

# Year 5/6 Changes of Materials Knowledge Organiser



## What do I know ?

- I can identify magnetic materials. (Y3)
- I can compare and group materials together, according to whether they are solids, liquids or gases. (Y4)
- I know that some materials change state when they are heated or cooled. (Y4)
- I can identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature. (Y4)



## Gems of knowledge

- I will learn that some materials dissolve in a liquid to form a solution. Others are insoluble and form sediment.
- I will learn that mixtures can be separated by filtering, sieving and evaporation.
- I will learn that some changes to materials are reversible, but some changes result in the formation of new materials and these are not reversible.



## How will I work like a Scientist?

- I will plan different types of scientific enquiry to answer a variety of questions.
- I will recognise and control variables where necessary (Y5- with support).
- I will select all equipment needed (Y5- with support).
- I will use a range of scientific equipment to take measurements with increasing accuracy.
- I will identify when to take repeat readings (Y5- begin to understand).
- I will take repeat readings.
- I will record data and results of increasing complexity e.g. line graphs.
- I will report and present findings from enquiries, including conclusions and suggest causal relationships (Y5- with prompting).
- I will report and present findings from enquiries in oral and written forms.
- I will identify scientific evidence that has been used to support or challenge arguments.
- I will use test results to suggest further comparative or fair tests (Y6- make predictions)
- Y6 only- I will report and present findings from enquiries, including explanations of the validity of results.

Vocabulary

Meaning

Change of state

A physical change in matter. E.g. solid changing to a liquid.

Dissolve

When a solid (solute) is mixed into a liquid (solvent) creating a solution.

Solution

Created by dissolving materials in a liquid.

Soluble

Describes a substance that dissolves in water.

Insoluble

Describes a substance that does not dissolve in water.

Reversible change

When materials can be changed back to how they were before the reaction took place.

Irreversible change

When materials cannot be changed back to how they were before the reaction took place. A new material is created.

## Significant Scientist



**Ruth Benerito** is an American chemist who created a new material. She invented 'wrinkle free' cotton fabric which helped the cotton industry stay in business.

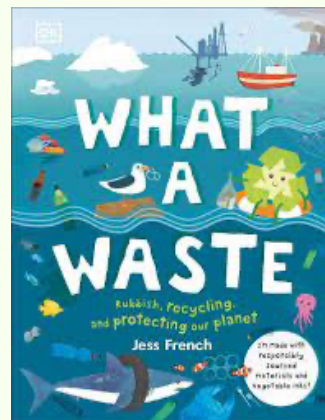


Careers in Chemistry



An **analytical chemist** analyses substances and determines their chemical composition. They may analyse interactions between drugs or the chemical composition of processed and manufactured food products.

## Read me!



What A Waste by Jess French.

Kensuke's Kingdom by Michael Morpurgo.

