

# Environmental Education in the Schools

Denise Poyer

Fall is upon us, backpacks are full, and the yellow school buses are once again on the streets bringing children to and from school. Sustainability is all about our children's future—and we are fortunate to have a very active, thriving community of educators who are getting students outside and learning. Environmental educators are organized under the Rhode Island Environmental Education Alliance (RIEEA) which includes groups such as the Audubon Society of Rhode Island, Save the Bay, and the R.I. Department of Environmental Management as well as smaller groups like Norman Bird Sanctuary, Roger Williams Park Zoo, and the Wood-Pawcatuck Watershed Association. All of these organizations have various programs and products that work in conjunction with teachers and schools to teach kids about their environment. Most of these groups are non-profit or state agencies that support their work through fees, grants, and membership dues.

RIEEA has also been actively working with the R.I. Department of Education to develop an Environmental Literacy Plan (ELP) for the state. With this ELP in place R.I. will be a good position to receive federal funding for teacher training and school programs should the No Child Left Inside Act, sponsored by our own Senator Jack Reed, be authorized by Congress. What the ELP does is provide a framework to incorporate EE into the curriculum of grades Kindergarten through High School. (See sidebar on page 3).

## Audubon Society of Rhode Island:

(Kristen Swanberg, Senior Director of Education, [kswanberg@asri.org](mailto:kswanberg@asri.org)). Audubon has been providing environmental education programs in schools for over 50 years. Today, Audubon offers dynamic, science based environmental education programs to schools in and around Rhode Island. Audubon's philosophy of education is built on a science inquiry approach that engages students through experiential learning. Programs are designed to assist teachers in achieving state educational standards. Audubon offers a variety of hands-on classroom programs as well as outdoor field based programs where students study local ecosystems. Audubon also provides school programs at their state-of-the-art Environmental Education Center in Bristol. In addition to programs for students, Audubon offers professional development opportunities for teachers to strengthen their science teachings. It is Audubon's mission to help develop the next generation of environmentally literate citizens.

**Central Falls Middle School:** (Stephanie Racine, [sracine@cox.net](mailto:sracine@cox.net)). Stephanie teaches English and science to seventh and eighth grade ESL students and emphasizes environmental awareness whenever possible. Students investigate different environments and learn about the food web using the school's butterfly garden and the nearby Blackstone River. The curriculum has culminated with participation in the RI Natural History Survey's BioBlitz where students are able to investigate and explore many diverse habitats not found in Central Falls.

**Norman Bird Sanctuary (NBS):** (Kim Botelho, Director of Education, [KBotelho@normanbirdsantuary.org](mailto:KBotelho@normanbirdsantuary.org)). NBS's Creative Connections: City to Sanctuary, A partnership between the Norman Bird Sanctuary and Central Falls High School exemplifies environmental education that combines science, art, and community service. Students participated in monthly programming either at Norman Bird Sanctuary or at Central Falls High School. Their days at NBS were spent learning about particular groups of animals and the habitats that these animals occupy and observing nature from the NBS trails. During the afternoons, students reflected on their morning lessons through different art forms such as writing, dancing, spoken word, and painting.



Chariho Middle School students learn about habitat assessment as part of the RIDEM Salmon in the Classroom Program. Photo by Denise Poyer, WPWA.

## Ocean State Environmental Education Collaborative (OSEEC):

is an association of three environmental organizations, Roger Williams Park Zoo, Norman Bird Sanctuary, and Save The Bay, with a shared belief: the quality of life in our communities is linked to the quality of environment. Through education, we empower our citizens to improve that quality of life and grow a sustainable future. OSEEC has AmeriCorps members placed among the three partner organizations to assist in reaching out to the urban communities. The AmeriCorps program allows OSEEC to provide supplemental science enrichment classes to schools and community organizations.

## Rhode Island Department of Environmental Management (RIDEM):

(Paul Dolan, Deputy Chief Division of Forest Environment [paul.dolan@dem.ri.gov](mailto:paul.dolan@dem.ri.gov), or Kimberly Sullivan, Aquatic Resource Education Coordinator [kimberly.sullivan@dem.ri.gov](mailto:kimberly.sullivan@dem.ri.gov)). Who has not heard of Smokey Bear and his message—one of the earliest and most effective programs in the field of EE? The Division of Forestry continues to reach students with our fire prevention program. RIDEM also works in the schools helping them with program development through our Project Learning Tree, Project Wild, and Project Wet. Another major focus has been the education of landowners, children and citizens of Rhode Island in the stewardship of the land, through workshops, career days, the Great Outdoor Pursuit, and Tree Farm tours.

From teacher training to children's field trips, the Division of Fish and Wildlife offers a variety of aquatic programming for all ages focused on the stewardship of Rhode Island's natural resources. The program provides teacher training in premier curricula such Project Wild/ Wild Aquatic, WOW-The Wonders of Wetlands, Project Wild, and in-school aquaculture programs such as Salmon/Trout in the Classroom and raising horseshoe crabs. We offer a wide selection of field trips including marine ecology at Jerusalem Coastal Lab and Rose Island, freshwater fishing at the Carolina Trout Hatchery.

**Roger Williams Park Zoo:** (Shareen Knowlton, Director of Education [sknowlton@rwpzoo.org](mailto:sknowlton@rwpzoo.org)). A 40-acre living classroom, Roger Williams Park Zoo is first and foremost an institution of informal learning. In 2010, our school programs, both onsite and off Zoo grounds, reached over 500 schools and more than 15,000 children and teachers. Our school programs are aligned with Rhode Island Grade Span Expectations and Early Childhood Learning Standards. At the Zoo, we offer a number of science-based formal education programs to complement a field trip and the classroom curriculum. We also offer free, standards-based self-guided tours on our website, for teachers that want to make the most of a Zoo fieldtrip but may not be able to take advantage of a formal Zoo education program during their visit. Off Zoo grounds, the Zoomobile carries our educational messages and ambassador animals to schools all over Rhode Island and Southeastern New England. To ensure that all Rhode

## Rhode Island Environmental Education Association

The Rhode Island Environmental Education Association (RIEEA) is a collaborative network of organizations and professionals working to promote environmental education in our schools and communities with the ultimate goal of developing environmentally literate citizens. Our individual members include educators, docents, and administrators from non-profit organizations, schools, universities, and state agencies. Our organizational membership includes schools, environmental organizations, and community agencies all working to protect, enrich and restore the world around us. RIEEA is over thirty years old, but recently we significantly expanded the scope and impact of our work with the development of the Rhode Island Environmental Literacy Plan (ELP) and an initiative to create a Children in Nature Coalition.

Apeiron Institute for Sustainable Living [www.apeiron.org](http://www.apeiron.org)  
Audubon Society of Rhode Island [www.asri.org](http://www.asri.org)  
Friends of Ballard Park [www.ballardpark.org](http://www.ballardpark.org)  
Girl Scouts of Rhode Island, Inc. [www.gsri.org](http://www.gsri.org)  
The Greene School [www.thegreenschool.org](http://www.thegreenschool.org)  
Norman Bird Sanctuary [www.normanbirdsantuary.org](http://www.normanbirdsantuary.org)  
Ocean State Environmental Education Collaborative  
Providence Children's Museum [www.childrenmuseum.org](http://www.childrenmuseum.org)  
R.I. Department of Environmental Management [www.dem.ri.gov](http://www.dem.ri.gov)  
R.I. Envirothon, Inc. [www.rienvirothon.org](http://www.rienvirothon.org)  
Rhode Island Families in Nature [www.rifamiliesinnature.org](http://www.rifamiliesinnature.org)  
R.I. Geography Education Alliance [www.ric.edu/rigea/home](http://www.ric.edu/rigea/home)  
Rhode Island Resource Recovery Corporation [www.rirc.org](http://www.rirc.org)  
Roger Williams Park Zoo [www.rogerwilliamsarkzoo.org](http://www.rogerwilliamsarkzoo.org)  
Rose Island Lighthouse Foundation [www.roseisland.org](http://www.roseisland.org)  
Save The Bay [www.savebay.org](http://www.savebay.org)  
URI Office of Marine Programs [www.omp.gso.uri.edu/ompweb](http://www.omp.gso.uri.edu/ompweb)  
Wood-Pawcatuck Watershed Association [www.wpwa.org](http://www.wpwa.org)



A Central Falls student writes in his Journal at the Norman Bird Sanctuary. Check out their video on [YouTube](https://www.youtube.com)! Photo: Kim Botelho.

Island school children are able to access the Zoo's educational resources, the Zoo provides fieldtrip grants to Title I schools through a program called Trixie's Fund.

The Zoo also provides teachers with additional resources like professional development opportunities and an Educator e-newsletter that addresses current classroom challenges and best practices. In 2009 we hosted our first Summer Field Institute for middle school teachers. Ten teachers spent a week working on local wildlife conservation projects with our Zoo experts. The teachers then translated their experience into real-life lesson plans for the classroom. Every fall, the Zoo holds its Teacher Appreciation Day, an opportunity for teachers to visit the Zoo free of charge and experience all of the Zoo's classroom educational resources first-hand. In addition to our school programs, Roger Williams Park Zoo offers camps, overnight experiences, scout programs, citizen science programs, volunteer opportunities, and internships.

**Save The Bay:** (Bridgit Kubis, [education@savebay.org](mailto:education@savebay.org)). Save The Bay has been working with districts across the region to create an integrated field experience for students and teachers that is easily incorporated into classroom curriculum. Save The Bay has created a Narragansett Bay field studies program with Central Falls High School. This program has been offered as an elective environmental science class. The overall theme is "How healthy is your urban ecosystem?" Students are split into 5 environmental health indicator groups that monitor water quality, bird diversity, human impacts, and macroinvertebrates. Students visit the site with Save The Bay educators 15 times during the school year where they collect data and then bring it back into the classroom to be analyzed and organized. Students end the year with an "Ecosystem Summit" where they culminate all of their experiences and based on their experiences decipher the health of the system.

**Smithfield School Department:** (Christine DePetrillo, [cdepetrillo@smithfield-ps.org](mailto:cdepetrillo@smithfield-ps.org)). Creating environmentally educated citizens is an important goal in Smithfield Schools. In order to stimulate interest and awareness in the environment, Smithfield Schools takes an interdisciplinary approach to environmental education. Each school, from elementary through high school, makes a conscious effort to incorporate environmental issues into other subject areas. Some schools also have sites dedicated to outdoor exploration. For example, Old County Road School, a K-5 elementary school in Smithfield, has an outdoor classroom and nature trail built by students and used to offer opportunities to discover and interact with wildlife. Our partnerships with organizations such as Roots & Shoots and the Audubon Society of Rhode Island deepen our commitment to environmental education.

**Wood-Pawcatuck Watershed Association (WPWA):** (Denise Poyer, Program Director, [denisep@wpwa.org](mailto:denisep@wpwa.org)). WPWA teaches students about watersheds in general and the Wood-Pawcatuck Watershed specifically. WPWA has a number of interactive classroom programs

which we bring to the school or guided field trips that bring the classroom to the outdoors. Perhaps the most unique and interesting program we offer is a guided Wood River Exploration where we take students in small single-person kayaks on a paddle trip from the WPWA campus. It is one thing to discuss insect life cycles in the classroom. It is another thing to find the shed of a nymph on a reed as you watch a mature dragonfly lay eggs in the river while you paddle by. Every other year WPWA joins with the Narrow River Preservation Association to offer a 3-credit Watershed Science for Educators course. This graduate level course uses the Active Watershed Education (AWESome!) curriculum to help educators fit lessons about watersheds into their classrooms.

*~Denise Poyer is the program director for the Wood-Pawcatuck Watershed Association.*

## **Rhode Island's Environmental Literacy Plan**

Rhode Island is among the first states in the nation to release an approved Environmental Literacy Plan (ELP), opening doors for potential federal funding that will help equip teachers with the skills, knowledge, and confidence needed to integrate critical environmental and science learning into their curricula. The goal of the ELP is to formally integrate environmental education into Rhode Island's classrooms in an effort to prepare today's students to be tomorrow's environmentally literate citizens, leaders, and policy makers. The ELP is also expected to improve performance of other state education initiatives as well, through implementation of hands-on experiential learning that crosses the curriculum.

Rhode Island's ELP has been designed to help to increase the effectiveness of the state's other existing educational goals and initiatives, as well. This includes attainment of Rhode Island's priorities outlined in the 2010-2015 strategic plan "Transforming Education in Rhode Island" through alignment with environmental literacy standards and through the use of environmental literacy skills and content to reach proficiency in standards; academic interest and achievement in the fields of science, technology, engineering and math through the study of real-world environmental issues; student's ability to perform on state and local assessments through applied learning experiences; and the overall health of students, both physically and mentally, through increased time outdoors.

The ELP was drafted by RIEEA in partnership with the Rhode Island Department of Education. Funding for this project was provided through a grant from the Rhode Island Foundation.