



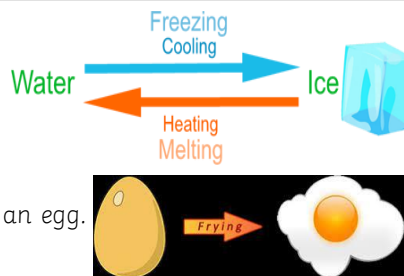
## Key Concepts

## Key Vocabulary

What are reversible & irreversible changes?

• A reversible change is a change which can be reversed to produce the original ingredients or components e.g. the heating or freezing of water.

• An irreversible change is a change where you cannot get the original components back e.g. frying an egg. There is no way to put the egg back into its shell.

How to separate materials?

Some materials can be separated after they have been mixed based on their properties - this is called a reversible change.

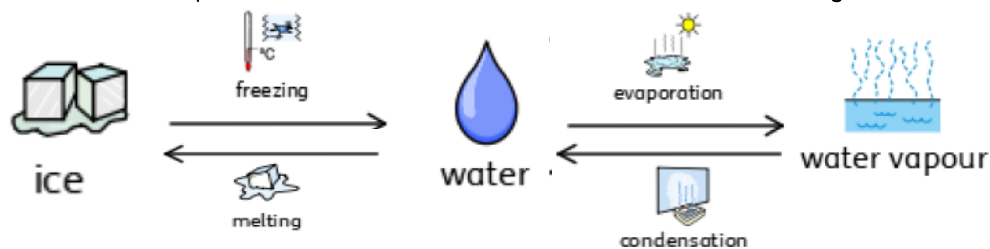
There are many ways to separating materials:

- Using magnets
- Using filters
- Using a sieve
- Using evaporation.



When a mixture cannot be separated, this is an irreversible change.

Melting and burning is one such example.

What role does evaporation and condensation have within reversible changes?

condensation	Small drops of water which form when water vapour or steam touches a cold surface such as a window.
evaporation	To turn from liquid into gas; pass away in the form of vapour
filtering	A device used to remove dirt or other solids from liquids or gases. A filter can be made of paper, charcoal or other material with tiny holes in it.
gas	a form of matter that is neither liquid nor solid. A gas rapidly spreads out when it is warmed and contracts when it is cooled.
irreversible	impossible to reverse, turn back, or change
magnetic	having to do with magnets and the way they work
melting	to change from a solid to a liquid state through heat or pressure
permeable	of a substance, being such that gas or liquid can pass through it
rate	the speed with which something happens
reversible	able to turn or change back
soluble	able to be dissolved.
solution	a mixture that contains two or more substances combined evenly
thermal	relating to or caused by heat or by changes in temperature

## Working Scientifically Skills

## Famous Scientists

???	Using Scientific knowledge to ask questions.		Planning different types of enquiry, controlling variables where necessary.
	Using scientific language to draw conclusions.		Recording data, taking repeat measurements where necessary and calculating a mean.
	Recognising when to use other sources to answer questions, separating opinion from fact.		

	Alfred Nobel (1833 – 1896) was a Swedish chemist, engineer, inventor, businessman, and philanthropist. He held 355 different patents, dynamite being the most famous. The Nobel Prizes became an extension and a fulfilment of his lifetime interests.
	Antoine-Laurent de Lavoisier (1743 – 1794) Lavoisier is most noted for his discovery of the role oxygen plays in combustion. He recognized and named oxygen (1778) and hydrogen (1783)