

Matter

2. Separating mixtures

CONCEPT 2

SEPARATING MIXTURES

NOTES

It is usually easier to **separate** the chemicals in a **mixture** than it is to separate the chemicals bonded together in a compound.

Mixtures can be separated into their component parts using **physical processes** such as **sieving** or **filtering** and **boiling** or **condensing**.

Gravel and rocks can be removed from sand by **sieving**.

This separation depends on the **size of holes** in the sieve and the **size of the particles** in the mixture. Particles larger than the holes will not pass through and will be kept in the sieve. Particles smaller than the holes in the sieve will pass through.

If a solid material has been mixed with water but has not dissolved the solid can be separated by **filtering**. Substance that do not dissolve in a liquid are described as **insoluble**.

Filtration separates an insoluble solid from a liquid.

Filters are made from paper or cloth with very small holes which are difficult to see without a microscope.

Filters can be used to remove the solids when making coffee.

The solid trapped by the filter paper is called the **residue**.

The liquid that passes through the filter paper is called the **filtrate**.

