Green Horizons 2019

New York City's Free Conference on Careers in Natural Resources and the Environment for Middle Schools

Date: **October 17, 2019**

Time: **9am – 2pm** (Please arrive no later than 10am)

Location: **Snug Harbor Cultural Center and Botanical Garden**

Guidance Counselors and Science Teachers:

A select group from your school can spend an exciting day at Snug Harbor Cultural Center and Botanical 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.

Each school is entitled to send up to 15 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.

A career guidance booklet 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.

Snacks will be provided mid-morning. Please plan to bring your own lunches and celebrate the event with us!

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

Refer to the next section for Registration Instructions and Information.

Stations

Please share station information with your students and assist them as they make their choices. Each student should make 4 different selections. We will make every effort to see that they are able to participate in 2 stations of their choice. Please do not register all you students for the same stations.

The 20 stations planned for you are described below. All of the activities take place outdoors. Read the information carefully and ask your guidance counselors, teachers, parents, or guardians to help you make your personal choices.

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

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. **Snakes, Turtles and Frogs: Oh, My! (Herpetology)**

Learn all about what it takes to be a herpetologist. Meet some "herps" that make their home on Staten Island and see what you can do to help conserve their habitats.

3. **Growing "Baby" Plants (Plant Propagation)**

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)**

Learn how the above ground and below ground 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. **Healthy Habitats for Birds and Other Wildlife (Ornithology)**

Learn the basics of bird identification and conduct a survey of birds in the Garden. Observe birds through binoculars and note the surroundings that help them and other wildlife survive.

6. **Climbing and Pruning Trees (Arboriculture)**

Climbing, swinging, jumping and walking on limbs with a rope and harness will be demonstrated. By watching expert arborists you'll understand how, when and why to prune a tree. Try out climbing techniques and equipment while safely on the ground.

7. **Creating a New Forest (Natural Resource Restoration)**

Plant native seedlings with the naturalist from the Parks Department as they help to create and preserve and urban forest that will provide refuge for wildlife.

8. **Teaching about Environmental Science (Environmental Education)**

Terrariums and wetlands create exciting opportunities to explore our environment and keep our connections with plants and animals. Create your own “mini-world” in a terrarium. Learn how environmental educators connect science to the real world.

9. **Working with Weather (Meteorology)**

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)**

What is compost and why does it matter? Understand how composting can have a positive impact on your garden, your community and the world around us. Roll up your sleeves, learn how compost is made and what to do with it when it’s done.

11. **Designing with Flowers (Floriculture)**

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. **All About Trees (Urban Forestry)**

Learn how to start off a trees life by preparing the site and planting it correctly. Then participate in an electronic inventory to count and learn the names of nearby trees and measure them with diameter tapes and Biltmore sticks.

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

Explore how a piece of land, such as Brooklyn Bridge Park is designed. Learn to interpret a site and create your own planting design.

14. **Beekeeping and Healthy Ecosystems (Apiculture)**

SAFELY explore the daily worker of a beekeeper. Honeybees are among the world’s most important insects, working to pollinate one-third of the food we eat. They are threatened by climate change, loss of habitat and pesticide use. Learn the importance of beekeepers and how they work to help honeybees survive.

15. **Examining a Body of Water (Fresh and Salt Water Ecology)**

Explore Snug Harbor’s tidal pong and wetlands that contain both fresh and salt water. Collect samples in container of different sizes and analyze them for pH, temperature, turbidity and how much electricity the water conducts.

16. **Help Prepare the Garden for Winter and Plant for Next Spring (Horticulture)**

Autumn is the time to plan our garden for next year and think about changes and improvements. It's the time to clean up beds and plant the daffodils and other bulbs whose colorful flowers will herald spring. Learn how bulbs store food and how they grow. You'll be helping to make the Garden that much more beautiful!

17. **Urban Farming (Urban Agriculture)**

We can grow our own food, even in the city! Help Farmer Jon weed and take care of his vegetable rows. You'll harvest some of the ripe produce and take it home to your family.

18. **Building Green (Green Architecture)**

Engineer's design and change buildings to conserve them and decrease our energy use. Learn how Snug Harbor staff works underground to get hot and cold air to all the buildings and design your own heating system.

19. **A Solar Future with Con Edison (Electrical Engineering)**

Con Edison uses solar power created by customers to support the grid that delivers electricity to your homes and businesses. With Solar1, learn how a solar panel works while building circuits with panels and motors. Play the solar PV system design game and test your electricity knowledge with the watt matching game.

20. **Learning about Bats- SAFELY**

Would you like to learn how animals live? Biologist research their favorite species. Check out he tools that a bat biologist uses and learn how you can get involved.