



NEW YORK CITY'S FREE CONFERENCE
ON CAREERS IN NATURAL RESOURCES
AND THE ENVIRONMENT
FOR MIDDLE SCHOOLS

PRESENTED BY

NEW YORK ReLEAF, ENVIRONMENTAL EDUCATION ADVISORY COUNCIL AND
MAGNOLIA TREE EARTH CENTER OF BEDFORD-STUYVESANT, INC.

REGISTRATION FORM INCLUDED ON LAST PAGE



NEW YORK CITY'S FREE CONFERENCE
THURSDAY, OCTOBER 14, 2010
ON CAREERS IN NATURAL RESOURCES
8:30 A.M. UNTIL 2:00 P.M.
AND THE ENVIRONMENT
BROOKLYN BOTANIC GARDEN
FOR MIDDLE SCHOOLS

GUIDANCE COUNSELORS AND SCIENCE TEACHERS

A select group from your school can spend an exciting day at Brooklyn Botanic Garden and work directly with noted professionals, as the students learn more about career opportunities in a wide variety of natural resources and environmental fields.

Each student will be able to attend two different stations led by experts. Instead of sitting and listening to someone talk about jobs and careers, the students will participate in hands-on activities that will allow them to experience what it is like to be part of important environmental work.

The stations — 19 in all — and their leaders are described on the accompanying page. Please share this information with your students and assist them as they make their choices. Each student should make four different selections. We will make every effort to see that they are able to participate in two stations of their choice. Please do not register all your students for the same stations.

Each school is entitled to send up to ten students with one guidance counselor or science teacher. Space is limited, so please register early!

In addition to the professionals leading the activities, each station will be staffed by an experienced environmental educator.

A guidance counselor or teacher will be assigned to each station, guaranteeing that all students will have a certified professional with them at all times.

Selected high school students will share their respective learning experiences with students and adult leaders.

Printed information will be available for participants to take home.

Attendance at Green Horizons will give your students a special entry into the world of environmental sciences, land-use planning and care of natural resources.

Lunch and snacks will be provided.

Be sure to have the students wear comfortable outdoor clothes and sturdy shoes!

Green Horizons is co-convened by New York ReLeaf and the Environmental Education Advisory Council in partnership with the New York City Department of Education, New York City Department of Parks & Recreation and Brooklyn Botanic Garden.



The conference is facilitated by Magnolia Tree Earth Center as part of its Urban and Community Forestry Program.

For more information, call Nancy Wolf at (718) 834-4589.

Funding for Green Horizons has been supplied by Con Edison, with additional support from Bartlett Tree Expert Company.





STUDENTS

We hope you will join us on Thursday, October 14, at Brooklyn Botanic Garden to learn more about careers in nature and the environment. Whether you like the city or the country — or both — there are many fascinating jobs that will be available to you in the future. Learning about them can be fun! You don't have to choose a career now, but you can find out what it's all about by registering for Green Horizons, the New York City green careers conference for middle school students. Many others who learned about the environment and made career choices at just your age will be at Brooklyn Botanic Garden to work with you and to share their ideas and experiences.

The 19 stations planned for you are described below. **Most of the activities take place outdoors.** Read the information carefully and ask your guidance counselors, teachers and parents or guardians to help you make your **personal choices**.

We'll see you at Brooklyn Botanic Garden on October 14!

Lunch and snacks will be provided.

STATIONS

1) Exploring the Secrets of Healthy Forest Soil (Soil Science)

Daniella Zanin and Natalie Wesson, Green Apple Corps

What we call "dirt" is a whole world of minerals, nutrients and critters that a healthy forest soil depends on. You'll take samples of soil layers and conduct tests and experiments to learn what's in the samples and if it's the right stuff to make for a happy, healthy forest.

2) Finding Insects of the Forest (Entomology)

Dr. Vicente Sánchez, U.S.D.A. Forest Service and Sharene Vaughn, City Parks Foundation

Insects and plants, like trees in forests, have a long history together. You will catch different insects in the woods using a variety of collection methods. Then you will determine how these insects and plants depend on each other, while discussing what makes for a helpful or harmful insect.

You'll take home materials to show your friends.

3) Growing “Baby” Plants (Plant Propagation)

Joe Gobin, New York City Department of Parks & Recreation, Wayne Morris, ISA Certified Arborist and Cheryl Blaylock, Trees New York

Learn how to tend tiny seeds and cuttings carefully so they grow to become the beautiful plants we love to see.

Learn layering, grafting, rooting and other ways in which plants can begin their lives.

Under careful guidance, you will begin this process yourself and take home samples of your work.

4) Arbor Rx: CSI (Arboriculture)

Charles King and David McMaster, Bartlett Tree Expert Company and Sam Bishop, Trees New York

Learn how the aboveground and belowground parts of a tree function. Use the latest instruments to discover how and why trees get “sick” and die. Try the latest tools and techniques used to help trees fight off insects or diseases. Learn how you can help a tree.

5) Lifting “Impossible” Weights by Using the Laws of Physics (Arboriculture/Engineering)

Nancy Nieland, Ramon Santana and Maura Safran Leppo, Brooklyn Botanic Garden

Arborists and foresters use their knowledge of physics and their skill with ropes, pulleys and levers to lift heavy tree trunks and limbs.

With their help, you can learn to use these important tools and lift big logs that are many times heavier than you are!

6) Climbing and Pruning Trees (Arboriculture)

Chris Roddick, Travis Wolf and Anne Hunter, Brooklyn Botanic Garden

Climbing, swinging, jumping and walking on limbs with a rope and harness will be demonstrated. By watching experts who work as arborists, you’ll understand how and why to prune a tree. Practice using the on-rope climbing techniques while safely on the ground.

7) Creating a New Forest (Woodland Restoration)

Joshua Nakash, Natural Resources Group, New York City Department of Parks & Recreation and Saara Nafici, Brooklyn Botanic Garden

As the human population increases and cities expand, more green spaces are being lost. Wildlife depends on these green spaces for survival. Join a

Parks Department crew in creating and preserving urban forests and providing refuge for our wildlife.

Learn why certain plants are a problem and why native plants are so important.

8) Teaching about Environmental Science (Environmental Education)

Fred Gerber and Gennadyi Gurman, Queens Botanical Garden

Create a “mini-world” in a terrarium: take it home and watch it grow!

Learn and practice exciting ways to teach others about water, air and nature’s cycle.

9) Working with Weather (Meteorology)

Nancy Furbush and Michael Cox, National Weather Service and Barry Weinbrom, Environmental Education Advisory Council

Learn how the experts use sophisticated meteorological instruments to make accurate weather forecasts.

Take readings with a cloud meter, rain gauge and a weather balloon to report on current conditions and make your own weather predictions.

10) Compost More, Waste Less! (Composting and Urban Recycling)

Luke Halligan and Jennifer Blackwell, Brooklyn Botanic Garden

Join us at the Garden's Compost Demonstration site to see how to turn your food scraps and garden trimmings into rich, fertile compost. Help us add the right amount of "browns" and "greens" and water to make a new compost pile.

Check out the compost worms in action and harvest some vermicompost to take home to your plants.

11) Designing with Flowers (Floriculture)

Steve Perry, John Bowne H.S. and John Bowne Students

Choose colorful flowers for creating designs. With expert help, learn how to design and construct your own flower arrangement, which you can take home.

12) Help Plant a Million Trees! (Silviculture)

Gary Koplun and Greg Owens, New York City Department of Environmental Conservation and

David Moore, New York Restoration Project

Participate in the Million Trees campaign by learning how to plant a tree under the guidance of professional foresters.

You'll help dig the hole, place the tree correctly, replace the soil and add water. Then participate in a tree tour to learn the names of nearby trees and measure them with diameter tapes and Biltmore sticks.

13) Creating a Plan for the Land (Landscape Architecture)

Doug Elliott and Planners, New York City Department of Parks & Recreation

Learn how city planners are turning the closed Staten Island Landfill into Freshkills Park, which will add many acres of open green space.

Then become a designer! After examining their charts and maps, you'll be able to help them plan a small part of the site.

14) Bees and Butterflies (Beekeeping, Field Biology)

Uli Lorimer, Brooklyn Botanic Garden and Patricia Perone, Staten Island Greenbelt

The Botanic Garden's Great Pollinator Project is studying bees and butterflies. Plants in the Garden and elsewhere depend on them for successful growth as they flourish and create good habitat. Learn about these natural connections and help build bee nests (safely)

to support these important players in our ecosystem.

No live bees will be used.

15) Investigating the Air We Breathe (Atmospheric Science)

Teresa Ippolito, U.S. Environmental Protection Agency and Beth Nicholls, Staten Island Greenbelt

Learn what's in the air you're breathing. Use scientific instruments and methods to record and analyze air-quality measurements.

Discover how to recognize the effects of poor air quality in your own neighborhood and help improve it.

16) Examining a Body of Water (Fresh Water Ecology)

Calder Orr and Lakeisha Bradshaw, New York City Department of Environmental Protection and Maritza Cuevas, Staten Island Greenbelt

At the Garden's Japanese Pond, take your own water samples. Become a water scientist and examine different sources and treatment methods by testing for pH, iron, nitrogen, temperature and turbidity.

17) America's Least Wanted at Brooklyn Botanic Garden! (Entomology)

Marlene Bombara, U.S.D.A./APHIS and Claudia Toback, Environmental Education Advisory Council

Learn why the Asian Longhorned Beetle (ALB) is harmful to the environment and how to identify this tree-killing beetle.

Watch as the U.S.D.A. tree climbers go high into the trees and inspect them for the ALB and its damage. Be a detective and help us look for the ALB at Brooklyn Botanic Garden. We will supply the binoculars!

18) Energy from the Sun

Thomas Gately, Green Power Solutions

A new environmental and energy career is opening up, focusing on gaining usable energy directly from the sun's power.

Learn how solar panels work and build a solar-powered car!

19) Help Prepare the Herb Garden for Winter (Horticulture)

Caleb Leech and Sarah Scott, Brooklyn Botanic Garden

At the Herb Garden, the students will learn that a garden is a dynamic place even during the winter months.

We will be removing and composting the annual vegetable material, such as corn and tomatoes, and preparing the bed for planting a cover crop. This will entail turning in compost, careful shaping of the bed, broadcasting of the seed, and lightly mulching with straw. This process of cover cropping is vital to maintaining and building a healthy soil.

Far from being simply a medium in which plants grow, the soil is a living thing. There are a multitude of physiological processes that occur underground that enable the extraordinary feat of life. Proper stewardship of this resource is essential to a successful garden.



DIRECTIONS TO BROOKLYN BOTANIC GARDEN

The **Brooklyn Botanic Garden** is located at 1000 Washington Avenue.

By school bus or car: Travel to Brooklyn's Grand Army Plaza or approach via Washington Avenue. From Grand Army Plaza, take Eastern Parkway one long block east to Washington Avenue and turn right (south). Parking is available on nearby streets. Walk to the Garden's entrance at 1000 Washington Avenue.

By mass transit: Take the #2 or #3 train to Eastern Parkway/Brooklyn Museum. Exit to the intersection of Eastern Parkway and Washington Avenue. Turn right and walk south to the Garden's entrance at 1000 Washington Avenue. Or take the D or Q train to Prospect Park and exit at Flatbush Avenue and Empire Boulevard. Walk east on Empire Boulevard to Washington Avenue. Turn left and walk north to the Garden's entrance at 1000 Washington Avenue. Check current bus information for Washington Avenue and Flatbush Avenue buses at www.mta.info.

REGISTRATION FORM

Guidance counselors or science teachers: please complete this registration form. Make a copy of this form if you are sending more than six students (*up to a maximum of ten*). **Please print clearly.** Place in a stamped envelope and mail no later than October 8, 2010, to:

Nancy Wolf
Magnolia Tree Earth Center of Bedford-Stuyvesant, Inc.
677 Lafayette Avenue, Brooklyn, NY 11216
(718) 387-2116

You may also FAX the form to Nancy Wolf at (718) 387-6133.
Please make sure each student chooses four different stations.

GUIDANCE COUNSELOR OR SCIENCE TEACHER

Name	School name	E-mail
School address	City	ZIP
Telephone ()		
Station choices (<i>indicate by number</i>):	1st	2nd
	3rd	4th

STUDENTS

Name	Name
School name	School name
Station choices (<i>indicate number</i>)	Station choices (<i>indicate number</i>)
1st () 2nd () 3rd () 4th ()	1st () 2nd () 3rd () 4th ()

Name	Name
School name	School name
Station choices (<i>indicate number</i>)	Station choices (<i>indicate number</i>)
1st () 2nd () 3rd () 4th ()	1st () 2nd () 3rd () 4th ()

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