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Wetlands

Wetlands are exactly what the name implies—lands that are wet. They are places where soils are completely saturated with water. Wetlands are a connection between land and water. Six percent of the earth's surface can be classified as a wetland. Curiously enough, a wetland may or may not be wet all year round.

Throughout the world, many areas can be classified as wetlands. Coastal wetlands consist of salt water areas found along the coast. These areas include shrub wetlands, salt marshes, and mangrove swamps. **Estuaries**, where saltwater and freshwater mix, often contain saltwater marshes and tidal mudflats.

The inland wetlands are associated with rivers, streams, lakes, and pond areas. These include **bottomlands**, freshwater marshes, and **delta** marshes located around river channels and floodplains. Marshes and forest wetlands can also be found surrounding lakes.

Wetlands are located on every continent except Antarctica, and can be found anywhere from the frozen areas of the tundra through the temperate zones and in the tropics. Every state in the United States has an area designated as wetland.

Across the United States, wetlands are categorized into four main groups: **swamps, bogs, and marshes**. Swamps can be found in freshwater and saltwater environments and are characterized by woody plants. They are home to many animals, including crocodiles and alligators. Fens are mostly freshwater and are covered with reeds, grasses, and various wildflowers. Bogs are also freshwater habitats and can be found around glacier lakes and contain a multitude of evergreen trees and shrubs, and often have a very soft floor composed of a thick layer of various mosses. Marshes are areas of soft vegetation, no trees. They can also be found in freshwater and saltwater environments.

The wetlands are sometimes referred to as the "nurseries of life," for they provide a key habitat for many species of aquatic plants and animals to breed and nest. Even though they are called wetlands, they are also home to many terrestrial, or land based, plants and animals, such as cattails, water lilies, sedges, and rushes.

Wetlands provide a unique habitat for many types of mammals, fish, waterfowl, and other birds. Some of the most common species of animal life are frogs, snakes, turtles, and alligators. The

U.S. Fish and Wildlife Service estimates that up to 43 percent of threatened and **endangered species** rely directly or indirectly on wetlands for their survival. There are also many types of fish, waterfowl, and birds that migrate to the wetlands and use them as a stopping ground to rest and eat. These areas provide shelter as well as breeding grounds for many species. Fifty percent of migratory birds rely on the wetlands at some point during their life cycle as resting and feeding ground.

Wetlands are important because they protect the quality of our water by filtering excess nutrients and pollutants. They also provide a habitat for wildlife and fish, and can either absorb the floodwaters like a sponge, or slow the flooding in certain areas. Wetlands absorb so much water that they can actually help control flooding. Did you know that if there had been only 3 percent more wetlands preserved in the upper Mississippi River Valley, the massive flooding in 1993 could have been prevented? By controlling floods, they protect both property and lives. Wetlands have the capabilities of slowing down and absorbing various bacteria that can eliminate certain types of pollutants. Coastal wetlands that are rich in plant life, such as the salt marshes, provide a buffer for inland areas from erosion and damage from storms. The roots of plants help to hold the soil in place and their stalks reduce the destruction from high winds and waves.

Many foods that we eat are grown in wetlands. Cranberries and rice are grown in flooded plains and bogs. Blueberries and persimmons grow in wetlands. Crabs and shrimp are wetland food sources. Rockfish, bluefish, catfish, perch, pickerel, salmon, and other fish need wetlands during the last part of their life cycle.

Life in the wetlands can be challenging for plants and animals. The soil and water can contain a high level of minerals and salinity. These plants have to find a way to root in oxygen poor soil and grow in flooded areas. Animals are faced with droughts, floods, and competition for food and shelter and have had to adapt in many ways to survive this environment. Examples include webbed feet of the beaver and muskrat, and the oarlike legs of the water strider to help keep them afloat. Swamp rabbits have splayed feet that help them to stay on top of wet ground. Snowy egrets fly low over the water, dragging one foot to stir up the fish on which it preys.

Even though wetlands are beneficial to our **ecosystems**, the United States loses close to 60,000 acres of these valuable properties each year. This is due to an overload of runoffs that can contaminate these areas, as well as changes in the climate throughout the world, and habitat destruction due to development that contribute to wetland loss.

It is vitally important for us to protect our wetlands to ensure a safe habitat for our fish and wildlife as well as keeping our water quality high and storing our floodwaters.

Glossary

Bottomlands: land covering the base of a valley, often associated with a river's floodplain

Delta: a landform created by deposits at the mouths of rivers or tidal inlets

Ecosystem: an ecological community together with its environment, functioning as a unit

Endangered species: an animal or plant that is in danger of extinction

Erosion: the process of soil being carried away by wind or water

Estuary: the lower part of the river where the current is met by ocean tides

Floodplain: flat land next to a stream in a river valley, produced by the overbank flow

Habitat: the environment in which an organism normally lives

For more information or activities for your students, please visit the following websites:

The EPA's Wetland
www.epa.gov/owow/wetlands

U.S. Fish and Wildlife Services
www.fws.gov

U.S. Forest Service
www.usda.fs.gov

National Geographic
www.nationalgeographic.com/geographyaction

Resources

America's Wetlands:
Our Vital Link Between Land and Water…
www.epa.gov/owow/wetlands/vital/toc.html

Our National Wetland Heritage:
A Protection Guide…
www.aswm.org

Wow! The Wonders of Wetlands:
an educators guide
www.projectwet.org