

**Urban Advantage School Bookings
2010-2011
Registration: 718 886 3800 ext 230**

These programs inspire open-ended observation of the natural world, promote independent inquiry, and provide ideas for possible science projects. Note: Class size may not exceed 30 students. Please try to book as early as possible so that we can best accommodate you.

Guided Garden Tours

Join a QBG instructor as you examine plants and exhibits throughout the garden. Through your investigations you will examine everything from adaptations to plant populations. Seasonal displays, provide a showcase of environmental and cultural themes. Our permanent gardens include the Bee Garden (with working hives) and the Woodland, Herb, and Perennial Gardens. Teachers may request a customized tour related to the subject area being investigated in the classroom.

Cost: Voucher

It's All in the Design – A Tour of the LEED Platinum Certified Visitor and Administration Building

The Visitor & Administration Center is a veritable encyclopedia of green building techniques that conserve water and mitigate global warming. It has a planted green roof, solar panels, geothermal heating and cooling, gray water recycling, and bioswales. .

Cost: Voucher

As the Worm Turns

Learn the importance of worms and other decomposers in the food chain, carbon cycle, and nitrogen cycle. Link our everyday lives in the city with a whole ecosystem of decomposers and explore environmental problems such as waste management. Collect materials and set-up a portable worm bin to take back to the classroom for observations and experimentation. Come up with possible exit project ideas for your classroom.

Cost: Voucher

Trees and Our Environment

How do trees impact our environment? An introduction to tree anatomy and function will lead to an exploration of adaptations, seasonal changes, and the impact of trees on our urban ecology. Outdoors, students learn which traits are used to identify trees and note similarities and differences in shape, bark, twigs, leaves, and other details. Students will be introduced to simple methods of measuring the urban forest such as canopy cover and height and diameter and will brainstorm on how to observe and measure characteristics and seasonal changes.

Cost: Voucher

Honeybees and Pollination

Examine the ecological importance of honeybees in plant reproduction, evolution, and survival. Through models, visual aids, and more, explore the life cycle of honeybees, their social system, and ways of responding to and communicating information about their environment. Observe active hives in QBG's Bee Garden and watch bees visiting flowers. Taste a drop of Garden-made honey.

Cost: Voucher

Interdependence of Plants and Animals—an Introduction to Ecology

Examine relationships such as the food web, biomass, predator-prey interactions; and other behaviors such as nesting, camouflage, and seed distribution. Tour the Garden to observe, first hand, some of these relationships and learn the scientific methods of assessing parts of the environment. Students brainstorm and learn about ways of doing environmental observations in their local park, school yard, or neighborhood.

Cost: Voucher

Biomes

Explore living and non-living components of biomes around the world. The tropical rainforest, desert, or urban communities can be explored by creating models. Each program considers the physical conditions of a community leading to observation and identification of adaptations of live plants from specific communities. Each student creates a model of a community for further exploration. Choose one community from the following:

- **Rainforest Terrarium**—provides an opportunity for students to identify the basic structure of the rainforest community and observe the rain cycle.
- **Desert Dish Garden**—students replicate desert conditions and then observe the unique adaptations of cacti and succulents.
- **City Plants**—explores the unique problems of our urban ecosystem with a focus on the pros and cons of the role of “weeds” in our city. Students make a personal herbarium, examine what a “weed” is, and observe their adaptations with a focus on the scientific technique of plant identification.

Cost: Voucher (includes materials for up to 10 students) + \$8 material fee per student for each additional student (contact us for other pricing options)

Plant Propagation

Explore ways plants reproduce, both sexually (seeds) and asexually (stem and leaf cuttings, runners, division, etc.). Observe flower structure and learn propagation techniques including using different media, in our greenhouse and garden. Students make a mini-greenhouse (propagation box) and utilize several plant propagation techniques that can be further used for open-ended observation. Many of these plants can be used for controlled experiments.

Cost: Voucher (includes materials for up to 10 students) + \$8 material fee per student for each additional student (contact us for other pricing options)

Round & Round It Goes

This three-part experience fits perfectly with the goals of Urban Advantage. Focusing on the strategies and technologies demonstrated in the Garden’s landscapes and green Visitor & Administration Building, your students will see and learn first-hand the vital importance of water and how environments—whether natural or man-made, offer ecological services that clean water and slow down and absorb storm water. Students conduct a controlled experiment and participate in a city planning activity that may inspire design projects. QBG staff comes to your school for the first workshop followed by two trips to the Garden that includes a behind the scenes tour of the green building.

Cost: Contact us for voucher usage and pricing options

Energy, You Move Me

This two part lesson discusses energy transformation as seen in both the natural and man-made environments. Students will learn how plants collect and allocate energy, as well as how various adaptations increase energy efficiency. They will conduct an exploration on the sources of energy and the processes that humans use to generate energy. A tour of the Platinum LEED® Visitor and Administration building, including a discussion of “mimicked plant adaptations” explains one way humans have attempted to increase energy efficiency. An optional third lesson allows students to take a closer look at human decisions and their positive and negative repercussions on the environment

Cost: Contact us for voucher usage and pricing options

Bookings - 718-886-3800 ext 230