

Activities: These are just a few ideas of educational activities you can do with students at Cay Creek or almost any outdoor setting. Many were adapted from Project WILD and Joseph Cornell's *Sharing Nature with Children*.

Starter Games:

It is a good idea to begin with a high energy ecology-focused game when you arrive at Cay Creek. The long open grassy area between two forest habitats provides an irresistible space to play games. Below are some ideas of physical activities that would be appropriate for K-1 students in Cay Creek.

1. Butterfly Life Cycle/Red Light Green Light (10 min)(K-5th grade)

Line up the students side-by-side in a large grassy area with enough room between them so that they do not bump into one another. Begin by asking questions and explaining how a butterfly transforms during the complete metamorphosis (see background section). Stand facing them to explain the game. The point of the game is for students to act like a butterfly does in its various life cycles in order to "race" to where you, the teacher, are standing. In only two of the life stages can the butterfly/child move forward (caterpillar and adult), and in the other two it can only wiggle in place (egg and pupa). When you call out "egg" the students must curl up in a ball. When you call "caterpillar" he/she may crawl forward on all fours. When you call "pupa" the students stand in place with arms wrapped around their bodies and wiggle. When you call "adult" or "butterfly" the students may run forward, flapping their wings. Change up the order to keep them on their toes! The game is over when everyone has crossed the "finish line."

2. Quick Frozen Critters (15 min)(K-5th grade)

This game teaches ideas of locomotion, adaptation, survival, and predator-prey relations. A few students are chosen to be foxes, and the rest are rabbits. The rabbits must make it from one end of the playing area to the other without being "eaten" (tagged) by the foxes. The rabbits have a defense tactic, however, and when they freeze in place the foxes cannot "see" them, so they can't tag them. Students may need to be told that rabbits can only freeze for 10 seconds at a time before the foxes can sniff them out. You may set up safe zones, "thickets" that can be resting grounds for the rabbits. Once all the rabbits have been eaten or a sufficient amount of time has passed ask the students what tactics were used by the rabbits and foxes to achieve safety and food. Make sure to talk about how camouflage, speed, and "safety in numbers," are all factors that affect an animal's ability to survive.

3. Scavenger Hunt (15 min) (All ages)

Scavenger hunts are a lot of fun, but can require some additional planning and supervision. With enough chaperones, however, it is a great way for young kids to explore nature independently, which is very important to them cultivating a relationship with nature. Students should split up onto teams of 2-4 and (with a chaperone) go off within certain boundaries to find a number of items on a list. The grassy area at Cay Creek is good for this activity because the teacher can supervise all

the groups within eyesight but the area is large enough that some substantial exploration can take place. Students should be given plastic bags or collecting jars to store objects. Another option is to have a photo-scavenger hunt and each group is required to take pictures of the objects instead of collecting them. Here are examples of lists that students may receive.

<u>K-2nd grade</u>	<u>3rd-5th grade</u>	<u>6th-8th grade</u>	<u>9th-12th grade</u>
blade of grass	hairy leaf	magnolia leaf	a grass, a rush, & a sedge
green leaf	smooth leaf	oak leaf	something inorganic
brown leaf	2 types of soil	sweetgum leaf	fungi
something red	something manmade	an invertebrate	3 types of seeds

4. Nature Items race game (20 min)(3rd - 8th grade)

This game can be played at Cay Creek with a little extra preparation time, or the materials may be gathered in another location ahead of time. You will need 5-10 natural objects (see examples below) and have some background information about their role in the natural ecosystem. Begin by gathering the students around for “show and tell.” Pick up each object one by one and tell them to listen very closely and remember everything they can while you tell them a few facts about its life cycle, habitat, function, or composition. Once you have described each object, have the children line up in two equal rows, spaced about 30 feet apart. Assign each child a number so that there are correlating numbers standing across from each other. The way you play the game is the teacher names a fact, and then calls out a number. The two children who have that number race to the center to grab the object that the teacher described and bring it back to their spot. Then the teacher asks the class which object(s) she described (so they learn the names as well as the appearance) and all items are returned to the center. The teacher continues calling out facts and numbers until every student gets to go at least once. At the end of the game you may assess the students by naming the facts and having them respond in a chorus.

5. Creepy Crawly Dance Moves (15 min)(K-5th grade)

This game is meant to engage the kids in a fun way and have them think about different ways that insects use locomotion. Each kid is asked to think of an insect (or “bug”) and a dance move that reminds them of how that insect moves. This can be used as a name –game for students that aren’t familiar with one another. One-by-one the students introduce themselves and teach the class their dance move, while calling out the name of the insect it represents. After each student teaches their move, the whole class must repeat all of the moves that have been done so far, so that by the end there is a long chain of dance moves and insect names that the whole class does together. Some students might have difficulty thinking of an insect and should be given plenty of time to make up a dance. Some examples of fun bugs to represent are: stinkbug, butterfly, roly-poly, dragonfly, grasshopper, spider, flea, ladybug, cicada, mosquito, walking stick, water strider, dung beetle, and many more!

Becoming a Naturalist (30-40 min)(K-3rd grade): Many children like to wear costumes or use props, which allow them to adopt a new personality. Many teachers have found that teaching kids to be “naturalists” and having some way of denoting this status helps engage the children with nature. One simple way to do this is for each child to have a naturalist’s journal to record thoughts and observations about nature. An example of the journal is attached to this document and can be printed, stapled, and distributed for this lesson.

Materials: Naturalist “journals” (can be printed from Coastal Wildscapes website), pencils, drawing supplies, glue sticks, writing boards/clipboards. Optional supplements: garden trowel, ziploc bags, insect sweep net, aquatic net.

Procedure: Explain to the children the purpose of a naturalist journal. You may explain what a naturalist is, and tell about how early explorers kept journals of their observations so they could describe in detail what they saw in new foreign lands. Lewis and Clark were sent by President Thomas Jefferson into the unsettled West and wrote descriptive entries of what they encountered. Naturalist journals can help people in the future to understand how land has changed.

Set off on your “excursion” through Cay Creek Wetlands. You can all go together, or split up into smaller groups if you have chaperones. Another option would be to have different teachers or chaperones at “stations” and the children rotate from one to the next to explore a diversity of subjects. Tell the children to whisper so that they can hear any bird calls, tree frogs, insects, or other sounds of wildlife. They should also be encouraged to use their sense of touch and smell whenever they encounter something new. Be sure to educate them on the dangers of splinters. Show them pictures of poison ivy and lookout to make sure none is in the vicinity. Also ask them to stay in the boundaries of the grassy area by the gravel driveway and not to get off of the boardwalk once they are on it.

On this excursion you will make several stops along the way. Give the students the chance to collect leaves, write or draw in their notebooks, and have them describe aloud what they see. In order, here are some ideas of stops you can take in your Cay Creek exploration.

1. Weather Watching

It is important that one of the first things the children observe is the weather conditions. This is best in the open grassy area where the games are played. Weather effects animal behavior as well as plant behavior, and this might change what they see on their excursion. Have them lie on their backs and observe the clouds for several minutes and ask what shape and color clouds they see. Also point out other signs of weather change, like wind moving the leaves or moving clouds. There is a page on the naturalist’s journal where they may draw a sketch of the weather conditions.

2. Soil Stop

Before you get to the boardwalk, stop in two places that are far apart from each other to look at soil. With a small trowel dig up a small amount near the forest edge or in a place that will not be obvious to other visitors. Have the students feel it (texture) and smell it, and describe what color it is. Is it sandy or does it feel more like clay? Does it stick together or fall apart? Is it wet or dry? Is it light or

dark? What else is mixed in with the soil? Have them record their observations. Bring a little bag to put some of the soil in and carry it to the next stop. Again, dig up soil and compare it to the first site so they can see how similar or different it is.

3. Leaf Collection

Each child will create their own miniature “herbarium,” a place for storing pressed plant specimens. A herbarium can have many uses: to teach others about plants, to preserve a particularly interesting find, or to document what was found in a particular habitat. Only a few examples should be taken so that it does not harm the plant. Students should choose 2-4 leaves that look different and glue them into their naturalist journals using non-acidic glue. They can write words beside the plant that describe their shape, size, color, texture, and other attributes. Discussion should teach students that all plants of the same species grow to look the same way. Show them pictures of other types of leaves and ask them which ones are most similar to the leaves they have. You can find a simple classification of leaf shapes that can be used to describe the leaf with the handouts. You may photocopy and distribute this image to the students.

4. Animal tracks

Observe the sandy and muddy areas for animal tracks. These may be seen from the boardwalk. Look for otter crawlways, crab footprints, bird prints, snake and alligator slides, and raccoon tracks. Many animals are nocturnal and are not active during the time when you may be at Cay Creek, so you may not see them all, but it is more likely that you will find evidence of their presence with tracks. Draw the tracks with a scale for size, or take a photograph to identify them later.

5. Habitat Observation

Have the students spend some quiet time using their senses to soak in and observe the natural space around them. If there is time, have the students do this in 2 different habitats so that they can compare the structure, function, and other characteristics of each. Depending on the age group, ask them to write a reflection or verbally express what they saw. You may suggest specific features for them to look for, like presence of water, type of substrate (sand/mud), amount of light and/or shade, movement, sounds, colors, smells, signs of wildlife (tracks), signs of a human presence (litter), wildlife sightings, etc.

6. Bird, butterfly, herp, or mammal counts

More advanced students may want to do faunal counts, recording what species they see during their visit. Field notebooks and species lists are helpful when doing counts, and binoculars can be essential as well. An especially useful tool for conducting these surveys is a high quality camera that can capture a quickly-flying bird or butterfly better than your own two eyes. The species can be identified later using credible sites like butterfliesandmoths.org, bugguide.net, or Cornell’s allaboutbirds.org. Butterfly, bird, mammal, herp and plant lists can be found at the end of this document.

Activities involving Interpretive Signs at Cay Creek:

On the Coastal Wildscapes website you can find a link to a PowerPoint presentation that has pictures of all of the signs at Cay Creek. These slides also include discussion questions that can be formed from the information and themes on the signs. For older middle or high school students you may consider connecting observations at Cay Creek with a classroom research project, and information contained on the signs.

List of interpretive signs at Cay Creek in order from road to dock:

- #1- Welcome to Cay Creek**
- #2- Rules and Regulations**
- #3- Cay Creek Waterways**
- #4- Avian Appetites-** birds and their food sources
- #5- Landscape Plan**
- #6- Be Our Guest-** butterflies and their host plants
- #7- Maritime Forest**
- #8- Pine Flatwoods**
- #9- Where Creek Meets Tide**
- #10- Plant Communities of Cay Creek**
- #11- History and Culture of Cay Creek**
- #12- Benign Bugs-** insects and arachnids
- #13- An Edible Landscape-** rice culture and blue crabs
- #14- Open Wetland**
- #15- Find the Flora and Fauna**
- #16- Freshwater Tidal Swamp**
- #17- Open Canopy**
- #18- Canopy Voices-** treefrog and owl calls
- #19- Ecosystem Engineers-** beavers and blackwater tannins
- #20- Hammock Havens-** hammocks, snags, sea level rise
- #21- Brackish Marsh Species-** Great Egrets and Graminoids
- #22- Tidal Travels**