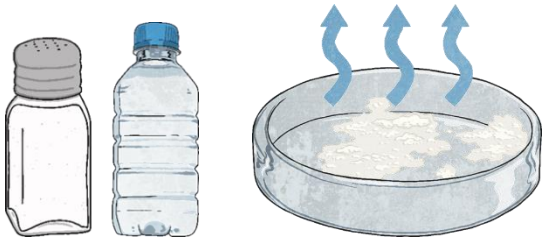
Science – Materials – Year 5 – Autumn 2

Vocabulary Top Ten:

dissolve	When a solid material mixes with a liquid and is no longer visible
evaporation	changing state from liquid to gas caused by heat
insoluble	Will not dissolve in a liquid e.g. sand
irreversible change	A permanent change that cannot be reversed e.g. baking a cake
mixture	a substance made by mixing other substances together
properties	a quality or characteristic
reversible change	A change that can be reversed e.g. freezing water
soluble	Will dissolve in a liquid e.g. sugar
solution	When a substance dissolves in a liquid it becomes a solution
substance	A solid, liquid or gas

Solutions

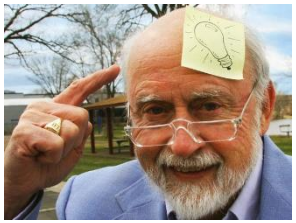
Dissolving salt in water will make a solution.



You can separate the salt from the water again by boiling the solution. The water will evaporate until it is all gone and the salt will be left behind.

Spencer Silver

Spencer Silver is named on over 20 US patents. His most significant invention was not an immediate success. In 1968, Silver developed a high-quality but low-tack adhesive.



Spencer Silver and Arthur Fry (inventor and scientist) developed the post it note.

Key Facts:

Properties of materials can include:

- absorbent
- electrical conductors / insulators
- flexible
- hard / soft
- magnetic
- opaque / translucent / transparent
- rough / smooth
- thermal conductors / insulators
- waterproof

Mixtures can be separated by methods like sieving, filtering and evaporating. A mixture made of solid particles of different sizes, for example sand and gravel, can be separated by sieving. You can separate a mixture of sand and water by passing it through a piece of filter paper.

Reversible Change

- a change that can be undone or reversed
- you can get back the substances you started the reaction with
- it might change how a material looks or feels, but it doesn't create new materials

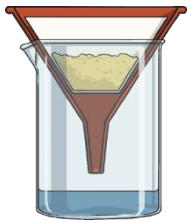
Irreversible Change

- new materials are always formed
- it is permanent for example, you cannot change a cake back into its ingredients again
- burning is an example of an irreversible change, when you burn wood you get ash and smoke





separating raisins and flour



separating sand and water





separating rice and paper clips