

THE WATER CYCLE

WATER IS ALWAYS ON THE MOVE: IT GOES UP INTO THE AIR AND RAINS BACK DOWN.

Water is one of the most precious things on our planet. Water is what allows life to exist. Without it, nothing would be alive on our planet.

Fresh water comes to us in the form of rain. Year after year, water rains down from the sky. It never runs out. We see it coming down as rain, but we do not see it going up into the sky. This is because water moves up into the sky in the form of gas that we do not notice. If you leave a glass of water in a sunny place you will note that after a while the water has disappeared, even though you did not see it go anywhere. The liquid water we see turned into a gas form that we do not see. The gas form is called **water vapor** and it went up into the air. The water vapor stays in the air

for a few days to a few weeks before it turns back to liquid and falls down on the land or the ocean surface. Thus, the rain we see is simply the return of the water that had previously become water vapor and went up into the air.

This never-ending movement of water up and down is called the **water cycle**. Water in nature is continually recycled in this way. The cycle has no beginning or end. The drop of water that falls today as rain contains water that has, in the past, been inside the ocean and rivers and lakes all over the world and has gone up into the air and rained down many times over. It may have been in the belly of a person some years ago or the belly of a dinosaur a hundred million years ago!

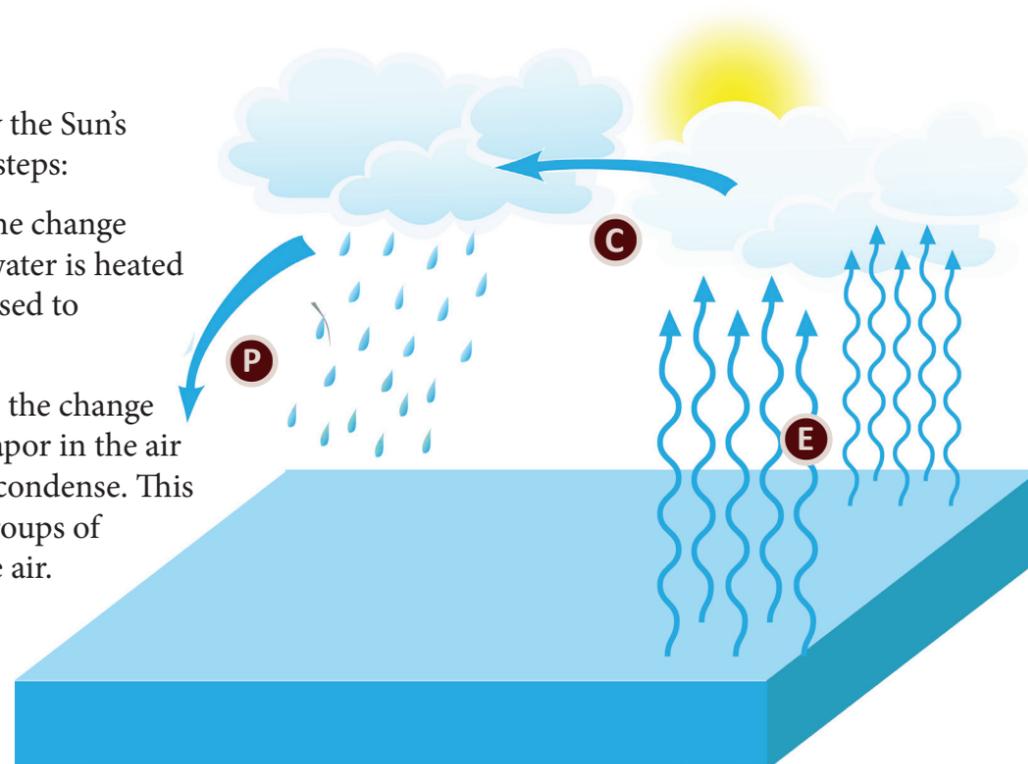
WATER CYCLE

The water cycle is driven by the Sun's energy and has three basic steps:

E **EVAPORATION** is the change from liquid to gas. Liquid water is heated by the Sun's energy and caused to evaporate up into the air.

C **CONDENSATION** is the change from gas to liquid. Water vapor in the air is cooled off and caused to condense. This creates clouds, which are groups of tiny droplets of water in the air.

P **PRECIPITATION** is the falling of liquid water from the sky back down in the form of rain.



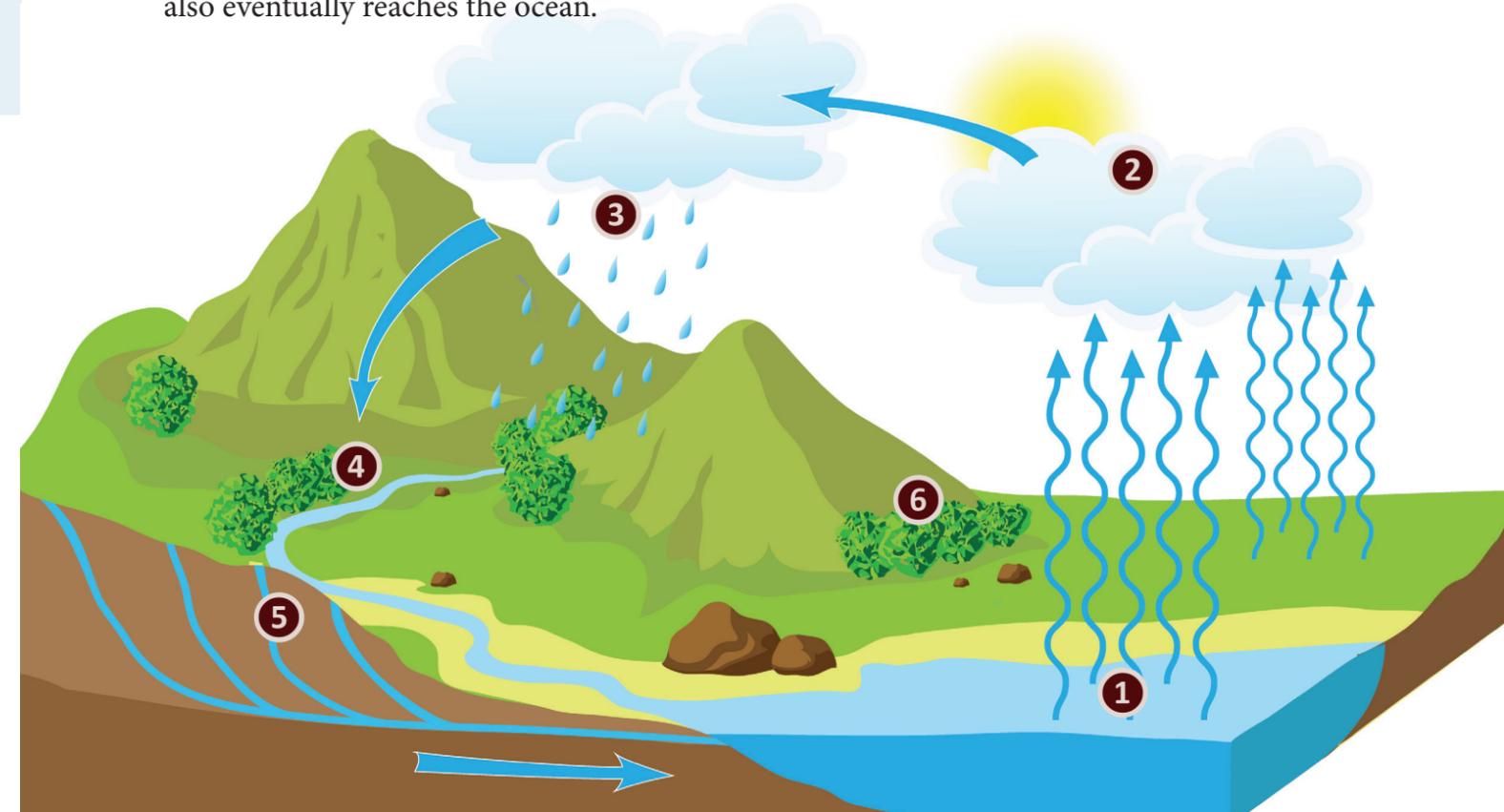
STEPS OF THE WATER CYCLE ON AN ISLAND

As water moves through its cycle, it goes from one place to another. The difference places that contain water at any time are called **reservoirs**. The largest reservoir is the ocean. Water evaporates from it and goes up into the air, which is another reservoir. There it condenses into clouds and precipitates as rain back down into the ocean. That completes the water cycle.

Water the rains down on land instead goes through important additional steps of the cycle. As it strikes the land, water may trickle across the land and run into streams and rivers. This water at the land surface flows downhill and eventually reaches the ocean. As it flows, some of it seeps into the ground and becomes groundwater. Groundwater slowly moves beneath the land surface and also eventually reaches the ocean.

At various steps of the cycle, water may be taken up by living things for their own needs. Plants extract it from the soil using their roots. Animals that live in the water swallow it from their surroundings and animals that live on land drink it from the land surface. People can take water from the rain, surface water, or groundwater, in order to drink it and use it for their other needs. From living things, water goes back to the surroundings and continues to cycle.

By moving water from one reservoir to another, the water cycle purifies the water, replenishes the land with fresh water, and influences the climate. It also makes life possible for many living things in a great variety of places through which water passes as it cycles.



1 OCEAN

3 RAIN

5 GROUNDWATER

2 CLOUDS

4 SURFACE WATER

6 LIVING THINGS