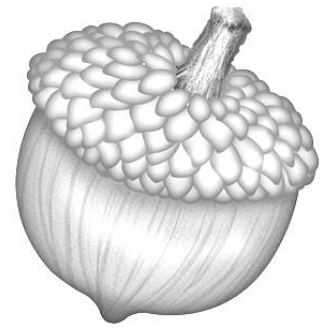


Self-Guided Visit: *Into the Woods*



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 K–1st 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?

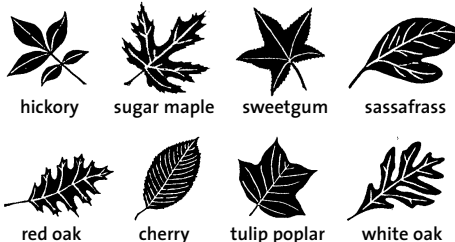
Biodiversity refers to the variety of living things in a particular place. Different species—or kinds—of plants, animals, fungi, and microscopic living things are all important, since each helps the ecosystem function in different ways. When the level of biodiversity of an ecosystem is lowered, the ecosystem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



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

Use the instructions below as well as your School Group 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.

Note: *The Forest Trail has moderate slopes throughout. Please come prepared with appropriate foot wear.*

1. After you check in at the School Group Check-In booth, encourage your group to use the restrooms and water fountains before you begin your journey.

2. Follow the signs to the **Clay Family Picnic Pavilions**, stay to the left on the paved pathway, and walk past the picnic pavilions, which will be on your right (*estimated walking time is 2 minutes*). You can stop here for lunch at this point, or at the conclusion of your self-guided visit.

3. At the fork in the trail, stay on the left path and follow the **Mitsubishi Wild Wetland Trail** to the Gazebo.

4. Take a right at the Gazebo where the path splits, and walk directly around to the other side of the Gazebo. Follow this path to the main paved road. (**Azalea Way**). Turn right onto **Azalea Way** and follow the road (*estimated walking time is 5 minutes*).

5. Turn left onto the **Forest Edge Trail** (The trailhead is marked with a sign and woodchips on the path.)

6. Walk along the **Forest Edge Trail** (*estimated actual walking time is 5 minutes*). As you make your way along the trail, help your group complete the **Into the Woods** activity sheets described below.

7. Exit the **Forest Edge Trail** and walk across **Azalea Way**. Continue walking straight to the paved path toward the Gazebo. Turn left at the Gazebo and retrace your steps through the **Mitsubishi Wild Wetland Trail** back to the **Clay Family Picnic Pavilions**, (*estimated walking time 7 minutes*).

8. Upon exiting the picnic pavilions, turn left and follow the paved pathway and signs back to the **School Group Exit**.

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.

