

The Curriculum

The Environmental Education Program at the Burton 4-H Center combines our barrier island location and the Georgia Performance Standards (GPS) to provide a classroom enrichment field study for students in K-12th grade. Currently, thirteen day classes and nine evening classes are offered to visiting residential groups. Class selection is determined by the teacher's scheduling discretion. To assist in class selection, each class is listed and described below. From this list, **choose 5 day classes**. These are 2-hour classes.

For a full list of Georgia Performance Standards met by each class, follow the links below:

<http://www.caes.uga.edu/georgia4h/burton/classes/index.html>

Day Classes

(Choose 5)

Beach Ecology

Waves, sand, and sea breezes are all important components in beach formation, and a nice day at the beach! Students will learn how beaches change over time through the processes of erosion and deposition, and what techniques people use for beach stabilization. They will begin class on-site for an introduction to beach formation and then will load the buses for a unique chance to explore and experience a Tybee Island beach.

*An optional component for Beach Ecology is Slope Survey. This option allows students a chance to compute the slope of the beach by utilizing research equipment and scientific skills. Due to advanced thought processes and loss of beach exploration time, Slope Survey is a great addition for older students. If you would like to incorporate Slope Survey into your Beach Ecology class, please note this on the class selection form.

Marsh Ecology

During Marsh Ecology, students are able to discover a very unique and biologically diverse habitat. Class begins at the center with a 45-60 minute interactive lecture where students view plankton samples, discuss various plants and animals living in the marsh, and learn how the moon and sun cause tidal fluctuations. The class concludes with students and adults getting to go to a salt marsh where they catch fiddler crabs, let periwinkle snails crawl on their hands, and learn how the marsh is critical for the survival for so many species.

Choosies

Students are given the opportunity to choose two different one-hour classes from a variety of topics offered by the Burton 4-H Center Staff. These classes take full advantage of teachable moments, interest of staff, seasonal events, and learning opportunities. Some examples of Choosies topics are: shark tooth hunting, drawing the historic Tybee Island Lighthouse, and building sea creatures in the sand. Choosies is an excellent class selection for those schools that are open to a variety of different activities. This is a great class to discuss topics not covered in normal day classes.

Crabs & Critters

During this class, students have the opportunity to see and handle a variety of native and non-native animals ranging from blue crabs to corn snakes. This is a perfect class for students to learn about the life history of various animals, understand their role in the ecosystem, and teach students how to be respectful of the animals around them. Through touching and handling of

animals, and seeing how Burton Staff help care for these animals, students develop a new appreciation of taking care of animals in the wild and in their own homes.

Discovery (Dolphin) Cruise

Get your students on an exciting boat excursion to really make a trip to Tybee Island complete! The Discovery (Dolphin) Cruise is a boat tour of the marsh and tidal rivers around Tybee Island narrated by an experienced captain. There's a good chance you will see dolphins, but there are plenty of other fascinating parts of the local ecosystem and human history you will experience aboard. This trip utilizes a local tour company. There is an extra charge of \$10 per person (paid to the tour company by a separate check). We make all the arrangements for the trip so it fits nicely into your schedule of classes.

Hydrology

Water is one of our most important resources and proper use and understanding of this resource is very important to our future. In this class students participate in hands-on activities to discover ways water is degraded and what people can do to protect our water supply. The water cycle and the various sources of water on Earth are related to current issues. An eye-opening trip to the Tybee Island waste water treatment plant is a major component of this class.

Invertebrate Studies

Sea squirts and scuds are only a couple of creatures that students will discover during this class. Students will view maritime creatures in motion under a microscope and then discuss additional invertebrates while visiting the on-site dock. While at the dock, students will be able to view, collect, and discuss various invertebrate species. This class enables students to examine the microscopic community that thrives on docks and rocks while learning to classify these animals in the correct phylum.

Maritime Forest Ecology

A study of the process of succession from the beach and marsh to the mature maritime forest. The Maritime Forest ecosystem plays a vital role to island ecology and is rich in biodiversity and ripe for study. This class will take place entirely on a hike through the wonderfully preserved land of Fort Pulaski National Monument. Along the trail, students will discover many unique plants and animals and learn about their role in the island ecosystem.

Orienteering

Orienteering is an active and challenging sport where people use a compass to find hidden targets on the landscape. In this class all students will learn how to use a compass and then apply math skills to calculate their pace. After practicing these skills, teams of students will test their new abilities on our orienteering courses located at the Burton 4-H Center.

Pollution Solution

Pollution is an ever growing problem in the world. This class starts out with an eye-opening trip to the beach, where students walk around and pick up litter. Upon their return to the Burton 4-H Center, students divide up their trash into different categories, calculate how much they found, and graph their findings. We then discuss biodegrading, and how long it would have taken some of their items to biodegrade. Students are introduced to the three R's (Reducing, Reusing, and Recycling) and finish the class with a game that compares the benefits of the three R's.

Surf Sleuth

Classes venture into the surf zone to catch an array of salt water animals and plants by pulling a

seine net through the crashing waves. After each tow, the group is able to examine and discuss their catch. Surf sleuth is a physically challenging class that allows students and adults the chance to work as a team in catching and identifying oceanic organisms. Due to the nature of this selection, this class is only offered from mid-March through November. Call 912-786-5534 for available dates.

Special Topics

Similar to Choosies, Special Topics classes are created and facilitated by the Burton 4-H Center staff based on their backgrounds and interests. Unlike Choosies, it is not divided into one-hour sessions, but is a full 2-hour course concentrating on biological topics and barrier-island ecology. These classes are more advanced than Choosies, and allow students to learn about various topics not offered in the curriculum. Some topics include: oceanography, ornithology, barrier-island botany, marine mammals, sharks, and beach exploration. Teachers should call for availability and specific seasonal topics.

Wetland Monitoring

This advanced class allows students to determine the health of a local salt marsh and tidal creek. Students will learn proper scientific methods and techniques such as random sampling, recording data, and analyzing their results. They will perform a biological survey using a transect and take water samples to perform chemical tests such as ammonia, dissolved oxygen, salinity, and turbidity. At the end, students will analyze all of the recorded data and compare them to normal expected ranges to determine the health of the marsh they sampled.

