltage across each bulb?
- What is the voltage of each branch?
- What is the total current provided by the battery?
- Calculate the current and the total voltage to determine the total resistance of the circuit.



2. Use the parallel circuit diagram to answer questions 4-5.

- What is the voltage across each bulb?
- What is the voltage of each branch?
- What is the total current provided by the battery?
- Calculate the current and the total voltage to determine the total resistance of the circuit.



3. Use the parallel circuit diagram to answer questions 6-8.

- What is the voltage across each resistor?
- What is the current through each resistor?
- What is the total current provided by the battery?
- Use the total current and the total voltage to determine the total resistance of the circuit.



4. Use the parallel circuit diagram to answer questions 9-11.

- What is the voltage across each resistor?
- What is the current through each resistor?
- What is the total current provided by the battery?

