WATER-WISE LANDSCAPING

OBJECTIVES

The student will do the following:

1. Use the telephone book to find the phone number and invite a guest speaker.
2. Develop interviewing techniques.
3. Read rainfall and seed package maps to compare climate conditions.
4. State the definition of xeriscaping.

SUBJECTS:
Science, Social Studies, Language Arts, Art

TIME:
2 - 4 hours

MATERIALS:
U.S. wall map
reference books
acetate sheets
several telephone books
teacher sheets (included)

BACKGROUND INFORMATION

Xeriscape ("zeer uh scape") is a word coined in 1981. It is so new that it probably is not in a dictionary. "Xeros" is a Greek word meaning "dry." The word "xeriscape" means landscaping that reduces the need for water. This is important because people use so much water to water their lawns, trees, gardens, and ornamental plants such as shrubs and flowers. More than 40 states in the U.S. now have xeriscaping programs.

All plants need water, but different plants have differing requirements for it. For example, houseplant owners know that their potted plants will not thrive (or maybe even survive) if they water them with equal amounts on a set schedule (e.g., once a week). Of course there are many reasons this is true, but one of the main reasons is that different kinds of plants have different needs. The same is true for outdoor plants with which we landscape our houses, schools, and other buildings.

Considering that we often use utility water (for which we pay) to water our landscapes, it makes sense both practically and economically to choose plants that are adapted to our locales' normal rainfall and temperature ranges. In arid areas, it is very important that people not use too much water for landscapes filled with thirsty shrubbery, lawns, and flowers. In those areas, it is especially important that landscapers choose plants that thrive without a lot of watering.

Term

xeriscape: a way of landscaping that reduces the need for water.

ADVANCE PREPARATION

A. Make transparencies from the teacher sheets.

B. Collect enough telephone books so that each team of four has one.

C. Ask your librarian to pull library books with pictures of trees, shrubs, and flowers for a small class library. (NOTE: You may also make use of colorful seed/plant catalogs.)

PROCEDURE

I. Setting the stage

A. Ask the students to list things plants need to live. (water, air, nutrients from soil, sunlight) Write their responses on the board.

B. Ask them how plants get the water they need. (rain, or someone "waters")

C. Tell the students they are going to investigate using plants that do not require much watering.

II. Activities

A. Show the students a transparency of the teacher sheet showing six different species of plants and ask where these plants might grow best.

1. Let the students match the plants with the regions listed on the transparency.

2. The answers are:

Cypress-	Southeastern U.S. (coast)
Cactus-	Southwestern U.S. (desert)
Palm-	Florida & Southern California
Birch-	Northeastern U.S.
Sassafras-	Eastern U.S.
Giant Redwood-	Northern California

3. Let the students locate the areas on a large wall map.

B. Show the students the transparency of the annual average rainfall in the continental United States. Compare major areas of the country. Discuss how climate (including rainfall and temperature ranges) affects the plant species native to any region.

C. Have the students look through the library books (and/or seed catalogs) to find a favorite (1) flower, (2) shrub, and (3) tree that they would like to put in their yards. (NOTE: If a student does not have a yard, substitute the schoolyard or a city park.) They should write the names of these plants on a sheet of paper and make a sketch of each of them.

D. Divide the students into teams of four. Have each team use the telephone book to find the phone number for the County Agricultural Extension Agent. Have one student call and invite your County Extension Agent to come to your school for about 1-1/2 hours. (Set the date and time beforehand.) Be sure the student communicates to the agent that you are studying xeriscaping. (NOTE: Follow up with your own call to the agent.)

E. As a homework assignment, have the students watch the news and pay special attention to a newscaster interviewing someone. The next day discuss good interviewing techniques.

F. Let the class decide on the logistics of how they can efficiently and effectively interview their County Extension Agent. (For example, they might have 3 x 5 cards listing their questions.)

G. Have an interview session with the County Extension Agent. Be very clear that he/she needs to advise students as to whether their favorite flowers, shrubs, and trees will require too much or receive too much water to grow well in your area. (Don't plant a cactus in Seattle or impatiens in Arizona.)

III. Follow-Up

A. Have the students write in their own words what "xeriscaping" means.

B. Have the students take a tour of the school grounds to evaluate the landscaping. Then have them design an improved landscape for your school. You might have them present this to the principal or the parent-teacher organization.

IV. Extensions

A. "Xeriscaping" is a very new word. Investigate other new words in our language. Talk about how language changes over time.

B. Read the Paul Bunyan story, "Why There Are No Trees on the Desert."

C. Invite a landscaper, horticulturist, or landscape architect to talk to your class about his/her job, plants native to your area, or some other topic related to landscaping.

RESOURCES

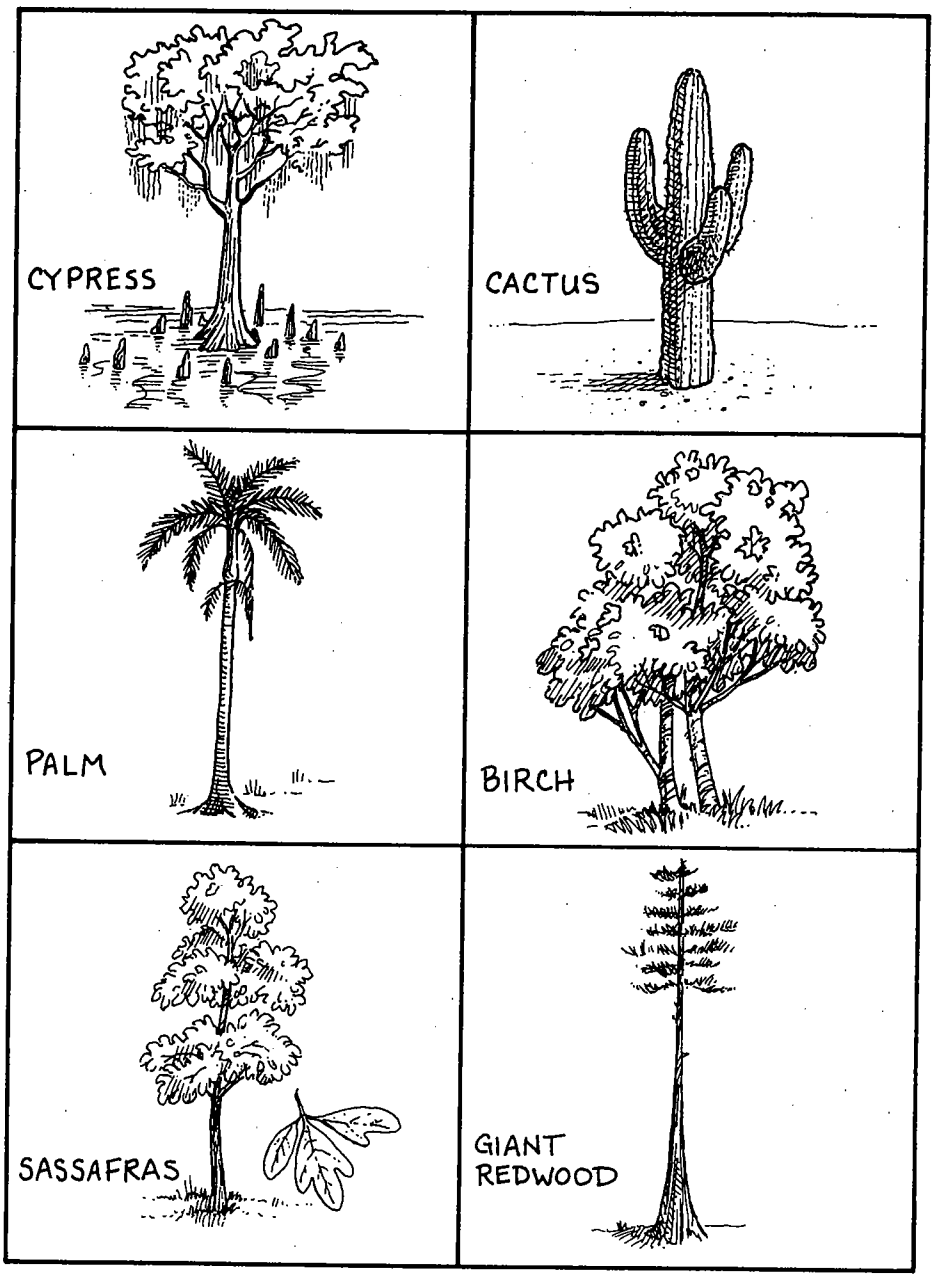
Electronic Geosafari Geography Game, "Biomes card," Educational Insights, Dominguez Hills, California.

Rounds, Glen, "Why There Are No Trees on the Desert," Ol' Paul, The Mighty Logger, Cadmus Books, Milwaukee, Wisconsin, 1949.

Wade, Gary, et al., Xeriscape - A Guide to Developing a Water-Wise Landscape, Cooperative Extension Service, College of Agriculture and Environmental Services, University of Georgia, Athens, Georgia.

WHERE DOES THIS GROW BEST?

Match these kinds of plants with the region in which they grow best.



Northern California

Southeastern U.S. (coast)

Florida & Southern California

Eastern U.S.

Northeastern U.S.

Southwestern U.S. (desert)

RAINFALL MAP