



What we might already know:

To identify and compare the suitability of a variety of everyday materials (Y1&2)

The difference between solid, liquids and gases (Y4)

What is a solution?

Key Knowledge:

Different materials are suitable for different jobs because of their **qualities** and **properties**.

How could you describe different materials?



- hard
- soft
- durable
- flexible
- transparent
- absorbent
- waterproof
- magnetic
- translucent
- opaque



Identifying, Classifying and Grouping

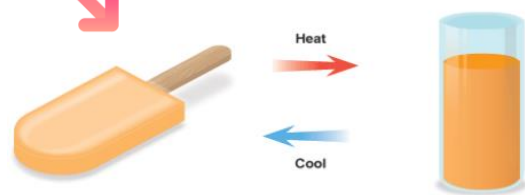
Irreversible changes are when you cannot get the original materials back again.

Heating and **chemical reactions** can both cause irreversible changes.

For example: when a piece of wood is burned to form ash. It cannot be made wood again.

Reversible changes are when you can get the original materials back.

For example: when ice melts to form water. It could be frozen back to ice again.



Can all changes be reversed?

Pattern Seeking

A **solution** is made when a material **dissolves** in a liquid.

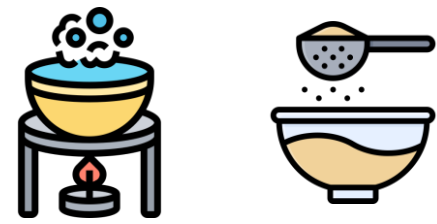
Sugar and salt are **soluble** materials.

An **insoluble** material does not dissolve in liquid, such as sand.

Comparative and Fair Testing



Can you identify the best methods to separate mixtures?



- evaporation** – used for separating a soluble solid and a liquid
- sieving** – used for separating two solids
- magnets** – used for separating magnetic and non-magnetic materials
- filtration** – used for separating a liquid and a solid

