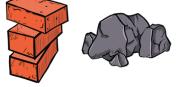


## Key Facts

### What I should already know

Compare and group materials together, according to whether they are solids, liquids or gases.

| Solid  | Liquid  | Gas   |
|--|---|---|
| <ul style="list-style-type: none"> <li>stay in one place</li> <li>keep their shape</li> <li>do not flow</li> <li>always take up the same amount of space</li> <li>do not spread out</li> <li>can be cut or shaped</li> </ul>  | <ul style="list-style-type: none"> <li>can flow or be poured</li> <li>not easy to hold</li> <li>change their shape to fit the container they are in</li> <li>take up the same amount of space</li> <li>volume stays the same</li> </ul>  | <ul style="list-style-type: none"> <li>often invisible</li> <li>do not keep shape</li> <li>do not take up the same amount of space</li> <li>can change shape and volume</li> <li>can be squashed</li> </ul>  |

### Materials

All materials exist in 3 states

Materials can be compared and grouped together on the basis of their properties including:

- Hardness – how hard or soft a material is
- Solubility – whether a material can dissolve
- Transparency – whether it allows light to pass through
- Conductivity (electrical or thermal) – whether it allows heat or electricity to carry through
- Magnetism – whether it can attract to magnets

Materials can be natural or manufactured.

| Natural   | Manufactured   |
|---|--|
| <p>A natural material is a product that comes from plants, animals, or the ground</p>  | <p>A manufactured material is made from natural materials using chemical processes</p>  |

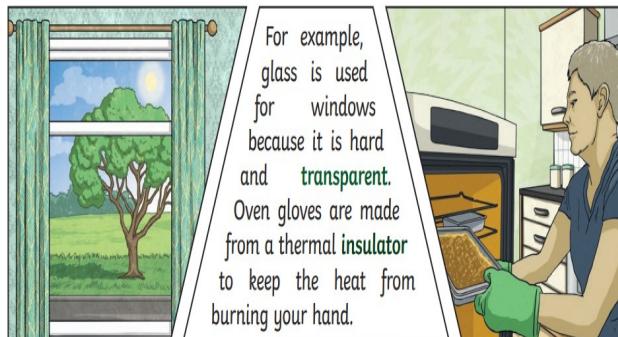


## Year 5 Science

### Properties of Materials

### Science strand: Chemistry

Different **materials** are used for particular jobs based on their properties: electrical **conductivity**, flexibility, hardness, **insulators**, magnetism, solubility, thermal **conductivity**, transparency.



## Vocabulary

| Word             | Definition   |
|------------------|--|
| Conductor        | A material that allows heat or electricity to pass through easily.                     |
| Insulator        | A material that does not allow heat or electricity to pass through easily              |
| Transparent      | Able to see through it.  |
| Hardness         | The quality of being hard.   |
| Insoluble        | Incapable of being dissolved.  |
| Comparative test | A test that <i>requires you to test and compare different materials or objects</i>     |
| Property         | <b>The qualities which a material possesses which may suit it to specific purposes</b> |
| Opaque           | An object that does not allow light to pass through it.                                |
| Hardness         | <i>A measure of how resistant solid matter is to permanent shape change .</i>          |
| Liquid           | a form of matter that flows easily and is neither a solid nor a gas.                   |
| Solid            | Solids are objects that keep their own shape and do not flow in a given temperature.   |