

are done with it. A plant's roots can stretch as far as 60 feet under the ground. Down there, the roots suck up the groundwater. The plant releases water in gas form through little holes on its leaves. If you placed a plastic bag over a potted plant, over time you would see water on the inside of the bag. **Transpiration** is when a plant lets out water into the air as a gas.

Just like you, water gets lonely sometimes. Water running across the Earth's surface and water flowing under the ground are always looking for more water to hang out with. Over time, water meets up with other water in lakes or the ocean. After all, everyone should chill out at the beach with friends every once in a while. **Accumulation** is when water gathers in one place, such as a lake or ocean.

Water falling from the sky or flowing from melting snow has lots of options. Lots of it travels downhill, making bigger and bigger streams and rivers. Eventually it meets up with other water in a lake or at the beach. Some water soaks into the ground, where it may flow slowly or sit until plants or people help it on its way. Water is all around you.

References:

"Snowmelt Flooding" *Flood Safety Awareness Week*. NOAA National Weather Service: Office of Climate, Water, and Weather Services, 2013. <<http://www.earthgauge.net/2010/snowmelt-flooding>>

"A Summary of the Hydrologic Cycle: Bringing All the Pieces Together"• Dept. of Atmospheric Sciences: University of Illinois, 2013. <<http://ww2010.atmos.uiuc.edu/%28Gh%29/guides/mtr/hyd/smry.rxml>>

"Summary of the Water Cycle" *USGS Water Science School*. US Geological Survey, 2013. <<http://water.usgs.gov/edu/watercyclesummary.html>>

Perry, Charles A. "*Significant Floods in the United States during the 20th Century: USGS Measures a Century of Floods*"• U.S. Dept. of the Interior, U.S. Geological Survey, 2000. <<http://ks.water.usgs.gov/pubs/fact-sheets/fs.024-00.pdf>>

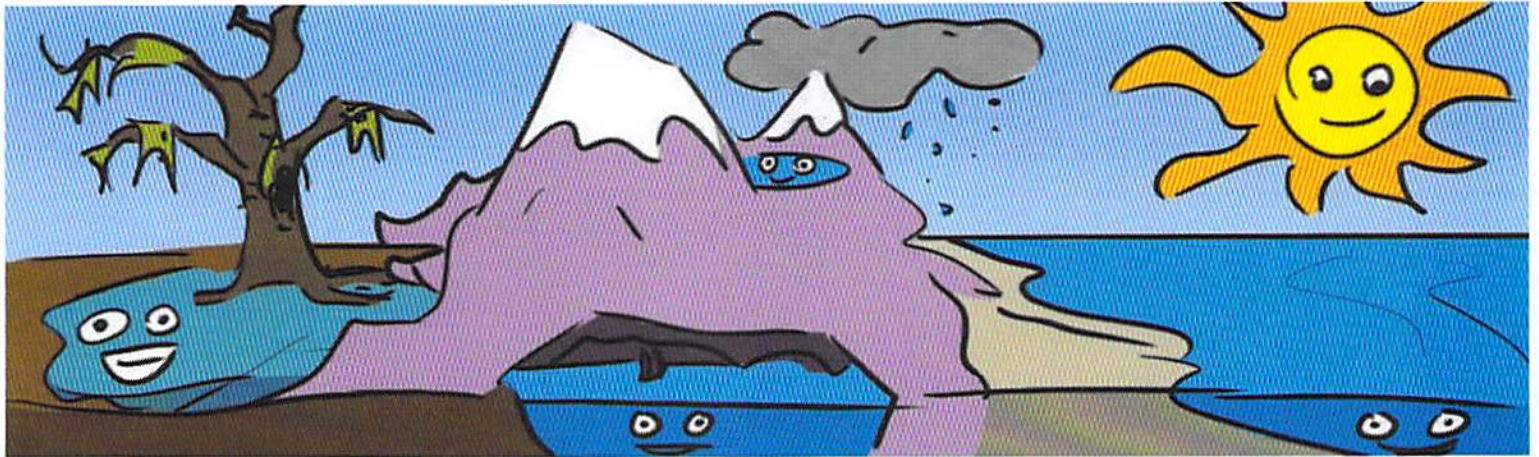
"Water Cycle" Biology. Science In Context, 2013. <http://www.biology-online.org/5/3_water-cycle.htm>



Name _____

Period _____

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Water Everywhere!

surface runoff, transpiration, groundwater, accumulation

The Earth System Unit

Water is all around you. It's in the air you breathe, in the clouds above your head, and under your feet. Even though water is everywhere, you will find most of the water in the world at the beach. Who can blame it? The beach is pretty awesome. Pack your swimsuit, and let's follow the water as it winds its way to the world's oceans.

What happens when rain or snow hits the ground? To find out, take a look at your driveway the next time it rains. You will see the water racing downhill to the curb, where it quickly flows into a small stream and into the storm drain. That storm drain may flow out to a river or the sea. The same thing happens in the country too. When the ground is too hard or wet to soak up any more water, the extra water flows downhill where it joins up with streams, rivers and eventually the ocean. **Surface runoff** is rain that flows over the surface of the soil to the nearest river or stream. About one-third of all rain runs back into the ocean this way.

But what happens to the rest of the water? Some water soaks into the ground. It flows underground, often slowly, like a river. If you dig down deep enough, you will see that dirt is full of water. Go back to the beach and pull out your shovel. Start digging. After a while, your hole fills with water at the beach too. The same thing would happen in your backyard. **Groundwater** is underground water that fills the spaces between pieces of rock and soil.

This water does not always stay in the ground. Over time it may leak into rivers or the ocean. Plants also pump up water from the ground to make energy they can use, then let the water out into the air after they