

Keywords: Autumn 1

Science

Topic Title: Properties of matter

Introduction to the topic:

Particles can be atoms, molecules or ions. Particles behave differently in solids, liquids and gases. The particle model explains the differences between solids, liquids and gases. Solids, liquids and gases change state when they are heated or cooled. Processes such as evaporation and boiling change the state of substances. Mixtures of substances can be separated into their parts using a variety of techniques.

What lessons will you cover during the topic?

The lessons in this topic include: what is everything made of? Changes of state, pure substances, separating mixtures and chromatography.

Keyword	Definition
Liquid	One of the three states of matter. Liquids, like water or oil, do not have a fixed shape and can flow.
Gas	One of the three states of matter. Gases, like oxygen or helium, do not have a fixed shape and can expand to fill their container.
Solid	One of the three states of matter. The particles in solids are very close together, therefore they cannot usually be compressed or squashed.
Particles	All substances are made of particles. Particles could be atoms, molecules or ions.
Compressed	Another word for squashed. Solids and liquids cannot be easily compressed, but gases can.
Melting	When a solid turns into a liquid as it absorbs energy from the surroundings.
Boiling	When a liquid turns into a gas as it absorbs energy from the surroundings.
Evaporating	When a liquid turns into a gas slowly, at temperatures below the boiling point.
Freezing	If the liquid is cooled, it transfers energy to the surroundings, and turns into a solid.
Condensing	If a gas is cooled, it transfers energy to the surroundings, and turns into a liquid.