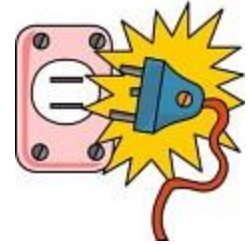


Electricity



What is an Electrical Current?

An electrical current is the flow of negative charges through matter. You make small electrical charges when you drag your feet on the rug, touch someone, and cause a spark to jump. However, these charges only last a moment. To run a light bulb or computer you need an electric current that continues to flow. In this case the electrical current flows through metal wires to these appliances.

How Do Electric Currents Work?

Electricity only flows through a closed circuit. As long as the path is unbroken, the current flows. To break a closed circuit, you turn off a switch or remove a part of the path. When electric current does not travel through a circuit the circuit is open. Every time you turn off a light you closed a circuit. There are two ways to have an open circuit; a series circuit and a parallel circuit.



Magnets from Electricity:

An electromagnet is a temporary magnet made when electric current flows through a wire coil. If you pass electricity through a coiled wire, the wire becomes magnetic. When the electric current stops working, the wire loses its magnetism.

Vocabulary

resistance: a measure of how much a material opposes the flow of electrical current & changes electric current into heat energy

conductor: a material through which electric current passes easily

insulator: a material through which electric current does not pass easily

series circuit: a circuit that connects several objects one after another so that the current flows in a single path

parallel circuit: a circuit that connects several objects in a way that the current for each object has its own path

generators: a machine that uses an energy source & a magnet to make electricity

electromagnet: a magnet made when an electric current flows through a wire