

# Properties and Changes of Materials Year 5 Term 5

## What I should already know:

- That materials can be solids, liquids or gases
- That materials change state when they are heated or cooled
- That changes can be reversible
- That chemical reactions happen at different speeds
- How to measure the temperature at which changes occur

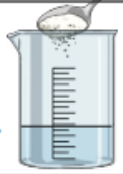
## What I will learn:

- That everyday materials can be grouped on the basis of their properties
- That some materials will dissolve in liquid to form a solution.
- How to recover a substance from a solution.
- How solids, liquids and gases might be separated from within a mixture, including through filtering, sieving and evaporating.
- That dissolving, mixing and changes of state are reversible changes.
- That some changes, result in the formation of new materials and that this kind of change is not usually reversible.

### Dissolving

A solution is made when **solid** particles are mixed with **liquid** particles. **Materials** that will dissolve are known as soluble. **Materials** that won't dissolve are known as insoluble. A suspension is when the particles don't dissolve.

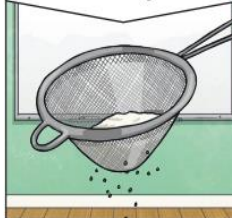
Sugar is a soluble **material**.



Sand is an insoluble **material**.



### Sieving



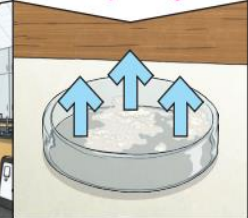
Smaller **materials** are able to fall through the holes in the sieve, separating them from larger particles.

### Filtering

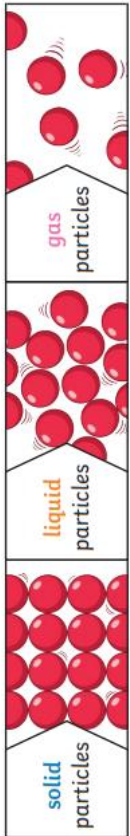


The **solid** particles will get caught in the filter paper but the **liquid** will be able to get through.

### Evaporating



The **liquid** changes into a **gas**, leaving the **solid** particles behind.



attract	chemical	conductor	dissolve	evaporate	filter	flexible
gas	hard	heat	insoluble	insulator	irreversible	liquid
magnet	magnetic	material	mixture	particles	permeable	physical
product	property	reactant	reaction	reversible	separate	sieve
solid	soluble	solution	suspension	thermal	transparent	variable