Year 5/6 Science: Changing Materials

Morda CE Primary School

Key Learning
Autumn 2 2025

Dissolving occurs when the particles of certain solids mix with the particles of certain liquids.

When a material dissolves, it looks like it disappears. But it has actually just dissolved in the liquid to make a transparent solution.

A solution is formed when a solid dissolves in a liquid.

Not all solids will dissolve, and not all liquids will allow solids to dissolve.

Dissolving doesn't need heat to occur.

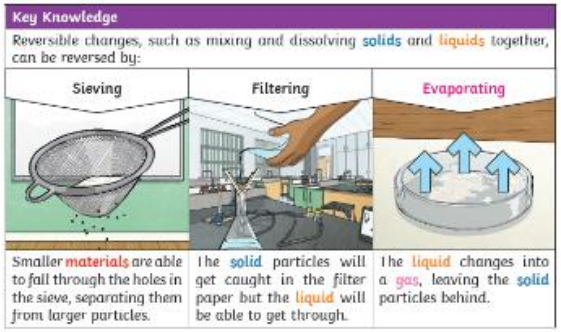
Melting involves only a solid.
In melting, the solid changes into a liquid that is the same material.

Melting needs heat to occur.

Melting, freezing, evaporating, condensing and dissolving are examples of reversible physical changes.

Reactants are the materials that you start off with, before an irreversible chemical change happens.
Products are the materials that are formed in the chemical change.

Key Knowledge



Key Scientific Vocabulary

Key Vocabulary	
conductor	A **conductor** is a material that heat or electricity can easily travel through. Most metals are both thermal **conductors** (they **conduct** heat) and electrical **conductors** (they **conduct** electricity).
insulator	An **insulator** is a material that does not let heat or electricity travel through them. Wood and plastic are both thermal and electrical **insulators**.
transparency	A **transparent** object lets light through so the object can be looked through, for example glass or some plastics.

melting	The process of heating a **solid** until it changes into a **liquid**.
freezing	When a **liquid** cools and turns into a **solid**.
evaporating	When a **liquid** turns into a **gas** or vapour.
condensing	When a **gas**, such as water vapour, cools and turns into a **liquid**.

Enquiry types

Observing over time - when exploring thermal insulation, observe the effects over time of different materials and how well they keep what is inside them cool.

Observe over time - evaporation when trying to separate a salt and water solution.

Observe the rusting of a nail in water and then test in other kinds of liquid.

Fair-testing - Carry out tests to identify properties of materials.

Fair-testing -Which materials are soluble or insoluble.

Sort materials into groups of reversible and irreversible changes.

Common Misconceptions

Solid is another word for hard or opaque.

Solids are hard and cannot break or change shape easily and are often in one piece.

Substances made of very small particles like sugar or sand cannot be solids.

Melting, as a change of state, is the same as dissolving.

Solids dissolved in liquids have vanished and so you cannot get them back.