

Electricity Knowledge Organiser

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.

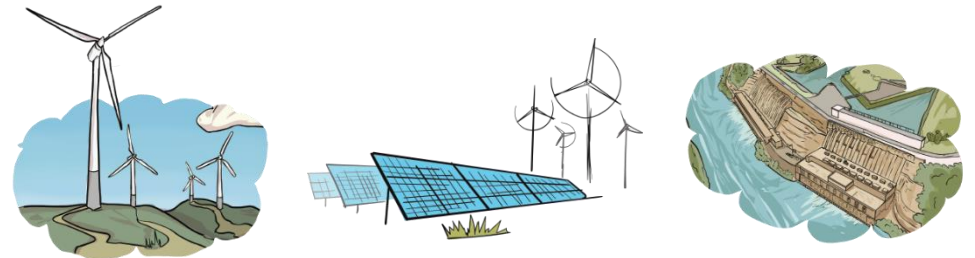
Battery Power

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

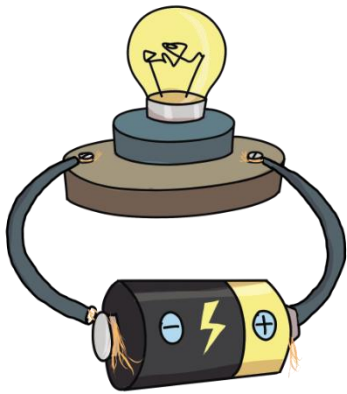
Mains power is produced mainly in a **gas, coal or nuclear power station**. **Wind turbines, solar panels and hydroelectric dams** are also used to produce mains power but are not used as often.



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
tin can
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