

Year 4 – Autumn Term – 2nd half Title of topic: Magical Elixirs

Topic Focus: The Science of solids, liquids and gasses

This is the knowledge organiser for our topic. It includes all the learning outcomes, key facts and vocabulary. Please share this with your child to help them develop their knowledge and understanding of our topic.

## What is a potion?

Potions are liquids that are said to have healing or magical properties. Before people knew about modern medicines, healing potions, often made from herbs, were thought to cure a range of health

The temperature of a substance can have an effect on its state.

Temperature is measured in degrees centigrade. This can vary over time for materials, depending on the conditions in which they are



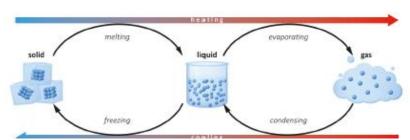
Welcome to the amazing magical world of potions and their properties. Now scientists, beware! There are some powerful and deadly potions out there – dangerous, unpredictable or plain



Matter can exist as a solid, a liquid or a gas. These are called 'states'.

Particle arrangement	Properties	Examples
Solid	Particles are tightly packed together, which means solids hold their shape and can't be squashed.	wood, brick, rock, sand, ice, butter
Liquid	Particles are slightly further apart so liquids can flow from one container to another. Liquids cannot change their volume.	water, milk, oil, honey, lemonade, blood
Gas	Particles are far apart so gases can spread out to fill all the space available. A gas can be squashed to change its volume.	air, oxygen, carbon dioxide, helium, nitrogen, water vapour

Matter can change between the states by being heated or cooled.



## Key vocabulary:

- Anaesthetic A substance that makes someone go to sleep or stop feeling pain.
- Boil When a liquid reaches the temperature at which it becomes a vapour.
- Condense When a gas cools to become a liquid.
- Cooling When a solid, liquid or gas is made colder.
- Evaporation When a liquid is heated, it turns into a gas and evaporates.
- Freeze When a liquid is cooled and becomes solid.
- Gas A non-rigid material that has no fixed shape or volume
- Heating When a solid, liquid or gas is made warmer.
- Liquid A non-rigid material that has no fixed shape but a fixed volume.
- Matter A physical substance that takes up space.
- Melt When a solid becomes a liquid by the process of heating.
- Particles A very small piece of matter.
- Poison Something which when ingested is harmful to a living thing.