#9044
BILL NYE THE SCIENCE GUY:
FORESTS

DISNEY EDUCATIONAL PRODUCTIONS
1994
Grade Levels: 3-6
26 minutes

DESCRIPTION

What is the largest living thing on earth? What are the four levels of a forest? Bill Nye explores a forest, its purpose, and its by-products. Visit different kinds of forests, a timberline, and a forest fire.

ACADEMIC STANDARDS

Subject Area: Geography

- Standard: Understands the characteristics of ecosystems on Earth's surface
  - Benchmark: Knows plants and animals associated with various vegetation and climatic regions on Earth (e.g., the plant and animal life supported in a midlatitude forest in North America, the kinds of plants and animals found in a tropical rain forest in Africa, animals and trees that thrive in cities)

INSTRUCTIONAL GOALS

1. To simulate the diverse forest environment.
2. To show how water is absorbed by tree roots and plants on the forest subfloor.
3. To simulate growth in three environments in a forest.

AFTER SHOWING

Discussion Items and Questions

1. What are the largest living things on Earth?
2. What are the parts of a forest?
3. What are *decomposers*?

Applications and Activities

1. Put a drop of food coloring in each of four glasses. Put a stalk of celery in each glass. Place the glasses in four areas: sunlight, in front of a blowing fan, in a plastic bag, and in a classroom at room temperature. Observe how the change in the celery is affected by various environments.
2. Use a corkscrew to hollow out the top quarter of a large, fat carrot. Insert a one-hole stopper into the carrot hollow. Remove the rubber stopper and fill the carrot hollow with corn syrup. Insert a glass tube into the rubber stopper. Replace the stopper in the carrot

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hollow. To insure a tight fit, seal the edge with candle wax. Place the carrot in a 600-milliliter beaker of water. Use toothpicks to hold it upright. After waiting 24 hours, measure the amount of corn syrup in the glass tube. Water in high concentration (in the beaker) will move toward water in low concentration (in the carrot), forcing the corn syrup up the glass tube.

3. Soak 60 beans overnight in water. Place 10 wet seeds on each of 3 wet paper towels. Dry 30 seeds and place 10 dry seeds on each of 3 dry paper towels. Carefully slide each paper towel into a plastic bag. Seal and label all 6 bags. Place one dry and one wet bag in the following classroom locations: under a light or sunlight, in a cold refrigerator, and in a dark drawer. Wait 48 hours, and then count the seeds that have germinated (roots appear from seeds). Record your observations on a chart.

RELATED RESOURCES

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- The Changing Forest #2458
- Plant Adaptations: Why Needles, Why Leaves? #3393
- Trees and Our Environment #2535

World Wide Web

The following Web sites complement the contents of this guide; they were selected by professionals who have experience in teaching deaf and hard of hearing students. Every effort was made to select accurate, educationally relevant, and "kid safe" sites. However, teachers should preview them before use. The U.S. Department of Education, the National Association of the Deaf, and the Captioned Media Program do not endorse the sites and are not responsible for their content.

- **SOCIETY FOR AMERICAN FORESTERS**

http://www.safnet.org/about/forestryfun.htm

Choose one of the grade-appropriate level buttons and have some fun checking out many of the links! Take a trip through the "Fantastic Forest," find out what we get from trees, participate in the National 4-H Forestry Invitational, and play tree-related games!

- **USDA FOREST SERVICE**

http://www.fs.fed.us/links/forests.html

Check out the national forests by interactive map, by name, or by state. Also check out national grasslands and forest Web sites by region. Contains a section for kids, explained by Woodsy Owl.

- **THE NATIONAL ARBOR DAY FOUNDATION**

http://www.arborday.org

Pick one of the several highlights, such as "Arbor Day History," "Tree City USA," "Youth Education," and others. This Foundation provides more than 8 million trees for planting throughout America each year.