

# ENVIRONMENTAL ENCOUNTERS

## Lesson Plans for the Science of Water



### Waterwise Plants

**Suggested grade level:**

Fifth grade

**Objective:**

Students will be able to discuss waterwise plants and natural resource conservation.

**Curriculum ties:**

- √ Fifth grade Science Standard 5 Objective 2 a-d
- √ Responsible and Healthy Living Consumer and Community Health Standard 7 Objective 1 a-c

**Time needed:**

- √ Prep: 1 hour
- √ Pre trip: 2-3 hours spread over two weeks
- √ Garden 1-2 hours
- √ Post trip: 1-3+ hours

**Materials needed:**

- √ Low-water use plants like cacti
- √ Higher water use plants like houseplants or tomatoes
- √ Pitcher with markings for water volume or liquid measuring cups

**Teacher notes:**

In this activity students will learn about the importance of natural resources like water to their well being and the health of the environment of which they are a part. Students should understand that plants grow differently depending on the environment they come from. They should know that plants that are native to environments with little rainfall adapt to their environment through adaptations such as needles or hairy leaves to retain water or deep roots to reach water far under ground.

**Procedures:**

Preparation

Call 801-565-4314 to schedule your visit to the Conservation Garden Park at Jordan Valley.

In the classroom

Students will learn about the water needs of different types of plants, and how these plants are adapted to their environment. Have the students grow several high and low water use plants and record how much water each needs to survive. You can try using a cactus and a tomato plant for this experiment. Why does the cactus need less water than the tomato? Have the students research one of the plants that grows at the Garden (use the online plant list at <http://www.conservationgardenpark.org/plant/Default.aspx>).



### Field trip

The guide will show the students the waterwise plants growing in the Garden and talk about conserving water. Suggested Garden areas are the High Mountain Desert and the Succulent Garden. Have each student observe the plant he or she researched. Where is it growing in the Garden? How well adapted is it to Utah? Ask them why it is important to conserve natural resources, including water. What are some of the ways to conserve water that they learned about at the Garden?

### Follow up

Have the students write about how the Garden encourages water conservation in Utah and how individual students can help. The teacher can expand this by encouraging the students to create their own water conservation projects. One idea you can suggest at the school is to have the students measure water use outside by placing cups on the lawn and finding out how much water is used every day to water it. They can also watch for places where the pavement is wet from the sprinklers, then report to the principal if the lawn needs less water or if the sprinklers need to be adjusted. It would also be helpful to work with the grounds manager or custodian on this project. They can also make posters teaching other students at their school about saving water by turning off the faucet when they brush their teeth, taking shorter showers, or filling their glasses from a pitcher in the fridge instead of by running the water in the sink.

### **Assessment:**

The students' plant reports, and reports and/or projects on water conservation will demonstrate their understanding of water conservation and waterwise plants.