

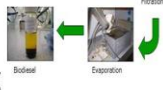
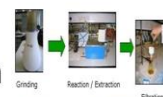


Science – Properties and changes of materials

YEAR 5

What are the different ways of separating mixtures?

- Magnetism
- Hand separation
- Filtration
- Sifting or sieving
- Extraction and evaporation
- Chromatography



Vocabulary	Definition
Hard	Difficult to scratch, like the head of a hammer.
Soft	Easy to shape, like fabric.
Soluble	Can be dissolved, like coffee granules.
Insoluble	Cannot be dissolved.
Transparent	See through, like glass
Opaque	Not see through, like a wooden door.
Electrical Conductor	Lets electricity pass through easily, like copper wire.
Electrical Insulator	Do not let electricity flow through easily, like plastic or rubber.
Thermal Conductor	Lets heat pass through easily, like a metal kettle.
Thermal Insulator	Does not let heat pass through easily, like a wood pan handle.
Magnetic	Is attracted to a magnet, like a steel spoon.
Non Magnetic	Is not attracted to a magnet, like a wooden spoon.

A mixture	Where substances are mixed together, but dissolving hasn't taken place. For example, mixing, cucumber slices, egg slices and tomato slices to make a salad.
A solution	Some substances dissolve in a liquid. When this happens the liquid is called a solution. For example, when gravy granules dissolve in water, this is a solution.
We can separate a mixture by sieving and/or filtering	<ul style="list-style-type: none"> • Sieving - sorting out the big bits from the small bits, e.g. stones from soil. • Filtering - separating solid bits from a liquid, e.g. sand from sand and water.
We can separate a solution by evaporation	Evaporation - A liquid evaporates into a gas when it is heated. This removes the liquid and leaves the substance behind.

Reversible and irreversible changes

Reversible changes	A change that doesn't last forever. For example, water can turn to ice when frozen, but can be turned back to water by heating it.
Irreversible changes	Lasts forever and is usually caused by heat. <ul style="list-style-type: none"> • E.g. Eggs, flour, butter and sugar heated to make a cake. The original ingredients can't be recovered.

Vocabulary	Definition
Dissolved	To become incorporated into a liquid so as to form a solution.
Separating	The action of moving things apart.
Evaporation	When a liquid turns to a gas due to an increase in temperature.
Properties	A specific quality of something.