

## Objective

By the end of this lesson, you will understand the basics of electrical circuits and be able to create simple circuits on your own.

## Materials and Prep

- Battery
- Light bulb
- Wires
- Paper clips
- Scissors
- Tape
- Safety goggles

No prior knowledge is required for this lesson. Make sure to work in a well-lit area and always wear safety goggles when working with electrical components.

## Activities

1. **Build a Simple Circuit:** Connect a battery, a light bulb, and wires to create a basic circuit. Observe how the light bulb lights up when the circuit is complete.
2. **Experiment with Conductors:** Use paper clips to test which materials conduct electricity and which do not. Record your findings and discuss why certain materials conduct better than others.
3. **Create a Switch:** Design and construct a simple switch using materials like paper clips and tape. Test how the switch can turn the circuit on and off.

## Talking Points

- "An electrical circuit is a path that allows electricity to flow. It typically consists of a power source, wires, and a load like a light bulb."
- "When the circuit is complete, electrons flow from the negative terminal of the battery, through the wires, and into the light bulb, causing it to light up."
- "Conductors are materials that allow electricity to flow through them easily, while insulators resist the flow of electricity. This property is essential in designing circuits."
- "A switch is a device that opens or closes a circuit. When the switch is open, the circuit is broken, and electricity cannot flow. When the switch is closed, the circuit is complete, and electricity can flow."