

Science • Properties and Changes of Materials



Crucial Knowledge

- Materials can be sorted in a variety of ways based on their properties
- The various properties of different materials make them suitable for a given function
- Materials can change state when temperature rises
- Some materials dissolve in a liquid and are called a solute, the liquid is called a solvent and the result is called a solution
- A material is described as soluble when it dissolves in a solvent. (e.g. sugar in water); or insoluble if it does not (e.g. sand in water)
- When a solvent is evaporated from a solution, the original solute is left behind. Eg. Water and salt.
- A reversible change is one that can be reversed such as; mixing, dissolving and changes of state where no chemical reaction takes
- An irreversible change is one that cannot be reversed and that examples of this often involve a chemical change where a new material is made
- Filtering allows solids and liquids to be separated.
- Sieving allows solids made up of different sizes parts to be separated



Key Vocabulary

reversible: a change that can be undone or reversed. Opposite- **irreversible**

soluble: something that can be dissolved. Opposite- **insoluble**

solute: a substance that can dissolve.

solvent: a liquid that a solute can dissolve in.

solution: what is made when a solute dissolves in a solvent.

saturation: the level to which something is dissolved (or absorbed).

crystallization: the process by which a solid is formed.

thermal: relating to heat.

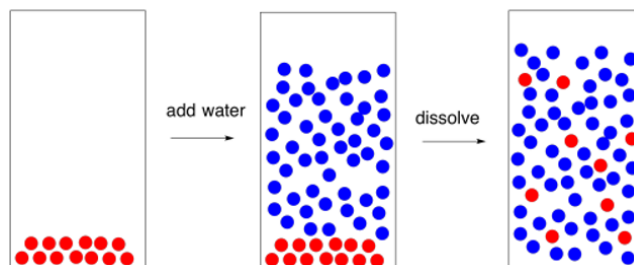
chemistry concerning the tiny particles (atoms)

(chemical): that everything is made of and how they change.



Diagrams / Images

Sugar particles dissolving in water



Reversible and irreversible changes



Important People



Walter Lincoln Hawkins
Polymer Chemist known for inventing plastic coating for telephone wires.



Ruth Benerito
Famous for inventing wrinkle free cotton.

We Are Building Our Knowledge From

- Materials (Y2) Electricity (Y4)

This will help when we learn about

- Changes of Materials (Y5)