

WATER

Of all the natural resources people take for granted, none is more plentiful – or more fragile -- than water. The surface area of Earth's oceans is much greater than that of land, and the volume of water between the waves and the ocean floor is almost impossible for us to comprehend. Yet, if the Earth's total supply were represented by a gallon of water, only a drop would be naturally drinkable.

Since the beginning of time, the human population has increased, but the amount of water on the Earth has stayed the same. It is constantly in motion about the planet. First, the oceans, lakes, and streams evaporate into water vapor, form clouds, and eventually fall back to Earth as rain or snow.

To keep our planet and its creatures alive and healthy, clean water is essential. By using Project WET's *Getting Little Feet WET* and this supplement, young children will be exposed to the ideas that water is not only the main element on the Earth's surface but is also the key ingredient in their bodies and all other living things!

The North American Association for Environmental Education (NAAEE) structures environmental literacy into 5 steps: AWARENESS, KNOWLEDGE, SKILLS, ATTITUDES, and PARTICIPATION. With these activities your little ones can start to develop a respect for this precious resource through further awareness and knowledge. With increasing knowledge, skills and positive attitudes they will then be able to take an active role in conserving and preserving our environment throughout their lives.

THE IMPORTANCE OF WATER PLAY

From a very early age, children are fascinated by water. Even an infant, wiggling and splashing in the bath, realizes that water is special. It can easily change its shape to fit any container it is poured into, it's wet, it's fun, and it makes noise! For young children, provide opportunities and containers for uninhibited water play. Pre-school age children also enjoy dish washing or doll bathing, pouring and measuring. Water play not only provides enjoyment, but also presents math and physical science learning experiences along the way.



Awareness

IDEAS TO USE WITH THESE GETTING LITTLE FEET WET ACTIVITIES:

Water Wonders, pg. 1 introduces children to water play and some of water's unique properties.

Our Blue Planet, pg. 21 allows children to use a beach ball globe to see that Earth is made up of both land and water.

Thunderstorm, pg. 49 has students simulate the sounds of a thunderstorm through a physical activity.

RAIN, RAIN, DON'T GO AWAY

Here is a twist on the old chant—*Rain, Rain, Go Away. Come again some other day.* Sing this little song to celebrate the wonders of RAIN:

Rain, rain, don't go away.

I'm so glad you're here today!

We want to come out to play,

I just love a rainy day!



WATER WORDS

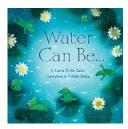
There are many words that describe water and how we perceive it: smooth, flowing, silvery, tinkling, crashing, velvety, slippery, cool, musical. We can dive into water and hear the splash, feel its coolness, taste it, and see the sunlight shimmering through it.

After an experience with water, ask the children to choose one word to describe it. Record their responses and as a group, write a story or poem that uses all of the words. They can make drawings or find pictures, then create a book all about *"WATER"*.

Water Can Be . . . by Laura Purdie Salas

This luminous picture book offers a series of brief phrases illustrating some of the roles that water plays on earth.

A fine choice for reading aloud in the classroom or at home. Grades preK-2.



Awareness

The Deep Blue Sea: A Book of Colors

by Audrey Wood

The rhythmic text is enticing and reads aloud smoothly. There are enough surprises to hold listeners' attention, and the language is simple enough beginning readers. for Children who look closely will see fish darting beneath the rippled sea, the reflection of the sun on the water's surface, and the nuances of the palm tree's trunk. Different shades of each hue are incorporated into the pictures, creating visual interest and showing youngsters that there are variations of colors. Grades preK-2.



TAKE A RAIN HIKE

Gather your children near a window or sit on a porch to listen to the rain. Take a deep breath and smell the Earth soaked with water. Try to observe any wildlife to see what they do during a rainstorm. If it is not too cold or threatening to thunder and lightning, go out with your children into the rain and feel the thousands of drops tap lightly on your head, shoulders, arms and legs. Turn your face upwards, close your eyes, and let the rain wash over you. Open your mouth and taste it. Jump into puddles and hear the splash of water from your feet. Afterward, share stories about the best part of your rain walk.

A SENSORY EXPERIENCE

Water has a special feel to it. Dip your hands into cool, clear water and experience the sensation. Provide a large tub or pan in the middle of a sitting circle, so that everyone can close their eyes and experience the feel of water while you read this story:

The oceans, lakes, rivers, and ponds are full of water. As a matter of fact, water covers most of the Earth's surface. Of course, we cannot breathe underwater but a fish can. We are going to pretend that you can turn into a fish and imagine what it would be like under the water. As you dip your feet into the cool, clear water, your legs melt together to form a large tail. Instead of skin, smooth scales cover your powerful tail. You wiggle it in the sunlight and watch it glimmer and shine with many beautiful colors. You let yourself slowly sink into the water and, as it covers your head, several gill slits appear on your chest. These gill slits allow you to breathe the oxygen in the water without a snorkel or tanks. The water is cool and the waves tickle your scales. As you sink lower, your arms shrink up and become fins. You gracefully curl your tail behind you and glide forward with a kick. Everything around you is silent. Take a few minutes to enjoy your underwater adventure. Can you image meeting a fascinating creature beneath the waves? After you come back to shore, you can tell us something about your underwater fantasy that was exciting or made you feel good.

After a few minutes ask everyone to return home. As soon as all hands are out of the water, children can take turns describing something they saw or experience during their imaginary journey.

Knowledge

IDEAS TO USE WITH THESE GETTING LITTLE FEET WET ACTIVITIES:

It's All Water, pg. 6 lets children experience the three states of water for themselves by watching water melt, freeze and boil into water, ice and steam.

House of Seasons, pg. 24 students learn about the four seasons and how water plays a role in each.

Rainstick: Make it Rain! pg. 53 students build a rainstick as an art project and use it to imitate the sound of rain.

BREATHE A CLOUD

A cloud is just a huge plume of water vapor floating in the sky. On a very cold morning, you can make a small cloud by blowing your warm breath into the air. Your warm, moist breath comes in contact with the cold air and forms into tiny water droplets. In nature, real clouds happen in a similar way. The warm, moist air above a lake or ocean rises into the sky when it is heated by the sun. There it meets cold air and forms into tiny droplets of water.

REST UPON A CLOUD

Clouds are always changing. They seem to effortlessly float in the sky but they are actually tumbling through the air, constantly changing their size and shape. On a pleasant afternoon, it is fun to watch a cloud change from an elephant to a turtle to a flower! Instead of an ordinary rest time, take your children outdoors to watch the clouds roll by. Give each child a private, quiet space alone to find pictures in the sky.

It Looked Like Spilt Milk

by Charles Shaw

A beautiful and engaging classic that inspires creativity and imagination.

The white shape silhouetted against a blue background changes on every page. Is it a rabbit, a bird, an ice-cream cone, or just spilt milk? In this childhood classic, kids are kept guessing until the surprise ending, and they're encouraged to improvise similar games of their own.



Knowledge

The Little Raindrop

by Joanna Gray

The raindrop's adventures are documented in soft pastels displaying the beauty of Earth's rainbow, streams, rivers, and oceans, while he encounters a variety of birds, bunnies, worms, moose, bears, and aquatic life.

While not nonfiction, this book would make a great introduction to nature units covering forms of precipitation or types of bodies of water. Additionally, with the smoothly flowing story and picturesque illustrations sweeping across the spreads, it would make a fine read-aloud as well. Just like water in real life, the little raindrop can make a big impact on his readers. Grades PreK-2.



TEAR A PAPER CLOUD

Your children can imitate the random artistry of real clouds by creating their own out of paper. Have each child tear a piece of white scrap paper into any shape desired. Paste the clouds onto blue paper and have each child carefully study the picture to determine what it looks like. Label them and hang around the room or bind into a book on "Clouds".

WHERE DOES THE RAIN COME FROM?

By conducting this simple kitchen experiment, you can demonstrate how rain or snow is made. CAUTION! *Do not let children handle or touch the hot water, hot pan, the steam and heating element.*

1. Fill a saucepan with water and bring to a rolling boil. Let children observe the bubbles and rising steam. Ask, "Do you think the steam is hot or cold?" *Caution them not to touch the steam as it is very hot.*

2. Place about ten ice cubes in a pie pan and let the children feel the bottom of the pie pan. Ask, "How does it feel-- hot or cold?" Hold the pie pan over the rising steam and have the children observe the bottom of it. As the water is heated, it turns into gas called water vapor. Your children will notice that as soon as it hits the cool pie pan, the vapor changes back into its liquid state and forms into water droplets. Ask them, "What happened to the steam when it hit the cold pie pan?" Let them feel the bottom of the cool pie pan and notice that there is water, like rain formed there.

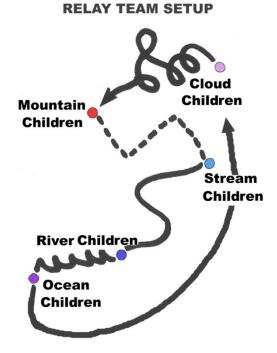
3. Explain that the Earth is heated by the sun and changes water into water vapor, just like the pan of water on the hot stove did. The water vapor rises into the air, forming clouds when the air becomes cold enough. The water vapor cools and forms heavier droplets that fall back to Earth as rain. If the clouds and the air are really cold, the raindrops freeze and fall to Earth as sleet or snowflakes.

Knowledge

THE RAINDROP'S RELAY

This relay demonstrates to young children the long journey taken by a raindrop in the water cycle. And when it's over the whole adventure starts again!

- Since you will need lots of space, this relay is best done outside. Divide children into groups of five. On each team, assign one of the paths taken in a raindrop's journey to each child: Mountain, Stream, River, Ocean, and Cloud.
- The children will gather at each field location in this order, with enough distance between them to mark a lengthy traveling path: Cloud Children, Mountain Children, Stream Children, River Children, and finally, Ocean Children. Place field markers out to show the beginning spot for each group. Identify team members with badges. Youngest children may need the path drawn out.
- Fill small balloons with water and tie off top to represent a raindrop. Hand one to each Cloud Child. Have each Cloud Children "float" about until they reach the Mountain Child on the same team.
- 4. Start the relay by saying, *"The water falls from the cloud in the form of a snowflake onto the mountain."* On each team the Cloud Child hands the balloon to the Mountain Child.
- 5. Continue, "Throughout the winter, the drop of water is frozen in place. When spring arrives, the snow melts and the raindrop begins its journey down the mountainside". The Mountain Children carefully run a zigzag mountain path and each hands the balloon to a Stream Child.
- 6. "Many drops of water come together to form a stream. The stream rushes down the mountain *until it meets a river.*" Hand off balloon to River Child.
- 7. "Many mountain streams empty into the river. The river twists and turns until it meets the ocean." Hand balloon to Ocean Child.
- 8. "Many rivers empty into the ocean, where the water sloshes and is pulled back and forth by the moon. The sun warms the water and it changes into water vapor." Have the Ocean Child wiggle back and forth and return the balloon to the Cloud Child.
- 9. "The water vapor rises into the sky and forms clouds. The clouds travel over the land and eventually the raindrop falls onto the mountain tops." Have the children repeat the relay, but this time let them tell the story of the raindrop as it travels to the ocean.



Knowledge

ARTISTIC RAIN

The random splashing of raindrops creates a beautiful effect on this "rain picture". Have children take a large piece of scrap paper and cover its surface entirely with watercolor paint. It can be a solid color or many colors. Dry completely, then during a light rain shower place it outdoors for a brief time and allow the raindrops to splash and partially wash away some of the paint. Bring it indoors and allow it to dry again. The drops of water will have created an interesting work of art. Since no two pictures will be exactly alike, encourage your children to try other designs and test what happens when they leave their paintings in the rain for various lengths of time.

MAKE AN UNDERWATER VIEWER

Our eyes are especially designed to see in the air, but the eyes of fish and other water creatures are designed to see underwater. You can make an underwater viewer from a clean, empty half-gallon milk container. Cut off the bottom and the top of the container and cover one end with a piece of clear plastic wrap. Secure with a rubber band. When the wrap covered end is placed in the water, you will see things you never noticed before! Have them share what they saw underwater.

CELEBRATE EARTHDAY THROUGHOUT THE YEAR

SPRING – Organize a signs of Spring Scavenger Hunt played in teams. The object is to search for signs of spring with a list of items (a robin, a bee, a flower, buds on a tree, etc.).

SUMMER – Play a game of "Mother Earth, may I? In this version when called on, a player thinks of a way to make Mother Earth happy, such as, "Mother Earth, may I plant a tree?" or "Mother Earth, may I turn off the faucet while brushing my teeth?" Then Mother Earth might reply, "You may take two giant steps forward". Continue playing until one child reaches Mother Earth.

AUTUMN – Make some applesauce! Core, peel, and slice at least 6 apples. Place them in a heavy saucepan with ¼ cup of water and cook until soft. Let it cool and mash.

WINTER – Stitch together a memory quilt. Have children bring in worn out or outgrown winter clothing. Cut squares out of the fabric and stitch together into a quilt. Have children add beads, sequins, and other ornaments with fabric glue to make beautiful! Let them share what they remember doing while wearing the clothing they brought in for the quilt.

Attitudes

Don't forget the crafts and snacks that make learning fun! Here are just a few good ideas to use with your study of water.



Attitudes

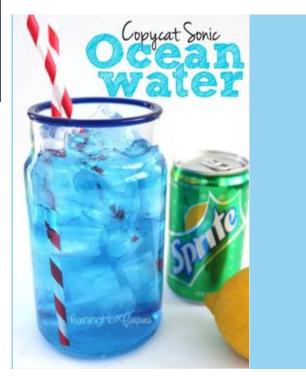


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Attitudes





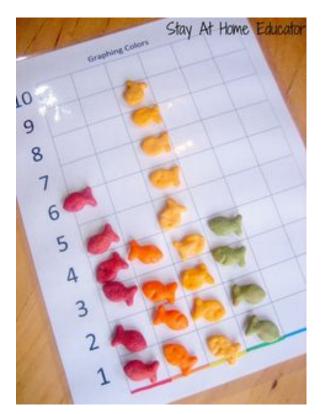




Attitudes



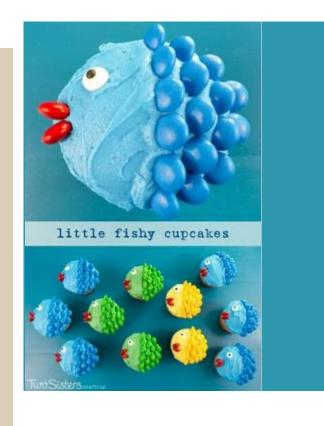






Attitudes









Attitudes







