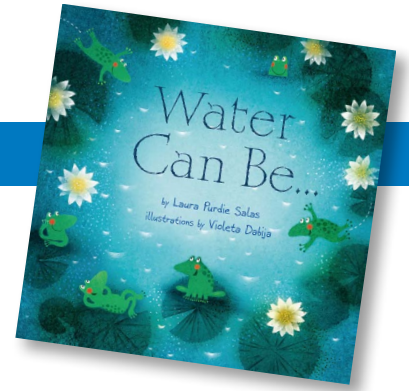


Water Can Be...



RIF EXTENSION ACTIVITIES FOR EDUCATORS

STEAM-THEMES: SCIENCE, TECHNOLOGY, ENGINEERING, ART, MATH

SCIENCE

IT'S RAINING!

Materials: 2 liter bottle with label removed, warm water, blue food coloring, ice cubes

Cut the bottle in half; leave cap on top half. Put about an inch of warm water in the bottom of the bottle. Add two drops of blue food coloring. Invert the top half into the bottom half. Fill the top with ice. After a few minutes, clouds will form and droplets will form on the inverted top. It's raining! Why does this happen?



TECHNOLOGY, SCIENCE

DRINK UP!

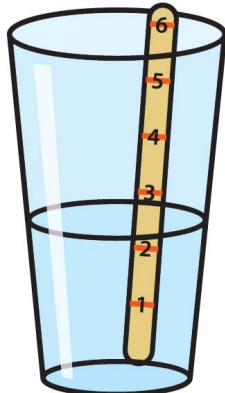
Where does drinking water come from? Tour a water treatment plant online to find out: <http://water.epa.gov/drink/tour/index.cfm> (in English or español).

ENGINEERING, SCIENCE, TECHNOLOGY

RAIN GAUGE CONSTRUCTION

Materials: clear cup, popsicle stick, ruler, sticky tack or clear tape, permanent marker

Lay the popsicle stick next to ruler. Use marker to create measurement lines on popsicle stick. Attach popsicle stick to side of cup using sticky tack or clear tape. Place cup outside. Be sure to secure cup in dirt or sand so it won't tip over. After a rain, retrieve cup and measure how much rain fell.



ART

WATER MURALS

Materials: paintbrushes, water, sidewalk

Have students use water and paintbrushes to "paint" pictures on the sidewalk. Discuss what happens to the water used for the pictures. Where did it go? Did it last longer in shady places?

ART, SCIENCE

MUSICAL MEMORY

Help students grasp the water cycle through song! The following is sung to the tune of *She'll Be Coming 'Round the Mountain*:

- ◆ Water travels in a cycle, yes it does (use pointer finger to make a big circle)
- ◆ Water travels in a cycle, yes it does
- ◆ It goes up as evaporation (move hands up to the sky)
- ◆ Then forms clouds as condensation (make cloud with arms over head)
- ◆ Then comes down as precipitation, yes it does (make rain motions with fingers).



MATH, SCIENCE

FILL IT UP!

Materials: variety of different sized clear containers, measuring cup, food coloring, water

Fill each container with 2 cups of water (but don't let the kids know!). Have students add drops of food coloring to each container. Ask which container has the most water. Record responses. Have students pour water from each container into the measuring cup. Introduce the word *volume* and talk about how a liquid takes the shape of its container.



Reading Is Fundamental

Water Can Be...

RIF EXTENSION ACTIVITIES FOR EDUCATORS

STEAM-THEMES: SCIENCE, TECHNOLOGY, ENGINEERING, ART, MATH

A PRECIOUS RESOURCE

Materials: 2 liter bottle, measuring cup, clear plastic cups, ice cubes, sand

PROCEDURE:

Show a 2 liter bottle of water to represent “all the water on Earth.” Ask students to guess how much of it would probably be salt water in the oceans.

Pour out 2 ounces into a measuring cup.

Pour a teaspoon of salt into the 2 liter bottle to show that the great majority of our water is salt. “We don’t have an easy way to turn salt water into fresh water, so we can only use what’s left in the measuring cup for our fresh water supply.”

Not all of the fresh water is available to us. From the 2 ounces in the measuring cup, draw up 12 milliliters into an eye dropper (it would be almost full). Keep that to the side.

Put ice cubes into the measuring cup to show that most of our fresh water is frozen in the polar ice caps. It would take a lot of global warming to melt them, which would have its own devastating consequences!

The water left in the eye dropper represents the available fresh water on Earth.

Some of this water is extremely hard to get, because it’s deep underground in the spaces between rocks. Squirt 10 milliliters of the water into the container with sand.

Now all that is left is 2 milliliters of that whole 2 liter bottle. This represents our accessible, available fresh water—rivers, streams, lakes, and the water we drink, bathe, and cook with.

How should we care for it? Should we just use it up without thinking? What are some ways that we can help protect our water supply? Ask students if this demonstration helped them realize how important it is for us to protect our water supply.

