

NCCF STUDENT EDUCATION PROGRAM:

# WETLAND NURSERY

## Student Wetland Nursery Program

Once referred to as dark, damp and sometimes spooky places, it is now known that wetlands are rich, productive and beautiful areas. More than 70 percent of plant and animal species listed as endangered, threatened, or of special concern in North Carolina depend on wetlands for survival. Wetlands protect coastal water quality by absorbing rainfall, recharging groundwater and filtering pollutants out of runoff. They hold back floodwaters, reduce storm surges, and lessen erosion, protecting property from hurricanes and storms. Recognizing these vital functions, the North Carolina Coastal Federation (NCCF) has created an opportunity for students to experience these wetland wonders and take an active role in their restoration.

Funded through numerous grants, students work in the classroom and in the field to increase their knowledge, ownership and stewardship of these vital ecosystems. Originally designed by Tampa Bay Watch, students learn about wetlands and water quality through hands-on activities, construct wetland nurseries at schools, cultivate wetland plants from seed, and then use these plants to restore coastal shorelines in their communities. Nearly 200 students from at least seven schools each year are involved in the Wetland Nursery Program. Over the past three years, students have successfully replanted 3 acres of marshland with over 24,000 marsh plants.

## Timeline

NCCF begins the Student Wetland Nursery Program in August with teacher workshops. This workshop introduces the wetland program, offers a timeline for lessons during the school year, and provides an overview of classroom curriculum taught by NCCF's Education Coordinator.



The first classroom lessons are on salt marsh ecology and the importance of its key plant *Spartina Alterniflora*, or smooth cordgrass, and occur in early fall. NCCF also collects *Spartina* seeds for experiments in the classroom, as well as use in our existing greenhouse. By cultivating in-house marsh plants, NCCF hopes to reduce the need for purchased seedlings.

During November or December, a nursery is built on school property, or maintenance is conducted on existing nurseries. Under the guidance of NCCF education staff, students actively participate in construction and maintenance throughout the year of the 16' x 16' nurseries.

In January, the second classroom lessons on *Spartina Alterniflora* are conducted, and the students set up their seed germination experiments. Using hypotheses to determine whether different seed storage techniques are effective in replicating natural dormancy and germination processes, each class collects data for 90 days. Schools will post their scientific results on NCCF's website, which allows them to compare results with other schools in the program.

In early Spring, the students transfer their grasses to their outdoor nursery. The students oversee the nursery daily for eight weeks, maintaining suitable water levels and overall plant health. NCCF meets with students monthly and also brings additional plants for their nurseries, which the students eventually will use for restoration site plantings.

In May, students transport their plants to a site selected by NCCF's Senior Scientist to use for restoration. Student participation in the full workday includes planting their grasses and conducting water quality, biological and physical monitoring activities. This data establishes the baseline from which NCCF staff will evaluate the success of the project.

With continued program success, NCCF plans to steadily build the Student Wetland Nursery Program, engaging students, teachers and the public coast-wide. This program encourages students to learn from action, producing an enduring habitat that has a positive impact on the environment and local coastal communities. This vested experience creates a lasting impression on students and cultivates a continued interest in environmental issues.

If you are interested in learning more about NCCF's educational opportunities for students, please contact NCCF at [nccf@nccoast.org](mailto:nccf@nccoast.org).



Students plant *Spartina Alterniflora*.



Students add plants to their wetland nursery.



The final product.



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## About the North Carolina Coastal Federation

The North Carolina Coastal Federation is the state's largest non-profit working to protect and restore coastal North Carolina. There are many exciting opportunities to get involved in restoration projects and help preserve our coastal environment. If you would like to support our efforts, please consider becoming an NCCF member. You also can learn about volunteer opportunities and other programs by checking out NCCF's website at [www.nccoast.org](http://www.nccoast.org), call 252-393-8185, or come by NCCF headquarters at 3609 Hwy 24 in Ocean, located between Morehead City and Swansboro.