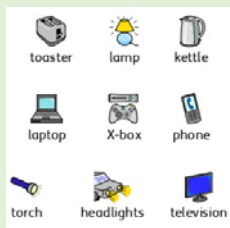


What should I already know?

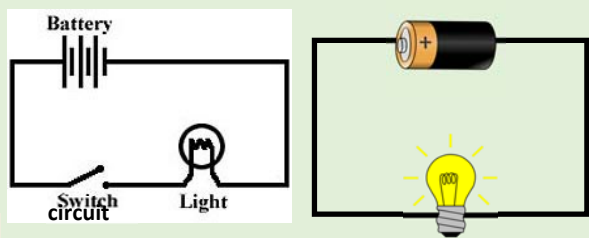
- **Electricity** is a form of **energy** that can be carried by wires and is used for heating and lighting, and to provide **power** for **devices**.
- **Sources** of light and sound may need **electricity** to work.

What will I know by the end of the unit?

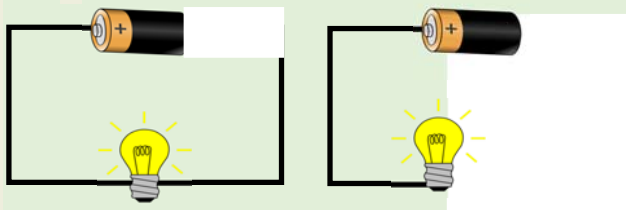
- Identify common appliances that run on electricity.
- Construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers.
- Identify whether or not a lamp will light in a simple series circuit, based on whether or not the lamp is part of a complete loop with a battery.
- Recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit.
- Recognise some common conductors and insulators, and associate metals with being good conductors.



These are complete **circuits** - they have a **battery (cell)** and a component (**bulb**). The **wires** are placed in the right places of the **battery** for the **circuits** will not work as they are incomplete.



to work.



Assessment – What expected looks like

I can show that I can consistently make a basic circuit and also add in a switch. I can recognise that a switch opens and closes a circuit to turn the component on and off. I have used both a bulb and a buzzer in circuits and understand that the buzzer must be connected into the circuit the correct way round. I can name insulators and conductors and can explain how they affect a circuit.

Vocabulary

circuit	An electrical circuit is a completed path through which an electrical current flows.
buzzers	A buzzer is an automatic signalling device. They are used as alarms and door bells.
conductor	A conductor is an object or type of material that allows the flow of an electrical current in one or more directions
battery	A battery is a device that stores chemical energy and makes it available in an electrical form.
cells	An electrical cell is a device that is used to generate electricity.
switch	A switch is an electrical component that can 'make' or 'break' an electrical circuit.
socket	Sockets allow electrical equipment to be connected to the alternating current (AC) power supply in buildings and at other sites.
appliance	An electrical appliance is a device that uses electricity to perform a function.
Appliance series circuit	Components connected in series are connected along a single path, so the same current flows through all of the components..
insulator	An insulator is a material whose internal electric charges do not flow freely.

Sticky Knowledge

- Electricity can be generated by from power stations, wind, the sun, water and even animal poo!
- Electricity is a type of energy that can build up in one place to flow to another.
- A power station is a place where electricity is created and sent to our homes.
- Electricity travels at the speed of light, which is more than 186,000 miles per hour.
- One flash of lightening could power 1000 houses for a whole year.
- When an electric charge builds up on the surface of an object it makes static electricity. This is why we sometimes have a small electric shock.
- The first power plant opened in 1882 and was opened by Thomas Edison.
- Thomas Edison was a very famous inventor who helped us make the most of electricity from bulbs to fuses.

How does a circuit work?

Name some things that need a battery.

Why is it dangerous to use electricity near water?

Electricity

What do you know?

What is a conductor?

What is an insulator?

What is power?