



Dept. of the Interior / U.S. Fish and Wildlife Service  
**Waccamaw National Wildlife Refuge**  
PO 1439, 21424 N. Fraser St.  
Georgetown, SC 29440  
Tel. 843.527.8069 / FAX 843.527.8494

**To set up a program, call Julie Binz at (843) 928-3368 or email her:  
[juliebinz@earthlink.net](mailto:juliebinz@earthlink.net)**

## **Environmental Education Programs**

### Amphibians

Come see some of the mysterious amphibians that live in the Lowcountry. By observing their characteristics, we can determine what makes them different from other animals. Learn about their unique life cycle and metamorphosis.

### Black Bears

Learn about the black bears that live around Waccamaw National Wildlife Refuge and what factors limit their population. This area of coastal South Carolina supports the only bear species east of the Appalachian Mountains. Older students will investigate how habitat fragmentation affects wildlife movement and biodiversity.

### Forest Ecology

A walk along our trail will allow students to observe different trees that live on the Refuge and what role they play in the ecosystem. They will also learn about some physical adaptations of local plants and animals.

### Freshwater Wetlands

Discover the wonders of wetlands! Let your students get their hands dirty by collecting various aquatic animals and plants from the river and bring them into the lab for identification. Tadpoles and aquatic insects such as the dragonfly, mayfly, damselfly, and mosquito will be the main focus in the discussion of metamorphosis.

### Invasive Species

Discover why invasive species are such a huge problem on our National Wildlife Refuges. Plants and animals that are introduced into the local ecosystem cause havoc on the natural balances that keep populations in check. We will cover some of the biggest local threats and what is being done to control these alien invaders!

### Mammals

From the flying mammals (bats), to the common white-tailed deer, discover the diversity of mammals that call Waccamaw National Wildlife Refuge home. Using mammal skulls and a dichotomous key, students will learn different mammalian adaptations to survive on land and sea.

### Red Cockaded Woodpecker

Part of Waccamaw National Wildlife Refuge is home to a population of these endangered species. Students will investigate what factors create suitable habitat for the endangered red cockaded



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woodpecker (RCW). They will then learn the reasons for this bird's decline and have a chance to be a biologist and "monitor" an RCW colony.

Reptiles

Come see and touch some local reptiles! We will observe the adaptations that allow them to survive in multiple habitats within the Refuge. Their importance in the food web will also be discussed as well as their life cycle.

Swallow-tailed Kite

Swallow-tailed Kites are a fascinating bird of prey that migrates between South Carolina to breed and South America to winter. Come discover the challenges that these and other migratory birds face twice a year as they travel thousands of miles to find safe habitats as well as other adaptations they use to survive and how wildlife managers try to minimize these challenges.

Tracks

Learn to identify the tracks of common animals found in South Carolina. Become a nature detective by using clues to identify which animals live on Waccamaw NWR and in your backyard.

Choose one:

Ecosystems -In the exhibit hall.

STUDENTS DISCOVER ON THEIR OWN what an ecosystem is by observing local habitats and the roles of organisms that live here. Investigate life under and around the PeeDee and Waccamaw Rivers to see how all of these organisms interact with each other and their habitats.

Humans and their Environment- In the exhibit hall.

STUDENTS DISCOVER ON THEIR OWN what effect humans have had on the land since the Native Americans lived here, through the colonization of America, and to the present day with the US Fish and Wildlife Service's stewardship of the land. This area is rich with history since people have been shaping this landscape for thousands of years!



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## **Standards**

Amphibians- K-2.1, K-2.3, K-2.4, K-2.5, 2-2.1, 2-2.2, 2-2.3, 2-2.5, 3-1.1, 3-2.1, 3-2.2, 3-2.3, 4-2.1, 4-2.3, 5-2.2, 5-2.4, 6-3.1, 6-3.2, 6-3.3, 6-3.4, 6-3.5, 7-4.1, 7-4.2, 7-4.3, 8-2.1, B-6.1, B-6.2, B-6.6

Black Bears- K-2.1, K-2.2, 2-2.1, 2-2.3, 2-2.4, 3-2.2, 3-2.3, 3-2.4, 4-2.2, 4-2.4, 4-2.5, 5-2.4, 5-2.5, 5-3.6, 6-3.1, 6-3.2, 6-3.3, 6-3.4, 7-4.1, 7-4.2, 7-4.3

Ecosystems -K-1.1, K-2.1, K-2.2, K-2.3, K-2.5, 1-1.1, 1-2.1, 1-2.3, 1-2.5, 1-2.6, 2-1.4, 2-2.1, 2-2.2, 2-2.3, 2-2.4, 2-2.5, 3-1.1, 3-1.3, 3-2.1, 3-2.2, 3-2.3, 3-2.4, 3-2.5, 3-3.5, 3-3.6, 3-3.7, 3-3.8, 4-1.1, 4-2.1, 4-2.2, 4-2.3, 4-2.4, 4-2.5, 4-2.6, 5-2.2, 5-2.3, 5-2.4, 5-2.5, 5-3.1, 5-3.4, 5-3.5, 5-3.6, 6-2.2, 6-2.3, 6-2.4, 6-2.9, 6-3.1, 6-3.3, 6-3.5, 6-3.6, 6-3.6, 7-4.1, 7-4.2, 7-4.3, 7-4.4, 7-4.5, 7-4.6, 8-2.1, 8-2.7, B-3.6, B-6.3, B-6.6

Forest Ecology- K-1.1, K-2.1, K-2.2, K-2.4, K-2.5, K-4.3, 1-2.1, 1-2.2, 1-2.4, 1-2.5, 1-2.6, 1-4.1, 1-4.6, 2-2.3, 2-2.4, 3-2.1, 3-2.2, 3-3.3, 3-2.4, 3-2.5, 4-2.2, 4-2.5, 4-2.6, 5-2.2, 5-2.4, 5-2.5, 6-2.1, 6-2.3, 6-2.4, 6-2.5, 6-2.7, 7-2.4, B-3.1, B-6.1, B-6.2, B-6.3, B-6.4, B-6.5, B-6.6

Freshwater Wetlands- K-1.1, K-1.4, K-1.5, K-2.1, K-2.2, K-2.3, K-2.4, K-2.5, K-4.3, 1-1.4, 1-4.4, 2-1.1, 2-1.2, 2-1.3, 2-1.4, 2-1.5, 2-2.1, 2-2.2, 2-2.5, 2-3.1, 2-3.2, 2-3.3, 2-3.4, 2-3.5, 3-1.6, 3-1.7, 3-1.8, 3-2.1, 3-2.2, 3-2.3, 3-2.4, 3-2.5, 4-1.1, 4-1.7, 4-2.1, 4-2.2, 4-4.1, 4-4.3, 4-4.5, 5-1.4, 5-1.8, 5-2.2, 5-2.4, 5-4.5, 6-1.5, 6-3.1, 6-4.3, 6-4.5, 7-1.1, 7-1.4, 7-1.7, 7-4.1, 7-4.2, 7-5.5, 7-5.6, 8-1.5, 8-1.7, B-3.6, B-6.1, B-6.2, B-6.5

Humans and their Environment- 3-1.4, 3-2.5, 3-4.6, 4-1.4, 4-2.7, 7-7.7, 8-1.1, 8-1.2, 8-1.3, 8-1.6, 8-3.6,

Invasive Species- 5-2.2, 5-2.4, 5-2.5, 5-3.6, 6-2.1, 6-2.9, 7-4.1, 7-4.3, 8-2.1, 8-2.7, B-3.6, B-6.1, B-6.2, B-6.6

Mammals- 4-2.1, 5-2.4, 6-1.3, 6-1.5, 6-3.1, 6-3.2, 6-3.3, 7-4.1, 7-4.2

Red Cockaded Woodpecker- 4-2.5, 4-2.6, 5-2.4, 5-2.5, 6-3.4, 6-3.5, 6-3.6, 7-4.1, 7-4.2, 7-4.3, 8-2.1, 8-2.7, B-6.1, B-6.2

Reptiles- K-2.1, K-2.3, K-2.4, K-2.5, 2-2.1, 2-2.2, 2-2.3, 2-2.5, 3-1.1, 3-2.1, 3-2.2, 3-2.3, 4-2.1, 4-2.3, 5-2.2, 5-2.4, 6-3.1, 6-3.2, 6-3.3, 6-3.4, 6-3.5, 7-4.1, 7-4.2, 7-4.3, 8-2.1, B-6.1, B-6.2, B-6.6

Swallow-tailed Kite- K-2.1, K-4.3, 2-2.1, 2-2.2, 3-1.1, 3-2.1, 3-2.2, 3-2.3, 3-2.4, 4-2.1, 4-2.2, 4-2.3, 4-2.5, 4-2.6, 5-2.4, 5-2.5, 6-3.2, 6-3.4, 6-3.5, 6-3.6, 7-4.3, 8-2.1, 8-2.7, B-3.6, B-6.1, B-6.1, B-6.6

Tracks- K-1.1, K-1.3, K-2.2, 2-1.4, 2-2.2, 2-2.3, 3-1.1, 3-1.2, 3-2.2, 3-2.3, 4-2.5, 6-3.2, 7-4.1, 8-2.1