WaterDrops

Water Cycle

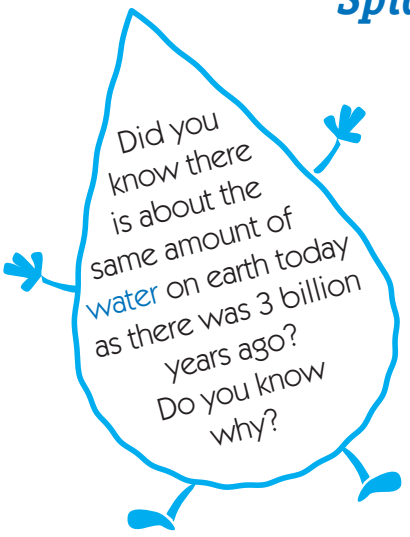
A Southwest Florida Water Management District Water Resources Newsletter for Grades 3–5

Hello Readers!

This issue of ***WaterDrops*** brings you information about water as a resource. What is a resource, you ask? It's something for us to use. Water is one of our most important resources. Water exists in a variety of places. We can find fresh water under the ground in places called aquifers and on the earth's surface in lakes, rivers and streams. We can see it falling from the sky as rain. Nearby, we can find salt water in the Gulf of Mexico.

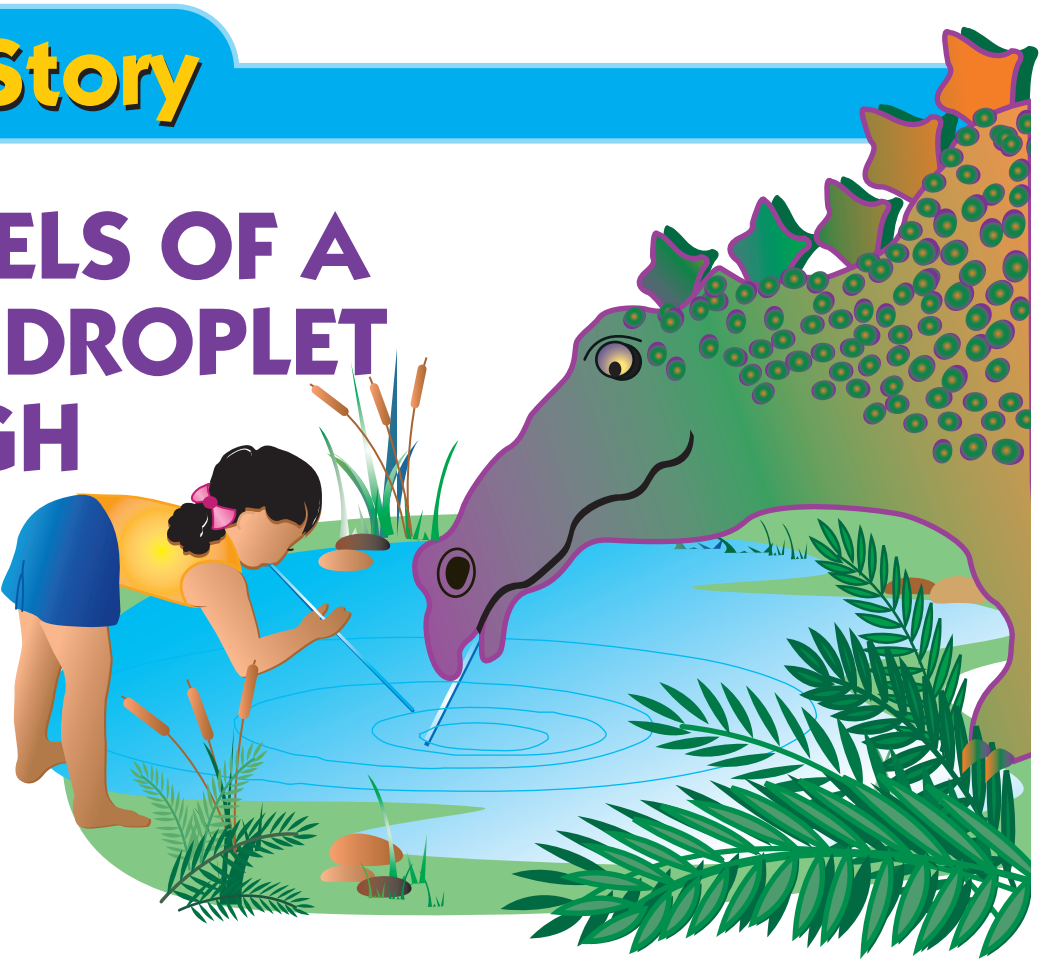
All the water on the earth is part of a wonderful system in nature called the water cycle. After you complete this issue, you will know a lot more about the water cycle.

Happy Splashing!



Feature Story

THE TRAVELS OF A WATER DROPLET THROUGH TIME AND SPACE!



This week at school, Kim's class is learning about the water cycle. The students just finished watching a video on the story of water. They learned that water moves itself in a never-ending cycle.

"What did you like best about the video?" asked the teacher.

"I liked the part that showed a timeline with dinosaurs drinking water, and then pioneers drinking the same water, and finally children of today drinking the EXACT same water," said Kim.

"I never knew that!" exclaimed Tomika.

"I guess that means that in 100 years, people will be drinking the same water," said Clayton.

"We have the same amount of water on earth we've always had. I think that's cool!" said Rick.

The class continued the discussion about water. "Did you know the water cycle is also called the hydrologic cycle?" asked the teacher.

"I think water cycle is easier to remember than hydrologic cycle," said Kim.

"What's important is that we all understand the different parts that make up the cycle," said the teacher. "Let's imagine that each one of us is a water droplet. How would you describe your trip through the water cycle? You may begin your journey anywhere in the cycle."

The students thought for a few minutes. "I think I would begin as a little droplet in the clouds. Gradually, I would become so heavy that I would drop from the clouds and fall to the ground," said Rick.

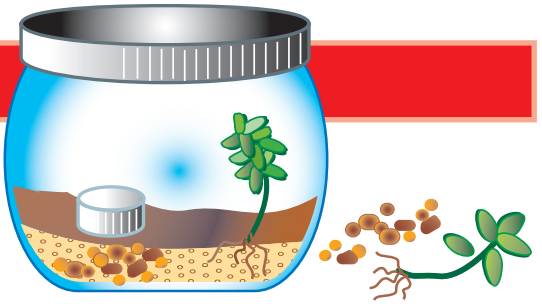
"I would begin my trip beneath the surface of the ground," said Kim. "I would percolate through the soil and sink way down into the Floridan aquifer system. Someone would have to pump me out of the ground through a well."

"We have time for just one more idea," said the teacher. Rosa raised her hand. Then she told the class, "My trip would begin far out in the ocean. I would roll along with the waves. Then I would evaporate up into the air and ride on the wing of an airplane. It would feel great!"

"These are wonderful beginnings for your water story," said the teacher. "Now write your story on paper."

Three students told about how they would begin their stories. Select one of these beginnings or make up your own. Continue your story about the travels of a water droplet through time and space. Be creative!

Take It Home



CREATE A WATER CYCLE AT HOME!

Here is an easy experiment you can do at home.

Materials:

- glass jar with lid
- bottle cap
- small stones
- sand
- soil
- a few small plants

Directions:

1. Find a clean jar that has a wide top. An applesauce or a pickle jar works well for this project.
2. Place a layer of small stones in the bottom of the jar and then cover the stones with sand.
3. Fill the jar with soil until it's about half full. Place a few small plants in the soil.
4. Fill a soda bottle cap or other small container with water. Place the container next to the plants on top of the soil.
5. Place the jar lid on top and twist it as tightly as you can. Place your jar in a sunny place for a few days.

You have created a miniature water cycle! Take notes on what you observe about the moisture in the jar. Share your findings with the class.

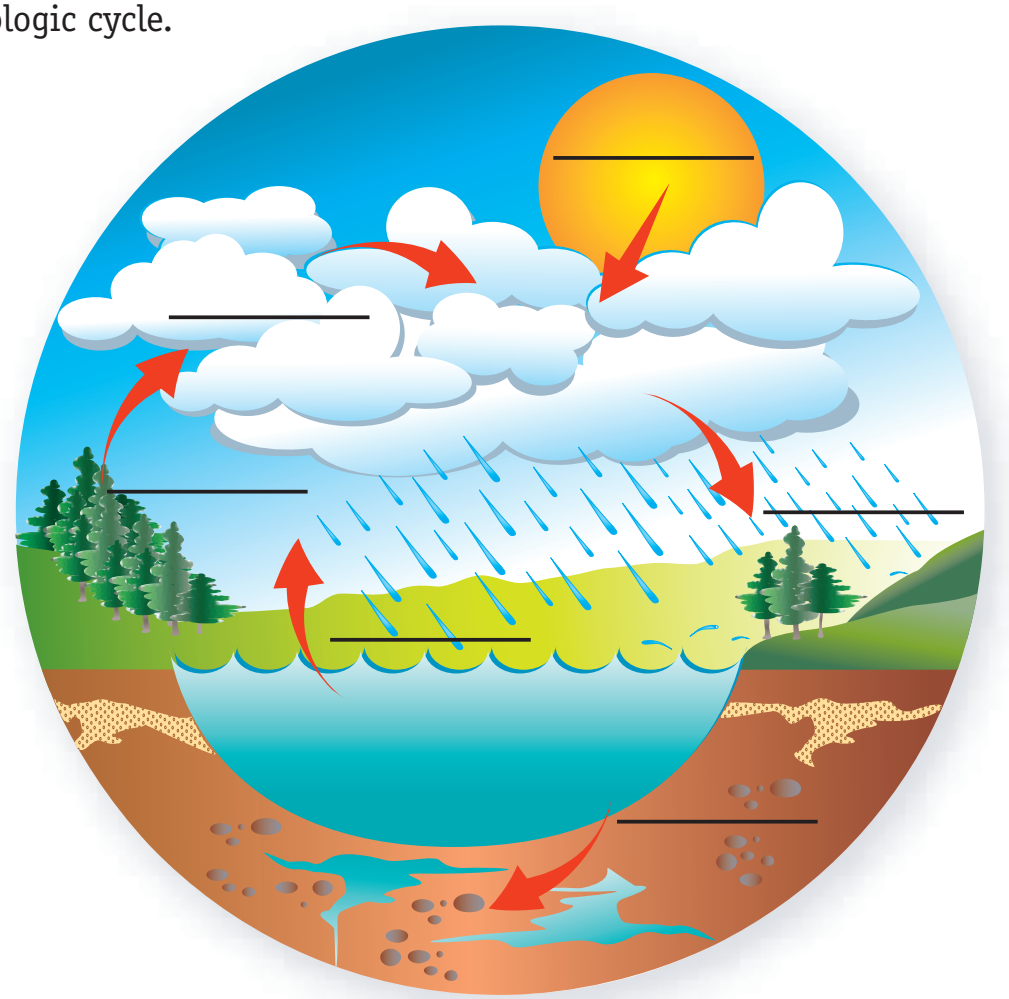
Ask Water Cycle Wanda

Sherita asks: My teacher says trees give off water! Is this true?

Water Cycle Wanda: Yes! Trees are an important part of the water cycle. They draw water up through their roots and use it to manufacture food. As they do this, they release oxygen and hydrogen through tiny holes in their leaves. This produces water in the form of gas. This process is called *transpiration*. Have you ever noticed you feel cooler when you walk through the woods? The shade cools us from the sun's heat. The moisture given off by the trees acts like a giant air conditioner that cools the surrounding air.

PARTS OF THE HYDROLOGIC CYCLE

As you learned earlier in this issue, the hydrologic cycle is also called the water cycle. Read the list of terms and definitions below. Use the terms to label each part of the hydrologic cycle.



sun - provides energy for the never-ending cycle

evaporation - vapor created when the sun heats water in lakes, streams, rivers or oceans

transpiration - vapor created when plants and trees give off moisture

condensation - tiny droplets of water formed when water vapor rises into the air and cools

precipitation - moisture released from clouds in the form of rain, snow, hail, etc.

percolation - movement of the water through the ground

WATER CYCLE EVERYWHERE!

Have you ever noticed a steamy bathroom mirror or window in your home? This is an example of an important part of the water cycle called *condensation*. Water vapor is a gas when it's in the air. The water vapor cools when it comes in contact with a cool surface such as the glass in a window. As the water vapor cools, it changes from a gas to a liquid. Tiny water droplets begin to form on the glass. As the droplets become heavier and heavier, they run down the glass. Something similar happens to water vapor in clouds. These droplets collect together in the clouds and grow heavier and heavier. When the droplets become too heavy to stay up in the clouds any longer, they fall as rain!

Fill in the blank

Complete each sentence by writing in the correct word.

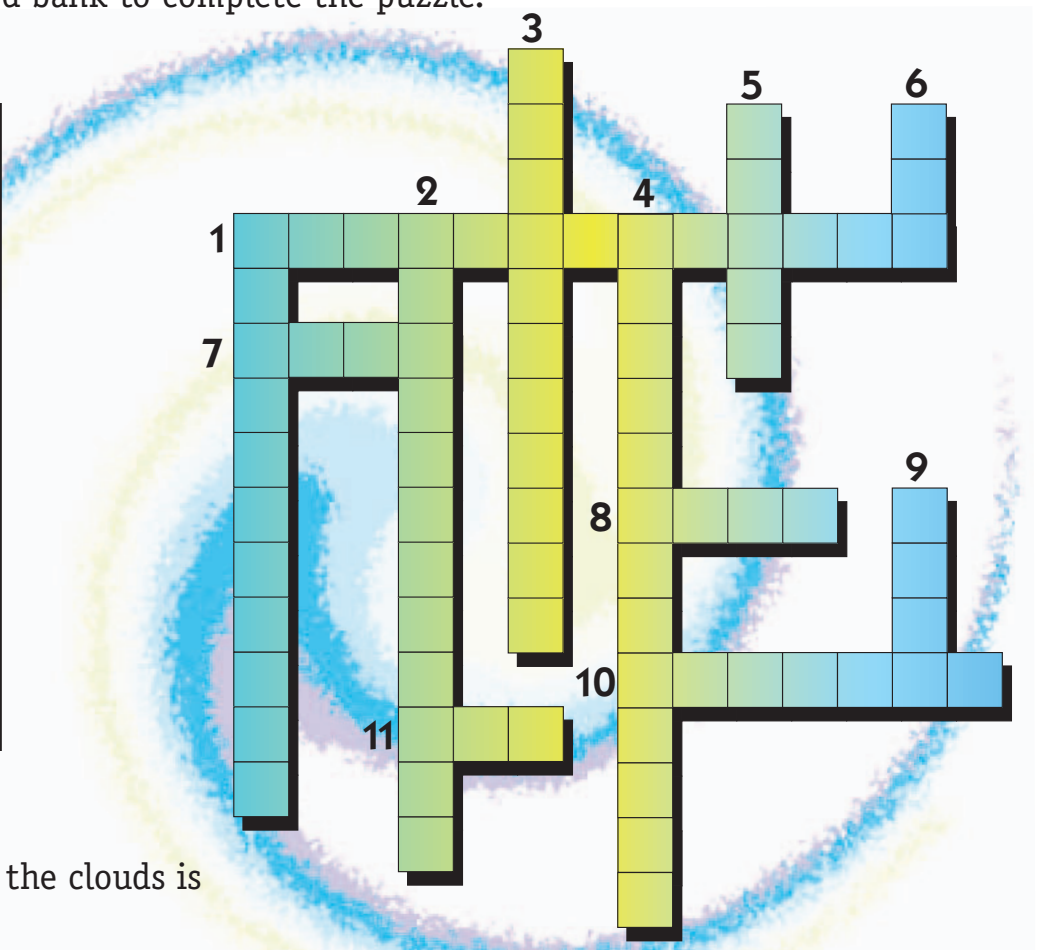
- When water droplets become too heavy to stay in the clouds, it _____.
- Water changes from a gas to liquid when it _____.
- Condensation is an important part of the _____ cycle.

WATER CYCLE CROSSWORD PUZZLE

Use the clues and the word bank to complete the puzzle.

Word Bank

aquifer
sun
transpiration
percolation
evaporation
rain
precipitation
water
lake
pond
ice
condensation



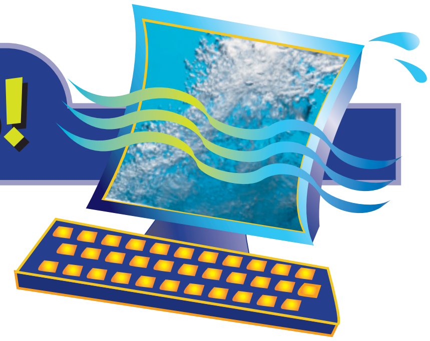
ACROSS

1. Moisture falling from the clouds is called _____.
7. Snow, hail and _____ are forms of precipitation.
8. A _____ is a small body of water.
10. An underground layer of limestone full of holes that water flows through is called an _____.
11. A solid form of water is called _____.

DOWN

1. Downward movement of water through the ground is called _____.
2. Tiny droplets of water formed when water vapor cools is called _____.
3. _____ is the vapor created when the sun heats water in lakes, streams, rivers or oceans.
4. Vapor created when plants and trees give off moisture is called _____.
5. People, plants and animals need _____ to live.
6. The _____ provides energy for the never-ending water cycle.
9. A _____ is a body of water that is surrounded by land.

What's Wet on the Web!



Naturally, ***Bill Nye the Science Guy®*** is simply full of cool information about almost everything! You can check out this great website by going to: *nyelabs.com*.

Under the For Kids & Teachers link, click on Episode Guides to find the topic that interests you. The Earth Science section contains a variety of water-related topics including the water cycle episode.

Find the Hidden Water Message!

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