

Electricity

Year 4 Autumn 1

Sparks Might Fly!

Sticky Knowledge

What common appliances run on electricity?

Some examples are:

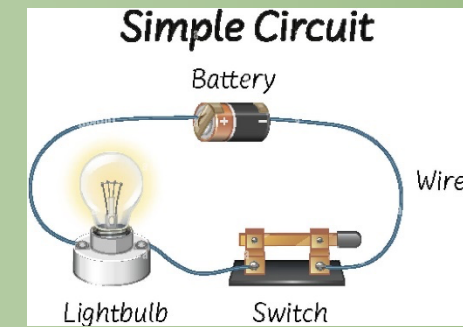
Oven, fridge, freezer, television, microwave, toaster, electric toothbrush, hair dryer, laptops etc..

What stops a circuit from working?

A bulb will not light in a circuit if it is not in a complete loop with the cell. A bulb will not light in a circuit if a switch is open.

What are conductors and insulators?

A **conductor** is a material that allows electricity to flow through it e.g. most metals. An **insulator** is a material that does not allow electricity to flow through it e.g. rubber.



What is a series circuit?

These are circuits where all the parts are connected in a single loop.

What is a switch? Where are switches used? It is a device that allows a circuit to be opened or closed without having to detach the energy source. Switches are used around the home e.g. lighting circuit,

What are the dangers of electricity?

Electricity can cause severe burn injuries, fatal shocks and even death. Create a poster about how to stay safe around electricity.

- appliances** – electrical devices used for a particular purpose, e.g. fridge, oven

- plug** – a device put into a socket to connect to an electrical circuit

- socket** – the part of the electrical circuit where the plug fits to make a connection

- cell** – a portable store of energy


Key Vocabulary

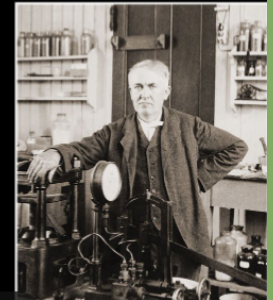
Vocabulary	Definition
Electricity	Electricity is a flow of charged particles. Electricity is a way of moving the energy needed to power appliances.
circuit	A closed path that energy can flow through
conductor	A material that allows electricity to flow through it.
insulator	A material that does not allow electricity to flow through it.
cell	A portable source of energy
battery	Two or more cells joined together to store more energy
switch	A device that opens and closes an electrical circuit

Useful websites

<https://www.bbc.co.uk/bitesize/articles/zcwn>

Edison perfects the light bulb

In 1879, Thomas Edison used carbon filament to perfect the first commercially practical incandescent light bulb. Earlier bulbs had flaws such as being expensive to produce and having a short life. Edison performed many experiments before discovering a way to compete with gas and oil based lighting.



- conductor** – a material that allows energy to flow through it

- insulator** – a material that does not allow energy to flow through it

- metal** – a material which can be hard, shiny and a conductor of electricity
