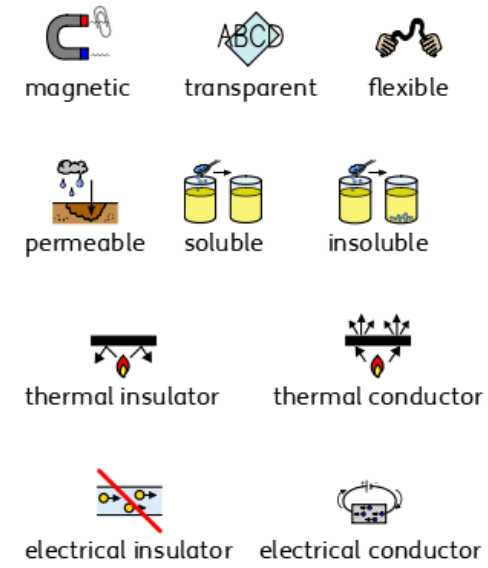
Darlinghurst Academy Year 5 Autumn 2: Mysterious Materials – What is it made of?

Vocabulary

condensation	small drops of water which form when water vapour or steam touches a cold surface, such as a window
dissolves	when a substance is mixed with a liquid and the substance disappears
evaporation	to turn from liquid into gas; pass away in the form of vapour.
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.
insoluble	impossible to dissolve, esp. in a given liquid.
irreversible	impossible to reverse, turn back, or change.
liquid	in a form that flows easily and is neither a solid nor a gas.
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
properties	the ways in which an object behaves
reversible	able to turn or change back
solid	having a firm shape or form that can be measured in length, width, and height; not like a liquid or a gas
soluble	able to be dissolved.
solution	a mixture that contains two or more substances combined evenly

Grouping materials



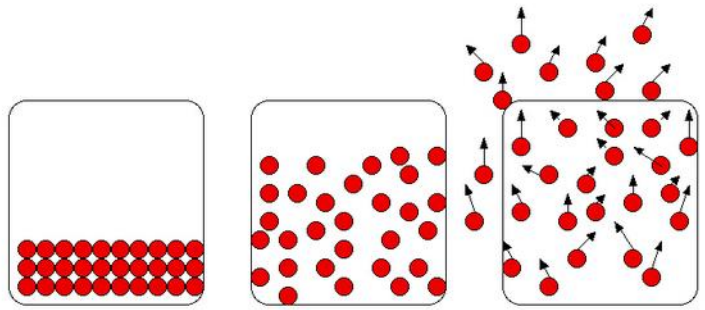
Can materials be separated after they have been mixed?

- Some materials can be separated after they have been mixed based on their properties - this is called a reversible change.
- Some methods of separation include the use of a magnet, a filter (for insoluble materials), a sieve (based on the size of the solids) and evaporation.
- When a mixture cannot be separated back into the original components, this is called an irreversible change. Examples of this include when materials burn or mixing bicarbonate of soda with vinegar.

What is dissolving?

- When the particles of a solid mix with the particles of a liquid, this is called dissolving.
- The result is a solution.
- Materials that dissolve are soluble.
- Materials that do not dissolve are insoluble.

States of Matter



Solid: The state of matter with a definite shape and volume. The molecules of a solid are very close.

Liquid: The state of matter with a definite volume but not a definite shape. The molecules of a liquid are free flowing and farther apart then those of a solid.

Gas: The state of matter that does not have a definite shape or volume. It is more free flowing than a liquid and its molecules are very, very far apart.