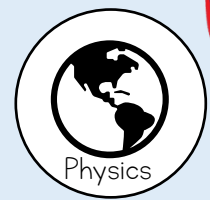


Electricity

Year 4



Review:

What should I already know?

- To make something electrical work we need a source of power.

Essential knowledge

- Identify and name common appliances that run on electricity.
- Construct a simple electrical circuit
- Identify and name the basic parts of an electrical circuit, including, cells, wires, bulbs, switches and buzzers
- Be able to identify whether or not a lamp will light in a simple circuit based upon knowledge of what a simple circuit needs.
- A conductor of electricity is a material that will allow electricity to flow through it.
- An insulator does not allow electricity to flow through it.



Vocabulary

Physics	is all about Earth and space and how they work.
Working Scientifically	is all about working like a scientist to answer scientific questions.
Appliance	A device or piece of equipment that has been made to perform a specific task.
Battery	A small item used to power small appliances.
Circuit	A pathway that electricity can flow around.
Conductor	A material which energy (in this case, electricity) can flow through.
Insulator	A material which energy (in this case, electricity) cannot flow through easily.

Examples of Electrical Conductors	Examples of Electrical Insulators
<p>copper steel</p>	<p>wood plastic paper rubber glass fabric</p>

<p>cell: Normally, we would call this a battery but scientifically, this is a cell. Two or more cells joined together form a battery.</p>	<p>bulb: Lights up in a complete circuit.</p>	<p>buzzer: Makes a noise in a complete circuit.</p>
<p>wires: Used to connect the different components in the circuit together.</p>	<p>motor: Produces movement in a complete circuit.</p>	<p>switch: Used to turn other components in the circuit on or off.</p>



Our enquiry focus:				
Observing Changes Over Time	Pattern Seeking	Identifying, Grouping & Classifying	Fair Testing	Research

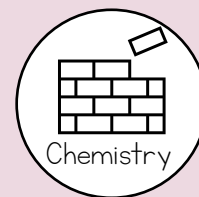
Skills I will need:

- I will set up several circuits using switches, bulbs and buzzers.
- I will test and observe multiple objects in a circuit and classify and group objects on whether they are conductors or insulators.
- I will ask questions and find patterns between electrical appliances powered by battery or the mains.



States of Matter

Year 4



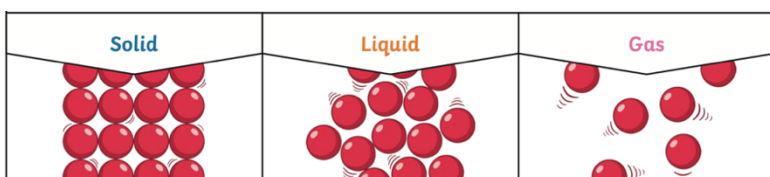
Review:

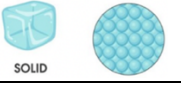
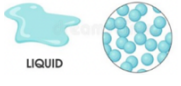

What should I already know?

- What temperature is and that a thermometer can be used to show it.
- That materials have different properties and how this influences the suitability of a material.

Essential knowledge.

- There are three states of matter.



State of matter	Feature	
Solid	Are rigid and hold their shape.	 SOLID
Liquid	Do not hold their shape and form a pool not a pile.	 LIQUID
Gases	Do not hold their shape and can escape from an unsealed container.	 GAS

Some materials change state when they are heated or cooled.

- **Freezing** is when liquids turn to a solid.
- **Melting** is when solids change to a liquid.
- **Evaporation** is when liquids change to a gas.
- **Condensation** is when gases change to liquid.

Vocabulary

Chemistry	Chemistry is all about materials and how they change.
Working Scientifically	is all about working like a scientist to answer scientific questions.

Material	What things are made from.
Solid	Has a clear shape and is hard or firm.
Liquid	Does not have a clear shape and can be poured.
Gas	Does not have a clear shape and can escape.
State	A way that a material exists.
Evaporation	Liquid changing to gas because of the temperature.
Condensation	Gas changing to liquid because of the temperature.
Water cycle	The process of water being recycled over and over again.

Essential knowledge.

The water cycle is the path that water follows as it moves around the Earth in different states.



Changing states of matter is an important part of the water cycle because both **condensation** and **evaporation** both occur within it.

Working Scientifically



Our enquiry focus:

Observing Changes Over Time	Pattern Seeking	Identifying, Grouping & Classifying	Fair Testing	Research
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Skills I will need:

- I will compare and group materials together based on their state.
- I will ask questions about the different states of matter.
- I will observe the difference between states of matter.
- I will observe evaporation over a period of time and investigate the effects of temperature.

