

Vocabulary

dissolving when a solid is broken down within a liquid and is no longer visible to the naked eye

solution a liquid that has dissolved material within it

mixture a substance made by mixing other substances together that do not dissolve

soluble a substance that can dissolve into another

insoluble a substance that does not dissolve into another

saturated when no more material can be dissolved in a liquid

filtering the process by which a device is used to separate small particles in a mixture. Usually involves filter paper.

sieving the process by which a device is used to separate larger particles in a mixture. This can involve a sieve or a colander.

Physics

Science Y4: Dissolving and separating

Key diagrams and knowledge

When a solid **dissolves** in a liquid, it means it has broken down into pieces that are so small that they are not visible to the naked eye anymore. Some solids dissolve while others do not. When a solid dissolves in a liquid, a **solution** is created. When a solid does not dissolve in a liquid, a **mixture** is created.

Solids dissolve at different rates. The factors that affect the rate of dissolving include the **temperature** of the liquid, the **grain size** of the solid and the **amount the solution is stirred**.

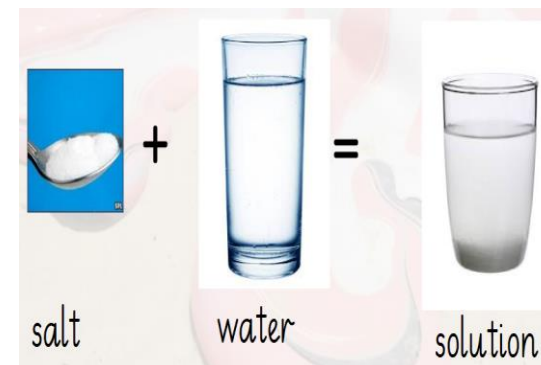
Substances that dissolve in a liquid are known as **soluble** substances and those that do not dissolve in a liquid are known as **insoluble**. When no more solid can be dissolved into a liquid, the solution is said to have become **saturated**.

A solution can be separated through the process of **evaporation**. Mixtures can be separated through a range of processes, Such as **filtering**, **sieving** and using a **magnet**.



Scientists

Melitta Bentz,
inventor of the
coffee filter



Links to prior learning and next steps:

Y5: Changing materials

Y6: Reversible and irreversible changes

Links to other subjects:

Maths: statistics – line graphs