



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
Lesson Plans for Teachers

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Desert Xeriscaping

Grade level:

- ◆ 6th - 8th grade

Sample TEKS for 7th grade: Science

- ◆ 1B
- ◆ 3BC
- ◆ 12C
- ◆ 14C

Objectives:

The students will be able to:

- Identify native species of desert vegetation.
- Plan a xeriscape landscape.
- Recognize the importance of water conservation.

Background:

This experiment was designed for the El Paso region of Texas, but the concept applies to all areas.

El Paso is part of the Chihuahuan Desert, the largest desert in North America. The biology of the area has special adaptations that have allowed them to survive hot, dry days and cold nights.

As the area of El Paso was settled, many people longed for the rich, green foliage of their former homes. Several new species of plants were introduced to the region that required more maintenance and more natural resources. Many of these plants require more than 30" of rain per year for normal growth in an area that receives less than 10" of rainfall per year.

Water reserves in the El Paso region are projected to be depleted by the year 2025. The El Paso Water Utilities estimate that 50 to 70% of the water usage in El Paso goes to landscaping needs.

It is necessary to recognize and implement conservation of our resources. Water can be conserved by using plants that are indigenous to the area, as they have adapted to the conditions of the desert and will not require excessive amounts of water.

Vocabulary:

- ◆ xeriscaping
- ◆ natural resources
- ◆ conservation
- ◆ landscape

Materials:

- ◆ Plant Price Lists from local nurseries or garden centers

Procedure:

Pass out materials to the students. Discuss the background information.

Inform the students of the following scenario - "You have just graduated from college and taken a high paying job. Here is a picture of the house you are having built. (Use magazine pictures.) The builder is providing you with \$1000.00 of landscaping. Plan your landscape using the plant price lists."

Students should plan out their xeriscape by making informed consumer decisions. Students will create a list of the plants that they want in their landscape, staying within the range of the landscaping allotment provided by the builder.

After students have created their list, they should draw, color (or cut and paste) the plants in a xeriscape design on a large piece of paper around the picture of the house they were given.

Students can write a short essay on the back of their picture explaining the reasoning behind their choices.

Assessment:

The list of plants, xeriscape design and essay should be graded.

Enrichment:

Students can research other native plants (possibly from their plant lists) and report the information learned to the class.

Create a desert plant coloring book for younger students.

Research Native American uses of selected desert plants and report findings to the class.

Calculate water savings over a 10 year period in a home xeriscaped as opposed to a green, lush landscape. (This will also require some research.)

Design a xeriscape for the school grounds and present it to the principal.

Submitted by: Kathy Kraften, University of Texas at El Paso TES, July 1996