



Year 5 Explanation



What should I already know?

- Include a question as a title
- Include a short introduction
- Stages of the process in chronological order
- Technical language for the topic
- Diagrams used with captions

What will I know by the end of the unit?

- Include a question as a title
- Include a short introduction
- Include detailed information around a specific topic
- Use time conjunctions
- Use technical language
- Include diagrams with
- Structure work so it is easily read by others
- Include a summary
- To be able to include all appropriate requirements from the year 5 banding sheet for writing

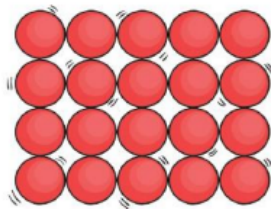
Diagrams/WAGOLL

How Do Materials Change State?

Materials are made of tiny molecules (also known as particles) and can exist in three forms, which we classify as solids, liquids and gases. In scientific terms, these are called the three **states of matter**. Varying the temperature or pressure of a material's surroundings affects its state.

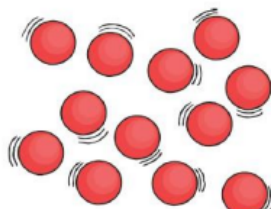
The Three States of Matter

- **Solid**
In a solid, the molecules' positions are quite rigid and they cannot move around much, if at all. As a result, solids (for example, ice) hold their shape.



molecules within a solid

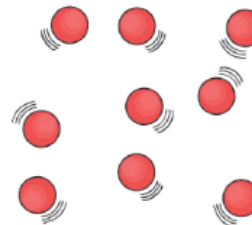
- **Liquid**
A liquid material (such as the water in a tap) has more loosely-packed molecules. Because they have more space, the particles can move around and the material flows to take up the shape of any container.



molecules within a liquid

- **Gas**

A gas's molecules are spaced very widely apart and bounce around freely to occupy the available space. Consequently, they will spread out as far as possible and seem to disappear if they are not trapped in a container.



molecules within a gas

Most materials, in everyday conditions, appear in only one state. However, many can possibly change between these three states according to alterations in their environment. For example, we can manipulate materials into changing states through the processes of heating and cooling.

Changing States

- **Evaporation**
Evaporation refers to the process of a liquid gradually turning into a gas (vapour) at its surface as it is gently warmed by air currents. This is how water from the oceans becomes the water vapour in the air.
- **Condensation**
Condensation is the scientific term for the process of a gas turning into a liquid, which happens when it is cooled. An example of this is when water vapour – the gas form of water – cools and returns to its liquid state. It is possible to see this process if water is boiled in a kettle. As the boiling water vapour from the spout meets cooler air, it condenses and becomes microscopic droplets – steam. If the steam then touches a cold surface such as a mirror, these droplets come together and the water reverts to its liquid state, dripping from the mirror.
- **Boiling**
When a liquid is heated to its boiling point, it turns immediately into a vapour. Each liquid has a different boiling point. Water boils at 100°C. The material nitrogen, which is a naturally occurring gas, boils at almost -200°C! When water boils, it returns from its liquid state into water vapour. Steam, which is what we see above a boiling kettle's spout, is a mixture of water vapour and tiny droplets of water.

Vocabulary

Title	The name of the piece of work.
Explanation text	Tell the reader how something works or happens
Sub-heading	Smaller titles in the piece of writing which gives the reader information about that piece of text.
introduction	Gives the reader a small piece of information about the text.
Casual conjunctions	Introduce a cause for a given action
Time conjunctions	Tell the reader when something is happening
Time Adverbial	A word or phrase functioning as a major clause constituent expressing time
summary	A brief statement about the main points
Paragraph	A distinct section of writing, dealing with one theme/subject
Diagram	a simplified drawing showing the appearance, structure, or workings of something; a schematic representation.
Organisational and presentational devices	Bullet points, headings numbered lists etc. they help make the text more straightforward.

Explanation writing Skills

- Research/gather facts about the topic
- Write in full sentences
- Improve punctuation
- Produce well written explanations