Name _____

The Water Cycle: Changing Forms of Matter Without Disappearing

Have you ever watched a puddle dry up after it rains? Or seen steam rise from a pot of boiling water? These are small parts of a big process called the water cycle. The water cycle is how water moves through the Earth and atmosphere. Even though water changes forms—like liquid, gas, and sometimes solid—it never disappears. This shows a science idea called the conservation of matter.

The water cycle has four main steps: evaporation, condensation, precipitation, and collection.

It starts with evaporation. The sun heats up water in oceans, lakes, and rivers. The water changes from a liquid to a gas called water vapor. You can't see this vapor, but it's still made of matter. It rises into the sky.

Next is condensation. When the water vapor reaches cooler air high in the sky, it cools down and turns back into liquid drops. These drops group together to form clouds.

Then comes precipitation. When the clouds get heavy with water, it falls to Earth as rain, snow, or hail.

Finally, the water collects again in oceans, lakes, rivers, or even underground. This step is called collection. After that, the sun starts the cycle again.

At every step, the form of the water changes, but the amount of water stays the same. Water becomes vapor, becomes liquid again, and even becomes solid snow. But it never disappears. It's just moving around and changing shape.

This is why the water cycle is a great example of the law of conservation of matter. Matter, like water, can't be made or destroyed. It just changes how it looks and where it goes.