

SCIENCE: Chemistry - States of Matter

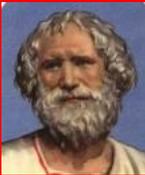
Autumn A

Year 4

Key Ideas

States of matter	The physical status of a substance (solid, liquid or gas)
Change of states of matter	The process of change from one substance to another (freezing, boiling, melting, evaporating, condensating)
The point at which the changes of matter occur	Temperature dictates whether a substance is a solid, liquid or gas.
Water cycle	The process of precipitation

Key Figures

Lonnie G. Johnson (1948-present)		An American Nasa engineer who invented the Super Soaker water gun by accident when he was conducting an experiment in his bathroom.
Archimedes (287bc-211bc))		Archimedes discovered the answer to why things float or sink.
Maria Beasley (1847-1904)		An american inventor most famous for her lightweight, fireproof, compact and easy-to-launch life raft. Beasley's rafts helped to save over 700 lives after the Titanic disaster.

Key words

Explanation

substance	A particular kind of matter (solid, liquid and gas)
solid	A solid keeps its shape and has a fixed volume.
liquid	A liquid has a fixed volume but changes its shape to fit the container.
gas	A gas fills all available space, it has no fixed shape or volume.
Freezing	Freezing is a state from a liquid to a sold.
Melting	Melting is a state change from a solid to a liquid.
Boiling	Boiling is a change of state from liquid to gas that happens when a liquid is heated to a specific temperature, and bubbles of the gas can be seen in the liquid.
Evaporation	The same state change as boiling (liquid to gas) but happens slowly at lower temperatures and only the surface of the liquid.
Condensation	It is the change back from gas to liquid caused by cooling.
Melting point	The temperature at which a solid will melt.
Boiling point	The temperature at which a liquid boils and turns to vapour.
Freezing point	The temperature at which a liquid turns to a solid.
temperature	How hot or cold something is.
precipitation	Rain, snow, sleet or hail that falls to the ground.
vapour	A substance suspended in the air, especially one normally liquid or solid.

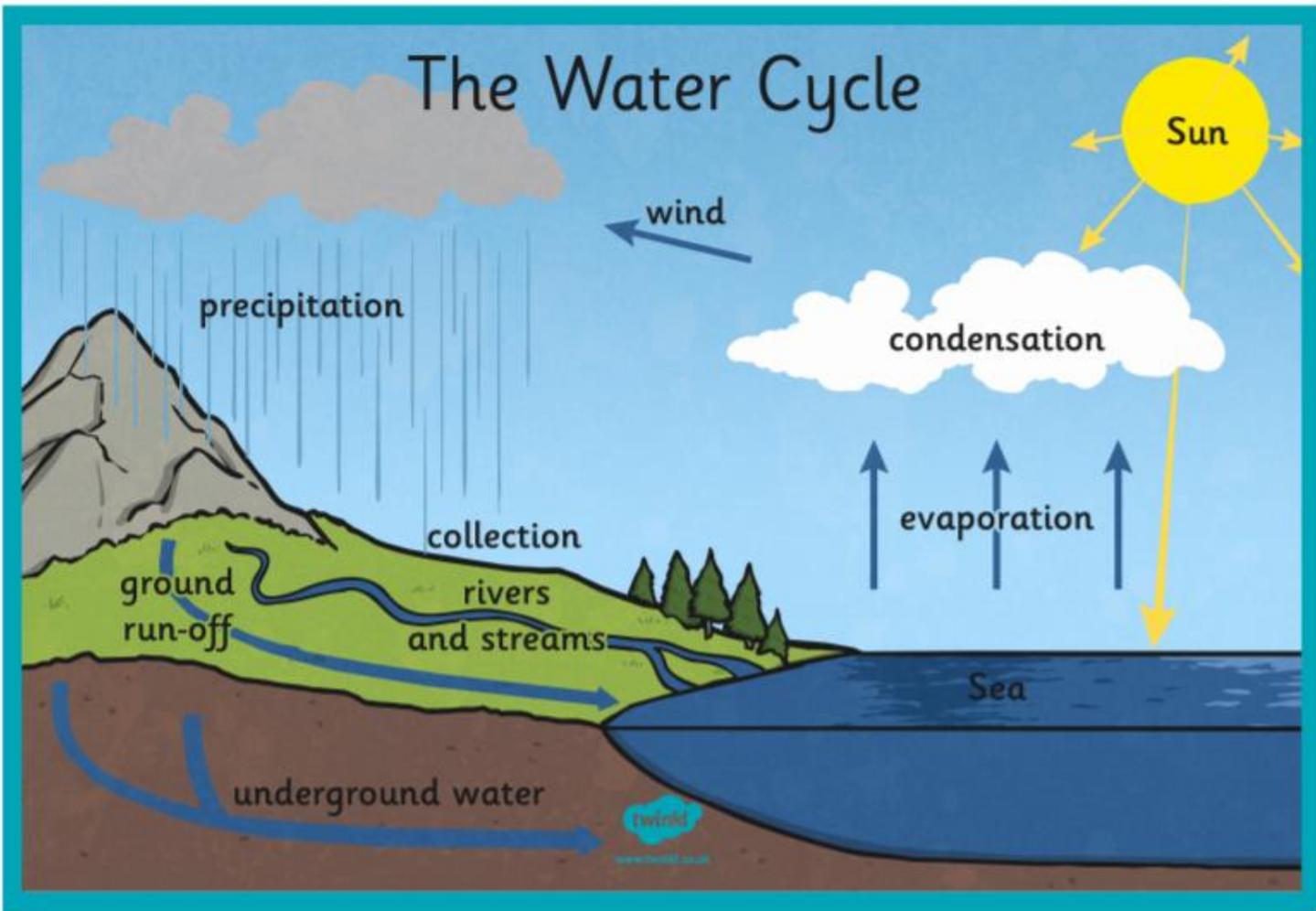
Key Questions

Can you describe the water cycle?

Can you name properties of solids, liquids and gases?

Can you give examples of melting and freezing?

Can you give everyday examples of evaporation and condensation?



Chocolate melting turning into a liquid.



Water is boiling turning into water vapour.