
TEKS K.7 Earth and space. The student knows that the natural world includes earth materials. The student is expected to:

(B) observe and describe physical properties of natural sources of water, including color and clarity; and

(C) give examples of ways water is useful.

Background Knowledge

Our Earth produces resources that meet our needs. Water is an important resource found on Earth in its oceans, lakes, rivers, puddles, streams, and even the sky. In this module, kindergarten students will be observing and describing physical properties of water, recognizing different ways we use water, and identifying different sources of water on Earth.

In nature, water exists in liquid, solid, and gaseous states. Although at this grade level, students are not held responsible for identifying gases. At room temperature, water is a tasteless, odorless, and nearly colorless liquid. You can describe water as clear, wet, and slippery; and ice as cold and hard. Clouds are made of water vapor, and the steam coming off of hot liquids is also water vapor. One difference between the liquid and solid states is that water flows and ice does not.

There are many different uses of water, from drinking to keeping us clean. All living things need water to stay alive and healthy. Living things get water by drinking it and eating foods that contain water. Plants get water by taking it up through their roots. Some animals, like those living in the desert, get water by eating plants.

There is more water than land on our Earth. Even though the oceans hold a lot of water, we cannot drink this salty water. When you go to the beach in Galveston, you are swimming in salty ocean water. Earth provides freshwater too. Rivers, streams, and creeks carry water over the land and often dump it in the ocean.

Water is also a part of the sky. Clouds are made up of tiny droplets of water. When too many water droplets collect in clouds, they fall to Earth as rain. If the temperature is very cold, this rain freezes and falls to the Earth as snow or sleet.

Essential Questions

How are water, ice, and steam alike and different?

(Water is clear, wet, and slippery; ice is cold and hard; steam is warmed water being released into the air. Water flows, ice does not flow, and steam rises up into the air.)

Why do we sometimes put ice in a glass of water?

(The ice takes some of the heat from the water. As the ice melts in the water, the water becomes cooler.)

We use water in other ways besides drinking, how else do you use water?

(Washing hands, brushing teeth, slip and slide, fish tanks, cooking macaroni)

How can natural sources of water be described?

(Water from natural sources such as lakes, rivers, and oceans, can be described by its color, how clear or cloudy it is, and by its taste. Freshwater is usually clear and tasteless, but it can be cloudy if the water is muddy. Freshwater is found in lakes, rivers, ponds, and streams. Rain and snow are forms of freshwater. Ocean water is also usually clear, but can be cloudy and foamy as waves move onto the beach. Ocean water and water in the sea is saltwater and tastes salty.)

Have you ever been fishing in a lake? Describe your experience.

Painting With Ice Cubes



Objective:

To observe and describe the properties of ice and water.

Materials:

- Ice trays
- Water
- Food coloring
- White cardstock or butcher paper
- Popsicle sticks
- A freezer

How to Conduct:

In this fun activity, students harness the melting properties of frozen water to create a painting. Put a few drops of different food coloring into each section of an ice cube tray and slowly pour water in the tray until each section is full. Add a popsicle stick to each section and place the trays in a freezer overnight.

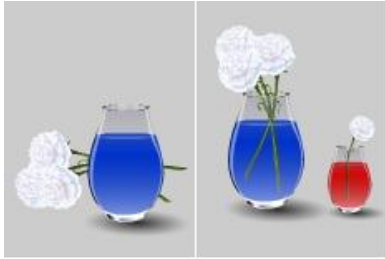
The following day, spread some paper out on some tables and remove the ice cubes from the trays. Have students select their own ice cubes. Tell them to hold the popsicle stick handle and use their “paint blocks” just like a paintbrush to create a piece of art on some cardstock paper.

Discuss how the food coloring has changed the color of the ice and the water when the ice melts.

Ask, “What was the color of the water before adding food coloring to it?”

Ask, “What makes water good to paint with?” (Liquid water flows and is absorbed by the paper. Food coloring can be mixed with water to change its color.)

Coloring Carnations With Water



Background Information:

Plants take in water from soil through their roots. The water travels up the stem of the plant into the leaves where it makes food. The water also travels to the flowers where seeds form. When a flower is cut, it no longer has access to water from the roots, but the stem of the flower still takes up the water and provides it to the leaves. (Coloring the water with food coloring does not harm the plant in any way. Celery can be used in place of carnations.)

Objectives:

To observe and give examples of ways water is useful.

To reinforce that all living things need water, and to observe how water travels through plants.

Materials:

- White carnations
- Food coloring
- Cups
- Water

How to Conduct:

- Right before doing this activity, cut the stem of each carnation at an angle to create a fresh cut so water will move up the stem.
- Give each student (or group of students) a freshly cut white carnation, a large cup, and some food coloring.
- Have the students fill the cup water to the half way point and add 15–20 drops of food coloring to the water. (The more food coloring they add, the more colorful the results will be.)
- Gently stir the water with a spoon to mix in the food coloring.
- Place the carnation in the cup of water and observe what happens over the next 24–48 hours.

The Ways We Use Water



Background Information:

Students drink water every day, but often do not think about all the other ways they depend on water throughout the day. The following two activities will help students recognize how important water is in our lives.

Objective:

To observe and give examples of ways water is useful.

Materials:

- Construction paper
- Old magazines, newspapers, calendars, pictures from the internet, etc.

How to Conduct:

Part 1

- Monitor water usage by having students observe all the different ways their family uses water during a 24-hour period.
- Encourage students to write down their observations using words or drawings.
- Have students share their observations with the class and compare their water use with others.

Part 2

- Have students make a collage to demonstrate all the different ways people use water.
- Give each student a piece of construction paper and have them title it “The Ways We Use Water.”
- Have students cut out pictures from old magazines, calendars, fliers, or newspapers that show people using water in different ways.
- Tell students to glue or tape the pictures on the construction paper to create a collage.