

Name _____



The Fantastic Journey: What Happens to Water After It Falls to the Ground?

After the rain or snow has fallen from the sky and touched the Earth, the journey of water is far from over. In fact, it's just the beginning of an exciting adventure that involves a variety of processes and destinations. In this passage, we will explore what happens to water after it falls to the ground and how it continues to shape our world.

The Arrival

When raindrops or snowflakes reach the Earth's surface, they land in different places, such as on the ground, leaves, or rooftops. This is the moment when water begins its transformation from falling precipitation to becoming an integral part of our environment.

1. Infiltration

One of the first things that can happen to water after it falls is infiltration. Infiltration occurs when water soaks into the ground, seeping through the soil and rocks. This water becomes groundwater, which is stored underground in spaces between rocks and soil particles. Groundwater is a vital source of freshwater for wells and springs.

2. Surface Runoff

Not all the water that falls can infiltrate into the ground. When precipitation exceeds the ground's capacity to absorb it, surface runoff occurs. This excess water flows over the land's surface, forming streams, rivers, and eventually making its way to larger bodies of water like lakes and oceans. Along the way, it can carry sediment and pollutants, impacting the quality of water in these water bodies.

3. Evaporation

Some of the fallen water is destined to return to the atmosphere through evaporation. When the sun's heat warms water on the ground, it changes into water vapor, rising back into the sky. This process happens from puddles, lakes, rivers, and even leaves on plants. Water vapor is an essential part of the water cycle, contributing to the formation of clouds.



Name _____

4. Transpiration

Water doesn't only evaporate from the ground; it also transpires from plants. Through tiny openings in their leaves, plants release water vapor into the air in a process called transpiration. This moisture-rich air adds to the humidity and plays a role in cloud formation as well.

The Cloud Connection

Once water vapor rises into the atmosphere through evaporation and transpiration, it eventually cools down at higher altitudes. As it cools, it undergoes condensation, forming tiny water droplets. These droplets come together to create clouds. Clouds are an essential part of the water cycle as they store water until conditions are right for precipitation to occur once again.

Precipitation

When the water droplets in clouds grow heavy enough, they fall back to the Earth's surface as precipitation. This can take the form of rain, snow, sleet, or hail, depending on temperature and other factors. Precipitation is the final step in the water cycle, bringing water back to where it started its journey—on the Earth's surface.

The Human Impact

Human activities can greatly affect what happens to water after it falls to the ground. Urbanization, deforestation, pollution, and climate change can alter the natural flow of water. For example, urban areas with concrete surfaces have less infiltration and more runoff, leading to increased flooding in some cases. Pollution can harm the quality of water in rivers and lakes, affecting aquatic ecosystems and human health.

The Endless Cycle

The journey of water after it falls to the ground is a continuous, never-ending cycle. Precipitation, evaporation, transpiration, and condensation all work together to keep water moving through our environment. Understanding this cycle is crucial for managing our water resources and protecting the health of our planet.

