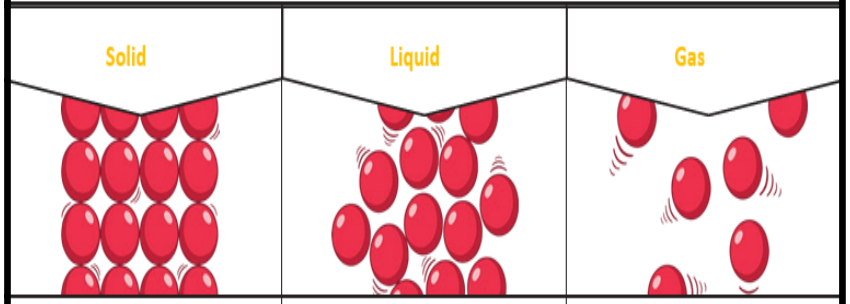
Burwell Village College Primary

States of Matter

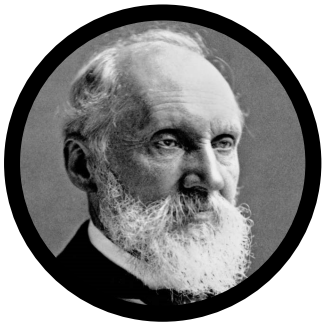
There are three states of matter.



Solid	Liquid	Gas
Particles in a **solid** are close together and cannot move. They can only vibrate.	Particles in a **liquid** are close together but can move around each other easily.	Particles in a **gas** are spread out and can move around very quickly in all directions.

When water and other **liquids** reach a certain temperature, they change state into a **solid** or a **gas**. The temperatures that these changes happen at are called the boiling, melting or freezing point.

Famous Scientist

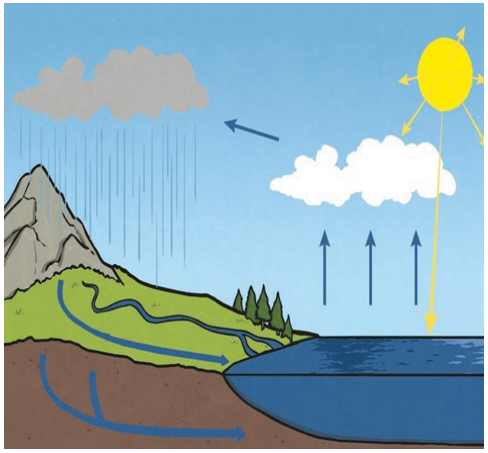


William Thompson

William Thompson was one of Britain's foremost scientists and inventors, best known for developing a temperature scale known as the Kelvin scale. The Kelvin scale uses absolute zero as the 0 point of its scale, which means the particles of matter are at their lowest energy points. Zero Kelvins is equal to 273.15 °C.

Key Vocabulary

states of matter	Materials can be one of three states: **solids**, **liquids** or **gases**. Some materials can change from one state to another and back again.
solids	These are materials that keep their shape unless a force is applied to them. They can be hard, soft or even squashy. **Solids** take up the same amount of space no matter what has happened to them.
liquids	**Liquids** take the shape of their container. They can change shape but do not change the amount of space they take up. They can flow or be poured.
gases	**Gases** can spread out to completely fill the container or room they are in. They do not have any fixed shape but they do have a mass.
water vapour	This is water that takes the form of a **gas**. When water is boiled, it **evaporates** into a **water vapour**.
evaporate	This is when a **liquid** turns into a gas.
condense	This is when a **gas** turns into a **liquid**.
precipitation	**Liquid** or **solid** particles that fall from a cloud as rain, sleet, hail or snow are all forms of **precipitation.**

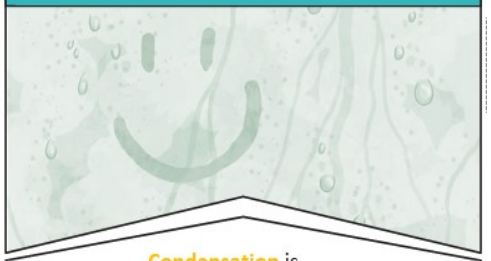


- Water from lakes, puddles, rivers and seas is **evaporated** by the sun's heat, turning it into **water vapour**.
- This **water vapour** rises, then cools down to form water droplets in clouds (**condensation**).
- When the droplets get too heavy, they fall back to the earth as rain, sleet, hail or snow (**precipitation**).

Evaporation

Evaporation occurs when water turns into **water vapour**. This happens very quickly when the water is hot, like in a kettle, but it can also happen slowly, like a puddle **evaporating** in the warmair.

Condensation



Condensation is when **water vapour** is cooled down and turns into water. You can see this when droplets of water form on a window. The **water vapour** in the air cools when it touches the cold surface.