**How can materials be compared and classified?**

Different materials are used for particular jobs based on their properties. For example, glass is used for windows because it is hard and transparent. Oven gloves are made from a thermal insulator to keep the heat from burning your hand.

A group of red balls

AI-generated content may be incorrect.

**Properties of materials include:** magnetism, electrical conductivity, hardness, thermal conductivity, solubility and transparency

**Vocabulary**

|  |  |
| --- | --- |
| crystallisation | to change into or cause to become crystals |
| dissolve | to mix completely with liquid into a clear  (but not necessarily transparent) state |
| filter | a device with tiny holes used to remove solids from  liquids or gases. |
| irreversible | impossible to change back to a previous state |
| saturation | the condition of being filled, soaked, or unable to  absorb further |
| solution | a mixture that contains two or more unlike  substances combined evenly |
| solvent | able to dissolve another substance |
| soluble | Materials that can fully dissolve into a liquid |

Diagram, radar chart

Description automatically generated

**How can a substance be recovered from a solution?**

By evaporating water from the solution, the substance will be left behind as it has a higher boiling point than water.

**How can mixtures be separated?**

They can be spearated through a variety of ways including; evaporation, sieving, magnetism and filtering.

A picture containing icon

Description automatically generated

A picture containing umbrella, accessory

Description automatically generated

**Can you explain, based on evidence from fair testing, the particular use of everyday objects including metals, wood and plastics?**

**How can we demonstrate an irreversible change?**

Some substances act together to form new ones which can not be reversed. Slime is made by adding bicarbonate of soda to eye wash that bind together.

**Which materials can dissolve in a liquid to make a solution?**

Some materials can be mixed completely into a liquid to make a clear (but not necessarily transparent) state. Sugar, salt and coffee are three good examples of this.

**SCIENCE**

**KNOWLEDGE ORGANISER**

**Year 5/6 Changes of Materials**