



| Key People/Scientists | |
|---|---|
|  | <p>Spencer Silver (1941-2019) American chemist who specialised in adhesives. He invented the sticky glue on post-it-notes.</p> |
|  | <p>Ruth Benerito (1916-2013) American chemist and inventor, who invented wrinkle free cotton.</p> |
|  | <p>Jaime Garcia (1987-) American scientist who invented a new plastic which is entirely recyclable</p> |
|  | <p>Sir Humphry Davy (1778-1829) A British chemist and inventor. Discovered how to separate gases.</p> |

| Key Questions | |
|--|--|
| What is the difference between melting and dissolving? | Melting involves only one substance while dissolving involves at least two substances. Melting takes place at a fixed temperature, but not dissolving. |
| What is a vacuum? | A space with no particles - not a solid, liquid nor gas. |
| Is sand a liquid? | Despite taking the shape of a container, sand is actually a solid because it is made up of individual tiny solids. |
| Is plasticine a liquid? | A solid can change its shape if a force acts on it. Plasticine changes its shape when it is moulded (a force acted on it) so it's therefore a solid. |

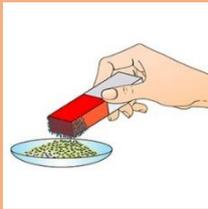
| Misconceptions/Key Facts |
|--|
| <p>Misconception: Confusion about hardness and strength.</p> <p>Fact: In science, hardness refers to the ability of a material to withstand scratching and strength refers to the ability of a material to support a heavy load without breaking or tearing.</p> |

Diagrams/Visual Aids

Filtration



Magnetisation



Evaporation



| Key Vocabulary | |
|----------------------------|---|
| conductor | A material or device that conducts or transmits heat or electricity. |
| dissolve | When a solid comes incorporated or part of a liquid. |
| evaporating | The process of using heat to turn liquid into gas. |
| filtration | One process of separating small particles from a liquid. |
| insulator | A material that does not readily allow the passage of heat or electricity. |
| irreversible change | When the properties of a material change and can never be changed back such as burning, cooking or rusting. |
| reversible change | When the properties of a material change and can be changed back such as dissolving, evaporation and melting. |
| separate | To unjoin a solution, to regain the original matter. eg sieving, evaporation and filtration. |
| solubility | The ability to be dissolved, especially in water. |
| solution | A liquid which has a solid dissolved in it |