

# 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.

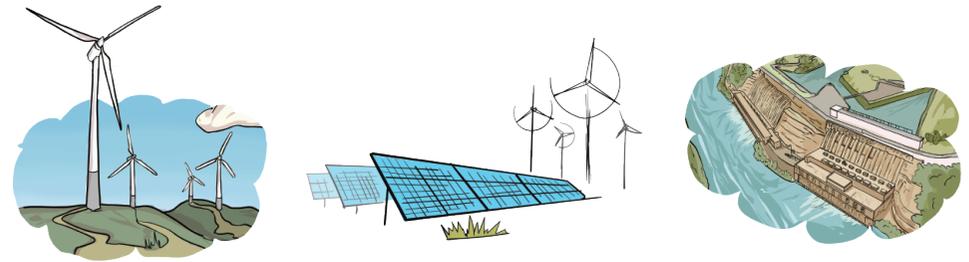
## Battery Power

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.

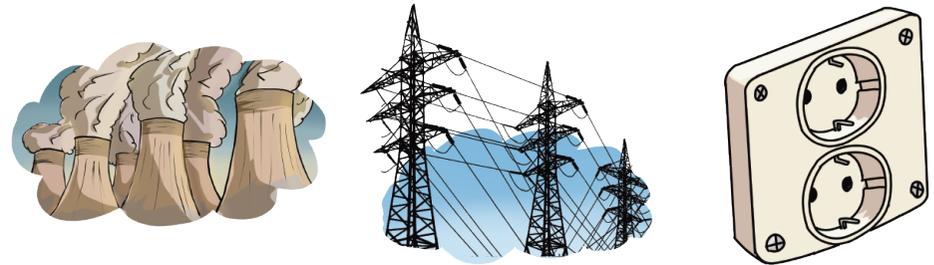


## Mains Power

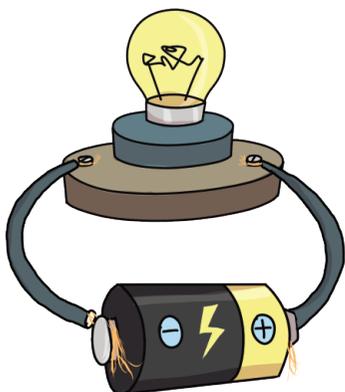
Mains power is produced mainly in a **gas, coal** or **nuclear power station**. **Wind turbines, solar panels** and **hydroelectric dams** are also used to produce mains power but are not used as often.



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

