



MINIS AT HOME

volume 1, issue 23

Greetings kids, parents, grandparents, guardians, friends and neighbors!

Welcome to issue 23 of Minis at Home newsletter. Each newsletter features a special theme and offers pertinent information, a craft, and recommended reading. Grownups: please work on projects together with your children. Your pARTicipation is important! We will offer hints and tips for ways to create art as a twosome or a family.

This week's theme = Rain

Rain, rain go away! We have had a lot of rain this year. Although you may not like to go outside in the rain, it is the most important type of weather we have. What is rain and where does it come from? As you know, rain comes from clouds in the sky. You probably remember from looking at pictures last week that clouds are a huge part of the Earth's atmosphere. If you look at satellite pictures from space, Earth looks like a swirly marble with blues from the oceans, greens from the forests, browns from the deserts, and white from the clouds. Take a look at the picture below and see if you can see clouds covering the Earth.



Why does it rain? Rain is an important part of the Earth's **water cycle**. A water cycle is how all the water on Earth gets **recycled**. There is only a **finite** (meaning that there is no more being made!) amount of water on the Earth. The water currently in the oceans, rivers, stream, lakes, mountain snow and ice, is all we will ever have on Earth. So, Earth must recycle its water. In a water cycle, the heat from the Sun warms the Earth and its water. This heat creates humidity—or moist, wet air. This is why the air feels sticky and wet in the hot summertime. This sticky wet air is actually made up of tiny water droplets

called water vapors. These water vapors form into clouds. When the clouds get full and heavy with water, they "break" open and the water falls to the ground as rain. If you took a paper towel and let some water drip onto it, the paper towel would eventually get so wet that it would break, and the water would come streaming down. When it rains, the water gets put back into Earth's water sources, such as oceans, rivers and lakes as well as snowy mountain tops. Where it's cold, it snows instead of raining.

Think about a pot of boiling water on your stove. As the water heats up, steam will rise. This is actually water vapor. If you placed a clear lid above the pan, you would see the steam rise and stick to the lid. When the steam rises, it cools off and turns into water droplets. This is condensation, which is how clouds form. When there is too much condensation and the clouds get heavy and full, the condensation falls to the ground as rain.



Activity: Science Experiment

Rain Cloud in a Jar (adapted from learn4yourlife.com)

Use a large, clear glass mixing bowl or large glass jar.
Put very hot water in the bowl or jar.
Place a plate over the top of the bowl to act as a lid.
Place several ice cubes onto the plate
Watch it rain inside the jar!

Rain is one of the 5 main types of **precipitation**. Precipitation is any type of water that forms in the Earth's atmosphere and falls to the ground. The water in the clouds can fall to the ground as rain, **freezing rain**, **hail**, **sleet** or **snow**. We have experienced a lot of all these types of precipitation this year here in Easton. Freezing rain occurs when rain freezes as it hits the ground, creating ice, slippery roads and icicles. Sleet occurs when the rain freezes before it hits the ground. This can create slushy wet snow. Hail occurs when frozen raindrops are formed in very high clouds where there is a lot of wind. When

these frozen raindrops start to fall, they get swept back up into the clouds by strong winds, gathering more water and freezing into bigger hail stones. Here's something crazy: sometimes we get a hailstorm in the summertime! Even though it might be nice and warm down on Earth, it can be quite cold higher up in the clouds.

Fun Fact: Did you know that a raindrop starts out round, but as it falls, it flattens out on the bottom and takes on the shape of the top of a hamburger bun? It doesn't taste like one, though :-).



Do you love rainbows? A rainbow is a beautiful gift from nature. But without rain, we would never see one! Just as rain begins to stop or if it is raining very lightly, also called **drizzle**, the sun may come out from the clouds. The sun's light will shine through the raindrops, causing all the light to reflect back. This is why we see all 7 colors of the rainbow: **red, orange, yellow, green, blue, indigo and violet**. They always appear in the same order. A fun way to remember that is to take the first letter of each color and to think of a rainbow as a person named **Roy G. Biv**. He's a colorful guy!



When sunlight shines into the water drops, the light actually bends inside them, making the reflected colorful light bend. If you look into a rounded object such as a metal can or a rounded mirror like you may see at an amusement park, your reflection may look bent and round.

Plants, animals, trees and all living things need rain to survive. Without rain, everything would dry up. Crops wouldn't grow and people and animals would get very thirsty. The ground would turn to dust. Rain is the most important kind of weather we have. In many parts of the world, rain does not always fall when people need it. Before humans understood the science behind rain, they thought the rain, just like the sun, moon, and stars, came from Gods or other special powers. When people needed rain in order for their crops to grow, they would hold celebrations asking for rain and then thanking the Rain Gods when it came. These celebrations would include feasts, dancing and music. In some cultures, people would shoot arrows into the clouds, hoping to make it rain. Many cultures would ask the Rain Gods for



rain by playing musical instruments such as rain sticks during their ceremonies. A rain stick, when shaken or turned upside down, sounds like falling rain. One of the most well-known types of rain sticks is made from hollow cactus branches filled with the dried needles.

Activity: Craft

Rain Sticks



Materials:

Paper towel roll
 Construction paper
 Crayons, markers or paint
 Scissors
 Uncooked rice
 Glue stick (optional)
 Tape
 Rubber bands
 Aluminum foil
 Yarn or ribbon

Procedure:

Cut two 4" x 4" square pieces of construction paper (to cover and secure the paper tube openings).

Decorate your paper towel roll using paint, colored construction paper shapes, stickers or markers/crayons.

Secure one paper square over one end of the tube using rubber bands and tape.

Tightly twist a strip of foil into a corkscrew shape, making sure the length of the strip fits inside the tube.

Place the foil corkscrew into the tube. Add a handful of rice.

Secure the opening of the tube with the other paper square, tape and a rubber band.

Tie strands of yarn or ribbon around each end of your rain stick for texture and decoration!



Many of the Earth's plants and animals live in rainforests, where it rains a lot. Without rain, the rainforests would not grow, so the animals living there would not survive. While rainforests get the most rain, deserts receive the least rain. Antarctica gets the least rain of all places on Earth, even though it is covered with ice! Look at a satellite picture of the Earth. Can you tell which areas of our planet get the most rain and the least rain?



Rain also helps us make electricity through hydropower which is using the energy, gravity and power of fast-moving water in rivers. Moving water is very powerful. Think about how strong a breaking wave can be. This power, or force, can move and turn special machines that make electricity.



Rain is so important to our planet that we even have special weather satellites to help us learn about and predict rain patterns all over the Earth. The Global Precipitation Measurement satellite was launched into space to map rain all over the world many times a day. This mission helps scientists learn what areas on Earth may experience too much rain, which is called a flood, or too little rain, which is called a drought.

It's fun to go outside and play in the rain! You just need to dress for it to stay dry. As many people who live in rainy places often say..."There is no such thing as bad weather. Only bad clothes!"



Activity: Singing and Chanting

Raindrops (original source unknown)

Raindrops, raindrops

Falling all around (move finger to imitate falling rain)

Pitter-patter on the rooftops (tap softly on a table)

Pitter-patter on the ground (tap softly on the floor)

Here is my umbrella

It will keep me dry (hold arched arms and hands over your head)

When I go walking in the rain

I hold it up so high (raise hands into the air)



Pitter Patter Raindrops (original source unknown)

(sung to "I'm a Little Teapot")

Pitter-patter raindrops

Falling from the sky (wiggle fingers moving them to the ground)

Here is my umbrella, (pretend to open an umbrella)

To keep me safe and dry

When the rain is over (make a sun with your arms over your head)

And the sun begins to glow

Little flowers start to bud (kneel down into ball and slowly stand up)

And grow and grow and grow



Literacy: POEM TO SHARE

Yay for a Rainy Day! by Constance Del Nero

I pop on my boots and tramp around,
stomping in puddles on the ground

Water like diamonds in the air
Raindrops pour upon my hair

Along comes my dog (friendly fella)
offering me a big umbrella

"Come in!" calls dad:
Dinner's ready
Tonight we're going to have spaghetti!

Literacy: RECOMMENDED BOOKS

Snuggle up in a big comfy chair and read together

Come On, Rain by Karen Hesse

Cloudy with a Chance of Meatballs by Judi Barrett

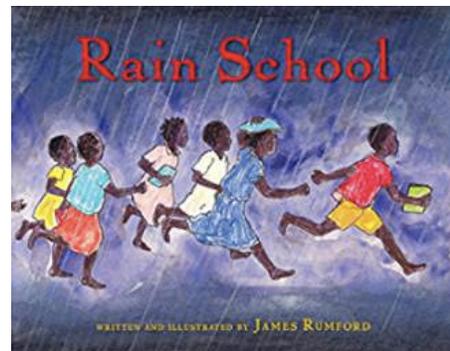
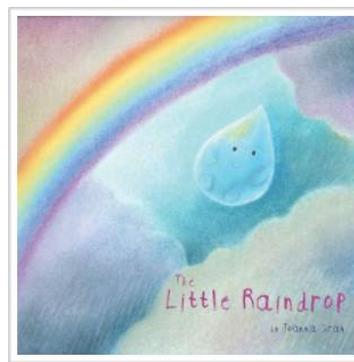
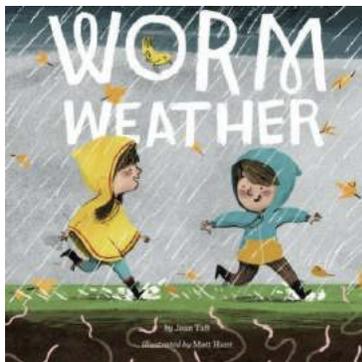
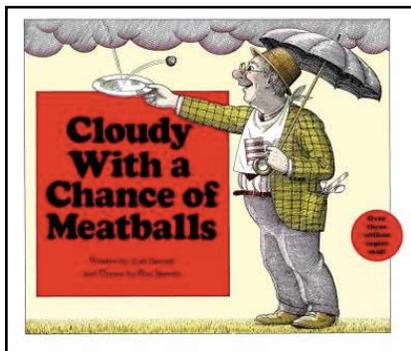
This Beautiful Day by Richard Jackson

Cloudette by Tom Lichtenheld

Worm Weather by Jean Taft

The Little Raindrop by Joanna Gray

Rain School by James Rumford



See you next week with issue 24 of **Minis at Home!**

Share your work on <https://www.instagram.com/minimastersaam/>

or email pictures to Ann Hansen
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