Wetland Metaphors

Many of the major attributes of wetlands can be explored through the use of metaphors. To use a metaphor is to apply a word or phrase to an object or concept that it does not literally denote in order to suggest a comparison between the two. “A tree is a home” and “Books are windows of thought” are two examples. In this activity, a variety of everyday objects are used to represent the natural functions of wetlands.

The major purpose of this activity is for children to develop an appreciation and understanding of wetlands through the power of metaphor, linking the natural functions of wetlands to the familiar realm of everyday life.

Douglas Ripley

Narrowleaf gentian is a perennial flower of our high elevation peatlands. Look for it on Dolly Sods in August or September.

Objectives

Children will: 1) describe the functions of wetlands and 2) evaluate the importance of wetlands to wildlife and humans.

Method

Children are presented with a selection of objects for investigation as metaphors for the natural functions of wetlands.

Materials

A pillowcase, opaque bag or box

Object	Metaphoric Function
Sponge	absorbs excess water caused by runoff; retains moisture for dry periods
Pillow	a resting place for migratory birds
Mixer or whisk	mixes nutrients and oxygen into the water
Cradle	provides a nursery that shelters and feeds young wildlife
Strainer	strains silt, debris, from water
Filter	filters smaller impurities from water
Antacid	neutralizes toxic substances
Cereal	provides nutrient-rich foods
Soap	helps cleanse the environment

Elizabeth Byers

A sponge-like peatland with dwarfed red spruce and cinnamon ferns growing on hummocks in the Laurel Fork Wilderness.

What To Do

1. Place the selected objects into a “Mystery Metaphor Container” (pillowcase, opaque bag) and put aside for later use.
2. Provide the youth with background information provided to serve as an overview of the basic ecological functions of wetlands. You may also have them read the article on wetlands in this issue of the magazine for background information.
3. Discuss the variety of wetlands found in your local area or state. You may ask anyone who has been to a wetland to describe their experience – what they saw, smelled, heard.
4. Bring out the “Container.” Tell the children that everything in the container has something to do with a wetland. Have the children, either independently or with a buddy, grab an object from the container. Ask them to figure out how the object could represent what a wetland does. You may assist by strengthening their connections.
5. After a short time, ask each child or group to show its object and explain how it relates to a function of wetlands.
6. Following discussion and review of the functions represented by each metaphor, ask the students to summarize the major roles that wetlands perform in contributing to habitat for wildlife. List the ways wetlands are important to humans. Besides ecological values, wetlands are places of recreation and esthetic beauty (beautiful flowers and wildlife.) Ask them if their own attitudes about wetlands have changed. If yes, how? If not, why not?

Background

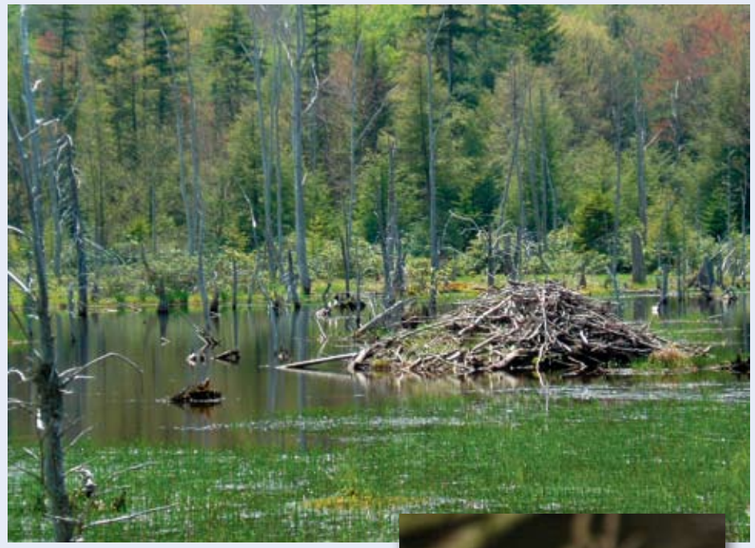
Wetlands mean different things to different people. Some people don’t give much thought to wetlands while others work to protect wetlands because of their importance. Wetlands include such areas as freshwater and saltwater marshes, bogs, swamps, wet meadows and bottomland forests. All wetlands, whether coastal or inland, provide special habitats that serve areas far beyond their boundaries. Wetlands are among the most productive ecosystems in the world.

Marshes provide breeding, resting and wintering habitats for thousands of migratory birds, including ducks, geese, cranes and shore birds. Many species of fish that are important for commercial and personal use by humans reproduce and spend part, or all, of their life cycles in fertile wetlands adjacent to larger, more open bodies of water.

A wide variety of reptiles, amphibians, insects and crustaceans also breed and live in wetlands. Many mammals, from beavers to muskrats to white-tailed deer, also depend on wetland areas.

Wetlands are often referred to as nurseries because they provide critical breeding and rearing habitats for countless numbers and kinds of wildlife.

Wetlands also have the unique ability to purify the environment. They act as natural filtering systems and have been shown to be extremely effective. For example, they can trap and neutralize sewage waste, allow silt to settle, and promote the decomposition of many toxic substances.



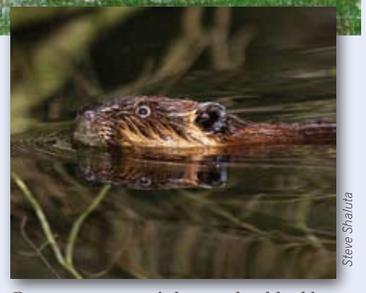
Elizabeth Byers

Three-way sedge (green vegetation in foreground) pioneers a new plant community next to a beaver lodge.

The importance of vegetation associated with wetlands cannot be overlooked. Plants absorb nutrients and help cycle them though food webs. Plants also help keep nutrient concentrations from reaching toxic levels. Plants slow down water flow, causing silt to settle out. Through photosynthesis, plants add oxygen to the system and provide food to other life forms. Of great importance to humans are the flood-control characteristics of wetlands. When runoff from rains and spring thaws is high, wetlands absorb excess water until it gradually drains away down streams and rivers and through the soil. In dryer periods, wetlands hold precious moisture after open bodies of water have disappeared.

Frequent flooding prevents woody vegetation from growing in these sedge meadows along the West Fork of the Greenbrier River. The dense vegetation stabilizes the riverbank, filters the sediment from flood flows, and helps keep the water clean for aquatic life.

Photo by Elizabeth Byers



Steve Shaluta

Beavers are nature’s best wetland builders.

As remarkable and resilient as wetlands are, these unique areas have limits. Their destruction and/or abuse can have devastating effects on wildlife, humans and overall environmental quality. Wetland habitats are being converted to other uses such as agriculture, roadways, and housing developments or are otherwise being altered (drained for mosquito control or polluted) at the rate of about a half million acres per year. And although many wetlands are protected by federal and state laws, there still appears to be a significant need to create a greater understanding of the importance of wetlands as ecosystems and as wildlife habitat.