

Linked Scientists

Thomas Edison – Inventor of the lightbulb and power grid

William Kamkwamba – Inventor who used wind turbines to bring electricity to his village in Malawi

Key Vocabulary	
appliance	A device or machine in your house which you use to do a job. Appliances often use electricity to make them work.
battery	Small sources of power for electrical items such as torches
bulb	Rounded glass part of a lamp which gives out light when electricity passes through it
buzzer	Electrical device that is used to make a sound
cell	One battery
circuit	Complete path around which electricity can flow. If a circuit is broken, and there is a gap, electricity cannot flow.
component	The parts that an electrical circuit is made of
conductor	Something that heat or electricity can pass through
crocodile clip	At the end of a wire . Used to connect components
current	The flow of electricity through a wire or circuit
device	An object that has been invented for a specific purpose
electricity	A form of energy that can be carried by wires and is used for heating and lighting, or to power devices
insulator	A non-conductor of electricity or heat. It doesn't let electricity pass through
mains	Where supply of water, gas or electricity enters a building
motor	Device that uses electricity to produce movement

Key Vocabulary	
plug	Part of a device at the end of a wire
power	Energy, especially electricity , used to operate lights, heating and machinery
switch	Small control for an electrical device which is used to turn the device on or off
wires	Long, thin piece of metal used to carry an electric current

What I will know by the end of the unit	
Common appliances that run on electricity	Many household appliances and devices run on electricity . Some use batteries , others plug in and use mains electricity .
	<div><div>mains-powered</div><div>battery-powered</div></div>
	Batteries come in many different sizes depending on the device they need to power .
Common conductors and insulators	Materials which let electricity pass through are called conductors . Those that don't let electricity pass through are called insulators .
	Metals are good conductors so they can be used as wires in a circuit . Water and graphite also conduct electricity .

Examples of Electrical Conductors	Examples of Electrical Insulators
<div><div>water</div><div>metal</div></div>	<div><div>wood</div><div>plastic</div><div>paper</div><div>rubber</div><div>glass</div><div>fabric</div></div>

What I will know by the end of the unit	
How to construct simple circuits.	An electrical circuit contains a battery , or cell , connected to wires and another component (bulb, motor, or buzzer). The current flows through the wires to the component (bulb, buzzer, or motor). If there is a break in the circuit , the component will not work.
	<div><div>Complete Circuit</div><div>Incomplete Circuit</div></div>
How switches affect a circuit	A switch can be added to a circuit to control the flow of electricity . When the switch is off, electricity cannot flow and the component can be turned on or off.

Safety First!

Be careful of mains switches, open sockets and any signs to do with electricity. **Water** is an excellent electricity conductor, so it can be very dangerous to have electrical devices near water.

Danger Electricity