

at the water's edge

A SOUND LEARNING TEACHER INSTITUTE



2010 INSTITUTE FINAL REPORT

The *At The Water's Edge Teacher Institute* was held at the Trinity Center in Salter Path, NC from July 11-16, 2010. This extremely successful teacher professional development opportunity was provided by funding from the Albemarle-Pamlico National Estuary Program to the Environmental Education Fund. The NC Office of Environmental Education and Public Affairs provided administration and coordination for the Institute.

Purpose

This week-long teacher institute was designed to provide elementary teachers with an in-depth understanding of issues affecting North Carolina's watersheds and river basins while exploring the unique natural habitats of the coastal region. Content focused on inquiry-based, hands-on field investigations and quality, research-based activities and resources that supported the North Carolina K-5 Standard Course of Study.

Curriculum

All content and activities presented during the institute were aligned with the NC Standard Course of Study for K-5 Science, Social Studies, Language Arts, Mathematics and/or Healthy Living, as appropriate. By applying the interdisciplinary approach of environmental education, educators learned how to incorporate outdoor experiences into the curriculum, utilize their school grounds and incorporate appropriate field exploration techniques. They also developed strategies for integrating science, social studies, language arts, math, health and art in their classrooms by using the natural environment, with a particular focus on river basins, coastal habitats and



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estuarine issues, as the context for learning. Participating educators received intensive support from an established network of educational partners who provided inquiry-based, experiential, and research-based instructional techniques for integrating environmental education into the curriculum. Educators participated in hands-on activities, site visits and investigations and



technology applications correlated to the Standard Course of Study. In addition, each educator received instructional materials including curriculum-related videos, maps, posters, books and other support materials to use with their students. Educators also earned 4.0 Continuing Education Units (CEUs) required for the renewal of their NC teaching certificates and 26 hours of credits towards becoming Certified Environmental Educators in North Carolina.

Teacher Demographics

Over 100 applications were received from teachers interested in attending the institute. The Application Review Committee chose twenty four participants to attend the institute from different areas of the mountain, piedmont, and coastal regions of North Carolina. All participants were elementary educators or administrators, working with grades ranging from kindergarten to 5th grade. Participants taught a variety of subjects including math, reading, science, language, physical education, social studies, health, engineering, and technology.

Collectively, these educators will have the opportunity to reach over 1,000 students in the 2010-2011 school year in classes ranging from earth/environmental science to biology to ecology. Educators averaged 14 years of teaching experience, with a range from 1 year to 30 years of experience. The majority of the educators were female, although two male educators were able to attend the institute.



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Facilitation



Our outstanding facilitators included staff from the NC Division of Water Resources, NC Aquarium at Pine Knoll Shores, NC Museum of Natural Sciences, Prairie Ridge Ecostation for Wildlife and Learning, NC National Estuarine Research Reserves, Core Sound Waterfowl Museum, National Park Service, NC Coastal Federation, Riverworks at Sturgeon City, NC Sea Grant, NC Wildlife Resources Commission, Jones County Schools, Albemarle-Pamlico National Estuary Program and the NC Office of Environmental Education.

Overall Evaluation

❖ 91.7% of teachers said that the institute **exceeded** their expectations. The remaining 8.3% indicated that their expectations of the institute were met.

- *“The quality of activities, knowledge of content of facilitators, awesome field trips, flow of schedule, accommodations, the group itself all exceeded my expectations”.*
- *“You have shared such an overwhelming amount of good ideas and covered so much material- I was not expecting such a wide variety of useful information!”*
- *“Everything was so well planned, coordinated, preplanned, thought out and thorough... excellent job!”*
- *“I was expected to only learn how to incorporate a few activities, but I felt like one of my students, being amazed by so much exciting new information.”*
- *“Having been to many workshops, this institute was authentic - hands on and minds on! The content knowledge was provided and activities supported the content.”*



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- ❖ 95.8% of the teachers gave the institute an **excellent** overall rating for professional development experiences. The remaining 4.2% reported a very good experience.

- ❖ 100% of the teachers at the institute said that they would strongly encourage other educators to attend this week long workshop.

- *“Yes. It was one of the very best I've ever attended including both foreign and domestic teacher opportunities in my 15 years of teaching. You are in my top 2!”*
- *“Everyone I work with will be told they should go!”*
- *“I would definitely recommend this workshop and can't wait to go back and talk with my 5th grade team and school about what I learned.”*



Training Effectiveness:

- ❖ 95.8% of teachers said that their confidence and **comfort level with teaching outdoors has greatly improved** as a result of participating in this institute.



- *“I used to be afraid and unsure of teaching outdoors but now I know lots of ways to teach lessons outside and how to bring the outside inside.”*
- *“I have many more ideas and ready activities at hand and I have some that can be implemented in 30 min or under with little prep time-- especially since resources included pictures ready to color!”*
- *“So much of what we did is readily accessible, for example, the spider webs that we visited, the “beach in a box”, the collage discover boxes, etc.”*

- ❖ Every participant felt that the instructional materials received will help increase student environmental awareness, interest, and classroom performance.

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- *“Students like to be involved in big things. The data collection activities and just going outside will help to energize them.”*
- *“I’m so excited about them! If I’m excited, the kids usually follow suit. The activities were very engaged and met a lot of different learning styles.”*
- *“The activities and projects will give the students ownership, which will spark interest and further inquiry.”*
- *“Materials that link the child's life experiences with real world experience will, through my guidance, “plant a seed” that will evolve into stewards of our environment.”*



- ❖ 95.8% of the teachers felt that the training received during the institute empowered them to actually use the materials/ activities in their classrooms.



- *“Lots of background information; good examples of real world application, resources are rich and bountiful!”*
- *“The materials are awesome! The examples of activities make it easier to adapt to different grade levels.”*
- *“The experiences from the activities, the materials and the online resources are all fantastic and will equip me to have many fantastic lessons!”*

- ❖ Confidence level increases were seen in every teacher at the institute:
 - *I came into this institute thinking I knew enough about these topics to teach it successfully, but during the course of this week, I have found that my understanding was only surface-level and not as in depth as it is now.*
 - *“My confidence has improved greatly! I was apprehensive about teaching science and trying to integrate different subjects. Now it looks like so much fun!”*
 - *“I feel much more empowered not only by the presenters but also by my colleagues.”*
 - *“My confidence in asking questions for clarification has increased. I am thrilled to have a network of EE Specialists to assist me!”*

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Conclusion

In this initial evaluation, every educator indicated that the institute either met or exceeded their expectations. Many participants mentioned that this experience was far better than previous workshops they had attended. The activities and materials directly targeted a wide range of content areas, and every teacher was able to find something they learned during the week to enhance their curriculum in the next year. The focus on elementary school, with a mix of K-

5 teachers, academically gifted specialists, science teacher specialists and administrators, worked very well. The participants were able to learn from each other as well as from the presenters.

Prior to the institute, less than half of participants (43.5%) reported confidence in teaching about estuarine issues. All participants indicated that the training increased their content knowledge and their confidence level in teaching environmental topics including wetland habitats, water quality and estuary issues. Teachers particularly benefited from the outdoor, hands-on nature of the sessions – almost all reported that their confidence in teaching outdoors improved as a result of participating in the institute. Many participants noted that they enjoyed being able to explore, learn, and discover as one of their students would. The integration of content areas around watershed and estuary topics was highly successful. This holistic approach to learning supplied teachers with real-life, relevant examples of issues to take back and explore with their students.

With over 100 applications for this institute, it is clear that a great need exists for this type of intensive, hands-on professional development opportunity. Every participant from this year's institute indicated that they would strongly encourage their colleagues to attend a similar workshop. Further evaluation will be conducted to determine the extent to which participants use the institute materials. Funding is recommended to continue this highly successful partnership in future years.

