

VOCABULARY

Look for these words as you read:

- circuit
- conductor
- electric current
- insulator
- resistor

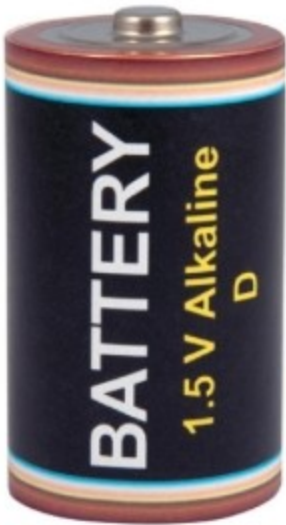
Electric Current

When you are in the dark, a flashlight is useful. A flow of electric charge lights the bulb. **Electric current** is the flow of electricity through a conductor.

A **conductor** is a material through which electricity flows easily. In contrast, an **insulator** is a material that slows or stops the flow of energy, such as electricity or sound.

As you saw in the Inquiry Activity, *Make it Work*, a **circuit** is a path through which electric current can flow. Often this path consists of wires. Circuits must also have a device to move electrically charged particles along. These devices, called voltage sources, increase the number of charged particles flowing in a circuit. Batteries are a voltage source.

A switch is a device that can open or close the path in a circuit. When the switch is closed, the electric current can flow around and around through the circuit. When the switch is open, the current cannot flow.



GO ONLINE Watch the video *Uses of Electricity* to see different ways that electricity is used every day.

The chemicals inside a battery store energy.

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An object in an electrical circuit that resists the flow of energy is called a **resistor**. Electrically charged particles lose energy when flowing through a resistor. This energy is transformed into other forms of energy, such as motion, light, or heat. A lightbulb is an example of a resistor.

Label a Diagram

Label the resistor and the voltage source on the diagram below.



A flashlight is a circuit. When the switch is pushed into the on position, it allows electric current to flow through the circuit.

What happens to energy in a resistor?

Handwriting practice lines for the question: What happens to energy in a resistor?

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