Changes that matter

Can the water cycle ever end? Justify.

Academic Excellence

We will learn the knowledge on the 'recall page' and we will be mastering the following skills:

- Present work neatly and effectively to demonstrate learning
- Ask for help when needed
- Take care in creating a good quality outcome

Character

What value am I focusing on and how will I demonstrate it?

Challenge—Respect

I will respect my peers by contributing to a good learning environment. I will respect my own learning by working to the best of my ability.

Have confidence in your own ability.

Outcome – How will our learning be used in real life?

We are creating a resource that can be used by teachers and other educators around the UK.

Learning to Learn

Our focus thinking tool is:

Cause and Consequence map

This tool helps us recognise the events that lead up to an action and the consequences that follow.

Children can explore colour, spacing and their ideas.

Personalisation

What will help me in this experience?

Use a dictionary to ensure understanding of technical vocabulary.

Research to answer any questions I have.

Use resources available within the classroom to support my understanding.

Rights Respecting

Article 24 - The right to clean water and a healthy environment We will learn more about this right by understanding the importance of clean water and a flowing water cycle as well as a healthy climate to ensure a healthy water cycle.

Concept

Changes

I understand that some changes are caused by humans and some are natural.

Recall Page

Vocabulary

matter	*anything that has weight and takes up space e.g. air, water, rocks*
state	*the condition in which the matter exists, i.e. solid, liquid or gas*
water cycle	*the processes by which water circulates between the oceans, atmosphere and land*
evaporation	*turning liquid into gas*
condensation	*cooling of gas, turning it into liquid*
precipitation	*the falling of liquid to the ground e.g. rain, hail, snow, sleet*
collection	*the process of precipitation gathering on the ground, heading to the ocean*

Knowledge

I will need to know:

- What solids, liquids and gases are
- How materials, such as water, can change state
- The four stages of the water cycle
- The relationship between temperature and the processes of the water cycle
- The cause and effect of disrupting the water cycle
- The features of an explanation text
- Simple organisational devices
- Technical vocabulary

Key facts

What is an organisational device?	They help to organise your writing into sections and specify what different elements are about.
What is the water cycle?	The water cycle is the process of water moving around the planet between land and the atmosphere
Can a solid ever be a liquid or a gas?	Yes, some materials can **change state**. For example, water can come in the form of ice (solid), water (liquid) or steam (gas).
How many stages are there in the water cycle?	There are four stages; precipitation, collection, evaporation and condensation.
Do the stages have to happen in a certain order?	The water cycle goes in a circle and cannot skip a step.

What is the Water Cycle?

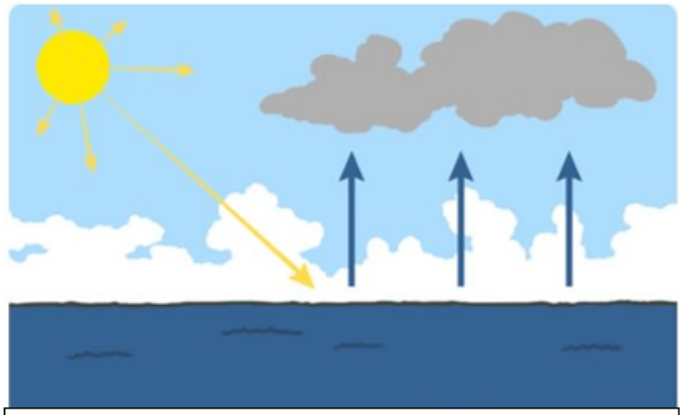
The water cycle is powered by the sun, as it heats water (from oceans, rivers, etc.) and it evaporates into the air. This is the first step of the water cycle process.

The Four Stages of the Water Cycle

There are four main stages of the water cycle, these four stages (evaporation, condensation, precipitation, and runoff) create the closed circuit water cycle that benefits all life on Earth, here is a little more about each stage:

Evaporation

The water cycle is powered by the sun. The heat from the sun increases the temperature of our rivers, lakes, and oceans. This causes surface water molecules to transform into vapour. This first stage of the water cycle is called evaporation. Heat can also force plants to release water vapour - a process known as transpiration. When water changes state, and becomes a gas (vapour), it rises into the atmosphere. That's because its molecular makeup is less dense than the other elements in the Earth's atmosphere - nitrogen and oxygen.



As the temperature rises, water evaporates to create clouds.

Condensation

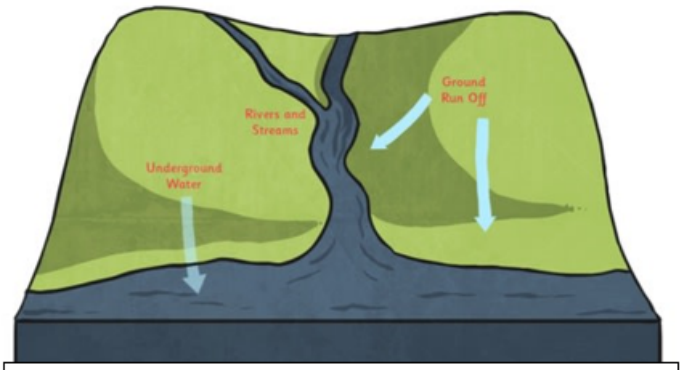
As vapour travels higher into the atmosphere, the temperature drops and the water molecules begin to cool and change state. This stage of the water cycle is known as condensation. When cooled, the atmospheric vapour molecules become tiny water droplets. These - not yet heavy enough to fall back to Earth as rain - hang in the air, combining with millions of others to form clouds.

Precipitation

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 return to Earth, back the way they came, as raindrops. This is known as precipitation. Once the water returns to the Earth's surface, the stages of the water cycle repeat.

Run-off or Collection

Surface run-off refers to how water behaves when it arrives back on land. With heavy downpours, in particular, at this stage of the water cycle, water flows over the Earth's surface, eventually making its way back into our rivers, streams, and reservoirs ready to start the cycle all over again.



After precipitation, water collects on the ground and heads back to the ocean, seas and reservoirs.

Throughout the water cycle, water is accumulation occurs. This is the process by which water is stored in oceans, lakes, rivers, streams, and underground. Infiltration also occurs. This is the process by which water is absorbed into the ground.

Experience Name (Unit of Study)

Academic Excellence

We will learn the knowledge on the 'recall page' and we will be mastering the following skills:

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Character

What value am I focusing on and how will I demonstrate it?

Outcome

We will be able to…(NC content)

Learning to Learn

Our focus thinking tool is:

Concept

Personalisation

What will help me in this experience?

Representations

Recall Page

Vocabulary

Knowledge

I will need to know:

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Sentence Stems

Key Facts
