

Final Report

Project Title: **Wetlands and Water Education for Elementary Science Teachers**

Prepared by: **Anne Smith**
Coordinator for Elementary Science
Clear Creek Independent School District

Prepared for: **The Galveston Bay Estuary Program (TCEQ)**
17041 El Camino Real Suite 210
Houston, TX 77058

Submitted to: **Steven Johnston**
TCEQ Project Coordinator

August 2009

Project Description –

Clear Creek Independent School District's *Watershed Education and Training* project equipped over 90 elementary science teachers with the tools and training that enabled them to bring a comprehensive, curriculum-enriching wetlands and water habitat education project to their science classrooms in 26 elementary schools. The project, which took place within the lower Galveston Bay water shed impacted approximately 4,000 elementary students through teacher training and teacher mentorship of their peers.

The teachers were trained in *Project WET* and *Project WOW: The Wonders of the Wetlands* curriculum and given the materials to use in the classroom. Dr. Brenda Weiser conducted the trainings, which included both classroom and outdoor experiences. These two modules utilized guide books, water demonstration kits, and trade books to bring a wealth of wetlands and water-related lessons into elementary school science lessons. The lessons, enabled teachers to apply the curriculum in the context of students' real-world surroundings along with NOAA products and data including watershed historical facts, watershed quality data, and NOAA watershed visual aids. Moreover, the project taught the experiences using classroom demonstrations and first-hand observations. To add experiential value to the project, Dr. Weiser instructed the teachers at the Environmental Institute of Houston's outdoor watershed lab and the Armand Bayou Nature Center, which is the region's premier watershed demonstration facility.

The project educated teachers and ultimately their students about their local ecology and the natural surroundings, improving their knowledge of the lower Galveston Bay watershed. In turn, the project helped students and their families support conservation and restoration of the natural resources of the Galveston Bay area. These environmental education efforts, including the Watershed Education and Training project, are a vital part of the CCISD Science curriculum, which is aligned with the Texas Essential Knowledge and Skills statewide curriculum.

Project Results –

The district hosted three workshops, which included two days of training for each participant. Therefore, each participant received fourteen hours of instruction over the two day workshop period. Ninety-three teachers were trained who in turn mentored their fellow teachers upon return to their campus. Not only did the students of those ninety-three teachers benefitted, but so were the students of their mentees.

Benefit to CCISD –

This project was interwoven into the curriculum as a valuable resource for teachers. Therefore, the science curriculum was strengthened from establishing this “cadre” of teachers who received direct instruction from the trainings. In addition, teachers have asked this science coordinator when the workshops would be repeated for future teacher impact, yet to date, funding has not been secured for repeating the project. Several teachers who attended the training have received educational grants to create outdoor habitats for their campuses and have utilized the resources learned to provide more outdoor education for their students. The strength of this project was that it empowered teachers to extend environmental education beyond the classroom walls by providing the resources and understandings needed for teacher and student success.

Lessons Learned –

This program could be provided throughout an entire school year where teachers would have continuous training during several outdoor settings and seasons for greater depth in learning and understanding. The positive results is that teachers want “more training,” now that they have achieved a comfort level with this type of educational experiences, they have voiced a desire for advanced learning. Teachers were thrilled and delighted to have received the resources of books and materials needed to immediately go right back to their classrooms and teach the lessons! The only weakness voiced among the teachers expressed the desire for more outdoor education learning opportunities! Obviously, we touched upon a definite need within our educators. This project was a true success, which has impacted students, teachers, and parents. Teachers have reported that parents have noticed more ecological and local ecological conversations being elicited at home by their children. In addition, we have had an increase in Earth Science entrees in our campus and district level science fairs.

Photographs – No known photographs were taken at the trainings.

Aime Mangas Smith
11/20/09