



## MISSION POSSIBLE??

*By John Pritchard*



The classroom is a great place to explore ideas about sustainability in theory, but putting those ideas into practice requires a major effort, efficient organization and funding. Here's a case in point:

Your assignment—to design and build the largest outdoor recreation facility in the country. It must be able to handle 60,000 people in a ten day period each summer. It can be anywhere in the US, it must be 'green' and it must be completed within three years. Your budget—\$100 million.

This project did happen for a group of dreamers given the daunting task of designing the new site of the National Boy Scout Jamboree. I had the opportunity to be on staff and experience this extraordinary accomplishment.

The location search started in 2007 and eighty locations were proposed and vetted. The basic guidelines required 5,000 acres of beautiful scenery and wilderness areas, near transportation and have the commitment of the local population. By 2009, the 10,600 acre Garden Ground Mountain in southern West Virginia bordering New River Gorge National River was chosen. The Summit-Bechtel Reserve (SBR) was about to be born.

SBR is a world class high adventure base. The largest outfitters in the recreation world were asked to design the facility...and design they did. It was developed as the longest, fastest, highest, most adventurous facilities of their kind. Activities include technical rock climbing, shooting sports, canopy tours, mountain biking, skate park, zip lines, and aquatics to name a few.

Many aspects of SBR are exciting, but as an environmental educator, I was most interested in the environmental aspects of the project. Similar to the mission of the EEAC, this facility is a statement of Scouting's long-term commitment to sustainability. The evidence is reflected throughout the facility and its intent is that scouts not only experience sustainability practices but to make a commitment to those practices when they return home.

The Jamboree site is on 900 acres but was required to make a carbon footprint far less than that. A conservation easement protects an additional 1,600 acres. Old mine shafts were sealed for safety but still allow the large bat population to thrive. The site is small enough that everyone traveled by foot. To further reduce air pollution on site, visitors' cars were parked twelve miles away and buses were used to transport visitors to the site.

*Continued on page 7*

## EEAC NEWS.....

### Steering Committee Meetings

Please visit the EEAC website at [www.eeac-nyc.org](http://www.eeac-nyc.org) for meeting locations or contact an EEAC Steering Committee member. All 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.

### 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 February, June and October. We would love your ideas!

### Newsletter Committee & Contributors

Kim Estes-Fradis  
Joy Garland  
Jane Jackson  
Regina McCarthy  
Lenore Miller, Newsletter Editor

### EEAC EcoHouse program

On December 11, 2013 at 5pm, EEAC will host a Members Only program featuring The Community Environmental Center EcoHouse. EcoHouse is a mobile sustainability exhibit and environmental education center. Learn about the financial and health benefits of becoming more sustainable in the home, from water conservation to energy efficiency and weatherization. Join EEAC at Renaissance Leadership Academy in Harlem. Contact Katie Gloede at [KGloede@CECenter.org](mailto:KGloede@CECenter.org) for information.



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

Judith Hutton  
The New York Botanical Garden  
Teacher Training  
2900 Southern Boulevard  
Bronx, 10458  
[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.

### EEAC Officers

Judith Hutton, Chairperson  
E. Shig Matsukawa, Secretary  
John Pritchard, Treasurer

### Steering Committee \*

Lynn Cole, Queens Borough Public Library  
Gail David, Elementary School Science Association  
Kim Estes-Fradis, NYC Dept. of Environmental Protection  
Joy Garland, Stuyvesant Cove Park Association, Inc.  
Katie Gloede, Community Environmental Center  
Judith Hutton, New York Botanical Garden  
Terry Ippolito, U.S. Environmental Protection Agency  
Pamela Ito, The Horticultural Society of New York  
Mary Leou, New York University  
E. Shig Matsukawa, Food Waste Recycler  
Jacqueline Pilati, City Parks Foundation  
John Pritchard, Grover Cleveland High School  
Betsy Ukeritis, NYS Dept. of Environmental Conservation  
Mike Zamm, GrowNYC

\* Affiliation for identification purposes only

### GET CONNECTED!

The EEAC listserv has migrated to a new home at [EEAC-NYC@googlegroups.com](mailto:EEAC-NYC@googlegroups.com). If you are a member of EEAC and would like to join the listserv contact Carol Franken at [carolfranken@gmail.com](mailto:carolfranken@gmail.com)

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## MESSAGE FROM THE CHAIR

EEAC will turn 40 in 2014! Please join our network and celebrate this milestone with an amazing membership base that represents like-minded, passionate educators across the fields of formal and informal education.

Take advantage of the many resources that EEAC provides. We continue to provide a high quality and informative newsletter three times each year. Please join us at our programs and meetings. It's a great way to stay connected with changes and trends in our sector as well as meet people, like you, who advocate for environmental education.

Our Annual meeting will kick off our 40<sup>th</sup> year with an informative panel discussion focusing on sustainability initiatives in New York City schools. Speakers include representatives from the New York City Department of Education, Grow to Learn and NYC Compost Project. The draft line-up of programs for the year includes a visit to the Community Environmental Center EcoHouse in December and tours with NYC H2O and GreenHome NYC later in the spring. Check the EEAC website for the most up to date information about programs and meetings.

Special thanks to our Steering Committee and volunteers; their continued participation supports the important work of EEAC. If you want to advance Environmental Education in New York City, join EEAC now or volunteer your time to support a committee.

I look forward to working with you in our programming, communications and networking efforts in 2014!

Judith Hutton

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### **NWF Eco-Schools in partnership with Gateway National Recreation Area and Jennifer Adams of Brooklyn College will be offering a PD on January 31st 2014, for High School teachers only:**

#### **Using the Common Core to Teach About Climate Change and Bird Migration: A PD Day at the Jamaica Bay Wildlife Refuge**

Last October, superstorm Sandy slammed into New York City, wreaking havoc on the City's coastal communities. The Jamaica Bay Wildlife Refuge – part of Gateway National Recreation Area - is one of the most significant bird sanctuaries in the Northeastern U.S., and an important route for migratory birds and endangered species like the piping plover. After Sandy, Jamaica Bay's beaches and dunes, and spawning and nesting habitats for shorebirds and other animals were badly damaged. How has Sandy impacted the refuge's bird populations? How will climate change affect animals and plants at the refuge in the future? How are scientists measuring climate impacts? What opportunities are available for teachers and students to investigate these issues in the field, and integrate them into the classroom? Join Hector Galbraith, staff scientist from the National Wildlife Federation, Professor Jennifer Adams from Brooklyn College, and Educational Specialist/National Park Service Ranger Dan Meharg at the Jamaica Bay Wildlife Refuge for a first-hand look at how climate change has impacted bird migration in New York City and beyond. Participants will enjoy nature observation from the expansive windows of the refuge's visitor center that overlook the bay's salt marshes, as well as outdoor bird-watching (weather permitting). Hands-on activities will help teachers introduce these topics to their students. Learn how and why STEM-focused field study is perfectly aligned to the Common Core and the NYC High School Science Scope & Sequence. Teachers will be encouraged to explore Gateway's "*Bird Migration and Climate Change Teacher Guide*" and return to the park with their students for further exploration. (Grades 9-12).

Emily A. Fano, NYC Outreach Manager, Eco-Schools USA, National Wildlife Federation, (646) 502-7096, FanoE@nwf.org

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

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

P.S. 83

7<sup>th</sup> Grade Math

## ~New York Botanical Garden - Predicting Tree Height~

### Estimate!

Predict the tree's height without measuring:

At this point, what method did you use to determine the height of the tree?

\_\_\_\_\_

\_\_\_\_\_

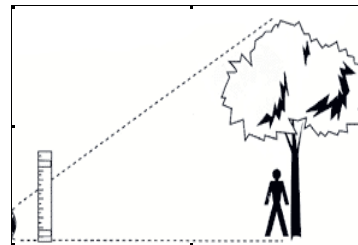
\_\_\_\_\_

\_\_\_\_\_

Your prediction:

feet

### Ratio Method

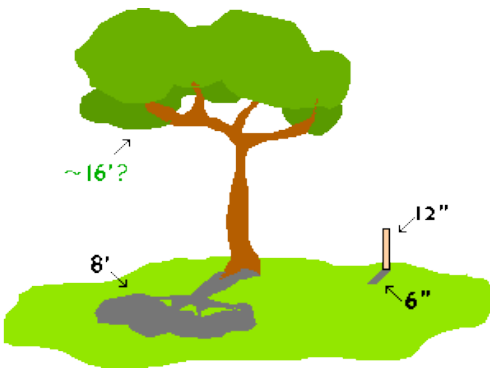


$$\frac{\text{Actual Kid Height}}{\text{Measured Kid Height}} = \frac{\text{Actual Tree Height}}{\text{Measured Tree Height}}$$

Your prediction:

feet

### Shadow Method



$$\frac{\text{Ruler's Height}}{\text{Ruler's Shadow}} = \frac{\text{Tree's Height}}{\text{Tree's Shadow}}$$

Your prediction:

feet

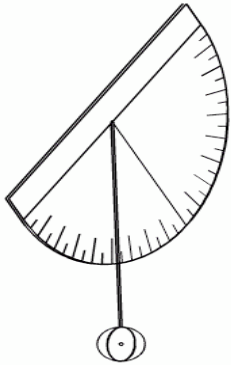
Name: \_\_\_\_\_

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

P.S. 83

7<sup>th</sup> Grade Math

### Clinometer Method



- 1.) Work with a partner.
- 2.) Look through straw until you can see the top of the tree.
- 3.) Have your partner adjust your distance so that the block hangs at a 45° angle.
- 4.) Measure the distance from your location to the tree.
- 5.) Record distance.

Your prediction:

feet

Question: How is the leg method related to the clinometer method? What geometric figure are you using to help you predict the tree's height? Which method is more accurate?

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### Leg Method

- 1.) Bend over and look through legs towards the top of the tree.
- 2.) Adjust your distance until you can see the top of the tree.
- 3.) Measure the distance from your location to the tree.
- 4.) Record distance.



Your prediction:

feet

What method(s) do you think is/are the most accurate?

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Which method would you use and why?

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The Environmental Education Advisory Council of New York City  
presents its

# ANNUAL MEETING

WEDNESDAY, NOVEMBER 13<sup>TH</sup> 2013



**Environmental Education Advisory  
Council of New York City**

**Pless Hall at NYU 82 Washington Square East NY, NY 5pm-7pm**



Please join us for a panel discussion on New York City school sustainability and composting initiatives.

**Keynote Speaker: Sharon Jaye, Director of Sustainability at the  
NYC Department of Education**

**Moderator: Julianne Schrader, GrowNYC**

Snacks and Wine will be available.

Register at <https://eeacannualmeeting.eventbrite.com>



Continued from page 1



This massive reclamation project started as three surface (strip) mines. It was later used as a commercial forest but recently closed and was about to put the remaining workers on unemployment. This gave SBR the opportunity to supply its own lumber and gravel. Hemlock was harvested for the 342 shower houses and black locust for the bridges, walkways and buildings. The wood was milled locally and nothing was wasted including scrap wood and sawdust. Over 260,000 tons of gravel were needed to improve the roads and surfaces and was quarried on site. Most of the other construction materials came from within 500 miles to cut fossil fuel emissions used in transportation.

Water for 60,000 people has to be properly managed. Eight million gallons of potable water was pumped from aquifers on site and stored in above ground storage tanks. All facilities have low-flow fixtures and automatic shutoffs. To help conserve water and to reduce the carbon footprint, shower water was ambient temperature (unheated except by the sun). This alone was expected to reduce typical consumer usage by two-thirds. Geothermal wells will eventually be installed for heating water and buildings. All buildings must use 30% less energy than conventional buildings. Buildings are of passive design making maximum use of sunlight for natural lighting and ventilation. (I spoke to the site water designer on the last day

and she told me that the actual usage was about 30% the projected usage). Gray water from showers and washing facilities was collected, filtered and reused as water for toilets. This black water was sent to an on-site wastewater treatment facility which returned it to the aquifers and the forest through drip irrigation. Storm water was carefully managed and allowed to soak back into the ground. Over 70 acres of SBR are dedicated to bio-filtration.

The Jamboree's projected waste stream was over 2,150,000 pounds of trash. To reduce this, food and paper were composted and 285 tons of compost was sold to local farmers. This was a carry in carry out event, so all trash had to be accounted for and removed by the users. Materials difficult to recycle such as glass and Styrofoam were not found on site.

One of the most unique structures on the Jamboree site is the Sustainability Treehouse. The \$6 million four story facility pumps and processes its own water and waste, is powered by solar cells and wind energy and has exhibit space and classrooms to exemplify sustainability in the world.

SBR IS a world class facility – both recreationally and sustainably. The BSA saw this as an opportunity to explore and demonstrate the principles of planned sustainability. It was not just talked about in a classroom, it was sustainability in action.

Reference: 2013 Jamboree Adventure Guide; Falcon Guides; Tim & Christine Connors, Editors

Reference: The Building of the Summit-Bechtel Reserve; Picaboo Yearbooks; Steven McGowan, Author

[http://en.wikipedia.org/wiki/The\\_Summit\\_Bechtels\\_Family\\_National\\_Scout\\_Reserve](http://en.wikipedia.org/wiki/The_Summit_Bechtels_Family_National_Scout_Reserve)



# MEMBERSHIP APPLICATION 2014

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:

John Pritchard, Treasurer, EEAC, 72-35 Metropolitan Avenue, Apt. 2C, Middle Village, NY 11379.

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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