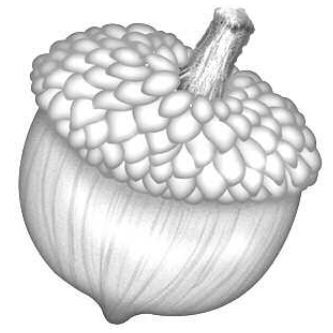


Self-Guided Visit: *Into the Woods*



TEACHER GUIDE

Welcome to The New York Botanical Garden! *Into the Woods* is a self-guided visit that explores the ecology of forests. This visit and the accompanying reproducible student activity sheets are recommended for use with 1st–3rd grades. The activity sheets for *Into the Woods* address New York State Science Standards 1 and 2 and New York City Science Performance Standards 2a, 2c, 5a, 5b, 5c, and 5f.

FOREST FACTS

What is a forest?

A forest is an ecosystem dominated by trees. It includes all the interacting living (plants, animals, fungi) and non-living (rocks, soil) things in an area. A forest remains a forest as long as the balance of these interactions remains intact.

What is biodiversity?

Biodiversity refers to the variety of living things in a particular place. Different species—or kinds—of plants, animals, fungi, and microscopic living things are all important, since each helps the ecosystem function in different ways. When the level of biodiversity of an ecosystem is lowered, the ecosystem becomes less healthy.

What is decomposition?

The process of breaking down dead material into smaller parts is called decomposition. For example, when a tree dies, the nutrients stored in it become available for other organisms to use. Decomposers such as insects, fungi, and bacteria feed on it, gradually breaking down the organic material and releasing nutrients into the soil.

What is so special about the Forest at the Botanical Garden?

The Garden's 50-acre native Forest is one of the few remaining tracts of natural, uncut woodland in New York City. Some of the trees are more than 200 years old. Although the Forest has been protected since it was purchased in the late 1700s, the Forest has been affected by people in many ways. Pollution and invasion by exotic tree species have dramatically altered the Forest. The persistence of this Forest is a testament to adaptation, survival, and careful management in an urban environment. Some common tree types that you might see in the Forest:



hickory



sugar maple



sweetgum



sassafras



red oak



cherry



tulip poplar



white oak

BEFORE YOUR VISIT

Bring copies of the three *Into the Woods* student activity sheets for each student. Each student will also need a pencil and something to lean on (such as a clipboard) while they write.

Review your goals and students' expectations several days before the trip and again the day before. Remind students to dress appropriately for spending time outdoors.

SUGGESTED ROUTE

Utilize the instructions below, as well as your Visitor Map and the directional signs posted throughout the grounds, to help facilitate your tour. You may want to highlight your route on your map as you go. Estimated walking times between each destination point are noted.

1. Orient your group at the Leon Levy Visitor Center. Encourage your group to use the restrooms and water fountains here before setting off.
2. When facing the Reflecting Pool, bear right and walk past the entrance to the Everett Children's Adventure Garden to the entrance of the 50-acre native Forest (*estimated walking time 10 min.*). There is a map of the Botanical Garden marking this entrance point.
3. Walk along the Forest Trail past the High Bridge to the end of the trail at Azalea Way (*estimated walking time*

30 min.). Have your students complete the three activity sheets as you make your way along the trail.

4. Make a right onto Azalea Way, and make a left when you see a stand of beech trees on your left (hint: the smooth bark makes these trees unfortunate victims of carved graffiti). Stay to your left to get to the Clay Family Picnic Pavilions (*estimated walking time 7 min.*), the only designated area for picnicking.

5. After lunch, follow the Mitsubishi Wild Wetland Trail to the end. Make a left and head back to the Leon Levy Visitor Center (*estimated walking time 7 min.*)—the beginning of your journey!

STUDENT ACTIVITIES

When you enter the Botanical Garden, explain to your students that they are going to use their observations to determine whether the Garden's Forest fits their definition of "forest."

1. Activity Sheet #1:

Nature Hunt

As you approach an entrance to the Forest, discuss the many kinds of things that they think make up a forest. Direct students to draw a plant and animal that they would expect to see in a forest.

2. Activity Sheet #2:

Words in the Woods

Once inside the Forest, challenge your students to write one thing that they see, hear, or smell in the Forest beginning with each letter in the alphabet. Encourage your group to find multiple words, or objects/ words that nobody else has used.

3. Activity Sheet #3:

Lots of Leaves

Look for fallen leaves along the trail. Have each student pick up two different leaves along the Forest path. Have the students draw or trace the outlines of the leaves, before describing their observed similarities and differences. Be sure to return all the leaves the students collected.

4. Discuss what the students observed—did it fit their definition of "forest"? Explain the term biodiversity, and challenge your students to think about the level of biodiversity they observed.

AFTER YOUR VISIT

Learn the names of common trees. Have students collect leaves from trees near your school and press them by putting them between sheets of newspaper and placing something heavy on top. Challenge students to identify the leaves using field guides—how many different trees are growing near your school?

Encourage your class to compare the Forest you visited to other ecosystems, such as wetlands, tropical rain forests, or deserts. How are the plants and animals that live there different from each other? How are they the same?

Adopt a tree near your school and observe it over the course of the school year. Take your class to visit the tree periodically to sketch and measure its trunk. How does the tree change? How much does the tree grow? What happens to the leaves that fall? What kinds of animals live in or near the tree?

RECOMMENDED TEACHER RESOURCES

Burns, Diane L. *Trees, Leaves and Bark (Take Along Guide)*. Menetonga, MN: NorthWord Press: 1995. A range of local trees are simply identified by descriptions of their leaves, bark, and seeds. Interspersed are easy tree-related activities for kids.

Fielding, Eileen. *The Eastern Forest*. Tarrytown, NY: Marshall Cavendish, 1999. Color photographs and clear text describe the many components found in a forest.

RECOMMENDED BOOKS FOR CHILDREN

Ehlert, Lois. *Red Leaf, Yellow Leaf*. San Diego, CA: Harcourt Brace & Company, 1991. Using brightly colored collages, a young child tells the story of his or her sugar maple tree. The seasonal changes in the plant life cycle and plant-animal interactions are highlighted.

Silver, Donald M. *One Small Square - Woods*. New York, NY: W.H. Freeman and Company, 1995. Descriptive text and fun activities help kids to learn more about the inhabitants of a forest.

