

Arbor Sleuth

Pre-Program Letter



Your students will be using a dichotomous key to identify trees at the Arboretum. Use the attached activity from Ranger Rick's "Trees are Terrific" to acclimate students to a dichotomous key before they come to the Arboretum for the Arbor Sleuth program. This will give them a little prior experience so that using the more complex tree key at the Arboretum will not be such a foreign idea! We at Blandy will go over the basics when your program begins, so don't be concerned if you *don't* have time to do this activity in the classroom, but making an effort to do so will ensure ample time to identify trees!

Activity instructions:

- Have students work in teams of two or three, giving each team copies of Part 2 and Part 3 of "Keying Out Trees", enclosed.
- Note the descriptions of several classifying terms used at the bottom of Part 2. These are terms they will use to identify the tree.
- As a class, identify Tree A on Part 3, beginning by comparing the leaves of Tree A with the statements in number 1 on Part 2.
 - Which statement is true for tree A? (leaves are broad and flat)
 - Follow the dotted line across the page to the instructions for the next step, "go to 3".
 - Compare the leaves to the statements in number 3; leaves are opposite, so you will go to 4. Continue the process until you have identified the tree as the silver maple.
- Students will then continue the process by identifying trees B through I on Part 3 using the leaf key provided in Part 2. For each of the leaves, students will begin at the statements in number 1 and continue as instructed until they have reached the name of the tree.

Answer Key for Part 3:

- | | | |
|-------------------|-------------------|-----------------|
| A. Silver Maple | D. White Oak | G. Sitka Spruce |
| B. Horse Chestnut | E. Weeping Willow | H. Choke Cherry |
| C. Black Walnut | F. White Pine | I. Honey Locust |

We look forward to seeing you at the Arboretum! Please call us at (540) 837-1758 x 242 if you have any questions.

Sincerely,

The Education Staff at the State Arboretum of Virginia



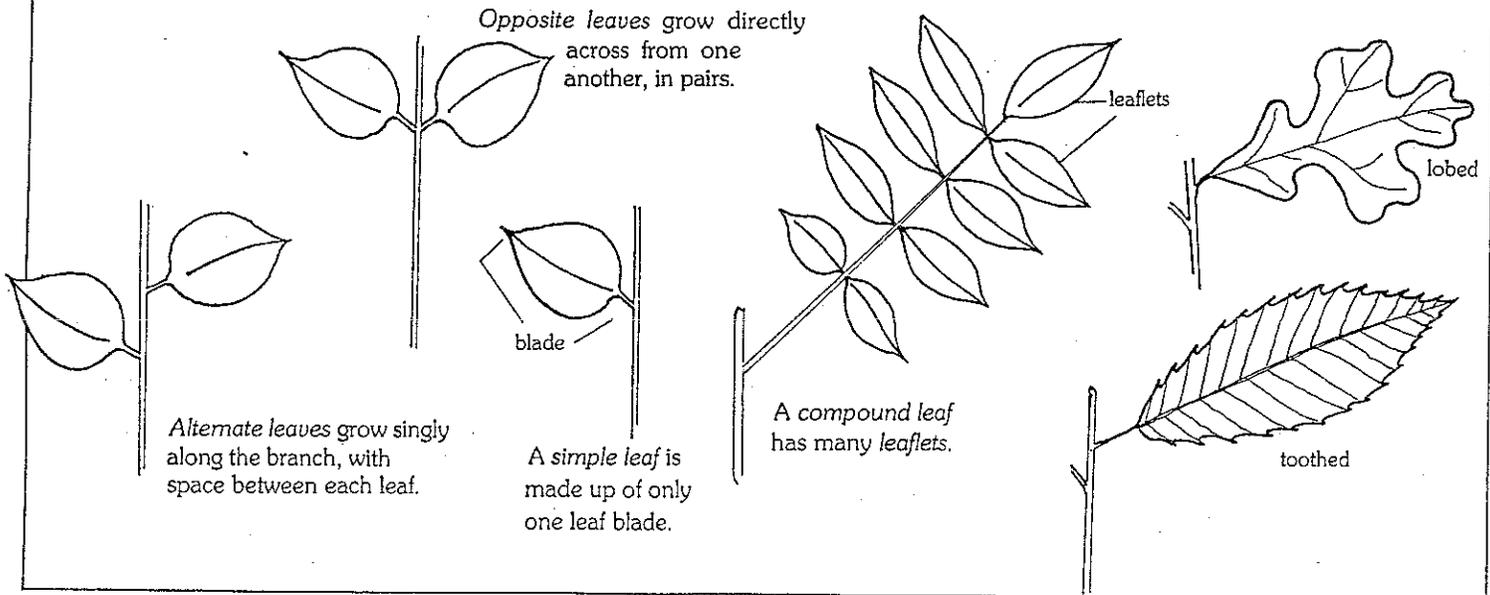
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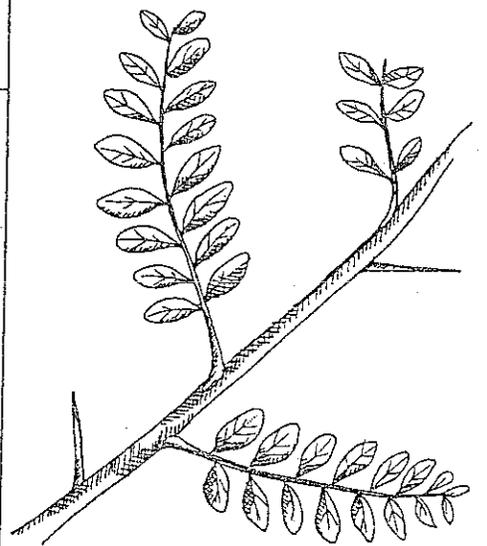
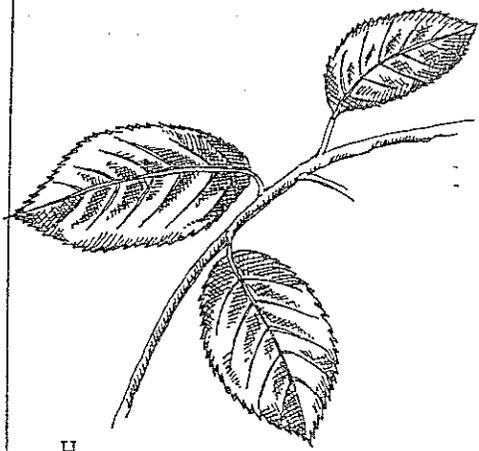
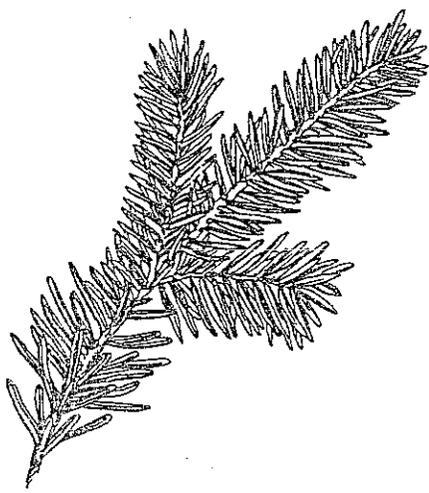
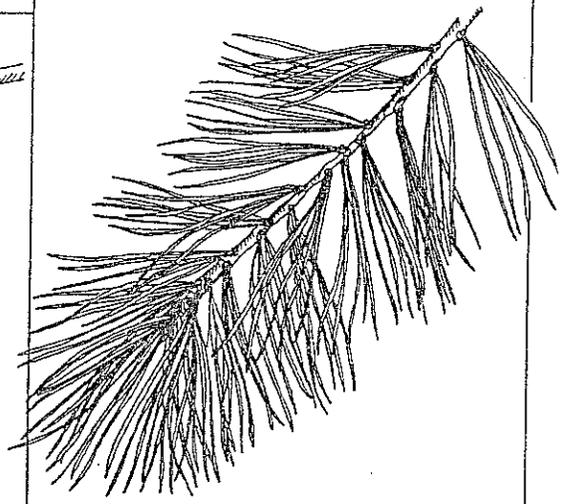
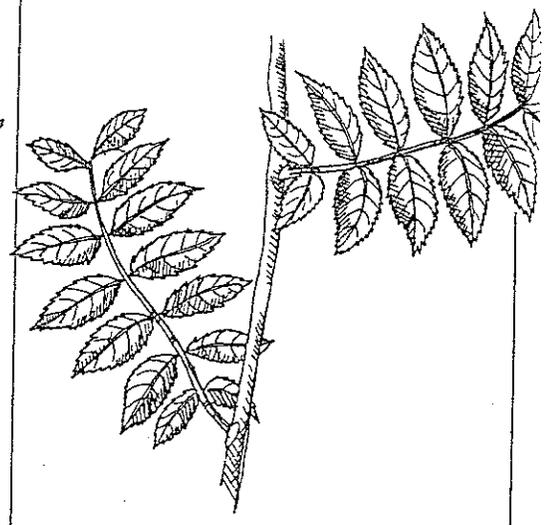
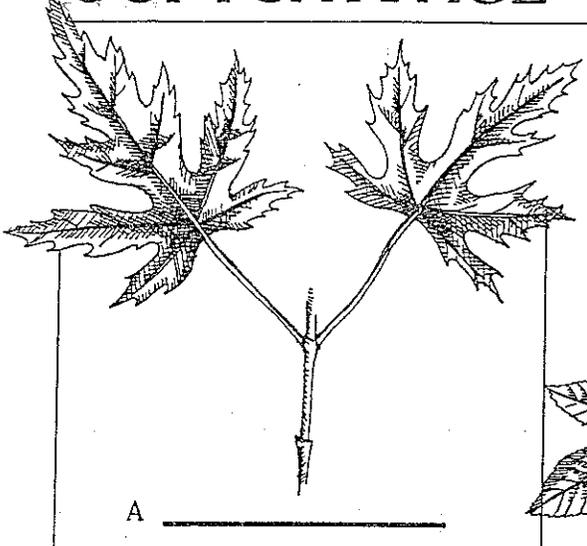




LEAF KEY

- 1. Leaves are shaped like needles go to **2**
 Leaves are broad and flat. go to **3**
- 2. Long needles grow in bunches of five. **WHITE PINE**
 Needles are short, and grow singly along the branch **SITKA SPRUCE**
- 3. Leaves are opposite go to **4**
 Leaves are alternate go to **5**
- 4. Leaves are simple **SILVER MAPLE**
 Leaves are compound. Leaflets grow around the stem in a circle.
HORSE CHESTNUT
- 5. Leaves are simple go to **6**
 Leaves are compound go to **8**
- 6. Leaves are lobed **WHITE OAK**
 Leaves are toothed go to **7**
- 7. Leaves are long and slender **WEeping WILLOW**
 Leaves are rounded **CHOKE CHERRY**
- 8. Branches have thorns **HONEY LOCUST**
 Leaflets are toothed. **BLACK WALNUT**





Arbor Sleuth

Post-Program Activity Ideas

Now that your students have learned to use a dichotomous key to identify some trees found at the State Arboretum, challenge them to use that knowledge to help Virginia's forests!

- **In the fall, you can organize a seed collection with your class for the Growing Natives program.** Doing this, your students will also learn to recognize and distinguish different types of seeds, as well as the leaves, of different Virginia trees. Volunteers of all ages in Virginia, Maryland, D.C., and West Virginia collect seeds from native trees to be grown for the reforestation of riparian buffers (the area along streams and rivers) to protect and enhance water quality in the Potomac River watershed. This is a fun and educational activity for students because they get to collect nuts, as well as make a significant contribution to a regional conservation project!

The Potomac Conservancy's site has a link to their Growing Native project, <http://potomac.org/growing-native/> for ways to participate. You can collect seeds from just one tree species, or many, depending on your school grounds or collection area. When your class has finished collecting seeds, you can simply bring them back to Blandy because we are a seed drop-off site!

- **In the spring, you can organize a native tree planting.** Tree planting is one of the best ways to offset carbon emissions! Is there an area at your school that needs some trees? Have the students choose an area at school or at home that could use a tree. Then, think about what kind of tree should grow there. A short tree? A tall tree? A tree for shade? A tree for hiding the view of something ugly? A tree for a windbreak? Is the area sunny or shady? What is the soil like? Is the area very wet or dry? Based on their site, students should select a tree species that would be appropriate for growing in those conditions and that would also meet the needs of the people using the site (i.e. a conifer for blocking the view of the street from the school yard, or an oak to provide food for animals as well as shade in a large, unobstructed area [no power lines near it]). Encourage students to think about the long- and short-term needs for a tiny seedling planted there. What will we need to do for it while it is still small? Will this tree be able to reach its full height in this location?

Tree seedlings can be purchased through the Virginia Department of Forestry. Their website is: www.dof.virginia.gov

- **Students can collect various leaves from their backyards to do leaf rubbings** (simply lay a leaf on a hard surface with a sheet of paper above it, and lightly color over it with a crayon). Have students practice using a key to identify their leaves, or they can use the enclosed activity sheet. Challenge them to include text beside their rubbings that describe why these trees are so important.

**Please contact us at 540-837-1758 x 242 if you have questions about any of these activities!
We are happy to be of assistance.**

