Theme: Water Cycle | **Phase:** Lower Key Stage Two | **Year Group:** 4 | **Strand:** Locational Knowledge / Human & Physical Geography

By the end of the theme I should be able to:
- Describe ad understand key aspects of the water-cycle.

In Year 1 & 2 I should already have learned:
- Condensation happens when water vapour (a gas) turns into small water droplets (liquid) when it is cooled.
- Evaporation happens when water (a liquid) turns into water vapour (a gas) when it is heated.
- Plants absorb water through the soil to help them grow.

3. Can you give a definition for these four terms; **evaporation**, **condensation**, **precipitation** and **transpiration**?

Skills

	Teacher Assessment	Self-Assessment
Demonstrate knowledge of places in the local area, UK and wider world, and some globally significant physical features		
Ask and answer questions about physical features.		
Ask questions to find out what affects the climate.		
Draw diagrams, produce writing and use the correct vocabulary.		

KEY VOCABULARY

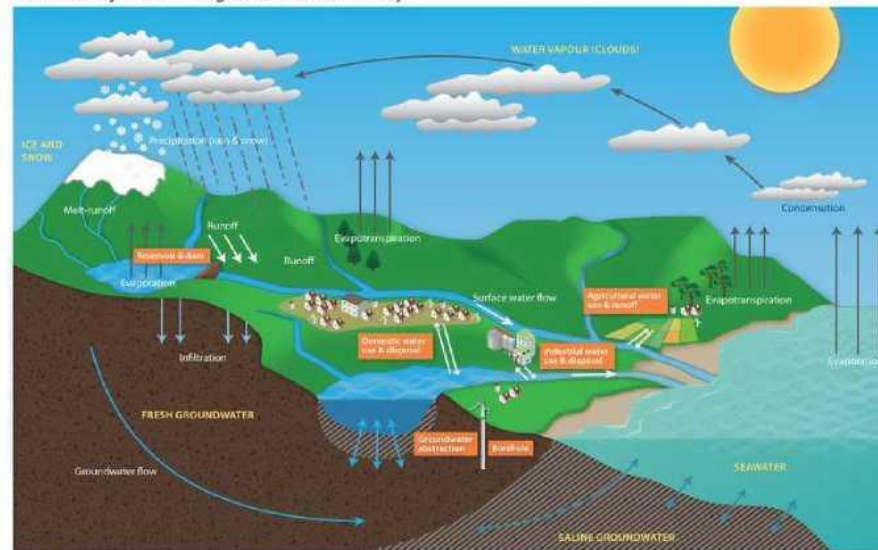|	
absorb	Take in or soak up liquid.
atmosphere	The layer of air / gases surrounding the earth or another planet.
gas	A substance in a state in which it will expand freely to fill the whole of a container, having no fixed shape or volume.
groundwater	Water held underground in the soil or in pores and crevices in rock.
liquid	A substance that flows freely but is of constant volume.
surface	The flat top part of something or the outside of it.
water vapour	Water in a gaseous state.

1. What is water vapour?

Water vapour is water in its gas state. It's invisible. Because water vapour is the gas state of water, it is part of the water cycle. It's important not to confuse water vapour with steam - they are different things!

5. What is a river basin and what is its purpose?

A river basin is the area of land around a river from which all water is drained. By collecting all available water from tributaries, creeks and streams in its area, a river basin drains the land of water along with sediment and minerals, sourcing a larger body of water, usually a river followed by the sea in most cases.

2. What is the water cycle and why is it important?

The water cycle including some human activity

If water didn't naturally recycle itself through the water cycle, we would run out of clean water, which is essential to us as well as the animals on our planet. Plants would also suffer as the water cycle delivers water to all the flora (plants) on Earth which they need to survive.
The water cycle is powered by the sun, as it heats water (from oceans, rivers, etc.) and it evaporates into the air. As vapour travels higher into the atmosphere, the temperature drops and the water molecules begin to cool and change state to form clouds. Rainfall occurs when these minuscule water droplets start to merge and grow in size. When water droplets are sufficiently heavy, gravity takes over and they turn into raindrops.

4.What is ground water and run off?

Water that reaches land may flow across the ground and collect in the oceans, rivers or lakes. This water is called surface runoff. Some of the water will soak into the soil. It will slowly move through the ground until it eventually reaches a river or ocean. This is called groundwater.

Evaporation
- The Sun makes water evaporate from seas, lakes, streams and puddles.
- When it evaporates, water turns into water vapour.

Condensation
- As water vapour rises, it cools
- As it cools, condensation happens and it becomes small droplets of water.
- Clouds are made from a mix of dry air and small droplets of water.

Precipitation
- When the droplets become heavy and large enough, they fall back to the Earth's surface in the form of rain or snow.

Runoff & Transpiration
- As precipitation happens water is absorbed into the soil.
- This is used by plants to grow.
- Water from plant leaves evaporates back into the atmosphere: called transpiration. Water may also run off and enter oceans, seas and rivers.
- Water then evaporates again and the water cycle begins again.