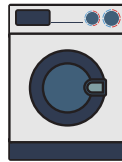


Electrical Appliances

Lots of appliances around our house use electricity to work.



Most big appliances in our house have to be **plugged in**. These are **powered by mains power**. Some **smaller appliances** can be **powered by batteries**. Some appliances have **batteries** that need to be **charged by mains power**.

Battery Power

Battery powered appliances are portable which means you can use it anywhere without it having to be plugged into a plug socket. There are **different types of battery** for different appliances.

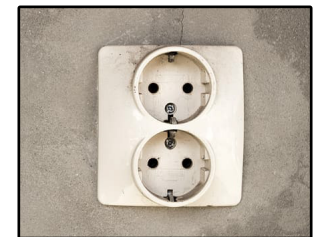


Mains Power

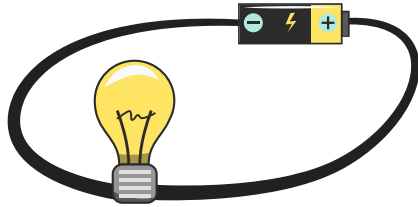
Mains power is produced mainly in a **gas, coal or nuclear power station**. **Wind turbines, solar panels and hydroelectric dams** are also used to produce mains power but are not used as often.



The electricity then travels from the power stations to our houses **through overhead wires and pylons**. We use the electricity in our house by plugging the appliance into a **plug socket**. Finally the electricity enters the appliance's electrical circuit through the **wires**.



Simple Circuit



The circuit has to be complete to allow the electricity to travel all the way around it.

Insulators

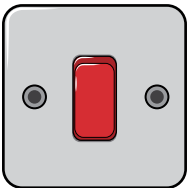
fabric
plastic
paper
string
wood

Conductors

tin foil
can
tin
steel spoon
penny

Switches

When we put a switch in an electrical circuit and turn it to the **on position**, it **completes the circuit** and **allows electricity to flow** around the circuit. When we turn the switch to the **off position**, this creates a **break in the circuit** meaning the **electricity cannot flow anymore** and the appliance will not work.



paddle switch



push button switch



pull switch

Key Vocabulary

Appliance – a device or piece of equipment that has been made to perform a specific task.

Battery – a small item used to power small appliances.

Circuit – a route through which electricity flows.

Components – the parts of a circuit.

Conductor – allows electricity to flow through it.

Electrical – something that uses electricity to work.

Insulator – doesn't allow electricity to flow through it.

Mains power – electricity provided by power stations.

Portable – can be easily carried around.

Pylon – a tower used for keeping electrical wires above the ground.