

Science- Materials (Properties) - Year 5

Prior Learning:

Y1 - know what a material is made from and its properties.

Y2 - compare suitability of materials.
Change solids shapes.

Y4 - solid, liquid and gases. Observe changes in state. Understand the water cycle.

Key vocabulary

Filter	A device used to remove solids from liquids/gases
Evaporation	Turn from a liquid to a gas.
Solution	The process in which one substance spreads evenly though another.
Transparent	Letting light pass through and give a clear view to the other side.
Flexible	Easily bent without breaking
Magnetic	A property which is attracted to magnets
Thermal insulator	A material used to reduce heat loss
Sieving	A device used to separate solids of different sizes

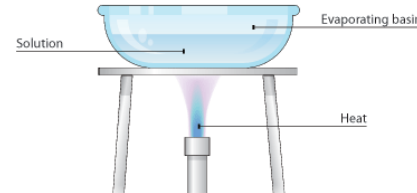


Ruth Benerito
(1916-2013)

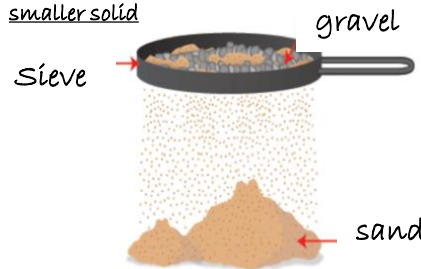
Saved the cotton industry with her discovery of a method of creating wrinkle-resistant cotton.



Evaporation - the process needed to get the solid back from a solution

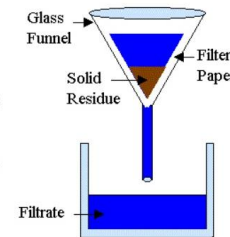


Separates a large solid from a smaller solid

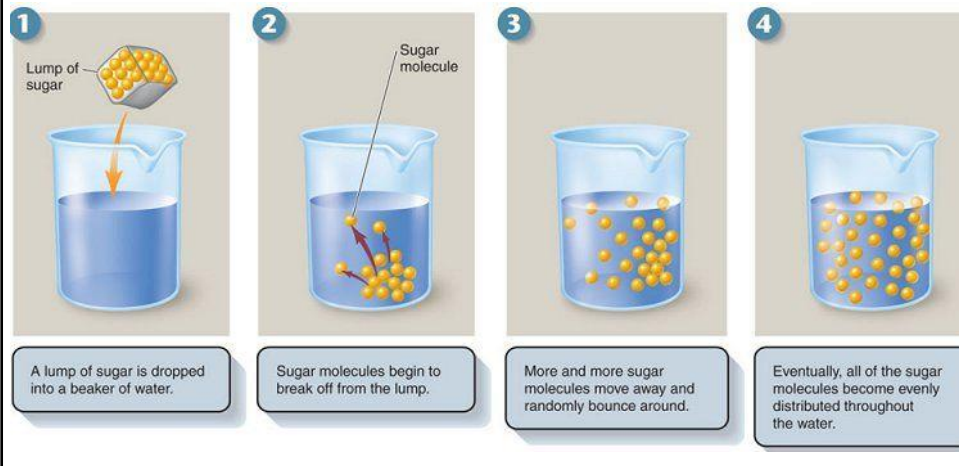


Filtration

Filtration is when you use filter paper to separate liquids and solids. Filtering is also another way to separate substances in a mixture. Filtration is used to separate liquids and solids that don't dissolve in the liquids.



Dissolving - mix a solute with a solvent to create a solution



Key Learning

- Materials have different uses depending on their properties (hardness, transparency, electrical and thermal conductivity, attraction to magnets) and state (liquid, solid, gas).
- Certain material properties make them suitable for particular functions.
- Some materials will dissolve in a liquid and form a solution while others are insoluble and form sediment.
- Mixtures can be separated by filtering, sieving and evaporation.
- Some changes to materials such as dissolving, mixing and changes of state are reversible.

Can I answer:

How can I get the sugar back from a cup of tea?

In what way is tin foil and cling film similar and different?

How could a takeaway keep warm on the journey home?

How can I separate flour and raisins?

How could I take sand out of a sand and water mixture?