

The Power of Plants: Establishing a Deeper Connection to Nature through Environmental Education

Alexis Arnold, *Lock Haven University*

The Wetlands Institute serves as an environmental education hub for all members and visitors to Stone Harbor and the surrounding community. The importance of environmental education is generally overlooked in the public and private schooling system, and for this, and a myriad of other reasons, many parents choose to homeschool their children rather than enrolling them in the formal education system. To provide homeschool parents and children with a more robust curriculum, The Wetlands Institute created the Nature Education for Homeschool Students and Teachers (NEHST) program. The NEHST program provides two lessons a month for children ages 5 to 13. These workshops explore a wide range of environmental topics with the technique of hands-on learning. Environmental education is vital to providing the necessary tools for students to gain a deeper connection with nature as well as understanding their impact on the environment.

I have created three sections of NEHST lessons based around the importance of plants found in New Jersey. The subjects include Plant Adaptations, Invasive vs. Native Plants, and How Humans and Animals Use Plants. There will be two similar sets of each of these three lessons; one for ages 5-8 and one for ages 9-13+. For each lesson, students will get an introduction to the subject, participate in a hands-on learning activity, and receive homework to further reinforce the material they just learned. Each of these lessons will allow students to understand why plants are essential to the salt marsh ecosystem and necessary for their lives.

Cameras Rolling... and ACTION: Reaching a Broader Audience through Social Media

Anna Caputo, *Green Mountain College*

The Wetlands Institute crafts general admission programs that give visitors a sense of place, which is a vital step towards environmental stewardship and wetlands conservation. However, the success of these programs rely on a visiting audience willing to hear the message. Traditionally, people who seek out places like The Wetlands Institute are those who are already environmentally inclined and/or vacationers who are looking for something local to do with their families. Our anthropocentric realities are intertwined in the natural world around us, and in order to invoke true environmental stewardship, it is crucial that environmental education be accessible to everyone. Unfortunately, equal accessibility to environmental education is a loftier concept to actualize than it seems. Increased use of technology can help bridge the gap between environmental education and accessibility.

Widespread use of social media platforms is currently at the forefront of environmental education because it can reach anyone who has access to the internet. My project aims to create a conservation education web series consisting of three complete episodes for The Wetlands Institute's YouTube channel. Each of three episodes focused on northern diamondback terrapins, ospreys and horseshoe crabs is written, directed and edited in-house using Adobe Premium Pro and features scientist interviews, animal facts and conservation education issues. Using technology and social media in this way increases the accessibility of environmental education for all, creates positive publicity, reaches a wider demographic and broader audience, and allows for visitors to continue learning at their own pace past their initial visit.

Going Batty: Creating a Bat Education Initiative to Increase Awareness and Appreciation

Emily Colombo, *George Mason University*

The Wetlands Institute's education programs inform the public about many different animal species within the marsh, including birds, fish, and diamondback terrapins to only name a few. While there is limited mention of any of the mammals that live within the marsh, there is one order of mammals that thrives in wetlands: bats! Bats are an important part of many ecosystems, and provide several benefits to humans including eating copious amounts of nuisance insects, producing fertilizer via guano, and pollinating hundreds of fruits and flowers around the globe.

Despite their importance, bats are not a common sight at The Wetlands Institute. Everywhere in the world, bats are suffering due to anthropogenic effects and, specifically in North America, from a disease called White Nose Syndrome. The Wetlands Institute can help by creating a bat education initiative to increase awareness and appreciation of bats. This new initiative contains components specifically aimed at attracting bats to the Institute grounds, including the construction and installation of several bat boxes to give bats a place to roost and the addition of night-blooming flowers to Marion's Gardens to encourage nocturnal moth visitors that bats like to eat. Attracting bats to the area is only one step in a comprehensive bat education program. In addition to these practical measures, the creation of educational signage installed in the Institute's observation tower and a new Science Feature program dedicated to bats will round out the initiative. Understanding bats and coming to appreciate them, instead of stigmatizing them, is the first step toward the recovery of their populations.

Helping Hands: Using Service Learning Programs to Teach People about the Importance of the Marsh

Diana Moczula, *Carleton University*

The Wetlands Institute thrives on interactive activities that allow for people to physically touch and learn. This physical aspect of hands-on learning allows for a stronger connection to the subject matter and this connection is what allows for people to realize the importance of our marsh ecosystem. Following these experiences, if you ask someone what they want to change they may list many things, but this desire to change will remain just a desire until they act on it. However, if you ask someone what they want to change and then give them the opportunity to do so, they act on their desire. Service learning is a unique way for people to learn that incorporates an additional aspect of community service intended to not only enhance the learning experience, but also incite change.

My project, *Helping Hands*, consists of six complete service learning programs focused on the following topics: marsh biodiversity, marsh birds, marsh plants, food from the marsh, marsh protection, and wetland pollinators. Each *Helping Hands* program begins with a PowerPoint presentation seeking to generate a connection between people and different aspects of the marsh. Once this connection is formed the audience is offered the opportunity to physically go out and make change; hence the "service" aspect of service learning. Program participants receive the opportunity to help what keeps them safe, or feeds them, or provides recreational enjoyment to them. Ultimately, people who participate in service learning programs are able to act on their desire for change and are more likely to spread their newfound knowledge.