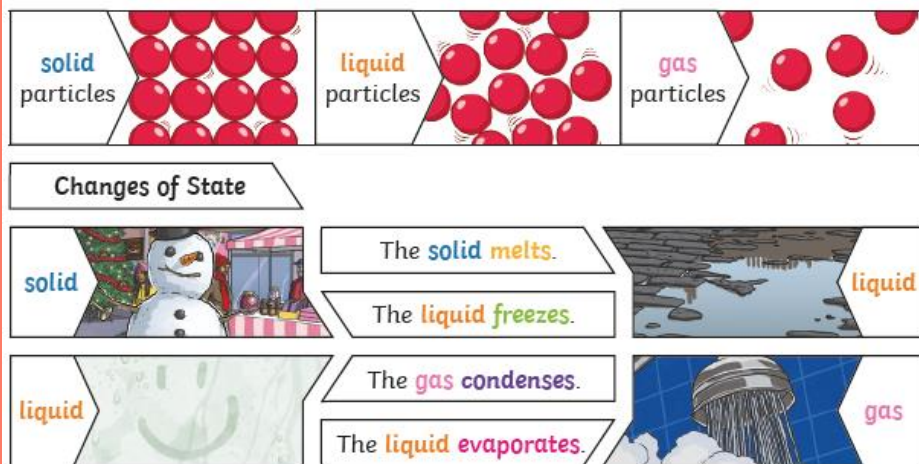


Year 5 Knowledge Organiser- Can I have that again please?

What will I learn?

In this topic we will learn to:

- Understand why some **materials** have **reversible** properties and can be recovered.
- Understand why some **materials** have **irreversible** properties and cannot be recovered.
- Separate solutions and mixtures using sieving, filtering and evaporating.



Previous learning

Y4 where does water come from and where does it go?

You should already know:

- the difference between solids, liquids and gases
- that some materials change state when they are heated or cooled
- the part evaporation and condensation play in the water cycle

Vocabulary Dozen

condensing	When a gas, such as water vapour, cools and turns into a liquid.
dissolving	A process where a soluble material appears to disappear into a liquid forming a solution such as a cube of jelly in hot water.
evaporating	When a liquid, such as water, is heated and turns into a gas or vapour.
freezing	When a liquid cools and turns into a solid
insoluble	A material or substance that doesn't dissolve in liquid such as sand, iron filings, pebbles
irreversible	Irreversible means something which cannot be changed back to its previous state.
material	The matter from which a thing is or can be made.
melting	The process of heating a solid until it changes into a liquid.
mixture	A substance made by mixing other substances together.
reversible	Reversible means something which can be changed back to its previous state.
solution	A liquid in which a substance is dissolved.
soluble	A material or substance that dissolves in liquid such as sugar, salt, aspirin

Useful Weblinks

1. Irreversible changes

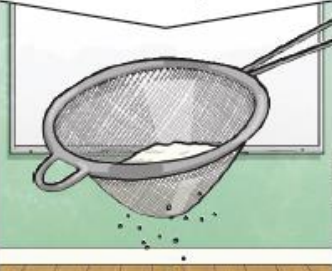
<https://www.bbc.co.uk/bitesize/topics/zcqv4wx/articles/z9brcwx>



[changing materials](#)



Reversible changes, such as mixing and dissolving **solids** and **liquids** together, can be reversed by:

Sieving	Filtering	Evaporating
		
Smaller materials are able to fall through the holes in the sieve, separating them from larger particles.	The solid particles will get caught in the filter paper but the liquid will be able to get through.	The liquid changes into a gas , leaving the solid particles behind.



Irreversible changes often result in a new product being made from the old **materials** (reactants). For example, burning wood produces ash. Mixing vinegar and milk produces casein plastic.



Key Knowledge

Which substances dissolve and can they be recovered?

- A solution is made when a substance dissolves in a liquid. Substances that dissolve are known as soluble. Evaporation can be used to recover a substance from a solution. E.g. to recover salt from a salt solution.
- Substances that won't dissolve are known as insoluble. You can recover an insoluble substance from a mixture by filtering or sieving. E.g. sand and water. The sand will not dissolve and can be filtered out.

How can mixtures of soluble and insoluble substances be separated?

- You can separate mixtures using sieving, filtering and evaporating.

What are irreversible changes?

- Irreversible changes in the state of a material often result in a new product being produced e.g. popcorn from sweetcorn kernels. They cannot be changed back to their previous state. E.g. you cannot un-boil an egg, or un-toast bread.

What are reversible changes?

- Reversible changes in the state of a material mean that it can be changed back to its previous state. E.g. water can be frozen and melted repeatedly to change between its solid and liquid states.