

The Wetlands Walk at Aspetuck



A Guide and Journal for Junior Girl Scouts

Linked to the Earth Connections Junior Badge
Girl Scouts of Connecticut, Inc.



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Welcome to Our Wetlands!

This **Wetlands Walk Guide and Journal** will provide you with information about wetlands. It also provides you with space where you can record what you observe during your time on the Wetlands Walk. By taking time to really observe what is around you, and by giving the wildlife a chance to become accustomed to your presence, you will begin to see how full of life this habitat truly is!

In addition to this guide, you will want to bring along a writing implement. While not necessary to observe and record your visit, other items you may wish to bring along might include these.

- Simple pond life, insect, wildflower, or tree guides (for those times you really want to know the answer to “what is it called?”)
- Binoculars, magnifying lenses, or “water snooper” (for a close-up look)
- Colored pencils, crayons, or markers (to capture the colors of the wetland)
- Sit-upon (for sitting comfortably while observing the wetland)

Before you start out...

You will be entering a special habitat. Here are some things to keep in mind.

- **Stay on the boardwalk.** This helps protect the plants and animals under your feet, and keeps your feet dry.
- **Leave everything as you found it.** Do not pick leaves or flowers, leave animals in their wetland habitat.
- **Take everything you brought with you, out with you.** Leave no trash or items behind.
- **This is a boardwalk, so remember to walk!**
- With your group decide how you can **quietly point out interesting items** to each other. Shouting “come see this!” can scare creatures away.

This booklet has two parts. The first part of the booklet is an explanation for each of the numbered station markers along the trail.

The second part links to the Earth Connections Junior Badge and has room for you to journal your experiences. You will find links to the following Earth Connections Activities.

1, Be an Ecologist; 2, Traveling Through Time; 3, Identify that Tree; 7, Adapt or Perish; 8, Plants and People; and 9, Observing Change. You might wish to learn more about saving wetlands for #10, “Earth as an Ecosystem.”

Aspetuck Wetlands Walk Stations

Along the Wetlands Walk, you'll see stations marked with green circles and white numerals. These descriptions match the stations.

1. This **American Beech** marks the beginning of the Wetlands Walk. With its smooth gray bark and long pointed buds, the beech is easy to recognize. It produces triangular-shaped nuts that are eaten by squirrels, chipmunks, and other animals. Beech trees prefer drier upland soils.

2. Before stepping onto the wetland boardwalk, take a good look at the landscape and plants at the mouth of the trail. A variety of trees share space on the edge of the wetland.

Red Maple has rough gray bark. Its buds, flowers, and leaf stems are all reddish in color.

Directly across from the boardwalk opening is a **Swamp White Oak**. This is a small specimen with grayish ridged bark. As its name implies, the Swamp White Oak is often found in swamps or moist areas.

A slender **Hornbeam** tree with cool gray bark grows near the stone wall and to the right of the boardwalk. It appears to have muscles under the bark.

A **Shagbark Hickory** stands to the right of the boardwalk. Its leaves are compound with five to seven toothed leaflets. Its bark peels vertically and looks "shaggy."

3. This large rock is covered with **Lichen**. Example of a symbiotic relationship, the lichen is made up of an algal partner providing the food and a fungal partner providing the home. What we see is mostly the fungus that eats into a tree or rock, gets a grip, and provides a "home." Meanwhile, the important green alga, through photosynthesis, provides food for both the fungus and the alga. Lichen can produce chemicals that help break down rocks into smaller particles that will become part of the soil.

Also take note of the delicate **Cinnamon Fern**, as well as the somewhat stouter **Marsh Fern**. These shade-loving plants thrive in the moist soil.

Across the way you can see **moss** covering a decaying log. The moss holds water on the log and creates a damp habitat for small insects. These insects are helping to decompose the log, turning it into soil.

4. As the ground becomes more waterlogged, be on the lookout for **animal tracks** in the mud. Many animals come here for food and water. You may find the "two-piece" heart-shaped deer track, a fox track similar to that of a dog, a raccoon's long-fingered "hand-like" pawprint, or small bird tracks.

On the right you can see a large **Red Maple**, which, unlike some of the other trees at the beginning of the walk, can tolerate wetland conditions.

5. On the left, notice two trees growing very closely together. Their bark is very different. You'll recognize the rough bark of the **Red Maple**, and on its left is a **Yellow Birch**, with bark that peels horizontally into thin curls. Looking up in the right season, you'll see a mixed bouquet of their leaves.

On the right side of the boardwalk, look for the **standing tree stump**. Left standing, this tall stump becomes a “grocery store” for some of the animals. Beetles lay their eggs in the tree, and the hatching worm-like beetle larvae eat the decaying wood. In turn, birds – such as downy woodpeckers and nuthatches – will drill holes in the wood to find a meal of insects.

6. This larger area of the boardwalk is a great place to stop and relax. Note how deep the water is here. You will find different types of plants here than at the beginning of the walk. Some grow under the water, while others grow on the small “Island” mounds of earth and roots. **Skunk Cabbage** is prevalent here, growing on the earthen mounds. You may also find **Jewelweed**, with its orange-yellow blossoms, or **Poison Ivy** vines taking advantage of the crack of sunlight created by the boardwalk through the wetland.

Take a moment to get close to the water. Many of the insects and amphibians that call this wetland home are camouflaged, and it takes close observation to find them. Look for **Water Striders** skating across the quiet water surface. You may also see Diving Beetles, tadpoles, frogs, insect larvae, or other **aquatic animals**. **Salamanders** take shelter under rocks and fallen branches.

7. Here is a close-up look at **Lichen** growing on a tree trunk. This plant slowly grows here, not harming or decomposing the tree. Lichen is very sensitive to air pollutants and has been used as a natural air-quality survey tool. If the air here were heavily polluted, the lichen would cease to grow.

8. The boardwalk was created so that we could enjoy and learn about the wetland area. It helps protect the vegetation from being trampled. Creating the boardwalk did disrupt some of the vegetation. Look at how the branches of this bush are now growing straight up to the sunlight. While on the boardwalk, have you seen vines or other plants that are reaching for sunlight?

9. As you near the end of the boardwalk, take note of the soil and vegetation around you. Is it more similar to that at the middle or beginning of the walk? How is it the same? From what you’ve observed, you can imagine the contour of the wetland area. This low-lying land acts like a **broad bowl or sponge**, catching runoff from rainstorms and holding the water until it soaks into the ground.

10. Notice even more similarities to the vegetation at the beginning of the Wetlands Walk! Behind the large rock on the right is a small **Hornbeam**. On the left is another **Swamp White Oak**. These trees tolerate somewhat moist soil. On the left of the boardwalk exit is a **Hemlock** tree with flat needles. Farther up the hill, to the left of the trail, you will find an **American Beech** and a tall **Red Oak** with its distinctive vertically striped bark.

This ends the Wetlands Walk. Think back to the changes that you saw as you walked along the trail. A wetland is not “muddy, wasted space,” rather it is a very special habitat for certain plants and animals. Visit again in another season, and you’ll see many changes that occur throughout the year.

What Is A Wetland?

Wetland is a word used to describe a habitat that has certain characteristics. As you walk through Aspetuck's Wetlands Walk, look to see if these descriptions are true here.

_____ Soil is waterlogged most or all of the year.

_____ The area has signature plants (such as skunk cabbage) that are specially adapted to live in a wet area.

_____ It is a low-lying area and/or the groundwater is near the surface.

What Type of Wetland?

There are many types of wetlands. Which of these best describes the wetland here at Aspetuck?

Coastal Marsh: Found along the ocean coasts, near the mouths of rivers or protected areas, coastal marshes contain salty water.

Inland Marsh: Inland marshes contain fresh water. Plants in a marsh are non-woody. Soft-stemmed plants, grasses, and sedges provide shelter for fish and many other types of animals.

Vernal Pools: These small wetlands without any inlet or outlet fill with water during the spring, providing an important breeding habitat for certain animals. By summer, the water completely or mostly dries up, although a heavy summer rain can fill the pool again for a while.

Swamp: A swamp is dominated by woody plants, such as trees and shrubs. If the area has many trees, smaller plants grow underneath the tree canopy, such as ferns and skunk cabbage.

Write some things that come to your mind when you hear "SWAMP." After the walk, see if you want to cross out or add any words.

Wetlands Are Wonderful!

Wetlands can be a...

Flood Buster! Wetlands act like sponges and soak up extra runoff water during storms. The wetland here at Aspetuck helps control the extra rainwater that doesn't soak into the ground. You probably walked up the hill from the parking lot and then down a hill to the Wetlands Walk. And if you look at the end of the boardwalk, what do you see? Another hill going up! When rainwater runs down a hill and runs into the wetland, the water slows down and has a chance to soak into the earth.

Reservoir! Wetlands may not look like a big, open, lake-like reservoir, but their sponge-like soil is very good at storing water for people, plants, and animals.

Strainer! Just as your kitchen strainer catches the pasta and lets the water drain through, the thick wetland vegetation catches and holds onto the silt and sand that may be carried by runoff. The wetland at Aspetuck helps strain the silt and sand, filter out pollutants, and improve water quality. Water that is full of silt and pollutants is unhealthy for fish, amphibians, aquatic insects, and people.

Rest Area! If you have ever traveled for a long time in a car, you know how good it feels to stop at a rest area for something to eat and perhaps a place to sleep. With the food, water, and shelter found in wetlands, migratory birds often seek out wetlands for their "rest area."

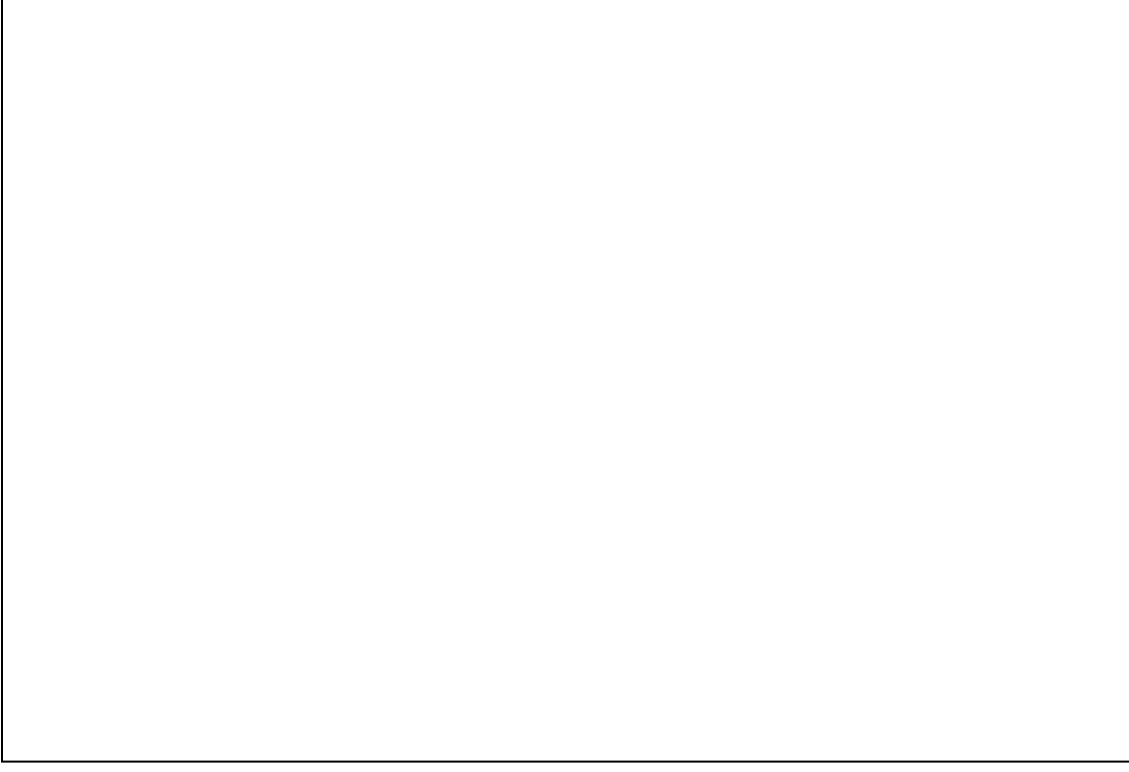
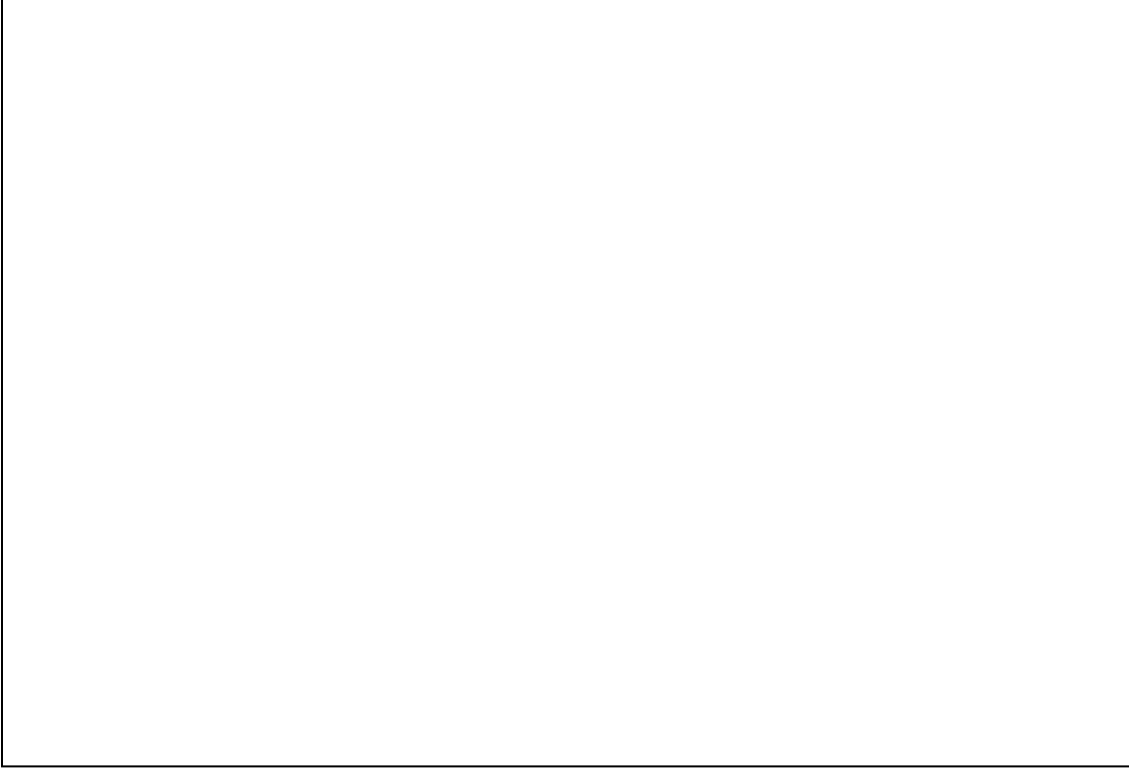
Nursery! For many animals, wetlands are a wonderful place to grow up! The habitat is rich in nutrients. The vegetation provides shelter for nesting and young animals. Many animals – such as dragonflies, toads, and salamanders – begin their life-cycle in the water, and live on land when they reach adulthood.

Even though wetlands are beneficial and provide habitats for a wide range of animals, in the United States about 60,000 acres of wetlands are "lost" each year. Much of this is due to development, but nonnative plants – such as Purple Loosestrife – can become established in a wetland area, dry it out, and also change the character and value of the habitat.

Sometimes, even if a wetland area is left alone, it will change slowly over a long period of time. After collecting silt and sand in the pores of the sponge like soil, an area may begin to fill in, making the ground drier and diminishing the wetland's ability to absorb, store, and purify water.

Imagine what the wetland area at Aspetuck might look like in 100 years. Use the next page to draw a present and "possible future" of the area.

Aspetuck Wetland, Present and Possible Future...




What Is Out There?

It is fun to go along the boardwalk, but have you taken time to really look out into the wetland? Have you stopped to listen for wildlife? Have you felt the texture of different tree trunks and caught the scent of a few plants?

Find a comfortable spot and take in what you see. Try lying on your back and looking up towards the sky. Are there different layers of vegetation in the wetland?

Record what you see here.

A large, empty rectangular box with a thin black border, intended for recording observations. It occupies the lower two-thirds of the page.

What types of animals do you hear and see around you? Remember to look up in the trees, down on the ground, and in the bushes, too. With pictures or words, record the animals you see and hear today.

**Record information about your wetland visit.
Come back to visit at another time. You'll be surprised at the seasonal changes!**

	Today	Next Visit
The weather is...		
Where did water cover the soil?		
I saw a lot of...		
I was surprised that...		

World of Water

Many of the plants and animals that live in the wetlands have adaptations that help them to live in this environment.

Skunk Cabbage is an amazing plant! It actually generates heat in the winter and early spring, melting the surrounding snow. Look for a maroon and green “hood,” known as a spathe, that first pokes up from the ground. This hood protects a fleshy club-shaped spike known as a spadix. The spadix looks fuzzy, but it is actually covered with small flowers that look much like cloves on a ham. Flies and gnats are attracted to the foul odor of the skunk cabbage and pollinate the flowers. Later in the spring and summer, the Skunk Cabbage plant produces large green leaves, giving the plant the appearance of cabbage.

Since the water in the swamp is very still, you may see patches of small green **duckweed** floating on top of the water's surface. The plant's roots are adapted to survive in water, not needing to be attached to the ground.

Do you see any floating plants today?

Kneel or lie down on the boardwalk and look closely into the water. As you look in the water you may see some small creatures, including the following.

Tadpoles: you probably know how frogs and toads go through metamorphosis, from tadpole to adult. As tadpoles, they get oxygen from the water through their gills, and as adults they get oxygen by breathing air into their lungs.

Diving beetles: like scuba divers these insects carry a bubble of air with them under the water.

Plants Plus!

Along the boardwalk there is a great variety of plants. In the past some of these plants were used by people for household uses. For instance, lichen was used to produce dyes, jewelweed juice was used to reduce itching, acorns from oak trees and sap from maple trees were used for food, moss was used for cushioning and absorbing liquids, etc.

Record some of the plants you see here today and do some research to see if and how they were used by native people or early colonists. Remember not to pick any of the plants. Your notes and drawings will help you identify the plants you wish to study.