



## Can I get my material back?



Lesson 1—Investigation: Are all materials the same?

Different materials have different features, or properties, which make them suitable for different uses.



Lesson 3—Investigation: How can we get our solid back?

If a substance has dissolved you can't recover it from filtering or sieving.



Lesson 4- Investigation: How can we get our solid back?

Can we recover the salt and sugar from its solution?  
Applying past knowledge of evaporation from Year 4.



Lesson 2—Investigation: Investigation: Do all materials dissolve in a liquid?

Not all solids will dissolve, and not all liquids will allow solids to dissolve. Substances like sugar and salt dissolve in water to make transparent solutions. Substances that do not dissolve in water are called insoluble substances.



Lesson 5- Investigation:

How can we get our solid back?

Can you plan an investigation to recover a mixture of paper clips, salt, sand and water.

All these processes are reversible.

Flexible	The ability of a material to deform elastically and return to its
Absorbent	The ability of a material to soak up liquid
Solubility	The ability of a solid, liquid, or gas substance to dissolve in solvent and form a solution
Electrical Conductivity	A measurement that determines a material's ability to transport an electric charge
Thermal Conductivity	The ability of a material to conduct heat.
Soluble/ insoluble	If a substance is soluble, it can be dissolved in liquid. If not, it is insoluble
Residue	A small amount of something that remains after the main part has gone

Reversible changes, such as mixing and dissolving solids and liquids together, can be reversed by:

**Sieving**

Smaller materials are able to fall through the holes in the sieve, separating them from larger particles.

**Filtering**

The solid particles will get caught in the filter paper but the liquid will be able to get through.

**Evaporating**

The liquid changes into a gas, leaving the solid particles behind.

Dissolving  
A solution is made when solid particles are mixed with liquid particles. Materials that will dissolve are known as soluble. Materials that won't dissolve are known as insoluble. A suspension is when the particles don't dissolve.

Sugar is a soluble material.

Sand is an insoluble material.