

Lesson 2

How Does Water Help Us?

Key Idea

Water is the best carry-all and cleaner for your body.

- 1 Water moves through your body through veins, arteries, cells and organs.
 - 2 Water carries dissolved food and wastes through your body.
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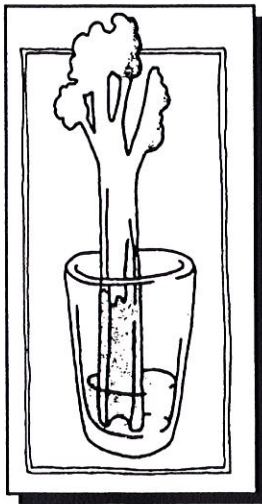
Activity

Students will use food and food coloring to study how plants and humans retain water.

Materials

Dried celery sticks from Lesson 1
Fresh celery stalks set in red food coloring overnight
Kitchen scale

Procedure



- 1 Have the children examine the dried celery, ask: What happened to our celery? (It looks dried.) Will it weigh more or less than before? Why?
- 2 Weigh and compare the dry celery with the celery that was weighed and recorded in Lesson 1. (Have the children hold dried celery in one hand and fresh celery in the other, if a scale isn't available.) Ask: How do we know now that celery contains water? Where did the celery keep its water?
- 3 To show how water moves up from the ground into plants, let the children examine the celery that has been standing in the red solution. Explain that the red lines in the stalk show where water travels in plants. These are the plant's "pipelines." Water in the plant's pipelines carries dissolved food from the soil throughout the plant.
- 4 Let the children now examine plant or weed roots. (optional) Help them imagine how the "pipe system" begins in the tiniest root hairs. These root hairs take

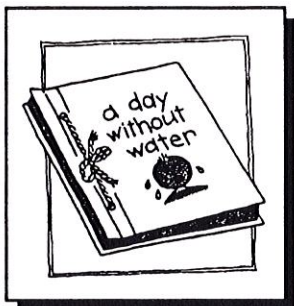
Procedure (cont.)

in dissolved plant foods and carry them throughout the plant where growing cells need feeding.

- 5 To help children understand their own "pipe system," have them look at the veins in their wrists. Ask: Can you name other parts of your body's pipe system? (veins, arteries, tissue, organs, etc.) How does your pipe system get its water? (from what you eat and drink) What would happen if you stopped eating and drinking?

Extension

- 1 Students will discover that water keeps us clean inside and out. Water is needed to carry food substances throughout our bodies, as well as for internal and external cleaning. Without water children could not "go and grow." Water carries food substances to body cells.



Have drawing paper for each child

To help children comprehend all of water's body-cleaning roles, ask:

- What happens when dust gets in your eyes? (eyes water) Where does this water come from? (tear ducts)
- How else does water help clean inside your body? (saliva, perspiration, wastes) How many ways do we use water to clean at school? At home? Make a chalkboard list of these ways.

Distribute drawing paper for children to fold into quarters and draw four ways water helps us clean things. Make a bulletin board display of the drawings.

- 2 Let the students imagine what life would be like without water.

Have writing paper for each child

Have children dictate or write individual stories entitled "A Day Without Water." Read the stories to the class.

Extension
(cont.)

So that children may continue to enjoy their stories, assemble them in a book for the class library. Note: This is not a scrapbook, but good, meaningful reading.

- 3** To continue your study of water and the human body, contact the Arizona WET Director at the University of Arizona to obtain a copy of National Project WET's *Water Bodies* activity.