

Carr Head Primary School - Knowledge Organiser

Science

Electricity

Year 4

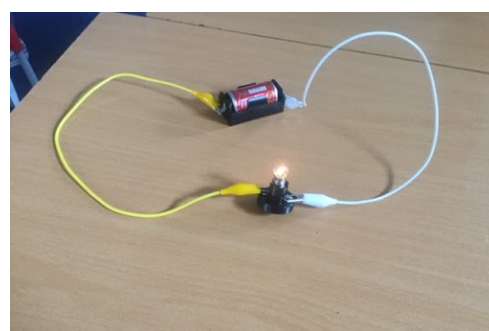
Autumn 2

Key Knowledge

Electrical conductors	copper, iron, steel, silver, gold
Electrical insulators	rubber, wood, plastic, paper
Thomas Edison	Lived in the USA between 1847 and 1931. He invented the light bulb.
Lightning and static electricity	These are examples of electricity that occurs naturally
Wind Turbines	Electricity can be generated from wind power using turbines.
The Sun	Solar panels turn the sun's rays into electricity
Mains electricity	Power stations send electricity through wires to transformers and pylons. Underground wires then carry the elec-
Mains electricity	Appliances use this when plugged into a socket. Examples include a washing machine, TV and oven.
Circuits	Electricity can flow around a complete circuit that has no gaps. There must be wires connected to both the positive and negative connections of the battery.
Switches	These can be used to open and close circuits. They break the flow of electricity.
Electrical safety	Water and electricity do not mix and should be kept well away from each other. Only plugs should be put into sockets. Fingers or other pieces of metal should never be put in sockets.

Key Vocabulary

battery	a small device that provides power for electrical devices
cell	a device used to generate electricity. A battery is an example of a cell.
conductor	Any material that electricity can pass through or along
current	A flow of electricity through a wire
insulator	Any material that electricity cannot pass through or along.
motor	A device that changes electrical energy into movement.
voltage	an electrical force that makes electricity move through a wire. It is measured in volts.
wire	a long, thin piece of metal that carries an electrical current. It is often covered in plastic for safety.



Know how to...

Working Scientifically	observe patterns in relation to electricity. For example—that bulbs get brighter if more cells are added.
	observe that metals tend to be conductors of electricity
	ascertain which materials can and cannot be used to connect across a gap.