

What should I already know?

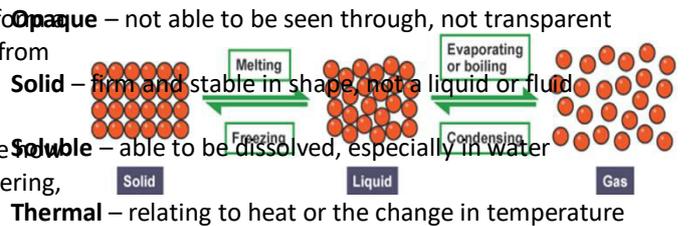
- Distinguish between materials made of wood, plastic, glass, metal, water, rock
- Metals are good electrical conductors
- Things are composed of a material in one of three states of matter: solid, liquid or gas
- Things are made of particles (tiny building blocks) and that these are organized differently in each state
- Materials can change state when temperature changes
- When solids turn into liquids, this is called melting and that the reverse process is called freezing
- When liquids turn into gases, this is called evaporation and that the reverse process is called condensation
- When a solid turn into a gas without passing through the liquid state, this is called sublimation
- The melting point of water is 0o C and that the boiling point of water is 100o C

Vocabulary

- Material** – any substance that has a name
- Conductor** – a material or device which allows heat or electricity to carry through
- Dissolve** – when something solid mixes with a liquid and becomes part of the liquid
- Evaporation** – the process of turning from liquid to vapour
- Flexible** – capable of bending easily without breaking
- Gas** – an air-like fluid substance which expands freely to fill any space available
- Insulator** – a substance which does not readily allow the passage of heat or sound
- Reversible** – able to be revered back to its original state

What will I know by the end of this unit?

- compare and group together everyday materials on the basis of their properties, including their hardness, solubility, conductivity (electrical and thermal), and response to change etc.
- know that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution
- use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating
- give reasons, based on evidence from comparative tests, for the particular uses of everyday materials, including metals, wood and plastic



Sugar dissolves in the water making a sugar solution. You cannot see the sugar but it is still there in tiny particles.

The water evaporates. This means that it becomes water vapour. The process will be quicker if the water is heated.

Once all the water has evaporated, the sugar is left at the bottom of the beaker. This is because sugar cannot evaporate.

- Research and explain the best material available to build space rockets out of? What other objects require this material and why?
- demonstrate that dissolving, mixing and changes of state are reversible changes
- Using everyday materials around the house, group them according to their properties
- explain that some changes result in the formation of new materials, and that this kind of change is not usually reversible, including changes associated with burning and the action of acid on bicarbonate of soda.
- Investigate different objects that can change state. Complete a written record of what happens and whether the change is reversible or not.

