4th Grade Science Lesson: The Water Cycle

Introduction

Water is one of the most important resources on Earth. Without water, no living thing could survive. The water cycle explains how water moves around our planet. It travels through the sky, land, rivers, lakes, and even underground. This cycle is continuous, which means it never stops.

The Stages of the Water Cycle

The water cycle has four main stages: evaporation, condensation, precipitation, and collection. Together, these stages recycle water all around the Earth.

Evaporation

Evaporation happens when the Sun heats up water from oceans, rivers, lakes, or puddles, and changes it into water vapor (a gas). This invisible vapor rises into the air. Even sweat drying on our skin is a small example of evaporation!

Condensation

As water vapor rises higher into the sky, the air gets cooler. The vapor turns back into tiny drops of liquid water, forming clouds. This process is called condensation. If you've ever seen droplets on a cold soda can, that's condensation too!

Precipitation

When clouds get too heavy with water, they release it. The water falls back to Earth as precipitation, which can be rain, snow, sleet, or hail. Precipitation fills rivers, lakes, and oceans, and provides drinking water for plants, animals, and humans.

Collection

The water that falls gathers in rivers, lakes, oceans, and underground. This stage is called collection. Some of the water will soak into the ground and become groundwater. Plants absorb this water through their roots. Eventually, the Sun will heat the water again, and the cycle starts all over!

Why the Water Cycle Matters

The water cycle keeps Earth's water fresh and clean by constantly moving it. It also controls weather and temperature. Without the water cycle, we would not have rain, rivers, or even clouds.

Fun Facts

1. The same water you drink today might have been drunk by dinosaurs millions of years ago!
2. About 70% of Earth’s surface is covered in water, but only 3% is freshwater.
3. Plants help the water cycle through a process called transpiration, where they release water vapor from their leaves.

Conclusion

The water cycle is a never-ending journey of water around our planet. From the oceans to the clouds, from the rain to the rivers, water is always moving. This amazing cycle supports all life on Earth and reminds us how important it is to protect our water resources.