

St. Mary's Catholic Primary School



Subject: Science

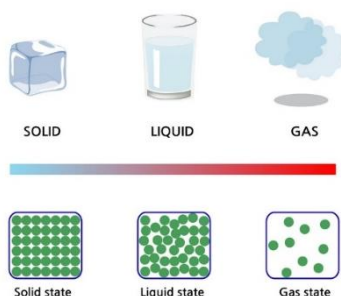
Topic: States of Matter

Year: 4

Strand: Chemistry/Physics

What should I already know?

- There are three states of matter – solids, liquids and gases.
- Solids can be squashed bent, twisted and stretched.
- You can turn some materials into other states.
- Some materials that fall into the categories of the three states of matter.



What am I going to learn?

- Materials in a solid state keep their shape unless a force is applied to them.
- Materials in a liquid state take the shape of the container they are in.
- Materials in a gaseous state can spread out to completely fill the container or room they are in.
- Bubbles in fizzy drinks are made from a gas called carbon dioxide.
- Carbon dioxide freezes at -78°C , and it becomes a solid called dry ice.
- When a solid turns into a liquid it is called melting. The temperature at which a solid material melts is called its melting point.
- When a liquid turns into a solid it is called freezing. The temperature at which a liquid material freezes is called its freezing point.
- Water changes state as a result of the following processes: melting, freezing, evaporation and condensation.
- Evaporation is the process of a liquid changing into a gas.
- The stages of the water cycle are evaporation, condensation, precipitation and collection.

Vocabulary

Carbon dioxide: A gas without colour or odour that is made up of carbon and oxygen.

Condensation: The act or process of changing from a gas to a liquid.

Evaporation: To turn from liquid into gas, finishing in the form of vapour.

Freeze: To harden into ice or become solid from cold temperatures.

Gas: A form of matter that is neither liquid nor solid. A gas rapidly spreads out when it is warmed and contracts when it is cooled.

Liquid: A form of matter that flows easily and is neither a solid nor a gas. Liquid can take on the shape of any container it is poured into.

Material: The matter from which a thing is or can be made.

Matter: All substances that contain atoms and take up space.

Melt: To change from a solid to a liquid state through heat or pressure.

Particles: A tiny portion of matter.

Solid: Having a firm shape or form that can be measured in length, width, and height; not like a liquid or a gas.

Water vapour: Water in the form of gas.

Investigations

- To investigate how heating and cooling can change a material's state.
- To observe how water can change into the three states of matter.
- To investigate how water evaporates and how temperature affects this.