



Unitywater

Natural Water Cycle

H₂O-hhh you're so old!

The water you used to brush your teeth this morning is older than your grandma. In fact, it is as old as the earth.

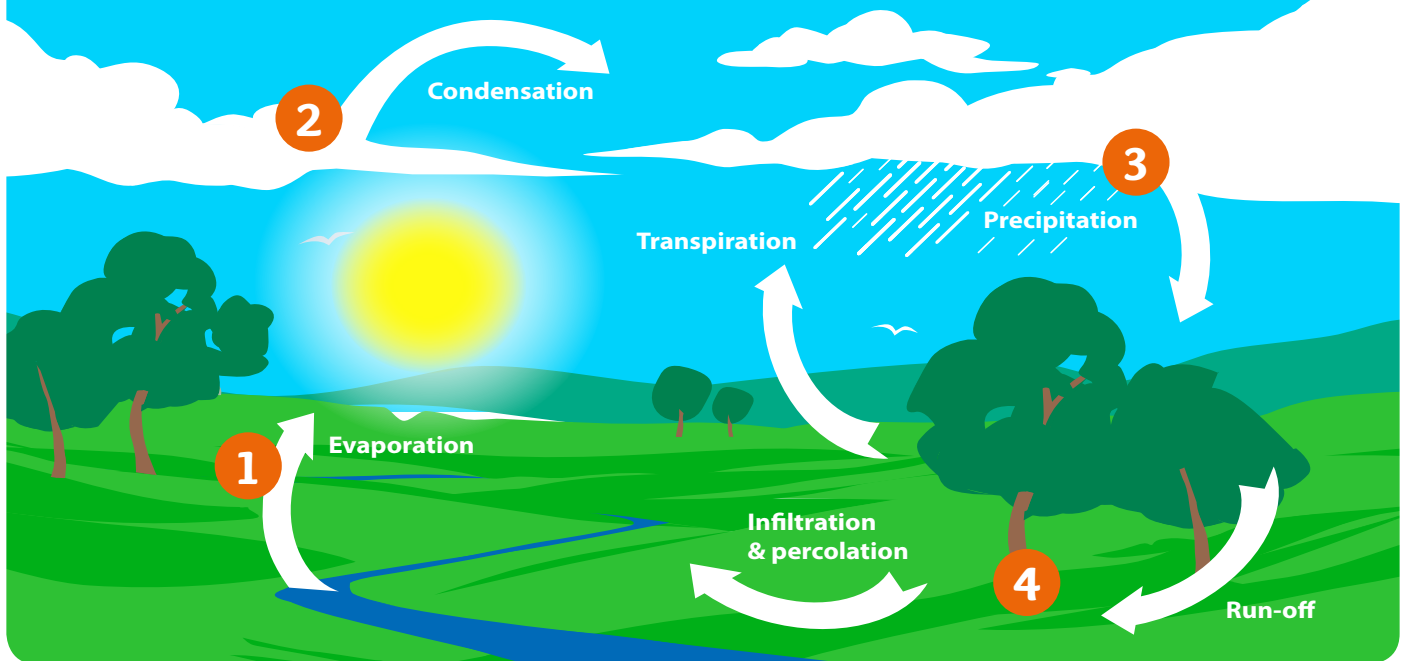
No new water is ever made. The same water cycles through the earth again and again as part of the water cycle.

The water cycle describes how water moves through the land, ocean and air as a liquid, gas and solid.



The Natural Water Cycle

The natural movement of water, without human intervention.



The natural water cycle consists of four main process:

1. Evaporation and Transpiration – Liquid changing to vapour

Evaporation occurs when water in oceans, lakes and rivers warms and turns into a gas, rising to the air. Plants release water into the air in a process called transpiration.

2. Condensation – Gas changing to liquid

When the water vapour cools, it condenses in the air forming clouds, fog or mist.

3. Precipitation – Liquid or solid water falling to earth

Eventually the clouds become too heavy and the water falls back to the earth as rain, hail, sleet or snow.

4. Infiltration, percolation and run-off – Liquid water absorbing into the earth

The water that falls to the earth flows into waterways (run-off), or it can absorb into the ground (infiltration) or aquifers and underground water pockets (percolation).





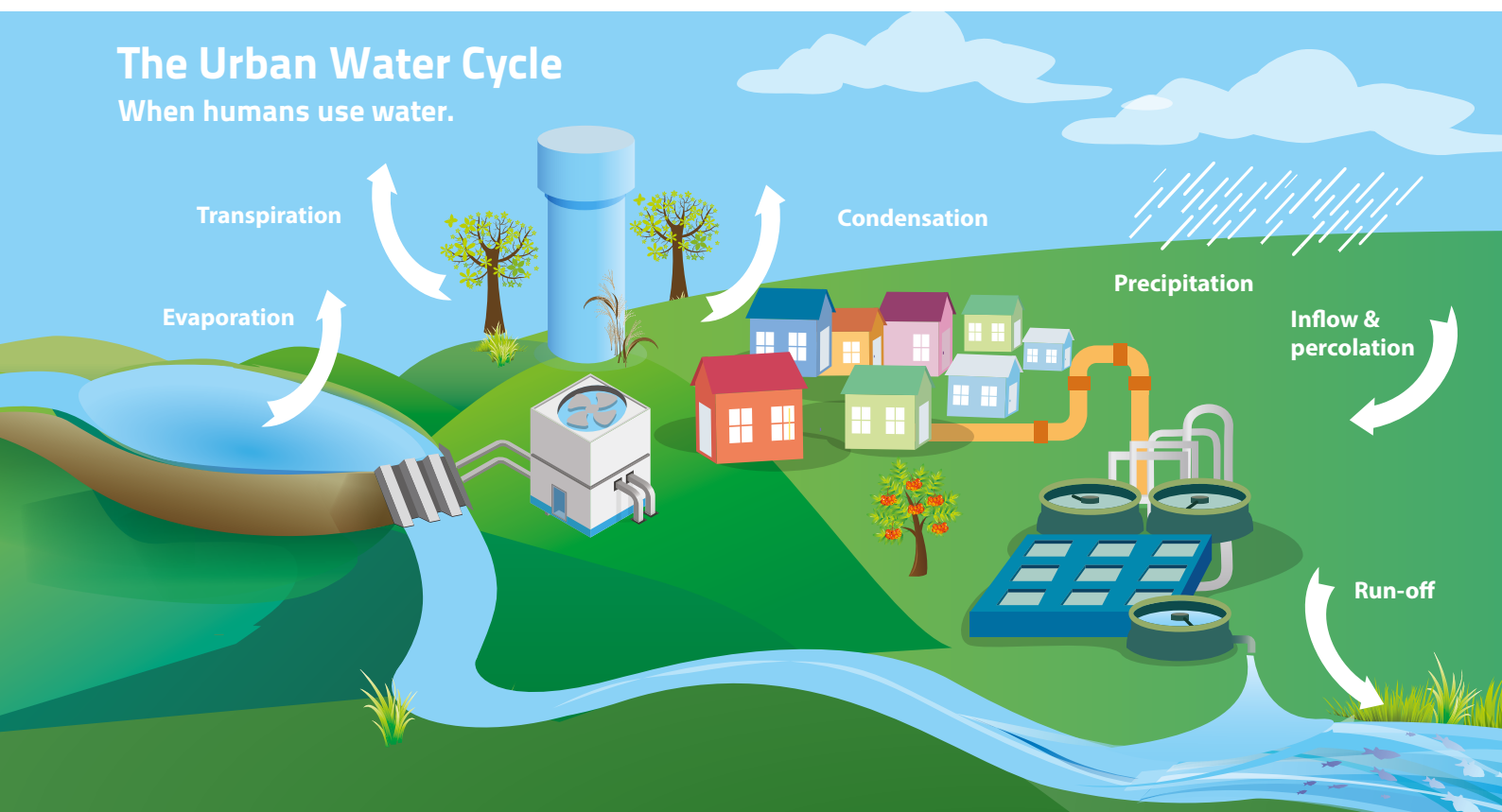
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Urban Water Cycle

So how does water get to my tap?
And where does it go after I use it?

The Urban Water Cycle

When humans use water.



The urban water cycle has four additional processes

Dams and water treatment plants

Water falls from the sky as rain and is captured in **dams**. The water is cleaned at a water treatment plant before being pumped to you in **underground pipes**.

Water storage

The clean water is stored in **water reservoirs and towers** until it's needed.

Stormwater drainage

Water run-off from buildings and streets is collected in **stormwater drains**, where it flows to the ocean.

Sewage treatment

After you use water, it is piped to a **sewage treatment plant** to be cleaned and treated. The **clean water or effluent**, is then returned to waterways at the **outfall**.

More information

Visit education.unitywater.com to explore:

➤ The interactive urban water cycle story

Visit unitywater.com/teachers to explore:

➤ The sewage treatment fact sheet

➤ The urban water cycle video

➤ A virtual tour of the sewage treatment plant



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