

Pre-Trip Activities

Pre-Trip Vocabulary

The following vocabulary and concepts will be useful in the core classes of our Georgia 4-H Environmental Education program (and are therefore divided according to class). Your students may also find them useful in the elective classes you may select.

Beach Ecology

- Accretion - building up of land by physical forces
- Barrier island - long, narrow island lying parallel to the mainland and separated from it by bay, lagoon, or marsh
- Bivalve - Mollusks having two shells (like clams, oysters, and mussels)
- Continental Shelf - remaining submerged portion of the coastal plain
- Continental Slope - the actual edge of the continent whose slope rapidly falls to a deep plateau and eventually into the ocean depths
- Erosion - process of being gradually worn away
- Georgia bight (South Atlantic bight) - inward-curving shape of the coast line stretching from Cape Hatteras, NC to Miami, FL
- Longshore current - current that runs parallel to the shore within the surf zones
- Sandbar - submerged or exposed line of sand accumulated by wave action
- Sand dunes - a hill of sand piled up by the wind
- Sea oats - a tall grass (*Uniola panicolata*) that grows on the coast of the southern U.S. and helps hold the sand dunes together
- Tides - periodic changes in the height of the ocean caused by the gravitational forces of the moon and the sun
- Univalve - Mollusks having only one shell (like snails, whelks, conchs)
- Wrack - debris washed up along the high tide line of a beach

Marsh Ecology

- Anaerobic - without oxygen, as in anaerobic mud
- Barrier island - long, narrow island lying parallel to the mainland and separated from it by bay, lagoon, or marsh
- Detritus - particles of dead organic matter and the decomposers that live on it
- Estuary - body of water partially surrounded by land where fresh water from rivers mixes with ocean water, creating an area of remarkable biological productivity
- Hammock - areas of higher elevation in the salt marsh which support shrubs and trees
- Salt marsh - a grassy area that extends along the shores of estuaries and sheltered coasts in temperate regions
- Salt pan - an undrained area in a salt marsh in which water gathers and leaves a deposit of salt on evaporation
- *Spartina alterniflora* - a tall perennial, plant which dominates the salt marshes of coastal Georgia
- Tides - periodic changes in the height of the ocean caused by the gravitational forces of the moon and the sun

Maritime Forest Ecology

- Canopy - the uppermost branchy layer of a forest

- Climax community - a stable, long-established community of self-perpetuating organisms that tends not to change with time
- Community - populations of all species that occupy a particular habitat and interact within that habitat
- Dune ridge - upland ridges originally formed from sand dunes on relic beaches
- Epiphyte - a plant that lives on another plant
- Maritime forest - the forests by the sea that are characterized by live oaks, palms, and palmettos
- Microclimate - the essentially uniform local climate of a small habitat
- Pioneer plants - plants capable of establishing themselves in a bare area and initiating an ecological cycle
- Salt-shearing - pruning of tree limbs, buds, and leaves the salt carried in the sea breezes
- Slough - freshwater areas ranging from temporary ponds to permanent swamps and freshwater marshes, those on barrier islands are typically formed in swales where the surface of the ground is close to the water table
- Succession - the changes in species composition that lead to a climax community
- Swale - low area between dune ridges
- Understory - the plants of a forest that grow low to the ground

Pre-Trip Activity Suggestions

The following are suggestions for activities that you may use in the classroom before or after your class comes to Camp Jekyll.

Language Arts--"The Marshes of Glynn" - (Coming Soon!)

Tide Chart Graphing:

The tidal influence along the Georgia coast should not be underestimated. The important salt marsh ecosystem is developed through tidal action, and the beaches and sand sharing system are influenced by the tides as well. Using a tide chart and graph paper, students can incorporate math skills and plot the daily tidal changes that occur on the coast. They can also correlate the lunar phase with the tides and make projections for the month of their trip. You can find tide charts online (www.noaa.gov).

Research Papers/Posters/Projects/Brochures/Presentations:

Students will have the opportunity to discover many new and unusual forms of plant and animal life on Jekyll Island. Below is a list of some of the most common flora and fauna:

- **Plants:** Smooth cordgrass, glasswort, cabbage palms, live oaks, saw tooth palmettos, Spanish moss, lichen, resurrection fern, wax myrtle, sea oats, southern red cedar, yucca, pennywort, poison ivy, muscadine grapes, dog fennel, Hercules club
- **Animals:** Ghost crab, hermit crab, ghost shrimp, knobbed whelk, surf clam, skimmer, brown pelican, fiddler crabs, periwinkle snails, ribbed mussels, sea gulls, common terns, great egret, snowy egret, great blue heron, cormorant, sea anemone, sea star, sea whip, sea squirts, bryozoan, grass shrimp, barnacles, oysters, polychaete worms, Atlantic bottlenose dolphin, loggerhead sea turtle, diamondback terrapin, gopher tortoise

Assign an organism to each student (or group of students). They can create colorful posters, educational brochures, research papers, or presentations on their discoveries. Students can incorporate art, history, and English skills with scientific inquiry.

Coastal Issues Role Play:

Using the Georgia coast as an example, have students think of specific coastal issues that affect the people and nature of our coast. Take one idea and develop a role play exercise around the issue. Have students act out different roles and argue the particular sides of the issue. Reserve some students for

the non-biased panel and have them vote to close the exercise. You can use the following interest groups as ideas when developing roles:

- Environmental advocacy groups
- Local shop owners
- Government officials
- Citizens organization
- Real estate industry
- Tourist industry
- Nature conservancy groups
- Local politicians
- Senior citizens association
- Local economic groups

Recommended Books

Coulombe, Deborah A. The Seaside Naturalist - A Guide to Study at the Seaside. New York: Fireside-Simon and Schuster, 1992.

Ballantine, Todd. Tideland Treasure. Hilton Head Island, SC: Deerfield Publishing, 1983.

Schoettle, H.E. Taylor. A Guide to a Georgia Barrier Island. St Simons Island, GA: Watermarks Printing Company. Darien, GA, The Darien News, Inc., 1996.

Kaplan, Eugene, H. Southeastern and Caribbean Seashores. (A Peterson Field Guide). Boston: Houghton Mifflin Co., 1988.