

# **Mt Lebanon Nature Conservancy**

## **School in the Park**

### Habitat Instructor Guide

## **FOREST**

### **MATERIALS INVENTORY**

- 1 set laminated tree and plant labels (see separate list)
- 1 set laminated cards for Decomposition Game (see separate list). One side of each card has a natural or human refuse or litter, e.g. dead animals or aluminum cans; the back has the time needed for that object to decompose, or rot.
- 1 set laminated Decomposition Rap cards
- 1 tree “cookie” piece: a slice of a tree trunk showing the annual rings
- 1 laminated poster showing the Scrabbled Tree Names Game
- exhibit of burdock seeds
- exhibit of a dead shelf fungus
- plastic lidded tray containing squirrel tails and rodent skulls
- 1 set of stamps and stamp pads

### **ADVANCE PREPARATION**

- First, the lead instructor of the forests station must walk the trails at least twice in the weeks preceding School in the Park sessions. The instructor will be checking that the trails are clear; sometimes big trees fall across them. The instructor will also be checking where to place the identifying labels for the trees & plants. Trees & plants thrive some years and not others. The wildflowers may bloom too early or too late for labeling during School in the Park. There have even been deaths of trees.
- Second, the lead instructor will check that there are no missing identification labels and no missing cards from the Decomposition Game. Anything missing will be replaced before SIP.

### **MORNING SETUP**

- Position the identification labels next to or near their examples in Bird Park
- Hide the burdock seeds exhibit near the burdock plants.
- Place the tree “cookie” at the “Y” in the trail.
- Near fallen tree trunks with fungus, hang the shelf fungus exhibit low enough for the students to touch.
- Place the plastic bin with rodent parts at “Y” trail intersection.
- Place the Decomposition Game and the Decomposition Rap, and the ink stamping materials at the last substation, a bit past the poison ivy area.

## INSTRUCTION

### Overview

Usually two areas are the focus of the Forest Station. Currently, they are invasive species and the importance of decomposition in the life cycle of the forest. However, other areas are included: identification of plants, trees, and occasionally animals; decomposition of litter left by humans. Be open to changes in the areas of focus, e.g. new problems in the Bird Park forest or developing problems in the Eastern Woodlands.

Sources for help with tree identification include *The Audubon Society Field Guide to North American Trees: Eastern Region* and the Pennsylvania Department of Conservation and Natural Resources website, <http://www.dcnr.state.pa.us/forestry/plants/commontrees/index.htm>

Sources for help with wildflower identification include *The Audubon Society Field Guide to North American Wildflowers: Eastern region*, <http://uswildflowers.com/>, and *Wildflowers of Tennessee, the Ohio Valley, and the Southern Appalachians* by Dennis Horn and Tavia Cathcart, 2013.

Also, the library is a good resource; people walking through Bird Park are often good resources.

The Forest Station includes substations, or several stops along the trails on which students are guided. There are six substations.

**Substation 1.** Students and adult escorts meet instructor in the general area where the upper and lower trails join briefly. There is usually a short discussion about forests (and why Bird Park is not one---too small), Mount Lebanon's good fortune to have a wild park such as Bird Park, and then the instructor invites students to unscramble tree names in the Tree Name Game. During the game, the instructor points out both the differences in the leaves and park examples of some of the trees, e. g. black cherry, beech. Other trees and wildflowers to be identified at this substation usually include: boxelder, Virginia waterleaf, hobblebush, sweet cicely, jewelweed, violets.

**Substation 2.** The instructor stops the group under the large bush honeysuckle, which as of 2018 is dying. The instructor explains that the honeysuckle is a native of Asia, but now is an invasive in Western Pennsylvania. The instructor can ask if anyone knows what an invasive is or may go ahead and define it as a plant, bush, or tree that is not originally from North America, but now grows wild here. The instructor can ask why the honeysuckle is not welcomed in the park and point out the lack of plants growing under it due to the deep shade. This particular honeysuckle bush bears the scars from bucks (male deer) stripping the velvet off their antlers. Students have fun trying to guess what animal has damaged the branches of the honeysuckle.

**Substation 3.** The students and adults are stopped at the rotting, or decomposing, stump. Many living things that help the rotting process can be observed here: fungus, holes from carpenter ants and boring beetles, moss, slime mold (in wet years). The instructor points out the "baby tree", a yellow poplar (a.k.a. tulip tree-state tree of Indiana), which is being partially nourished by the decomposing stump. Across the

trail at this site is burdock, an invasive from Europe whose fruit are large sticky-prickled burrs. The instructor can hold up the burdock seed exhibit, letting the students feel it, and ask what famous invention was inspired by these sticky seeds---Velcro. Other wildflowers found at this site include: garlic mustard ( an edible invasive from Europe), mayapple, elderberry (whose berries are enjoyed by all wildlife and were used by native Americans and white settlers). If the instructor wishes, she/he may offer a small bit of garlic mustard leaf to those third graders brave enough to try it. The instructor should tell them first that the leaves taste a little bitter and a little spicy, and never eat anything outside without an adult's supervision.

**Substation 4.** The instructor next stops at a "y" intersection in the trails. The labeled cross section of a tree trunk and the example of shelf fungus are *usually* placed here. The instructor also points out the arrowwood bush and explains that its name comes from its use for arrows by native Americans. Or the instructor can ask the students if anyone knows why it was called arrowwood. Other plants found at this site include: violets, spice bush, false solomon's seal, lady's thumb (another introduced species). It is also at this stop that the instructor opens up the plastic tray to show the students the rodent parts, including squirrel tails and skulls. The students may touch the squirrel tails with two fingers, but the skulls should only be handled gently by the instructor.

**Substation 5.** The instructor takes the left or lower branch of the trail and stops the students and adults at the area with poison ivy, which is often trying to grow into the trail. The instructor shows the variety in the surface of the leaves, the usually red stem, and the persistent three leaflet pattern. The instructor can mention that jewelweed is an excellent antidote for poison ivy rash. (There may even be some growing along with the poison ivy.)

**Substation 6.** This last station includes the Decomposition Game, the ink stamps, and, if there is time, the Decomposition Rap. The cards in the Decomposition Game are labeled with a kind of litter from human activity or from nature on one side, such as glass or dead animals. On the reverse side is the amount of time that will pass before that litter decomposes. This can be played several ways. Students can try to guess the time needed for each material, or the cards can be shuffled and dealt out. Then students can be asked to sort themselves. A quick way for sorting is to place all those materials needing 20 years or less for decomposing in one spot, and those needing more than 20 years in another spot. If there is time, the students can sing the Decomposition Rap or they can have the backs of their hands stamped. This concludes the Forest Station, and the students with their adult escorts and the assisting high school students walk to the Birds Station under the big pine trees.