Y6 Electricity

Scientist

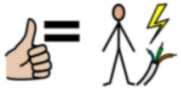
Mo Ibrahim
Pioneer in the mobile phone industry

Hertha Ayrton
Engineer, physicist, mathematician and inventor

Skills

I'm planning different types of scientific enquiries like a renewable energy engineer.

I'm setting up comparative and fair tests like an electrician.



Careers

Electrician (installs and maintains electrical equipment)
Renewable energy engineer (works on environmentally conscious energy production)

Enquiries

How does the voltage of the batteries in a circuit affect the brightness of the lamp?

Which brand of battery lasts the longest?

Does the temperature of a light bulb go up the longer it is on?

How would you group electrical components and appliances based on what electricity makes them do?

How has our understanding of electricity changed over time?

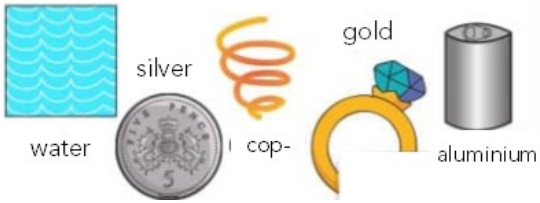
Brecknock Primary School
A lighthouse of learning

Main idea

Learn how to construct a simple series circuit and represent it as a diagram using recognised symbols. Relate the brightness of a bulb to voltage, and compare and give reasons for how the different components function. Explore more sustainable energy,

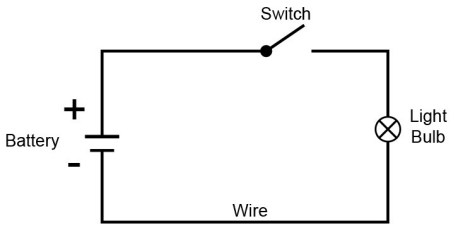
Conductors

Do allow energy to get through.



Insulators

Do not allow energy to get through.



Key Learning

- Compare and give reasons for variations in how components function, such as the loudness of buzzers or the on/off position of switches
- Building on their work in year 4, pupils will construct simple series circuits, to help them to answer questions about what happens when they try different components, for example, switches, bulbs, buzzers and motors.
- Pupils are taught to take the necessary precautions for working safely with electricity, and how to look for hazards in the home such as overloaded adapter switches.
- Pupils will work apply their knowledge of series circuits by designing and making devices such as traffic lights or burglar alarms.

What you should already know

Construct simple electrical circuit and name its basic parts, including cells, wires, bulbs, switches and buzzers.

Draw simple electrical circuits and know the essential elements needed to make a circuit work.

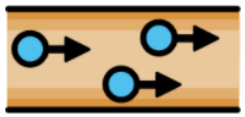
What comes next?

Key Stage 3: Electricity and electromagnetism

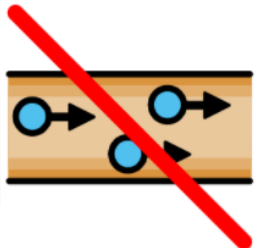
Key vocabulary

Conductor
Insulator
Socket
Series circuit
Cells
Volts
Generator
Turbine
Fuses
Thomas Edison

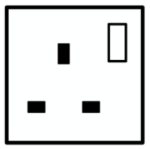
Year 6: Electricity



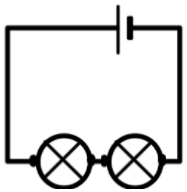
Conductor: Some materials let electricity pass through them easily. These materials are known as electrical conductors.



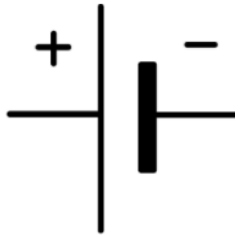
Insulator: materials that don't let electricity pass through.



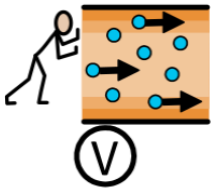
Socket: a safe device to plug your electrical items into at home. Almost every room at home will have at least one socket.



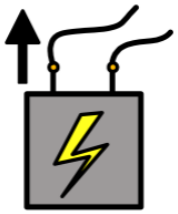
Series circuit: one that has more than one resistor, but only one path through which the electricity (electrons) flows.



Cells: a device that is used to generate electricity, or one that is used to make



Volts: Voltage is an electrical potential difference, the difference in electric potential between two places.



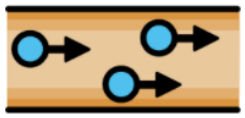
Generator: A machine that converts energy into electricity.

Turbine: A machine that creates continuous power in which a wheel, or something similar, moves round and round by fast moving water, steam, gas or air.

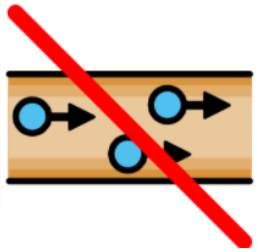
Fuses: These are safety devices. A fuse is a strip of wire that melts and breaks an electric circuit if it goes over a safe level.

Thomas Edison: inventor that came up with a way of making the electric light bulb accessible for homes, industry and outside in the streets.

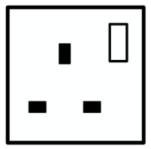
Year 6: Electricity



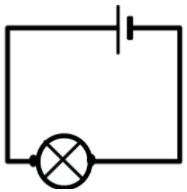
Conductor



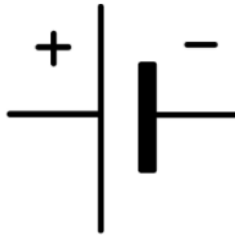
Insulator



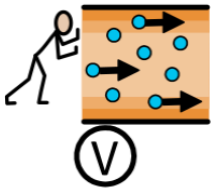
Socket



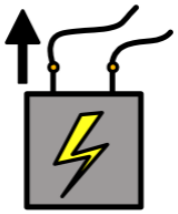
Series circuit



Cell



Volts



Generator

Turbine

Fuse

Thomas Edison