

Background History for Butterflies and Strawberries Program:

- Boone Hall Plantation** In 1681, Major John Boone was granted 470 acres of land as a dowry from Theophilus Patey who had received the land from the Lord Proprietors. He then expanded this land from 1681 to 1711 when he died. Boone Hall Plantation was a substantial piece of property in the Lowcountry of Carolina. From 1817 until 1935 the Horlbeck family owned the plantation. Henry and John Horlbeck were in the brick business. They expanded the plantation's brickyard and crop land to 1700 acres, increasing the slave numbers to supply workers for the plantation.
- Butterfly Pavilion** Boone Hall's Butterfly Pavilion was erected in 2004 so that visitors could get a glimpse of the many native species of butterflies that live here. In the pavilion you can see the life cycle of the butterfly from egg to adult. One can also view the different plants that these butterflies need in order to live. Butterflies are very important creatures as they tell us if an area is polluted or not.
- Agricultural Crops** Three main cash crops were planted on this plantation between 1681 and the early 1900s. Indigo, cotton and pecan trees supplied the plantation with all of the wealth it could afford. Boone Hall Plantation did grow rice but only a small crop mainly for the consumption of its inhabitants. Today Boone Hall Plantation is one of the only working plantations left in South Carolina. Now the staple crops of the plantation are strawberries, tomatoes, peppers, and pumpkins although; grapes, blueberries, eggplant, zucchini, squash and asparagus are also grown here.
- Weather** Farming in general relies on the weather just as we do. Here at Boone Hall Plantation our weather station allows the farmer to keep an eye on the weather that happens here on the plantation. The weather station is connected to a computer monitor that allows the farmer to check the temperature in the fields throughout the day and night. Weather events such as frost, too much or too little rain can damage and kill plants.
- Wildlife** Growing vegetables and fruits on a plantation is never an easy feat when you have local wildlife that eat the foods you are trying to produce. Local White-tail deer, Raccoon and Opossum populations need to be deterred from going into the fields. Here at Boone Hall we use a variety of techniques to do this such as putting fencing or pouring hot sauce around the fields.

Program Goals:

Students will be able to:

- ▶ View the butterflies in an enclosed habitat and in the wild
- ▶ Relate environmental issues to the lives of butterflies and the importance of their actions in the future
- ▶ Interpret the life cycle of a butterfly

- ▶ Identify what plants a butterfly needs to live
- ▶ Explain how butterflies use camouflage to survive
- ▶ List the five things that all living things need to survive
- ▶ Explain how weather affects the life cycle of strawberries
- ▶ Interpret the history of the strawberry
- ▶ Identify a strawberry flower, an unripe strawberry and a ripe strawberry
- ▶ Explain how people, plants and animals interact in the case of growing strawberries

2008 South Carolina Academic Standards Fulfilled:

Science: K-1.1, K-1.2, K-2.1, K-2.2, K-2.4, K-2.5, K-4.3,
 1-1.2, 1-1.3, 1-1.4, 1-2.1, 1-2.2, 1-2.3, 1-2.4
 2-1.1, 2-1.4, 2-1.5, 2-2.1, 2-2.2, 2-2.4, 2-2.5, 2-3.2
 3-1.1, 3-1.2, 3-1.3, 3-1.8, 3-2.1, 3-2.2, 3-2.3, 3-2.4, 3-5.1

Social Studies: K-4.2
 1-2.2

English Language Arts: K-3.3, K-3.7, K-6.1, K-6.4, K-6.5
 1-3.3, 1-6.1, 1-6.4, 1-6.5
 2-3.1, 2-3.3, 2-6.1, 2-6.5, 2-6.6
 3-3.1, 3-6.1, 3-6.3, 3-6.6

Vocabulary: Character Education Vocabulary

Responsibility - moral, legal, or mental accountability

Respect - the quality or state of being held in high or special regard

Trust - assured reliance on the character, ability, strength, or truth of someone or something

Self-control – control of one’s own feelings and actions

Program Specific Vocabulary

Egg - the oval or round object that is laid by a female bird, fish, reptile, insect, or other animal. A young animal of the same kind hatches from it at a later time.

Chrysalis - hard shelled pupa of a moth or butterfly

Pupa - an insect in the stage of development between a larva and an adult

Metamorphosis - the change in form that some animals go through in developing

Host plant - plants that eggs and larva are likely to be found on

Nectar plant - plants that produce a high quantity of a sugary liquid fed on by adult butterflies

Fragile - easily broken or damaged; delicate

Pre and Post Visit Activities:

Pre-Site Activities:

1. Review the vocabulary and draw a picture or act out an example that represents each word.
2. Go to the website, www.boonehallplantation.com, to learn about Boone Hall Plantation and its resources
3. Read books and newspapers or magazines articles relating to butterflies.
4. Research the different types of South Carolina butterflies.
5. Listen to a few songs or make up a song about the life of a butterfly.

Post-Site Activities:

1. As a class, discuss butterflies and how they need certain environmental conditions to survive.
2. Make a poster of a butterfly and label its parts.
3. Do an art project or color a picture of a butterfly. (Use the research from pre-site #4 to help the students if needed)
4. Compare two different butterflies and how each survives in the wild. (Use the research from pre-site #4 to help the students if needed)
5. Class Project: Complete four of the following:
 - Create a new butterfly farm that you have bought for raising butterflies and public touring. This could be modeled after a Boone Hall, Cypress Gardens or any other Butterfly Facility. Some questions to answer are:
 - What is it called?
 - Where is it located?
 - What important features does it have (buildings such as barns and a house, rivers, lakes)?
 - What species of butterflies do you keep?
 - Design a brochure for your new butterfly farm.
 - Sketch a picture of this new butterfly farm.
 - Make a video commercial promoting visitation to your butterfly farm.
 - Write a newspaper article as a reporter doing a story on the opening festivities of this new butterfly farm or write a story about raising butterflies.
 - Create a radio jingle to draw visitors to the activities your butterfly farm provides (observing butterflies, raising plants to feed the butterflies, using butterflies for special events such as weddings, birthdays, etc.).

(Make a teacher/student-made rubric to grade projects. A helpful websites are:
<http://rubistar.4teachers.org/index.shtml> or http://www.teach-nology.com/web_tools/rubrics/general)

Want to Learn More?

Are you a Butterfly? By Judy Allen

Where Butterflies Grow by Joanne Ryder

The Beautiful Butterfly Book (Beautiful Bug) by Sue Unstead

Becoming Butterflies by Anne Rockwell

Butterflies by Karen Shapiro

Butterflies (Peterson Field Guide Color-In Books) by Robert Michael Pyle

Butterflies of the Carolinas by Jaret C. Daniels

Caterpillars (Peterson Field Guides) by Amy Bartlett Wright