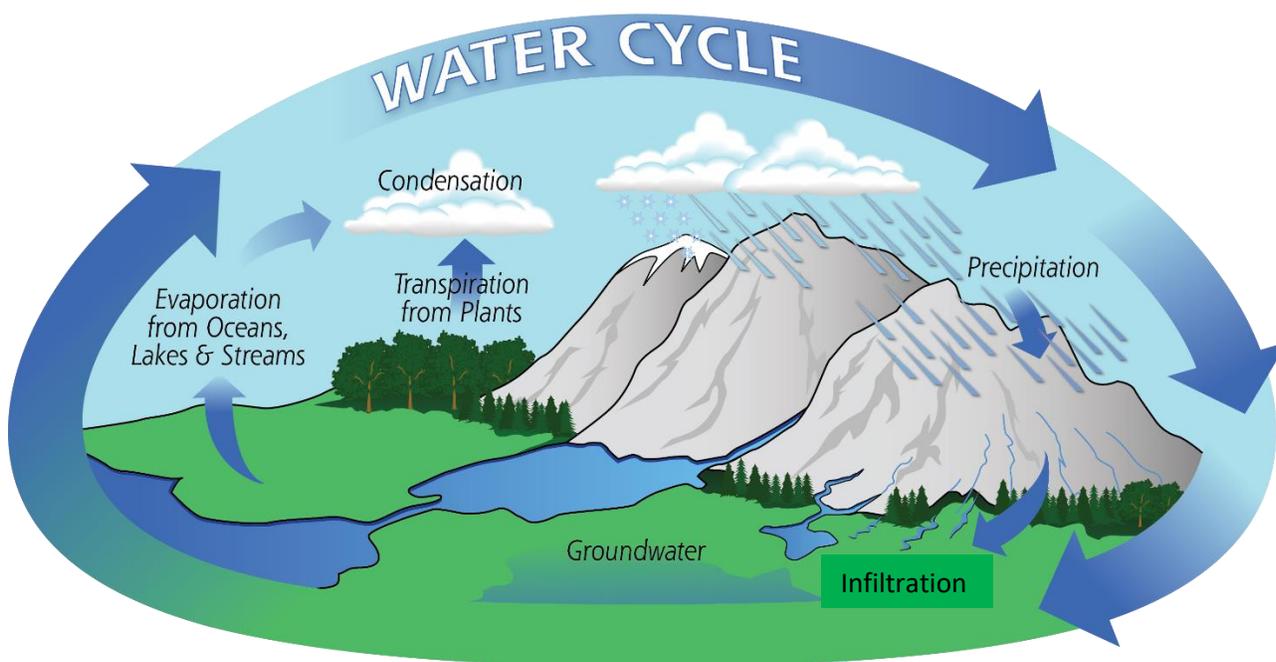


WATER, WATER EVERYWHERE!

Every living thing needs water to survive. Water covers 71% of Earth's surface. Most of the water on earth—96.5%—is in the oceans. Water is also in rivers, lakes, groundwater, glaciers, the air as water vapor, the soil and even in you!

Have you ever thought about water and what it is like? Here are three activities to explore water.



DID YOU KNOW?

The **WATER CYCLE** is the way that water moves from being water vapor to liquid water and then back to water vapor. Sometimes it becomes solid ice along the way, too! It's the journey that water takes as it moves around the earth in different states. Water is liquid in the oceans, seas, rivers, lakes, and even underground. Liquid water can evaporate (change from a liquid to a gas or vapor) and travel into the air. It condenses (changes from a gas or vapor to a liquid) and leaves the sky as rain or snow and falls to land.

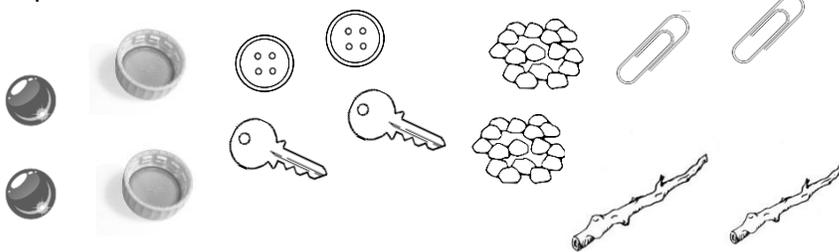
FEELING LIKE A RACCOON

RACCOONS use **WATER** in a special way.

Try this activity to test your sense of touch in water.
Then learn how raccoons use water.

Materials:

- Bucket or container
- Towel that can cover the bucket
- Water
- Several pairs of objects that are ok to get wet and that will fit in the bucket: things like marbles, hairclips, rocks, spoons, sticks, plastic bottles



Directions:

1. Collect your objects. Make sure you have 2 of each thing.
2. Fill the large bucket or container with water.
3. Put one of each matching pair of objects into the container of water. Leave the other object of each pair next to the container.
4. Cover the container with a towel.
5. Choose an object from outside of the tub.
6. Reach your hands into the tub under the towel without looking.
7. Use your sense of touch to find the object in the container that matches the object you chose outside the container.
8. Repeat until you have matched all objects outside of the tub with the matching object inside the tub.

DID YOU KNOW?

Raccoons have an extremely sensitive sense of touch. Raccoons have many nerves in the pads on their front paws and using their sense of touch helps them to identify things. They will rub and roll objects in their hands to learn more about them.

Raccoons can often be seen dipping their food into a stream or creek before they eat it. For a long time, scientists thought it looked like they were washing their food. Now, scientists think that raccoons' sense of touch is even more sensitive when their paws are wet, so dipping objects in water helps raccoons to better identify them.



Questions to ponder:

- When you were feeling for a matching object in the water, how did you know when you found the matching object? Did you feel its texture? Size? Shape? Something else?
- Do you ever use your sense of touch to find or identify things? When?
- What animals do you know that feel things with their hands, paws, whiskers, or other body parts?
- Can you think of any other animals that use their other senses in specific way?

PAINTING WITH WATER

Materials:

- Cup
- Water
- Paint brushes
- A surface that can get wet

Directions:

1. Find a dry area where it will be okay to paint with water. Suggested areas include a sidewalk, driveway, stones, concrete, wood, a fence, or the side of the house. Make sure you have permission to get the area wet!
2. Fill your cup at least halfway with water.
3. Grab your paintbrush and cup of water and go to your area.
4. Dip your brush in water and use the water like paint.

Questions to ponder:

- How long of a line can you paint with one stroke?
- Can you make a pattern, shapes or a picture?
- Can you paint a picture of a tree, a flower or a leaf?
- Can you write letters or a word? Can you write your name?
- Can you find different ways to use a brush to put water on a surface?
- Can you paint with your fingers? How about objects you find outside, like a stick or leaf?

DID YOU KNOW?

Evaporation is the process which water turns from a liquid to a gas or vapor.

Different liquids evaporate at different rates because it requires different amounts of energy to separate the liquid molecules.

- How much can you paint before your painting evaporates?
- How long does it take the water to evaporate?
- Does the weather make a difference? Sunshine or shade? Warm or cool?
- What happens if you use a different size brush?
- Try different surfaces! Does water evaporate at different rates?
- Does your water make the surface you are painting on look lighter or darker?

WHAT IS HAPPENING?

Why do wet things look darker? The water changes the way the light is reflected off a surface so the color we see is different. Instead, the color of the object is refracted, which means a change in the direction of a ray of light, so less light is coming back to your eye.

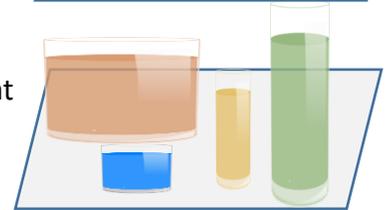
This means the wet surface absorbs more light, making it look darker.

WATER VOLUME EXPLORATION

Ages: Preschool and Elementary

Materials:

- Water
- 1 large container for water
- Several cups or containers of different sizes
- Trays large enough to collect spills
- Several small objects that are ok to get wet. Try to find objects that are different sizes and weights that will fit in the cups.



Directions:

1. Fill a large container with water
2. Place it on a tray, or do this activity in a place where it's ok to spill water, like outside.
3. Place cups or containers on the tray or on another tray
4. Dip water from the large container using the smaller cups or containers
5. Explore and experiment to find the answers to the questions below.



Questions to ponder:

- Which container holds the most water? the least?
- Do any of the containers hold the same amount of water?
- Does a tall skinny container hold more or less than a short wide container?
- What happens to the water in the cup when you put different objects into the water?
- What happens when you pour water from one cup into another?
- Which objects float? Sink? Why?
- Test your sense of hearing. Ask someone else to drop an object into the water. Can you tell which object made the splash?
- Do the objects look different when they are under water?
- What other questions or observations do you have about water?



DID YOU KNOW?

Water takes the shape of the container it is in. The same amount of water will look different in different size and shape containers. You can use a measuring cup to prove this.

Objects that are denser (usually heavy & harder) than water sink and those less dense than water float.

Some examples of things that sink: keys, marbles, screws.

Some examples of things that float: leaves, ice cubes, Legos