



Theme: Water (Grades 6-8)

Pre-Visit Activity #2 Discovering Wetlands

Overview:

The purpose of this lesson is to prepare students for their visit to the Springs Preserve. At the Preserve, students will study the wetlands ecosystem found on site. They will learn what wetlands are, where they are found, and why they are important to the environment.

Objectives:

- Students will learn basic information about wetlands.
- Students will identify some of the plants and animals that live in a wetland, and how they have adapted to their wetland habitat.
- Students will study a specific type of wetland.
- Students will create a PowerPoint presentation about their wetland.

Materials:

- Pencil
- Pen
- Paper
- Computer
- Pictures of different types of wetlands in Nevada

Background:

A wetland is an area in which water is present at least part of the time. While scientists classify wetlands in a number of ways, two major divisions of wetlands are saltwater and freshwater wetlands. Examples of saltwater wetlands are salt marshes, tidal flats, and mangrove swamps. Types of freshwater wetlands are marshes, bogs, swamps, and vernal pools. Every wetland is unique and supports the surrounding ecosystems.

Insects, plants, animals, and other organisms live and thrive in wetlands. In addition, wetlands are extremely important to water systems. Wetlands do much more than provide a home for wildlife; they also keep water clean for us. Wetlands are the filters of the water cycle; the intertwining roots, leaves and fibers of the dense plant life remove sediment and pollutants from the slow-moving water. When water runs out of the wetland and returns to the stream, it is once again clean. Wetlands are also

nature's sponges. When floodwaters overflow the banks of streams and rivers, the porous soils and plants of wetlands soak up tremendous amounts of the excess water. Water then seeps slowly back into the streams to prevent downstream flooding. In times of drought, wetlands are fed by groundwater which is released into streams to keep them flowing year-round.

Activity:

1. Ask students what they think of when they hear the word "wetland." Ask them if they have ever visited a marsh, swamp, or bog, or have ever watched tadpoles swim in small puddles. Ask them what they think some of the things are that make a wetland a true wetland (i.e., wetlands are covered in water at least part of the year; they have special soils, and support certain kinds of plants that can live in these conditions.) Write some of their answers on a chalk or dry-erase board. Discuss their answers as a class.
2. Show pictures of different kinds of wetlands in Nevada. After showing them the pictures:
 - Ask if students recognize any of the plants or animals in any of the pictures.
 - Help students identify the plants and animals in different scenes.
 - Ask what differences they see between these wetlands. What are some similarities?
3. Have students break into small groups.
4. Have each group choose a different type of wetland. Types of wetlands are:
 - Tidal Marsh
 - Wet Meadow
 - Vernal Pool
 - Playa Lake
 - Forested Swamp
 - Shrub Swamp
 - Bog
 - Fen
5. Have students research their chosen type of wetland and answer these questions:
 - Can this wetland be found in Nevada? If so, where?
 - Can this wetland be found in the United States? If so, give an example.
 - What is the importance of the wetland? For example, does it filter water, is it home to a particular species of plant or animal, and is that species on the endangered list?
 - List 5 different plants and animals found there, and include adaptations the animals have developed for dealing with wetland conditions (talk about adaptations ahead of time if students are unfamiliar with the concept).
 - Is this wetland increasing or decreasing in size? Why or why not?

6. Each group should create a 6 to 7 slide PowerPoint presentation of a trip through the wetland they are discussing.
7. Groups will then lead the class on a trip through their wetland, stopping to explain the answers to the questions above.

Discussion:

Ask students what they have learned about wetlands. Why are they important? Why should we work hard to save them? What kinds of things might threaten wetlands? Explain to the students that they will have the chance to learn more about wetlands at the Springs Preserve.

Teacher Note:

If you are interested in doing the Post-Visit Activities located on this website after your visit to the Springs Preserve, have the students bring a notebook with a pen or pencil to write notes on a food chain that interests them from the Springs Preserve Cienega.