Electricity- Simple Circuits

Thomas Edison

Thomas was an American inventor and businessman. He developed many devices in the field of electricity. These inventions included the phonograph, the motion picture and early versions of the electric light bulb.

What else have you discovered about Thomas Edison?

_____

_____

_____

_____

_____

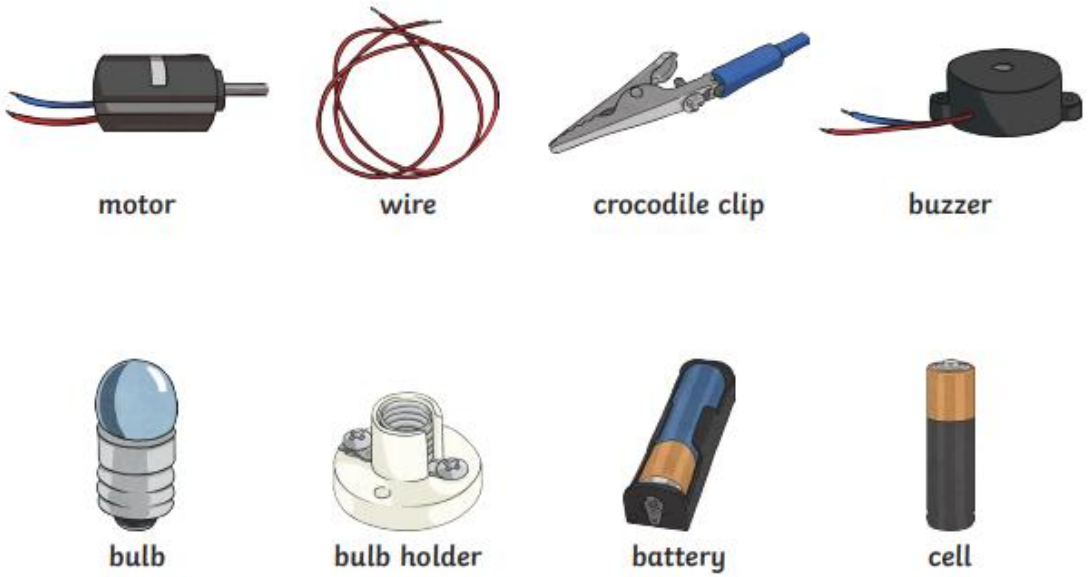
_____

_____

_____

_____

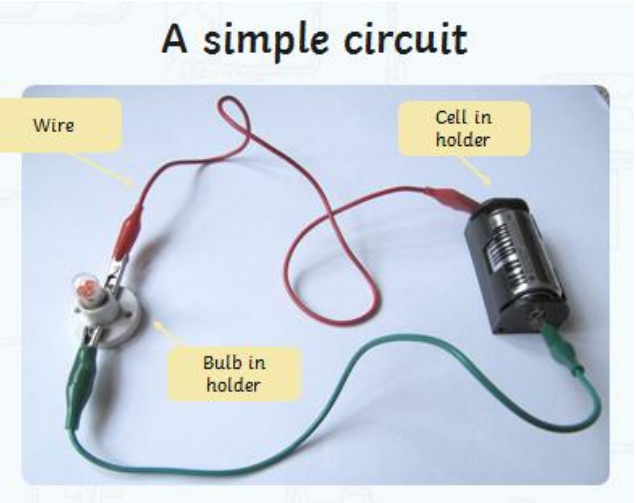
Electrical Circuit Components



Mains or battery electricity?

Devices that need to be plugged in are mains powered whereas devices that do not need to be plugged in (at all or all the time) are battery operated.

Battery operated: Mobile phone, watch, remote control
Mains operated: Television, iron, hairdryer

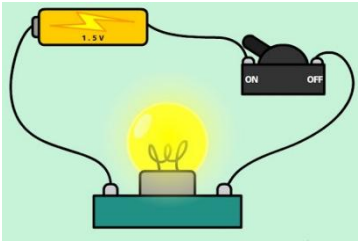


To create a working circuit you need wires and a power source (battery). You then may use a buzzer, a motor or a light bulb.

Why are switches important?

Switches are important because they can be used to open or break the circuit; a switch is able to 'break' the circuit to stop the flow of electrons. When the switch is on, the circuit is complete and the electrons are able to flow around the circuit.

Year 4 – Autumn 2 – Electricity- Simple



Word	Definition
Electricity	A form of energy that can be carried by wires.
	A source of electricity that will not run out
Complete	A circuit that electricity can flow completely around
Incomplete	The current cannot flow because the path is interrupted at some point
Circuit	A pathway that electricity can flow around.
	Very small particles that travel around an electric circuit
Switch	A device for making and breaking the connection in an electric circuit
Conductor	A material or object that allows electric current (the flow of free electrons) to pass through it easily with very low resistance
Insulator	Materials that prevent electric current from flowing freely

Arctic and Water World

What different bodies of water are there on Earth?

- Rivers and lakes
- Oceans and seas
- Reservoirs and bays
- Gulfs and straits
- Glaciers and fjords

How water is treated:

Collecting rain
↓
Storage
↓
Screening
↓
Removing particles
↓
Final treatment
↓
Getting water

Water is the key to survival for humans. We use water daily for many different reasons.

When do you use water?

- Shower or bath
- Brush teeth
- Making food
- Washing clothes

How can we save water?

- Shower instead of bath
- Turn the tap off whilst we brush our teeth
- Reuse water when possible

Water can be used and recycled to contribute to a sustainable future (to help us ensure there is enough water in years to come).
Water can provide electricity instead of using the Earth's coal and oil resources for electricity.

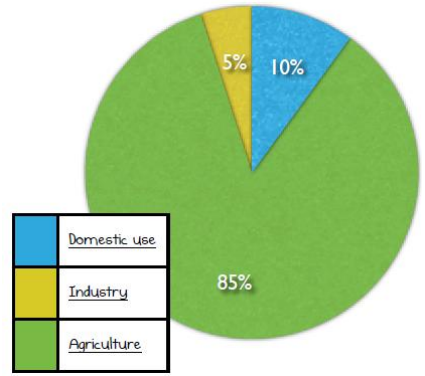
Hydropower is power derived from the energy of fast-flowing water. The energy is known as renewable energy.



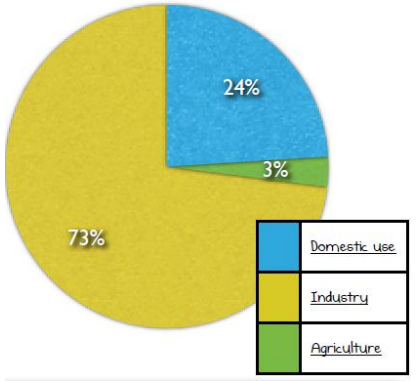
Positives	Negatives
Can produce water for many years	Expensive to build
Greenhouse gases aren't produced	Flooding can occur
The lake can be used for leisure activities	Can cause earthquakes

Water Usage

Kenya



UK



The UK has a lot more water available so more can be used for domestic use. How would you feel if there wasn't enough water available?

I would feel concerned because I wouldn't be able to live my life like I usually would.

Y4 Autumn 2– Arctic and Water World



Word	Definition
Earth's surface	71% of the Earth's surface is covered in water.
Bodies of water	Large amounts of water in one place
Water cycle	The process where water circulates between the oceans, atmosphere and land.
Water usage	Total amount of water used
Water supply	A source that supplies the water
Water availability	The amount of water that can be used in a given area
Hydropower	Energy from the flowing water that is converted to electricity

More facts I have discovered through my research...

_____

_____

_____

_____

_____