



Course: Electrical
Section: Electrical Technician



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Build a Simple Circuit

What You Will Do

Build a circuit to control the flow of electricity from a battery, through a light bulb, and back to the battery.

Materials You Will Need

- 1 AA battery
- Small flashlight bulb
- Aluminum foil
- Tape

What is a Circuit?

An electric circuit is a closed, continuous path that allows electric charge (current) to flow from a power source, through components, and back again. It consists of a power source (battery or power plant), conductive pathways (wires), and a load (light bulb or appliance) that uses the electrical energy.

Electricity needs a complete path. This path is called a circuit. If there is a break in that path, electricity stops flowing. Switches, like light switches, complete or break that path. Power goes to the switch but can't flow until the switch is thrown completing the circuit.

Safety

Working with electricity is very dangerous. Never attempt to work with live electricity unless it is very low voltage. AA batteries are low voltage (between 1.2V and 1.5V). Handling anything 50V or higher is dangerous. The outlet your living room lamp is plugged into is 120V.

Create a Circuit

1. Tear two strips of aluminum foil and twist them into thin, sturdy "wires".
2. Tape one end of the first foil strip to the positive (+) end of the AA battery.
3. Tape one end of the second foil strip to the negative (-) end of the battery.
4. If using a lightbulb, touch one wire to the bottom tip and the other to the metal side.
5. When both foil pieces connect to the bulb simultaneously, the light will turn on.

Can you picture the path the electricity is flowing through this circuit?
Will it still work if you reverse where the wires are connecting to the bulb?