

# How to Lead a Tree Identification Walk

Virginia Master Naturalists often have the expertise to teach others about local ecosystems and native tree species. Tree identification (ID) walks are a good way to engage people with “nearby” nature and encourage them to continue learning on their own.

Tree identification is an important skill for any homeowner or nature explorer. Trees can provide a good introduction to the rest of the world around us. Knowing which trees are growing on a site can tell us about the soil, climate, and other environmental conditions there. Native trees are a key component of habitat for wildlife, providing food, shelter, and spaces to raise young. Learning to identify the trees in our yards helps us provide proper care and maintenance for the species we have. Understanding a tree’s growth characteristics can keep lives and property safe, and planting the right tree in the right place can save money over time.

This guide covers planning a walk for a general adult audience, but most of the tips also work for middle and high school students. (For ideas on tree ID activities for younger children, contact Virginia Department of Forestry.)

## Planning a Walk

- Consider the season. ID walks are easiest with leaves, from mid-spring through mid-fall.
  - o Winter and early spring walks will require careful observation of twig and bark features, and thus may be more suited to advanced learners.
- Choose a location that will allow everyone to see and hear you. Open areas such as parks and relatively flat, smooth trails are good choices if they have good tree species diversity.
  - o Avoid steep or narrow trails that require a lot of single-file walking and don’t have good gathering spots.
  - o Make sure foliage is low enough to be accessible for close observation.
- Visit the site ahead of time so you will know which species you might cover and can note any possible safety concerns.
- Try to keep groups under 15 people per leader for best seeing and hearing.
- For general/beginner audiences, keep ID walks to around 12 species and 1½ hours, including the time spent on introductory material.
- Have a helper to bring up the rear along a trail, to assist with ID, or to help in an emergency.
- Have a first aid kit available.
- Remind participants ahead of time to wear proper clothing and footwear, use tick and sun protection, and bring water.
- Optional: Bring hand lenses, especially for winter ID.
- Optional: Make a list of species to cover and create a single-page key to just those species.
  - o A one-page key is less overwhelming for beginners.
  - o Simple keys for each region are included at the end of this document and can be customized. The Helpful Hints page can be copied on the back of a key.

## Leading a Walk

- Introduce yourself and tell the group a little about the Master Naturalist program.
- Begin by asking the group why people might want to ID trees. (See introduction above.)
  - o Making the walk relevant to people's lives helps hold their interest.
- Give an ID overview to introduce basic terminology: opposite vs. alternate and simple vs. compound at minimum; ideally, mention lobes, teeth, and venation.
  - o Show-and-tell samples are a good idea when teaching terminology.
- Walk slowly, stop often, and be aware of those who might have difficulty with the trail.
- Don't start talking about a tree until everyone has caught up and found a spot where they can see and hear you.
- In general, give 3 to 5 solid ID features for each tree.
- Try to add at least one interesting fact about each tree, or one fact that ties into a theme. (E.g., wildlife values, fall colors, or wood uses)
- Encourage close examination of details. (Hand lenses are helpful here.)
  - o With a few trees, ask participants to examine and tell you the details they notice first. This helps them focus and pay close attention.
  - o For students, you might describe a nearby tree and ask them to find it based on your description.
- Use simple dichotomous or pictorial keys to enhance learning and give participants a take-home skill.
  - o Give everyone their own key but encourage working in pairs or family groups.
  - o Demonstrate how to use a key by identifying one tree together as a group.
  - o Don't plan to key out every tree; instead, choose a few that are hard to get wrong.
  - o Easy-to-key species are good practice for everyone, and they give beginners confidence that they can do this.
- If there's a tree you can't identify, admit it. Talk through the details and try to key it out as a group.
  - o You are modeling how to learn, not how to memorize.
- End on time and close to where you started.

# Leaf Key to Common Eastern Virginia Trees

*Instructions: Start at number 1, read both statements, choose the best one, and follow directions to the next number. Continue this process until you reach the name of a tree.*

- 1) Tree has needles – go to 2
- 1) Tree has leaves – go to 3
  
- 2) Needles very short, or pressed tightly to the stem like scales – **Eastern Redcedar**
- 2) Needles long, in bundles of 3 – **Loblolly Pine**
  
- 3) Leaves are opposite (straight across from each other on the stem) – go to 4
- 3) Leaves alternate with each other along the stem – go to 5
  
- 4) Leaf has jagged edges and 3 to 5 main lobes – **Red Maple**
- 4) Leaf has smooth edges and no lobes – **Flowering Dogwood**
  
- 5) Leaf is simple (having only one part) – go to 6
- 5) Leaf is compound (divided into more than one leaflet) – go to 13
  
- 6) Leaf is thick and spiny – **American Holly**
- 6) Leaf is thin and flexible, and not spiny – go to 7
  
- 7) Leaf has lobes (parts that stick out from the main leaf edge) – go to 8
- 7) Leaf has no lobes, and may or may not have teeth along the edges – go to 11
  
- 8) Leaf looks like a 5-pointed star, and has tiny teeth along the edges – **Sweetgum**
- 8) Leaf is not star-shaped and does not have tiny teeth along edges – go to 9
  
- 9) Leaf has 3 or more lobes, with a single lobe at the tip – go to 10
- 9) Leaf has 4 or 6 lobes, the outer two mirroring each other – **Yellow-poplar**
  
- 10) Leaf has smoothly rounded lobes – **White Oak**
- 10) Leaf has pointed lobes, with a bristle at the tip of each lobe – a **Red Oak** species (southern or northern red, black, scarlet, pin)
  
- 11) Leaf is much longer than it is wide, with smooth edges – **Willow Oak**
- 11) Leaf has teeth along edges – go to 12
  
- 12) Leaf has fine, tiny teeth along the edges – **Black Cherry**
- 12) Leaf has evenly spaced teeth, one at the end of each vein – **American Beech**
  
- 13) Most leaves have 5 to 9 leaflets - A **Hickory** species
- 13) Most leaves have more than 10 leaflets – **Black walnut**

# Leaf Key to Common Central Virginia Trees

*Instructions: Start at number 1, read both statements, choose the best one, and follow directions to the next number. Continue this process until you reach the name of a tree.*

- 1) Leaves are broad and flat – go to 2 OR
- 1) Leaves are needle-like – go to 3
  
- 2) Leaves are attached opposite each other on the stem – go to 4 OR
- 2) Leaves alternate with each other along the stem – go to 5
  
- 3) Needles are short, twisted, always in bunches of 2 – **Virginia pine** OR
- 3) Needles are fairly straight, in bunches of 2 or 3 – **Shortleaf pine**
  
- 4) Leaves are oval, with smooth edges – **Flowering dogwood** OR
- 4) Leaves have several lobes and ragged edges -- **Red maple**
  
- 5) Leaves are compound (having more than one part) – go to 6 OR
- 5) Leaves are simple (having just one part) – go to 8
  
- 6) Leaflets are smooth-edged – **Black locust** OR
- 6) Leaflets have tiny teeth along the edges – go to 7
  
- 7) Most leaves have 5 to 9 leaflets – **Hickory** species (mockernut, pignut, red) OR
- 7) Most leaves have 10 to 24 leaflets – **Black walnut**
  
- 8) Leaves have no lobes and have smooth edges – **Black gum** OR
- 8) Leaves may have lobes or undulating edges and/or toothed edges – go to 9
  
- 9) Leaves have pointed lobes – go to 10 OR
- 9) Leaves have either rounded lobes, or no lobes at all – go to 11
  
- 10) Leaves have 4 to 6 lobes, with the outer two mirroring each other – **Yellow-poplar** OR
- 10) Each lobe has one or more bristle-tipped points – **Red oak** species (northern or southern red, black, scarlet, pin)
  
- 11) Leaves have smoothly rounded lobes or undulating edges – **White oak** species (white, chestnut, post) OR
- 11) Leaves have no lobes, but do have teeth along the edges – go to 12
  
- 12) Leaves have one tooth at the end of each vein – **American beech** OR
- 12) Leaves have many tiny teeth, like a steak knife blade – **Black cherry**

# Leaf Key to Common Western Virginia Trees

*Instructions: Start at number 1, read both statements, choose the best one, and follow directions to the next number. Continue this process until you reach the name of a tree.*

- 1) Tree has needles in bunches of 5 -- **Eastern white pine** OR
- 1) Tree has leaves – go to 2
  
- 2) Leaves opposite each other on the twig – go to 3 OR
- 2) Leaves alternate with each other along the twig – go to 5
  
- 3) Leaves oval – **Flowering dogwood** OR
- 3) Leaves with 3 to 5 lobes – go to 4
  
- 4) Leaf edges smooth between widely-spaced points – **Sugar Maple** OR
- 4) Leaf edges with jagged teeth – **Red Maple**
  
- 5) Leaves simple (having only one part) – go to 6 OR
- 5) Leaves compound (divided into several parts) – go to 12
  
- 6) Leaves basically oval, with a pointed tip – go to 7
- 6) Leaves with rounded or pointed lobes – go to 9
  
- 7) Leaves more than 6 inches long, with slightly wavy edges – a **Magnolia** species  
(cucumbertree, Fraser, bigleaf, umbrella)
- 7) Leaves less than 6 inches long, with teeth along the edges – go to 8
  
- 8) Leaf edges have tiny teeth; twig smells bitter when scratched – **Black cherry** OR
- 8) Leaf edges have jagged teeth; twig smells like wintergreen when scratched – **Sweet birch**
  
- 9) Leaves with smooth, rounded lobes or undulating edges – go to 10 OR
- 9) Leaves with pointed lobes – go to 11
  
- 10) Leaves lobed; bark pale gray, loose and shredding – **White oak** OR
- 10) Leaves with undulating edges; bark thick, brown, with deep ridges – **Chestnut oak**
  
- 11) Leaves with 4 to 6 lobes, the outer two mirroring each other – **Yellow-poplar** OR
- 11) Leaves with 7 or more bristle-tipped lobes – a **red oak** species (scarlet, black, northern red)
  
- 12) Most leaves with 5 to 9 leaflets - a **Hickory** species (shagbark, mockernut, pignut, red, bitternut) OR
- 12) Most leaves with 10 or more leaflets - **black walnut**

## Helpful Hints

These leaves alternate with each other.



These leaves are opposite each other.



These are types of simple leaves. Each has only one part.



Compare them to this compound leaf. This is one leaf that has 7 parts, or leaflets. (Do not confuse the leaflets with opposite leaves!)



These leaves have different kinds of lobes (parts that stick out from the main leaf edge).

