The Jungle Trail - A Wetland Walk

Grade level: can be made appropriate for 2nd grade to adult
40-50 min

Learning Objectives:

Identify the four parts of a habitat.
Learn the value of wetlands
Explain a black water system
Introduce a few examples of plants and animals that inhabit wetlands.

Materials:

Animal cards
Jar with long string attached

Introduction: at the Jungle Trail sign. We are about to enter a wetland habitat. We will learn a little about the plants and animals that live here. Also I am going to show you the important jobs that the wetlands do for us.
There are different kinds of wetland habitats. Generally, they are areas that are sometimes flooded or saturated enough to support wetland adapted plants and animals.

***Wetlands flood when we get heavy rains. This is good because it keeps the rain from running off into the rivers and lakes too fast. *Fast water causes erosion. Erosion is when the dirt uphill gets washed downhill.**

Stop at tip-up trees. What you are looking at is the underside of the roots, much like the bottom of your shoe. Wetland trees have adapted to have shallow roots. Perhaps this is because most of the nutrients are near the surface, and in order for the roots to get air, they stay near the surface. Different plants develop different adaptations to cope with living in soil that is under water some of the time.
When a large tree falls down, it pulls up some of the soil with it and leaves a low area that fills with water and becomes this great little habitat for lots of things like frogs, small fish and insects. They are safe here from the predators that are in deeper water. Some predators, such as snakes and small alligators, may find them easy prey.

Gather at the first wide spot: What animals do you think we might see along the boardwalk? (Turtles, snakes, lizards, insects, birds, spiders)

Activity: Habitats provide four basic needs for wildlife: food, water, shelter (cover), and space.
Pantomime eating, drinking, hands in tent over head for shelter, and swing arms out wide for space. Group the students into threes and fours. Hand out cards with an animal printed on the front. If needed, ask the adults to help read the back of the cards. Instruct the students to slowly follow you (about 50' or so) while looking closely to where their

animal could live. ***Stop and ask each group something about the habitat where their animal could live.** *Example: point to trees with woodpecker holes. Bird group; how could a bird use this tree? Snake group; Where might a snake take cover? Large groups will not allow all the children to answer questions, but include at least one question to each group before moving on.*

If time allows, stop to observe flowers in bloom or fruits, butterflies and other insects and spiders, etc.

Examples that can be pointed out: Identify Poison Ivy and explain how it climbs trees. Blackberries have prickers and edible fruit. Swamp Rose has thorns and rose hips are good animal food. Climbing Aster blooms in Fall. Sweet Gum trees have lines of holes in their bark made by a woodpecker called the Yellow Bellied Sapsucker. Dahoon Holly has red berries that are food for birds. Many tree trunks are buttressed at the base for stability in saturated soil.

***When you see trash point it out as another purpose wetlands serve. Pollutants like trash and fertilizer and muddy runoff gets caught in the swamp and some of it settles in the mud and decomposes, some like fertilizer, is used by plants, while other stuff is just stuck until someone pulls it out and disposes of it properly.**

As you near the end of the boardwalk, have students name the waterways that they see. Give the open jar with string to a student to dip into the creek and fill with water. Keep hold of the end of the string. The water is the color of weak tea. What is in a tea bag? Crushed leaves. In the swamp there are leaves along with pine needles and pine cones and acorns and twigs. They all sit in the warm water and make a kind of tea that is full of tannins. This makes the water brown. ***When water sits in the wetland for a long time, it slowly runs into the creek. It also gets the chance to soak way down in the ground. When it goes deeper than the plants can reach, it can enter the ground water aquifer. This is ground water recharge.**

The water is brown because of tannins that leach out of the dead leaves and seeds that fall into the water. We have so many swamps and marshes that the whole river is brown as tea. We call this a **black water system**. It is the natural condition of the Black Creek and St. John's River. It is not considered pollution.
It is also tidal because the Black Creek is connected to the St. John's River which is connected to the Atlantic Ocean. When there is a high tide at the beach, water runs into the St John's River. Several hours later, there is a high tide here. Because the tides make the river flow backward, the Black Creek and the St. Johns River are both brackish (slightly salty) at this location.

Wetlands perform several important functions. As you walk back, ask the students if they can tell you the five important things they learned about the wetland today.

Stop at each place where they should be able to tell you one or more function. *Look for the asterisks* in the text for those stops.*

1. Help prevent flood damage (act like a sponge)
2. Stop erosion (slow speed of water across the land)
3. Improve water quality (filter out pollution)
4. Recharge ground water (retain water so that it can soak into the ground)
5. Provide habitat for many plants and animals

The following information may help answer questions. I don't expect it to be part of the lesson

Wetland background. Wetlands are known by many names, swamps, marshes, sloughs, bogs, etc. They all have one thing in common. They are all submerged for some period of time,(hydroperiod), for some it is seasonal, for others, it is daily. The water height usually changes by about three feet at the mouth of the Black Creek. Wetland habitats can be identified by the plants that will thrive in it. Many wetlands have porous substrates that allow water to filter down to the aquifer. When pollutants collect they can become sequestered in the soil and mud thus removing them from the water that runs off or percolates down. This is also the purpose of community runoff ponds – to collect and hold pollutant chemicals

Manatees can be observed in this area when the water is warm (They usually return late April or early May). They are herbivores. They graze on the submerged grasses and other plants in the shallow water. What is the problem we have with manatees and boats? Propellers hit them because they are often just under the surface. They are hard to see because the water is so dark. An average fully grown manatee is about 1000lbs and ten feet long. They can eat about 150lbs of food a day. Newborn babies are 60-70lbs and 4ft in length.

If you point out the **Bald Eagle's nest** just above the tree line, note that the tree has died and the eagles have moved to another close by tree to nest. That tree is not visible from the Jungle Trail. It is just outside the park boundary. Bald Eagles return to the same nest each Fall. Young eaglets usually two, fledge around the beginning of April.

There are many water snakes in our area. You are more likely to see one of the non-poisonous species such as the **Brown Water Snake** from this boardwalk instead of a Cottonmouth Water Moccasin. Water Moccasins will inhabit areas far into the swamp and other areas of the park. Please be alert to all snakes and let them be.

Alligators and Turtles are also common in the Black Creek. They will climb up on logs or shallow shorelines to bask in the sun. Being reptiles, they need the sun to warm them so they can move and digest food properly.