

Materials

I can explain how mixtures can be separated through filtering, sieving and evaporating

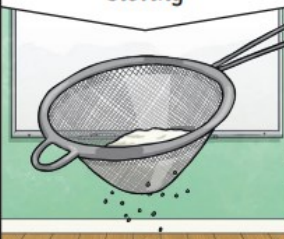


I can explain that some irreversible changes form new materials



Irreversible changes often result in a new product being made from the old **materials** (reactants). For example, burning wood produces ash. Mixing vinegar and milk produces casein plastic.




Reversible changes, such as mixing and dissolving **solids** and **liquids** together, can be reversed by:


| Sieving | Filtering | Evaporating |
|--|---|--|
|  |  |  |
| Smaller materials are able to fall through the holes in the sieve, separating them from larger particles. | The solid particles will get caught in the filter paper but the liquid will be able to get through. | The liquid changes into a gas , leaving the solid particles behind. |

Dissolving
A solution is made when **solid** particles are mixed with **liquid** particles. **Materials** that will dissolve are known as soluble. **Materials** that won't dissolve are known as insoluble. A suspension is when the particles don't dissolve.

Sugar is a soluble **material**.



Sand is an insoluble **material**.



| Key Words | Meaning |
|--------------|---|
| Conduct | To have the quality of transmitting something (as light, heat, sound, or electricity) |
| Insulate | creating a barrier between the hot and the cold object that reduces heat transfer |
| Thermal | Heat- a thermal conductor will conduct heat |
| Solids | Solids hold their shape |
| Liquids | Liquids take the shape of the container |
| Gases | Gas particles move around freely |
| Dissolve | When a substance dissolves it mixes with water |
| Solution | A solution is formed when a solid is dissolved in a liquid |
| Substance | that of which a thing consists |
| Reversible | Can be changed back to how they were before |
| Irreversible | Can't be changed back to how they were before |