

# Science - What's the Matter?

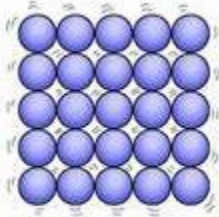
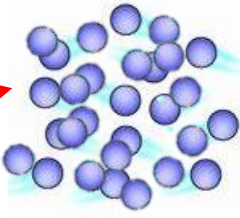
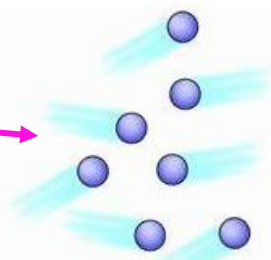
## Key Vocabulary

Matter	The scientific name for everything physical around us
Solid	The 3 States of Matter - all matter exists in one of these forms, but they can change from one to another
Liquid	
Gas	
Particles	The tiny parts that materials are made from. They can only be seen under a very powerful microscope.
Vibration	Means quickly moving back and forth (or up and down)
Melt	To change from a solid to a liquid
Evaporate	To change from a liquid to a gas
Condense	To change from a gas to a liquid
Freeze	To change from a liquid to a solid
Volume	How much space an object takes up

## Solids, Liquids and Gases

Particles are arranged differently in solids, liquids and gases. This means that the three states of matter all have different properties and behave in different ways.

Why do you think the way the particles are arranged gives them each such unique properties?

	Properties of the state	How the particles are arranged
SOLID	<ul style="list-style-type: none"> <li>- Particles vibrate but can't move around</li> <li>- If left alone, it stays the same shape</li> <li>- Fixed volume</li> </ul>	
LIQUID	<ul style="list-style-type: none"> <li>- Particles can move past each other</li> <li>- Changes shape to fit its container</li> <li>- Volume doesn't change</li> </ul>	
GAS	<ul style="list-style-type: none"> <li>- Particles are free to move anywhere</li> <li>- Volume and shape can change</li> <li>- Spreads out to fill the space it's in</li> </ul>	

Examples of each state of matter:



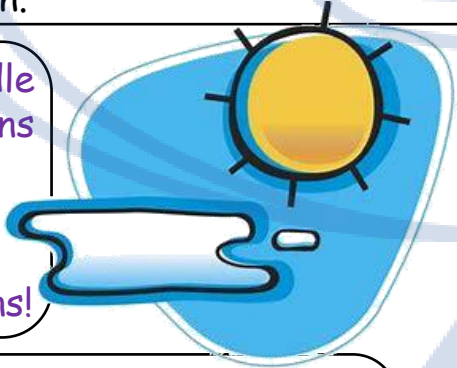
Can you name any other examples? Which is the easiest state to find examples of?

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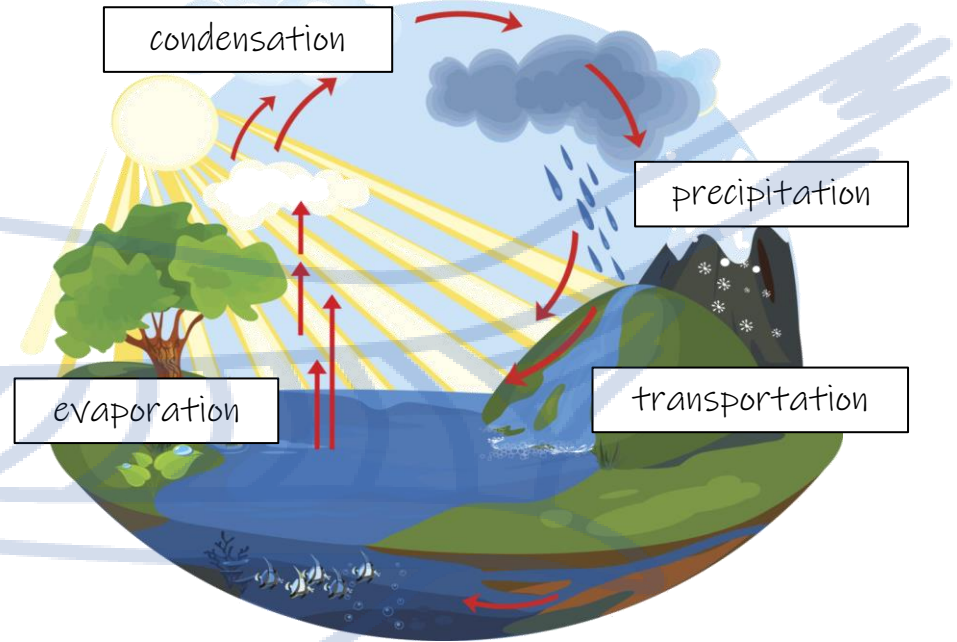
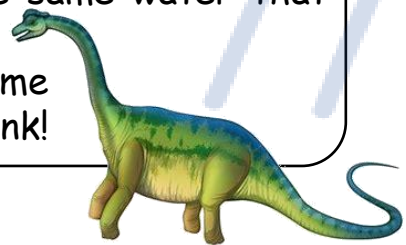


The water cycle begins with a big body of water, such as the sea. As the sun shines on it, the top layer of water particles get heated up and turn to water vapour, a gas. The water vapour rises up into the sky where it cools down and turns back to tiny water droplets. These tiny droplets join together and form a cloud, until they are too heavy and fall down to Earth as rain, hail or snow. This water runs along roads, through streams or down into the ground and flows, slowly, back to the sea where the whole process begins again.

Have you ever seen a puddle after the rain? What happens when the sun comes out?  
How long does it take for all of the water to evaporate?  
Try timing it next time it rains!



It's called a 'cycle' because it goes round and round continuously without ending. This means that all of the water in the world keeps going round without going away... so the water in the world now is the same water that was here 150 million years ago! So you could be drinking the same water that a brachiosaurus drank!



## Key Vocabulary

Water Cycle	A continuous process where water moves from the sea, to the sky, to the land and back to the sea.
Precipitation	The scientific name for water falling from the sky - this could be as rain, hail, sleet or snow.
Evaporation	The 4 stages in the Water Cycle
Condensation	
Precipitation	
Transportation (Collection)	