

# St. Mary's Catholic Primary School



## Subject: Science

Topic: Properties of materials

Year: 5

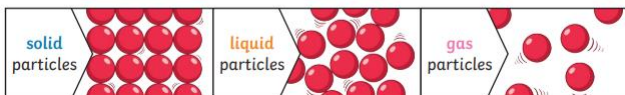
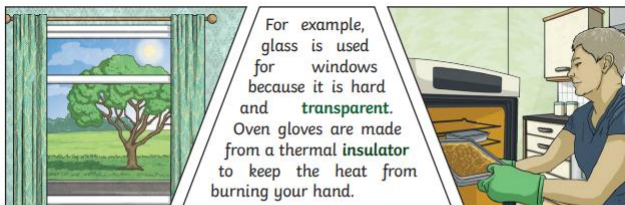
Strand: Chemistry

### What should I already know?

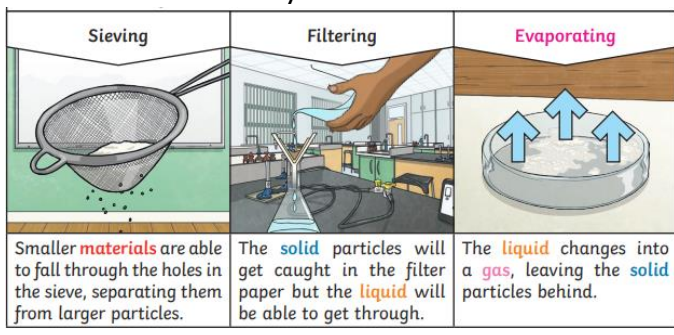
- Materials are what objects are made from
- I can use language to describe the properties of different materials
- I am able to carry out simple investigations to find out what materials are best for certain uses. For example, glass is best for a window and plastic is best for a rain coat
- Properties of materials:
  - Wood is hard, stiff and strong
  - Glass is waterproof and transparent
  - Plastic is waterproof, strong and can be smooth or rough
  - Metal is strong, hard and easy to wash

### What am I going to learn?

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



- There are 3 states of matter- solids, liquids and gases.
- Reversible changes, such as mixing and dissolving solids and liquids together, can be reversed by:



### Vocabulary

- **Materials-** The substance that something is made out of, e.g. wood, plastic, metal
- **Solids-** One of the three states of matter. Solid particles are very close together, meaning solids, such as wood and glass, hold their shape
- **Liquids-** This state of matter can flow and take the shape of the container because the particles are more loosely packed than solids and can move around each other. Examples of liquids include water and milk
- **Gases-** One of the three states of matter. Gas particles are further apart than solid or liquid particles and they are free to move around. Examples of gases are oxygen and helium
- **Melting-** The process of heating a solid until it changes into a liquid
- **Freezing-** when a liquid cools and turns into a solid
- **Evaporating-** When a liquid turns into a gas or vapour
- **Dissolving-**

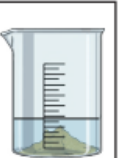
#### Dissolving

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.



### Investigations

Children will investigate thermal conductors and insulators. They will also investigate materials which will dissolve. Lastly, they will investigate which electrical conductors make a bulb shine brightest

#### Changes of State

