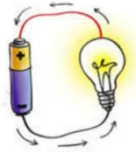


Electricity

What is electricity?

Electricity is a form of energy that can be carried by wires and is used for heating and lighting and to provide power for machines.



Staying Safe with Electricity

Electricity can be very dangerous and can cause a fire if not used properly. Always ask an adult to help when using electrical items. Always turn a plug off before removing from the wall. Never use an electrical appliance near water. Never fly a kite near power lines.

Types of electrical energy

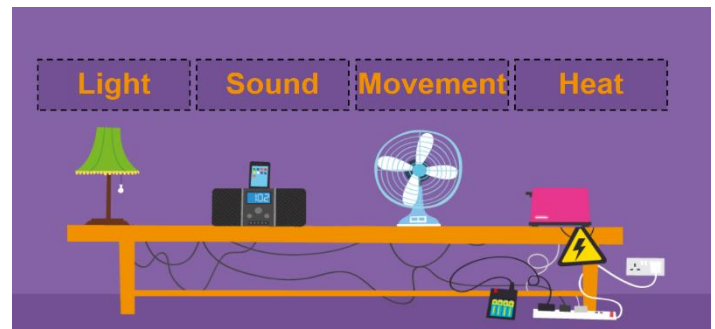
Most of the **appliances** in our house are powered by mains electricity. This is a supply of electrical energy. The appliances convert this electrical energy into other forms of energy. Some smaller electrical appliances use batteries. **Batteries** are also a source of electrical energy. Appliances convert electricity into four types of energy.

Conductors: These are different types of materials that allow electrical **energy** to flow through.

Common examples: metal, copper, gold, silver

Insulators: These are different types of material that won't allow electrical energy to flow through. Metal materials allow electrical energy to flow through. Plastic won't allow electrical energy to flow through. Therefore, electrical wires have a plastic coating, so they are safe to touch.

Common examples: plastic, wood, glass, rubber



Battery



Wire



Bulb



Buzzer



Motor



Switch (off)



Switch (on)

Electrical Circuits

A circuit is a path that allows electricity to flow through it from the negative terminal of the battery to the positive terminal.

We can draw the circuits using a diagram using simple symbols.

Key Vocabulary

Appliances	An appliance is a device or machine in your home that you use to do a job such as cleaning or cooking. Appliances are often electrical.
Battery/ batteries	Batteries are small devices that provide power for electrical devices. A battery has a positive end (+) and a negative end (-).
Circuit	A circuit is a path that electrical energy follows. The electrical energy flows through the conductors and there must be no gaps. A circuit can include electrical parts such as wires, bulbs, buzzers or motors.
Energy	Energy can mean different things, but in this topic we are talking about the power from sources such as electricity that makes machines work.
Mains	The point in a wall where you can connect electrical equipment to the power supply.
Power	The word power can be used to mean different things, but in this topic we are talking about electrical energy that is used to operate electrical appliances.