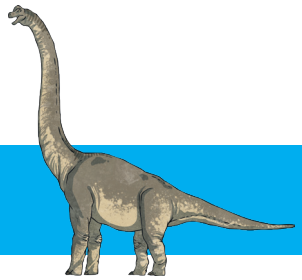
The Water Cycle

You drink water every day, but have you ever asked how old the water is? The Earth always has the same amount of water and it moves through a cycle. The water in your cup today could have been the same water a dinosaur once took a bath in! The water cycle is important to life on Earth, but it is important to know that without the Sun there would be no water cycle.



There are four stages of the water cycle.

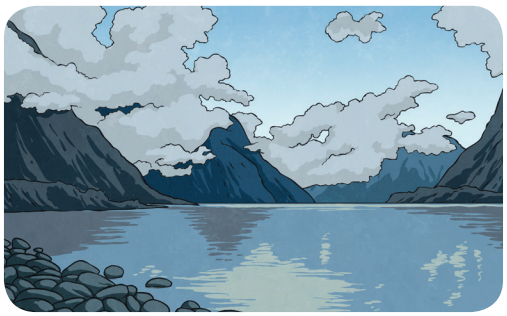
Accumulation

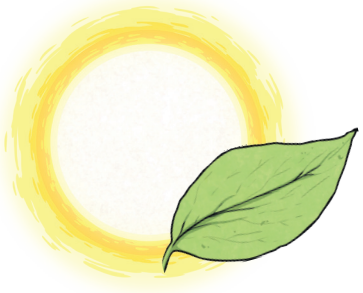
The first stage of the water cycle is water accumulation. Water accumulation is water that is stored in rivers, lakes, and oceans. Oceans are the largest water accumulations because they hold 97 percent of the Earth's water. Accumulation can also be groundwater, which is water that goes into the Earth's surface, and is absorbed by roots to help plants grow.

Evaporation

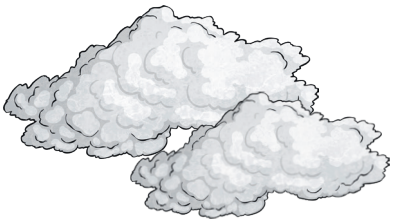
As the Sun shines on accumulated water, the water heats up and turns into water vapour. Water vapour is a gas, so it rises into the air. When the Sun changes water from a liquid to a gas, the process is called evaporation.

Water can be evaporated from plants. This is called transpiration. You can see evaporation by finding a puddle near your home after a rainstorm. As time passes, you will see that the puddle gets smaller. This is because the water is evaporating.





Condensation



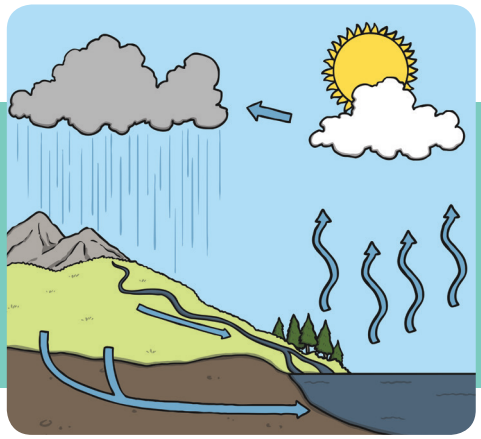
When water vapour is in the air, it cools. As it cools, the water vapour forms back into a liquid. Groups of water droplets come together to form clouds. When water changes from a gas (water vapour) to a liquid, this process is called condensation.

Even if there are no clouds in the sky, there is still water in the air. Clouds are not the only place to see condensation. On a hot day, you may take a cold glass of water outside. After some time, you feel that the outside of your cup is wet. Is the cup leaking? No, it is actually water vapour condensing when it cools on the side of your cup.

Precipitation

As more water condenses in the air, it becomes heavy. The water will fall back to Earth as rain, hail, sleet, or snow, which is called precipitation.

When the water falls back to Earth, it gives water to plants and animals. Some water that does not go into the soil will run-off, which is when gravity pushes water to larger accumulations. The water cycle is now complete and ready to repeat again.



Questions

1. Does the amount of water on Earth change? Explain your answer.

2. List the four stages of the water cycle.
   1.
   2.
   3.
   4.

3. Describe an example of evaporation you might see at home.

4. What happens after water vapour is in the air?

5. How does the Sun help the water cycle?

6. Explain precipitation in your own words.

7. Find and copy a phrase that tells you the Sun is important to the water cycle.

8. What role do oceans play in the water cycle? Explain your answer using evidence from the text.

Answers

1. Does the amount of water on Earth change? Explain your answer.
   The Earth always has the same amount of water and it moves through a cycle.

2. List the four stages of the water cycle.
   1. **Accumulation**
   2. **Evaporation**
   3. **Condensation**
   4. **Precipitation**

3. Describe an example of evaporation you might see at home
   Example answer: You can see evaporation by finding a puddle near your home after a rainstorm. As time passes, you will see that the puddle get smaller. This is because the water is evaporating.

4. What happens after water vapour is in the air?
   When water vapour is in the air, it cools and becomes liquid again. These water droplets form clouds.

5. How does the Sun help the water cycle?
   The Sun helps in the water cycle by heating water so that it becomes water vapour, which helps the cycle continue moving.

6. Explain precipitation in your own words.
   Example answer: When water condenses in the air, it becomes heavy and falls back to the Earth as rain, sleet, hail or snow.

7. Find and copy a phrase that tells you the Sun is important to the water cycle.
   Without the Sun, there would be no water cycle.

8. What role do oceans play in the water cycle? Explain your answer using evidence from the text.
   Oceans are the largest water accumulations because they hold 97 percent of the Earth's water.