



## **GREENING OUR BLUEBELT** *Empowering our students to create a better tomorrow*

**By Mary Lee, Science Teacher, St. Clare's School, Staten Island**

It was the end of the school year and the children were still excited about learning! In fact, I have never seen my students so passionate about creating and showing projects to judges. But these were no ordinary projects and this was no ordinary science fair. And in the end, I also learned this was no ordinary program, thanks to the extra special group of children and mentors involved.

Fifty of my seventh and eighth graders had worked a whole year after school and on weekends at one of our Adopt-A-Bluebelt sites as part of our newest science enrichment venture at St. Clare's School in Staten Island where I teach. Thanks to the support of the Staten Island Bluebelt Unit from the New York City Department of Environmental Protection (DEP) and startup funding from the Timberland Company, the St. Clare's Advanced Environmental Team was born and my students were actively collecting data in the field and analyzing it in the classroom. This included soil and water tests as well as animal and plant surveys and contour mapping, plus frequent and laborious cleanups and plantings at this outsized and diverse stretch of land in the Dongan Hills area of Staten Island.

In the second half of the year, the students were challenged to play the role of environmental engineers. Working in teams, they were to apply the information learned to create models of different sections of this Bluebelt system using effective Best Management Practices. This ranged from using weir walls to retention basins to stone-based culverts, diverters and natural vegetation on a site recently acquired by DEP.

The students' designs were to ensure a healthy wetland ecosystem that would serve as a natural filtration system for water runoff as it finds its way into the ocean from inland storm sewers and collection basins. Proper water drainage that would prevent flooding of nearby residences, the use of native vegetation, and aesthetic and recreational concerns were also factored in.

To help set the stage for this engineering showcase I called "Greening Our Bluebelt," the students did some additional research on the DEP website to learn designing tips. We toured the now closed Fresh Kills Landfill with the Urban Park Rangers to learn about the ecological restoration techniques being used there to create a world class park. We even enjoyed a trip on a big fishing boat and caught fluke in the waters near Ocean Breeze and Midland Beach where this bluebelt system drains to realize the full impact of all their cleanups.



After working on their Bluebelt models for months in the classroom and at home, the students were finally ready. They used clay to contour the land and design their water systems. They added some natural and imitation plants and animals to the sites as well as a variety of other extra components. Each team was given a specific plot within the site and, when all was done, the plots could be connected to show the entire run from start to finish. Each team also had a research report and an informative poster.

With representatives from DEP (Jack Crawford, Jim Rossi, Joseph Scarlotta, Mike Mormile and Mary Jane Walczynszyn of the S.I. Bluebelt Unit, and Min Kan, an environmental educator), the Staten Island Museum (Ed Johnson and Lenore Miller) and even Timberland (Jeff Fuchs) serving as judges, the students showed ownership over their plots and enthusiastically presented their ideas. The vegetation and plans varied according to where their sites were situated and how the teams thought the community could best be served.

Some teams included fishing and canoeing areas, parks, and special areas for nature study. One team superimposed an enlarged aerial photograph of the site with on a map of the streets and houses nearby to show its exact location. Another team researched what type of piping could be used within the system using Popular Mechanics magazine for reference, while other teams considered solar-powered generators for area lighting or even aeration pumps or waterfalls for aquatic animals. One group went so far as to project income for activities at their site based on similar projects and recommended using profits

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## EEAC NEWS.....

### Steering Committee Meetings

EEAC Steering Committee members meet on the third Wednesday of every month (except August). Upcoming EEAC Steering Committee meetings are September 17, October 15 and November 19.

Steering Committee meetings are usually held at New York University, Pless Building, 32 Washington Square Park East and Washington Place in the 5th floor Conference Room. Steering Committee meetings are open to anyone interested in learning about environmental education in New York City and sharing information about special programs and projects.

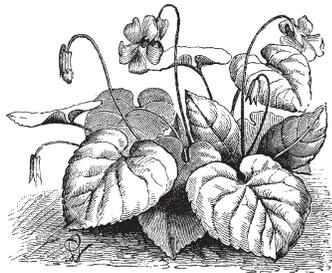
Meetings are also occasionally held at New York City sites associated with our members. Please be sure to contact an EEAC Steering Committee member or visit the EEAC website at [www.eeac-nyc.org](http://www.eeac-nyc.org) to confirm meeting location and schedule.

### Newsletter Deadlines

If you would like to submit an article for the newsletter, please email it as a Microsoft Word attachment to [lmiller296@aol.com](mailto:lmiller296@aol.com). The newsletter deadlines are the first Monday in April, July, October and January. We would love your ideas!

### Newsletter Committee & Contributors

Meg Domroese  
Kim Estes-Fradis  
Michelle Fufaro  
Joy Garland  
Jane Jackson  
John Lancos  
Regina McCarthy  
Lenore Miller, Newsletter Editor  
Betsy Ukeritis  
Jill Weiss



The Environmental Education Advisory Council (EEAC) would like to acknowledge the support of the New York City Department of Environmental Protection (DEP) for helping to produce the EEAC newsletter. Visit the DEP website at [www.nyc.gov/dep](http://www.nyc.gov/dep), email [educationoffice@dep.nyc.gov](mailto:educationoffice@dep.nyc.gov) or call (718) 595-3506 for information about DEP's education resources for students and teachers.

## ENVIRONMENTAL EDUCATION ADVISORY COUNCIL

c/o Teresa Ippolito  
Environmental Education Coordinator  
U.S. Environmental Protection Agency, Region 2  
290 Broadway, 28<sup>th</sup> Floor  
New York, NY 10007-1866  
[www.eeac-nyc.org](http://www.eeac-nyc.org)

This newsletter is a publication of the Environmental Education Advisory Council (EEAC), a voluntary organization of educators, classroom teachers, administrators and other professionals in active support of quality environmental education.

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Barry Weinbrom, Vice-Chair for Programs  
Terry Ippolito, Membership Secretary  
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\*Affiliations for identification purposes only.

### GET CONNECTED!

If you are a member of EEAC and want to be part of information sharing and on-line discussion on the EEAC listserv, contact:

[cfranken@nyc.rr.com](mailto:cfranken@nyc.rr.com)

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## Message from the Chair-Jill Weiss

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**Where has all the Nature Study gone?** I have participated in several conversations related to this question over the past few years. It has left me with some mixed thoughts. It is true that “Nature Study” was grade school course work here in NYC for many years (in some schools you can still see these words stenciled over a door or two), and it was also shared in households through scouting, summer camp, pet care, camping and fishing; one person passing knowledge, curiosity and patience on to another. Many of us gravitated to EE because of these experiences; escapes to a woodlot for that alone-time with a mossy log fostered the necessary gifts for this work.

Nature Study, though “generalist” in character, is a craft. It is a very specific discipline that takes years to hone and develop. I submit, the number of naturalists, especially local specialists, is diminishing in our ranks, and are not easily replaced. More than one quarter of the U.S. population will be retiring in the coming years. Could this include the majority of naturalists in NYC?

**Has a generational gap developed?** A case for this could be found with the non-majors I teach, ages 18-20, from NYC and beyond. They lack curiosity and patience perhaps as a result of two distinct forces: First, email, texting, music and movies are immediate. Thanks to the web one does not need to leave home or even a chair to gain a wealth of information on “nature” or any topic they choose. This is terribly problematic not only for Nature Study, but for thinking in general.

Second, due to changing trends in safety and parenting, this generation and those younger most likely have not had unsupervised play in nature. This large segment of our population turns to technology for alone-time and escape and is not familiar with, and therefore not curious about, nature.

**Are there exceptions?** Another group of students in an EE graduate course became annoyed with the opening discussion about “defining environmental education”. They said it was unnecessary; a waste of time. After all, wasn’t it all the same? Perhaps you agree, but as the course progressed, focus and practice were not all the same. Loyalties were clear; Some became self-described as humane-educators, others revealed themselves as environmental/health justice activists, science teachers, or program facilitators. Some stated their discipline was inclusive of Nature Study, while others claimed it was unrelated. There were only two students who were considering only naturalist activities, such as “taking kids on nature walks”. (Was that so wrong?!)

Further discussion revealed strong opinions about setting priorities. Pressures of overpopulation, poverty, unsustainable resource use and global climate change took center stage. Our naturalists felt devalued, less relevant. The group did not rejoice at what seemed to be a splintering of EE and a marked shift away from Nature Study – but there was no move to change positions. For this group it was not a lack of curiosity or patience for Nature Study, but interests in other facets of our growing field and concern over global crises.

**Will Nature Study lose out to “issues”?** I am not sure it is a case of losing or choosing. It is important to note that first, NYC boasts a diversity of EE organizations (and individuals!), many highly urban and specialized outside of Nature Study. Second, the organizations associated with nature, specifically, are often small, yet shoulder other important responsibilities. They provide field trips and teacher training linked to standardized school curriculum (a variety of science topics plus other subjects). They also serve the public with essential community information and provide programming that addresses contemporary environmental studies ideas such as the intersection of environment, economy and the social needs of people. Lastly, many must provide entertainment/popular programming and fundraisers to increase membership and operating budgets and reach out to populations that may not come in for the services listed previously.

The good news is that Nature Study is still out there and simply the best tool for teaching sensitivity, curiosity, patience and critical thinking. People are talking about it, and this is further facilitated by organizations such as the Nature Network. It is still a perfect discipline for young students as developmentally, they are seeking to make sense of where they fit in the world, and how things work around them. Likewise, it is useful to teens and adults as it reconnects their lives to the systems that support them, requires observation and promotes critical thinking. Several organizations, such as the Alley Pond Environmental Center in Queens and the Blue Heron Park Nature Center in Staten Island, do a terrific job in this vein. Even larger institutions such as the American Museum of Natural History, with its Discovery Room, put real nature artifacts in the hands of children and adults and feature microscopy and things that wiggle.

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## Make Earth Day Everyday

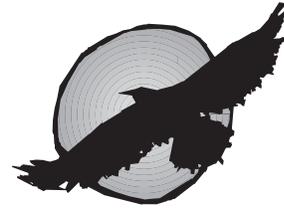
By Michelle Fufaro

At some point in recent history, our society has become simply obsessed with the concept of “antibacterial”. We suddenly discovered that germs are everywhere around us and we decided to declare war against them. Well, as with most things of that nature, practicing a total germ-free lifestyle does have a negative impact on our natural environment.

Take Triclosan, for example. Triclosan, also known as Microban or Igrasan, is an antibacterial ingredient found in many household products such as soaps, cleaners, and a variety of cosmetics and toiletries, and is also a component of some toys and clothing. Because of the nature of most of the products in which it is found, 95% of Triclosan is washed down the drain and then sent off to wastewater treatment plants, finding its way to local waterways.

Studies have shown that the Triclosan present in aquatic ecosystems is highly damaging to algae growth and can result in disruptions to the ecosystem. It has also been found to alter the development of tadpoles and frogs in freshwater systems. Several health studies have shown that Triclosan can be transformed into potentially toxic compounds, including dioxins and other harmful compounds. Dioxins are chemicals linked to infertility, birth defects, and cancer.

Most regular soaps are just as effective as antibacterial soaps in killing harmful germs. For example, soaps made with Australian tea tree oil or grape seed extract both contain natural, safe antibacterial agents. Hand sanitizers and soaps that are alcohol-based are also a more eco-friendly choice. Make sure to read the label when purchasing household products and avoid those containing Triclosan. It is better for our health and our environment. For a list of some products containing Triclosan, go to <http://hpd.nlm.nih.gov/> and click on Ingredients.



## Bookbuzz

Regina McCarthy

### PALE MALE REDUX

New York’s famous Red-tailed Hawk, Pale Male, has produced not only a progeny of hawks in our city but now the inevitable children’s books have followed. *Pale Male: Citizen Hawk of New York City* is written by Janet Schulman. The book is beautifully illustrated by Meilo So. Although I had been personally involved with NYC Audubon in 2004 when the nest was taken down, I learned something new from this book: the nest had actually been removed and returned during its early days of existence. So obviously, the building’s occupants really had it in for them from the start. What concerned me in this book was that the author named George W. Bush, our currently sitting President, as the cause of the change in the Migratory Bird Treaty in 2003, which the occupants then used as justification to take down the nest in 2004. Now I’m no lover of this current administration, but naming him like this in a children’s book could be a bag of worms some might not want to open. So discretion is advised. I think the ensuing protest that is discussed in the book is important and many of the photographs include children. Children need to know they can be part of change. I wish the text had been more specific about the children in the building who were involved in getting the nest back up. I would recommend this book for an older elementary school audience.

There are another two books a bit safer for use in public schools. *City Hawk: The Story of Pale Male*, written and illustrated by Meghan McCarthy, is for ages 4 to 10. The author avoids the political issues about the building, which is safe on one level, but thereby misses an important point. She does give extensive background on both Central Park and the entire history of Pale Male in detail in the back of the book. Educators and higher level readers can find out more this way. She also provides extensive resources for further information. The best part about this book is that the proceeds go to NYC Audubon, which is a great cause.

My favorite of all three is *The Tale of Pale Male: A True Story* by Jeanette Winter. The author gives us background on Red-tailed Hawks and then develops the story of the famous NYC Hawk including the nest destruction and protest. Her illustrations are wonderful and there is simple text. An Author’s Note follows at the end of the book with more detail. Like Schulman’s book, I wish she had focused on the children in the building who really pressured their parents to “bring back the nest”. Children need to know their voices count. I would recommend this book for ages 5 through 12.

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## Paper vs. Electronic: Making Choices and Taking Action

### Betsy Ukeritis

For the past year, EEAC has been talking about taking a step to make the newsletter more environmentally friendly by changing over from a paper newsletter to an electronic one. I have asked everyone to email me their preference – electronic or paper – for the last three or four issues and the responses have been slow, so I want to make sure everyone understands what will happen for the Fall/Winter 2008 issue of the EEAC newsletter.

First, the Newsletter Committee has been working hard to improve this membership benefit. The “Earth Day Every Day” tips section, the activity, the resources, book reviews, and environmental education news sections all work to provide our membership with useful tools they can use in their work. If you have suggestions for resources, activities, or even “Earth Day Every Day” tips, feel free to email them to [newsletter@eeac-nyc.org](mailto:newsletter@eeac-nyc.org) with specific information (like URLs and links).

Second, the switch from a paper to an electronic newsletter will happen for the Fall/Winter 2008 issue, so this is the final paper issue being mailed out to all EEAC members.

**What does this mean?** If you want a paper copy of the EEAC newsletter, please email me at [baukerit@gw.dec.state.ny.us](mailto:baukerit@gw.dec.state.ny.us) because we do not want to prevent you from receiving the newsletter and we know there are people out there who prefer reading a printed newsletter.

If you want the electronic version – a PDF document, complete with bookmarks to more easily jump to specific stories and sections – please email me at [baukerit@gw.dec.state.ny.us](mailto:baukerit@gw.dec.state.ny.us) with the email address where you would like to receive the electronic newsletter. I will try to make the PDF as small a file as possible and you can always email me or call me at 718-482-6404 if you have any trouble with the document.

**Why the switch?** Yes, we are taking steps to be more environmentally-friendly by moving the newsletter to an electronic format. But that is not the only reason. A large portion of our budget is spent on creating and mailing out the newsletter. EEAC would like to put on programs and presentations such as the panel we offered back in March (Cool It NYC at the Horticultural Society). By not spending as much mailing out the newsletter, we can turn around and use that money to provide our membership – you – with more informative programs on topics that interest you. (Feel free to suggest a topic or a guest speaker you would like to hear at [info@eeac-nyc.org](mailto:info@eeac-nyc.org)! We are in the midst of planning the annual meeting and could use your input on that, too.)

So, as we take action and move from paper to electronic newsletter, please do not feel you will not be receiving EEAC news anymore. We do not want to lose any of you. Please email me with your preference and we will make every effort to make sure you do not miss a single issue.

Thanks! And have a great summer! - Betsy

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## Environmental Education Resources

### John Lancos

The New York State Outdoor Education Association (NYSOEA) annual conference, “Thinking Like a Mountain,” will be held from October 23-26 at the Hilton Lake Placid Resort, and will have (as always) great workshop sessions, keynote and guest speakers, entertainers, and other fun, educational, and networking activities. This year’s strands include Sustainable Living, Outdoor Recreation, Diversity, Classroom Outdoor Education, and Leave No Child Indoors. Learn more about the conference at [www.nysoea.org/conference/htm](http://www.nysoea.org/conference/htm).

Speaking of “no child left indoors”, you can visit the official website of the book, “No Student Left Indoors: Creating a Field Guide to Your Schoolyard,” at [www.nostudentleftindoors.com](http://www.nostudentleftindoors.com). The site has a number of great resources for classroom teachers and others involved in EE, including a new 30-page free downloadable book, “Take a Cloud Walk,” written for children and covering all the how’s and why’s of clouds and their identification. The site also offers free nature journal pages.

Another resource for teachers is Landscape America, a partnership between NatureServe and the National Geographic Society. This program brings together maps, GIS (Geographic Information Systems), research data, and other resources about the special places where we live, both wild and just “around the corner.” It also covers current issues related to preserving outdoor spaces and ways to get involved to protect them. For further information, visit [www.landscape.org](http://www.landscape.org).

# LESSON PLAN

## WATER CONSERVATION LIMBO

Adapted by NY Project WET

### Summary

With the use of a limbo stick, students simulate how easy it is to conserve water.

### Objectives

Students will:

- identify various ways to conserve water on a daily basis
- record plausible water conservation practices
- verbally share conservation ideas with group
- physically demonstrate the impact of a group of people saving water

### Materials

- limbo stick
- paper for each group of students
- clipboard for each group
- pen to write for each group

### Main Idea

This activity is designed to simulate and stimulate actual ways students can save water. The overall premise is any one person can save water and make a difference, but when joined with many people conserving water, the impact is much greater. Included in this idea is the fact that many ways to save water are very easy to accomplish every day, e.g., turn water off when brushing teeth.

### Activity

1. Divide students into five groups.
2. Have each group choose a scribe.
3. Have each group choose a moderator - this person makes sure each idea is written down and listened to by the group.
4. Have each group choose a speaker - this person will call out the best ideas of the group when called on by facilitator.
5. Pass out materials to each group.
6. Each group now brainstorms and records on their paper as many ways as they possibly can to conserve water.  
It is important to stress that these ideas should be ones that they themselves can actually do at home and/or in school.
7. After a few minutes, have all groups stop their recording. Call on each scribe to read their first best idea – only one – until each group has given one idea. Instruct all students to listen well since they should not repeat ideas already stated.
8. Explain that the limbo bar represents the amount of clean water available for use. As each scribe reads aloud one idea, raise the limbo bar off the ground. As each group reads their ideas, the bar gets raised. This signifies the importance of many different ways to save water. And that, yes, one person can conserve water and make a difference, but many people saving water will have a much larger impact.
9. Once the limbo bar is very high off of the ground, instruct students to form a line and all walk under the limbo bar in a great big procession.
10. Have students form circle again for wrap up discussion.

### Wrap up

Discuss with students what just happened. As they saw with each plausible idea, the limbo bar, the amount of clean water, was raised. Ask: “What does this represent?” “Which of these ideas we have heard today do you already practice? Which ones can you add to your daily life and really continue to practice?”

Thank students and remind them to practice conserving water.

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## Greening Our Bluebelt *Continued from page 1*



students' ideas, winners had to be selected. But the real prize was that so many experts in the field supported the program from start to finish and then came to listen to the students and provide immediate feedback on their ideas.

"I remember when I was in school. I had no idea what I wanted to be until a teacher gave me an assignment to design an area and told me I had talent in landscape design. She actually inspired me to become what I am now," said Dean Cavallaro, a landscape architect and engineer with the DEP who helped with student plantings at this site. "You have no idea how a program like this will affect these children in the future. They are our leaders of tomorrow and we need to provide them with opportunities that foster stewardship and environmental awareness and allow them to recognize and develop their talents to that end."

Certainly, all the outside groups and even the parents, teachers, and school administration who supported these students are to thank. There is no doubt each student walked away from this program feeling a sense of accomplishment. But it is also my hope they will carry what they learned with them the rest of their lives and it will empower them to have a positive impact on the lives of others and the world around them.

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## Message from the Chair *Continued from page 3*

### So when we say:

#### Where has all the Nature Study gone?

1. We need to recognize there are important disciplines emerging in our field that will not replace Nature Study, but may help preserve us, and the nature we seek to study.
2. Bridge the generational gaps. Let's be fair and encouraging to our fellow environmental educators. Let's respect their specializations and be generous with sharing our skills and local knowledge by creating professional opportunities to share the craft of Nature Study, especially within the boundaries of NYC.
3. Let's take a closer look at the motivation for removing Nature Study from the standard classroom. Yes, the United States is falling behind in Math, Science and Technology in the marketplace, but when were naturalist tools like curiosity, patience and critical thinking made separate? Let's hold our decision makers accountable for such gaffs, and let's talk about it loud and often.
4. Let's be fair to our classroom teachers. In many cases only half of their time is devoted to actual teaching and much of that has been predetermined by a third party. How can we make Nature Study an option that does not put them at odds with what their job requires?
5. Last, let's support organizations that feature Nature Study, and work hard to get the next generation outdoors. Let's brush up on our own skills, stay curious and keep asking better questions. I think it serves our profession to continue the process of self-examination, definition and assessment.



# MEMBERSHIP APPLICATION

New Member       Renewal

Name: \_\_\_\_\_

Address: \_\_\_\_\_  
\_\_\_\_\_

Apt. \_\_\_\_\_ Zip Code \_\_\_\_\_-\_\_\_\_\_-\_\_\_\_\_

If Sustaining Organization, Name of Contact Person  
\_\_\_\_\_

Business Phone (      ) \_\_\_\_\_

Home Phone (      ) \_\_\_\_\_

Affiliation (for categories other than Sustaining Organization): \_\_\_\_\_

Title/Position: \_\_\_\_\_

Address (for categories other than Sustaining Organization):  
\_\_\_\_\_

E-mail address: \_\_\_\_\_

Mail completed form and check to:

Jay Holmes, Treasurer, EEAC, American Museum of Natural History, 79<sup>th</sup> Street and Central Park West, New York, N.Y. 10024

Date: \_\_\_\_\_

Please check the appropriate calendar year membership category:

- \$ 20 Regular       \$ 50 Sustaining Organization
- \$200 Individual Life Membership

Please make checks payable to EEAC.

Thank you!

EEAC is a 501-(c)3 organization.

I would like to become involved in a committee.

Please provide me with information about the following committees:

- Communications     Programs     Membership
- TEEP (Teacher Environmental Education Preparation)



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c/o Teresa Ippolito  
Environmental Education Coordinator  
U.S. Environmental Protection Agency, Region 2  
290 Broadway, 26<sup>th</sup> Floor  
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