

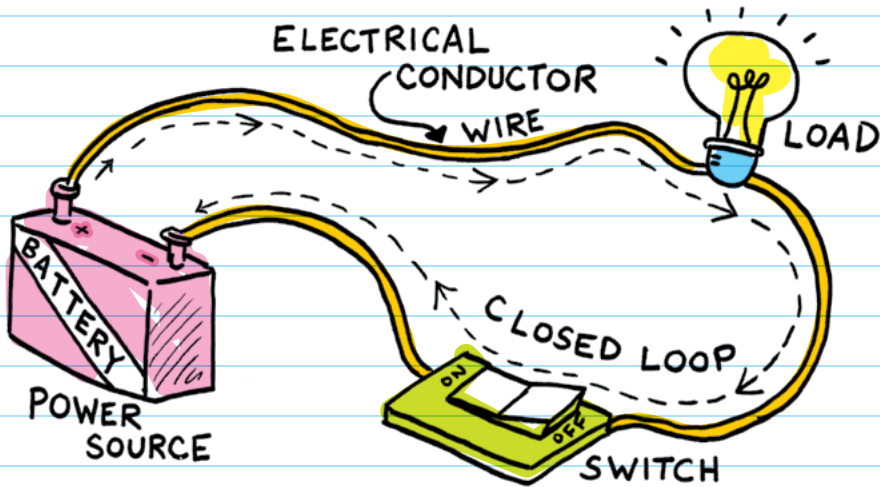
## Electrical Circuit

An electric current will continuously flow if the charges can travel in a closed conducting loop, called a **CIRCUIT**. The electric field keeps the charge moving.

The components of a circuit are:

**ELECTRICAL CONDUCTOR**, such as a **WIRE**, which connects to the power source to form a **CLOSED LOOP** (a connection with no openings or breaks)

**LOAD** (not necessary, but usually there), a device that the circuit is powering, like a lightbulb, fan, or speaker



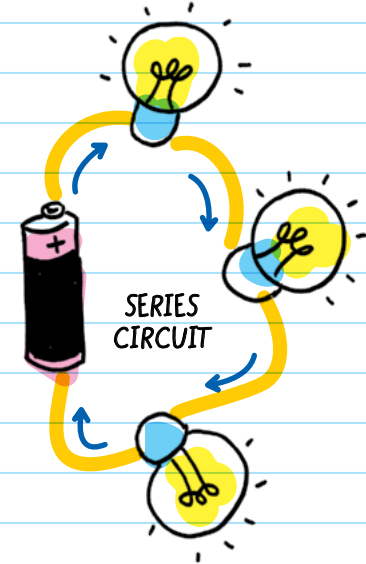
**POWER SOURCE** of electrical energy, such as a **BATTERY**

**SWITCH** (not necessary, but frequently there), a device to open and close a circuit

↪ IT'S LIKE A DRAW BRIDGE ON A ROAD.

## Series and Parallel Circuits

If an electron is like a car, a circuit is like the road: The circuit provides an electron with all the paths it can take. When there is only one way an electron can travel through a circuit, the circuit is called a **SERIES CIRCUIT**. In a series circuit, all of the current flows in one direction through every element in the circuit, and if the circuit is opened at any point, the electrical flow in the entire circuit will stop. So if a lightbulb in a circuit burns out, causing a break in the circuit, electricity will stop flowing.



A **PARALLEL CIRCUIT** is like traveling on a road with a fork in it—a car can take either a right or a left. In a parallel circuit, the electrons can take more than one path. When one path is broken, the current can continue to flow because the electrons still have an alternate path to follow.

