



# The Water Cycle

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01

## Introduction

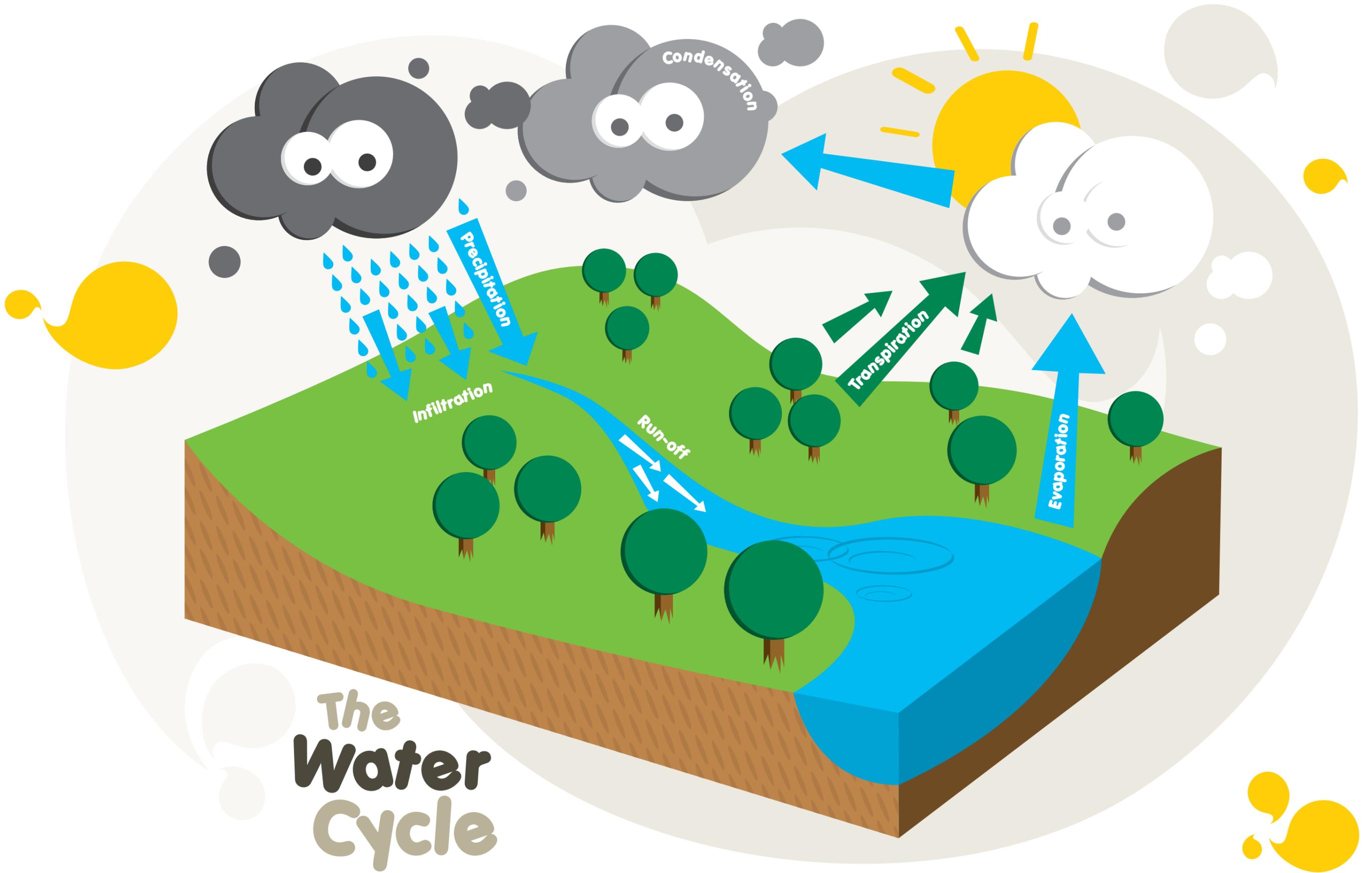
If there were no water on Earth, there would be no plants, no wildlife and no humans. All living things, from the tiniest insects, to the tallest trees, need water to survive. Next to the air we breathe, water is our most important need. Humans can live without food for several weeks, but can only survive a few days without water.

Did you know that our bodies consist mainly of water?

## The Water Cycle

Nature makes sure we have a continuous supply of water through a process we call the **water cycle**. Just like a bicycle wheel, the water cycle has no beginning and no end. It has been the same since time began.

- Water comes from the sky as rain, hail or snow. This is called **precipitation**.
- When water falls it can soak into the ground. This is called **infiltration**.
- The water that does not soak into the ground is called **run-off**. This water flows into streams, rivers or oceans.
- When the sun shines on the earth it heats up the water and causes it to turn into water vapour, like steam, and it rises to the air. This part is called **evaporation**.
- Water can also be released into the air by plants in a process known as **transpiration**. A way of demonstrating transpiration is to tie a clear plastic bag tightly around some leaves on a shrub and watch the water appear.
- **Condensation** occurs when the water vapour cools down and turns back into a liquid in the sky forming clouds.
- The clouds travel across the sky. When they reach the land, the air is too cold to hold the water and it falls as **precipitation** and the cycle starts all over again.
- The entire process is called the **water cycle** because water goes round and round in a cycle.



The  
**Water  
Cycle**

The natural water cycle has to be used by all of us to meet our growing needs. The spread of population, development of new towns, industrial growth and water-based recreation have all combined to create an increasing demand for water in this country. Dublin City Council enters this natural cycle and makes sure that the water reaching your home is wholesome and safe. After you have used the water, steps are taken to treat it again before it is released into the sea to rejoin the never-ending water cycle.

## Water in the World

It is an amazing fact that the oceans hold 97 per cent of the world's water. Two per cent is frozen in the polar ice caps. The remaining one per cent not only provides all the water we use, but also includes all the water in the atmosphere and all the groundwater, lakes and rivers. There is really only a small amount of water available to keep people, animals and plants alive. We depend on the constant recycling of that one per cent of water to meet all our needs.



**Did you know that every drop of water is used again and again and we share it with all living things, past, present and future?**

All the water in the world's atmosphere only equals about ten days normal rainfall. You can imagine that if water was something we used up like oil or gas, then the world would run dry very quickly indeed. Thanks to the water cycle, water doesn't get used up – it simply goes round and round! There is no more water now than when the world began. That means that the water you drank this morning might have been the same water that dinosaurs drank millions of years ago!