



## Your Very Own Pet Water Drop

water cycle, evaporation, condensation, precipitation

The Earth System Unit

I am going to give you a little pet water drop to take care of. It's a little wobbly and a little runny, so you will need to keep an eye on it. Water drops won't stay in the same place. When you are not watching, it could fly away. No, that's not a joke. They will play anywhere, from streams to the middle of the air, to way up high in the clouds. Here are some instructions to help you know where your water drop is at any moment. The first rule is easy. Don't drink it.

*Your pet water drop likes to move!*

If you do not keep it in a closed cup, your water drop will change so it will not even look like water. The **water cycle** is what happens when water changes from a liquid into a gas and back into a liquid again. You may think that the word *cycle* means that your water is riding a bike. But this just means something that keeps going around and around, over and over again. The water bike is sold separately. And you do not need it. Your water moves around just fine without it.

*Your little water drop likes sun!*

If you leave your water drop out in the sun, it will start to go away. Do not worry. This is supposed to happen. **Evaporation** is when liquid water turns into a gas. When the sun's light makes it hotter, your little water drop will change into a lot of much smaller water droplets. These are too light for gravity to hold down, so they rise up into the air. Let it go. It's going on its water adventure.

*Your water drop likes to eat dirt!*

It floats up into the air as a lot of tiny water drops, going up and up and up until it just can't go any higher. It's colder up in the sky. There's a whole bunch of dust floating around from the wind blowing it away from the Earth. Your water drop will grab onto one little speck of dirt. So will another water drop and another and another. **Condensation** is when water gathers together to go from a gas back to a liquid. Water can do this on the side of your glass of lemonade or on a leaf in early morning. It tends to do this when it gets cold. Up in the air, the water will grow into a big water drop around that speck of dust and get really heavy. Now take a deep breath. This next part may worry you, but your water drop will be just fine.

*Your water drop likes to skydive thousands of feet back down to Earth.*

Are you missing your water drop? Plip. Wishing that you had kept it in a jar instead of leaving it out in the sun? Plop. Well, I have good news. PLIP. It, and a lot of its friends, are on their way back. Plip plop PLOP plip Plop plop. **Precipitation** is another word for rain, snow, or hail that falls down to the ground. Once it has grabbed hold of some dust with other water drops, it becomes heavy enough to fall down again. And it will come right back to you! Only it might splatter on your face. Hey, it beats cleaning up a mess.

Your new pet water drop can do great things. It can shrink down to nothing, rise into the air, gather around dust, and fall back to Earth. The important thing is to let it move. It may end up a wet mess on your face or shoulder, but hey, no pet is perfect, and it got to go on a great adventure. And yes, if you get fed up with your pet water drop, you can drink it.

### **References:**

Kids Science. "The Water Cycle" Kids Science, 2011.

<<http://www.sciencekids.co.nz/sciencefacts/weather/thewatercycle.html>>

Neo K12. "Water Cycle" Neo K12, 2012. <<http://www.neok12.com/Water-Cycle.htm>>