

Year 5

Science

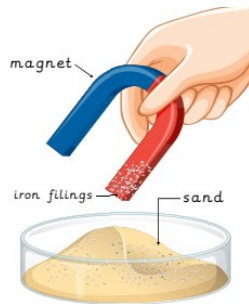
Mixtures and separation

Mixtures

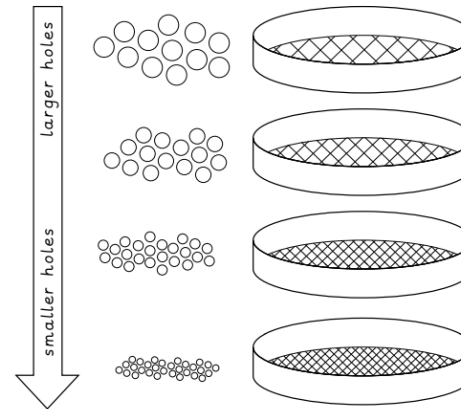
Sieving

Filtering

A mixture forms when two or more substances are mixed and remain present. The different parts of a mixture can be separated. Some examples are air, sand, gunpowder, fizzy drinks, soil and seawater. Magnets can be used to separate mixtures of solids.



Sieving is used to separate mixtures of solids which are different sizes, such as soil. A series of sieves with increasingly small holes separate out the particles from largest to smallest.



Filtering is used to separate mixtures containing a liquid and undissolved solids, such as sand and water. The mixture passes through a filter or filter paper. The gaps in the filter are small enough to let the liquid through but not the solid.

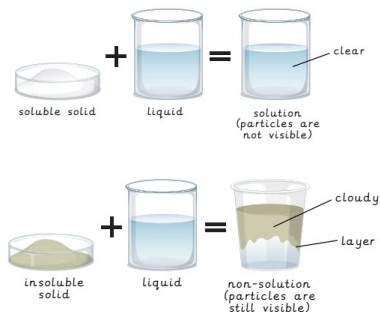


Solutions

Dissolving

Evaporating

Some substances can dissolve in a liquid to make a solution. Dissolving is when a substance spreads evenly through a liquid.



Factors affecting dissolving:

- Stirring decreases the time taken to dissolve
- Smaller pieces of the soluble solid will dissolve faster than larger pieces
- If the liquid is warmer the solid will dissolve faster
- Some solids are more soluble than others
- If a solid will not dissolve in water it may dissolve in another liquid, such as alcohol

Evaporation separates solution. The solution is heated until the liquid evaporates. The dissolved substance will crystallise as the liquid evaporates. Salt flats form because of evaporation.

