The life of a drop of water.

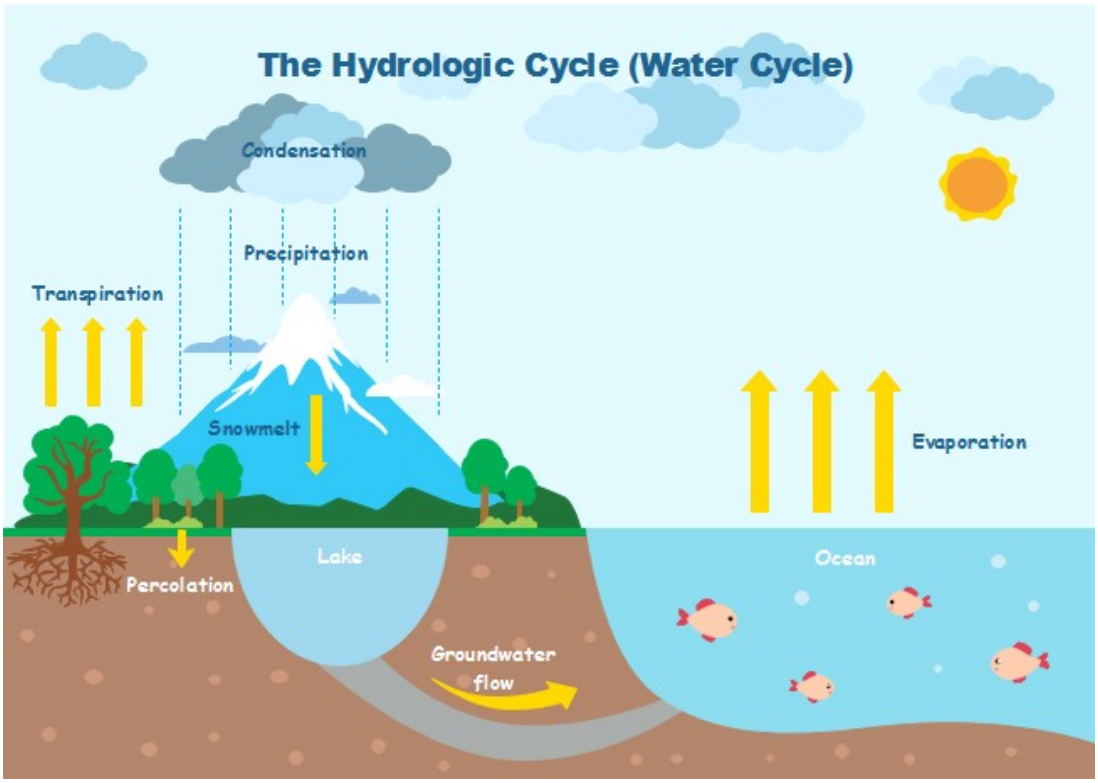
In this lesson we present the most relevant information about the concept, important and about the life of a drop of water, A drop of water is a very important element for life, not only is it fun to have it to use it, water is super essential for the world, all human beings need water to survive. Did you know that, once, a drop of water does not mean much to some people, that simple drop of water goes through different stages to get to its right place? In this project, she will talk to you about what is important and about the states that a drop of water goes through and what her life is like.

The planet's water circulates and changes state constantly –between solid, liquid and gaseous– thanks to the energy that comes from the Sun and the force of gravity. l water in the oceans, rivers, clouds, rain, etc. a cyclical movement follows. Surface water evaporates, while cloud water precipitates and trickles down rivers to seas and oceans or infiltrates Earth. Be that as it may, the total

amount of water on the planet does not change. This cycle begins with the evaporation of water from the earth's surface thanks to solar energy.

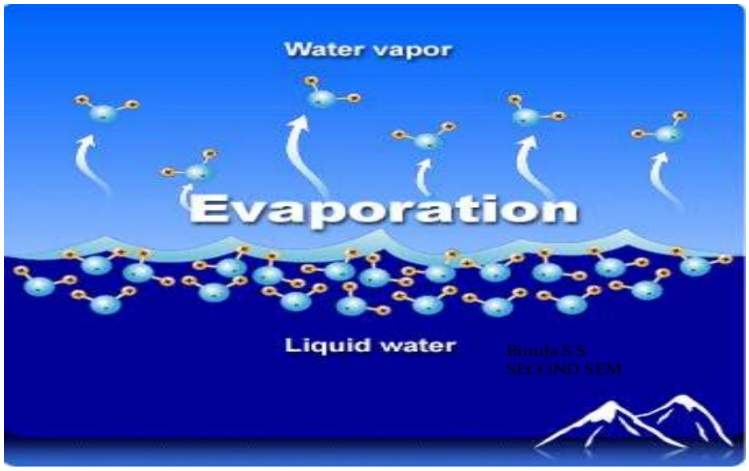
Water vapor moistens the air as it rises, cools on solid particles, and condenses into microdroplets, which join together and form clouds. Then, the water droplets fall to the ground in the form of rain, hail or snow, depending on the temperature of the atmosphere. Finally, the water ends up returning to the oceans through different channels. Total,the planet contains about 1,385 million km ^{3} of water in its different states, of which almost 97% is salt water found in the oceans, while the rest corresponds to fresh water that is distributed among the polar ice caps, rivers , lakes, underground aquifers and the atmosphere.

Within the hydrological cycle, each molecule of water remains a different interval of time in one place , depending on where it is stored. Thus, the water accumulated in the deep underground layers can remain there for up to 10,000 years, that of glaciers for a maximum of 100 years and that of a river for up to six months. Living beings, through their metabolic processes, also participate in the hydrological cycle, taking and expelling water. Especially plants, which provide 10% of the water in the atmosphere. Perspiration is the natural process of regulating body temperature that causes living beings to expel water in the form of steam, either through the sweat glands of the skin (animals and humans) or through the leaves (plants).



What are the stages of the water cycle?

Evaporation

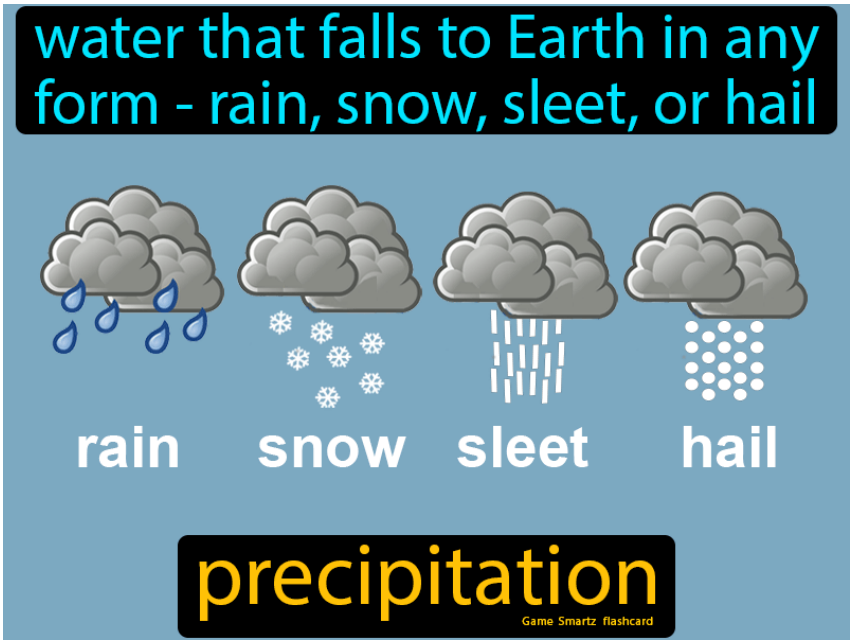


Thanks to the effect of the Sun, the water in the oceans and on the Earth's surface (rivers, lakes, swamps, etc.) is heated and vaporized and, as a consequence, the air is loaded with moisture. In this same phase of the hydrological cycle, transpiration and sweating of living beings and sublimation (transition from solid to gaseous) that occurs on the surface of glaciers would be included.

Condensation

For condensation microdroplets to form, water vapor must cool down. When this happens, the water molecules decrease their mobility and begin to gather on solid particles suspended in the air.

Precipitation



As they cool and condense, the drops become larger and end up falling due to their weight. It is estimated that approximately 300 km3 of water fall each day in the form of precipitation. When temperatures are especially low, molecules crystallize and precipitation occurs in the form of hail or snow.

Runoff

The force of gravity causes liquid water to slide down the surface of the terrain through rivers and streams. This phenomenon also constitutes an important geological agent for erosion and sediment transport. Approximately 1,400 km3 of water circulates on the Earth's surface.

Infiltration and underground circulation

Part of the water that reaches the ground returns to the atmosphere when it is sucked by the roots of the plants and transpired by its leaves, and another part is filtered by gravity through permeable areas of the substrate, such as limestone rocks. This water ends up in aquifers, which can reach the surface or communicate with the sea, or remain stagnant underground.

Conclusion

Water exists on Earth in three states: solid (ice, snow), liquid, and gas (water vapor). Oceans, rivers, clouds and rain are constantly changing: surface water evaporates, cloud water precipitates, rain seeps into the ground.The water cycle has a constant interaction with the ecosystem as beings alive depend on it to survive, and in turn help its functioning. The hydrological cycle begins with the evaporation of water from the ocean surface. As it rises, the humidified air cools and the steam turns into water: it is condensation. The drops come together and form a cloud. Then they fall under their own weight: it is precipitation. If it is very cold in the atmosphere, the water falls like snow or hail. If it is warmer, raindrops will fall. A part of the water that reaches the Earth's surface will be used by living beings; another will run through the terrain until it reaches a river, lake or ocean. This phenomenon is known as runoff. Another percentage of the water will seep through the soil, forming aquifers or groundwater layers, known as water tables. This process is infiltration. From the water table, sometimes, water sprouts on the surface in the form of a source, forming streams or rivers. Sooner or later, all this water will return to the atmosphere again, mainly due to evaporation.