



## Nearby Nature from Home: [Tremendous Trees](#)

**FOCUS:** Everyone is familiar with trees, those woody giants towering above us, branches reaching for the sky. Trees come in a variety of shapes and sizes but are made of similar parts. Each part plays an important role in its survival, from protective bark and woody trunks to leafy branches and underground roots. Trees grow and change throughout their lives, like people do, and their bark, shape, and posture help tell their story.

### Day One: Tree Tour

#### **MEET A TREE**

**What you'll need:** *optional:* tree identification guide: [What Tree Is That? Tree Identification Guide at arborday.org](#)

Take a walking tour of nearby trees. As you walk around, which trees seem to be the same type? How can you tell? Take a moment to act out the posture of the different trees, the angle at which they hold their branches, and the movement and sounds they make in the wind.

Some people can identify trees just by looking at their bark. Look at and touch the bark on different trees. Can you see differences?

Study the leaves on different trees. Pick up some from the ground that match those on the tree. Notice their shape, color and size. Any fruit on the tree or ground?

What is the smallest tree you can find? The biggest? Can you tell which were planted or which grew up naturally?

Using your observations, make a guess about the identity of some of the trees on your tour?

#### **POET-TREE**

Pick one of the trees that caught your interest on your tree tour and write a poem about it. Try looking at your tree from a different perspective. Pretend to be a bird who sings high in the treetops or consider your tree from the perspective of a tree frog clinging to the trunk. Or imagine you are a chipmunk who lives under the roots at the base of your tree or a young

caterpillar munching on its favorite leaves. Write down all the words or descriptive phrases that come to mind and use them to create your poem. Consider writing a shape poem- where the text is shaped like the thing it describes. Now strike a pose that represents your critter and take a photograph with your tree. You can also write several poems from different perspectives and combine them together to make your tree poem.

## Day Two : What Makes a Tree a Tree

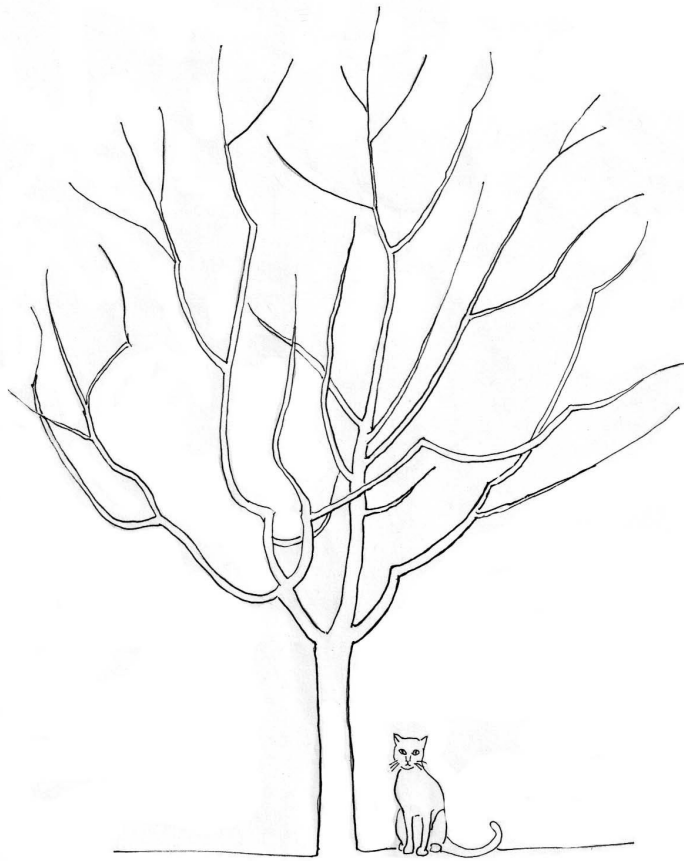
### **PICTURE A TREE**

**What you'll need:** pencils, peeled dark-colored crayons, clipboards, drawing paper.

A tree is the sum of its parts. Find a tree you'd like to study and focus on its shape and structure. Walk around it and pick the best spot to view it and get far enough away to see its whole shape.

**How to draw a tree.** Start by drawing its trunk- looking at its shape and how it changes from ground to sky. What happens at the base where it meets the ground -- can you see any exposed roots anchoring it?

What is the overall shape of the whole crown (the part with leaves)? Is it a triangle, oval, circle? Now draw in the branches, noting their angle, starting from big main branches down to the littlest new twigs. Draw the bigger branches in front first. Most trees have lots of little branches; don't try to draw them all. Leaves, flowers or fruits? Again, drawing them all will take too long. Try adding them in groups to show where some are located.



This crabapple tree didn't have leaves yet. It looks like a big tree, but the cat shows you it's not.



Lots of short pencil lines used to show the pine's needles.

Drawing is hard work-- so take time to stretch. Stand up and imagine being the tree in your drawing. Stretch your roots (toes) down into the soil to pull up water and nutrients. Reach up to the sky with your branches (arms). Spread your leaves (hands) wide to capture some sunlight.

## **DRAW THE PARTS**

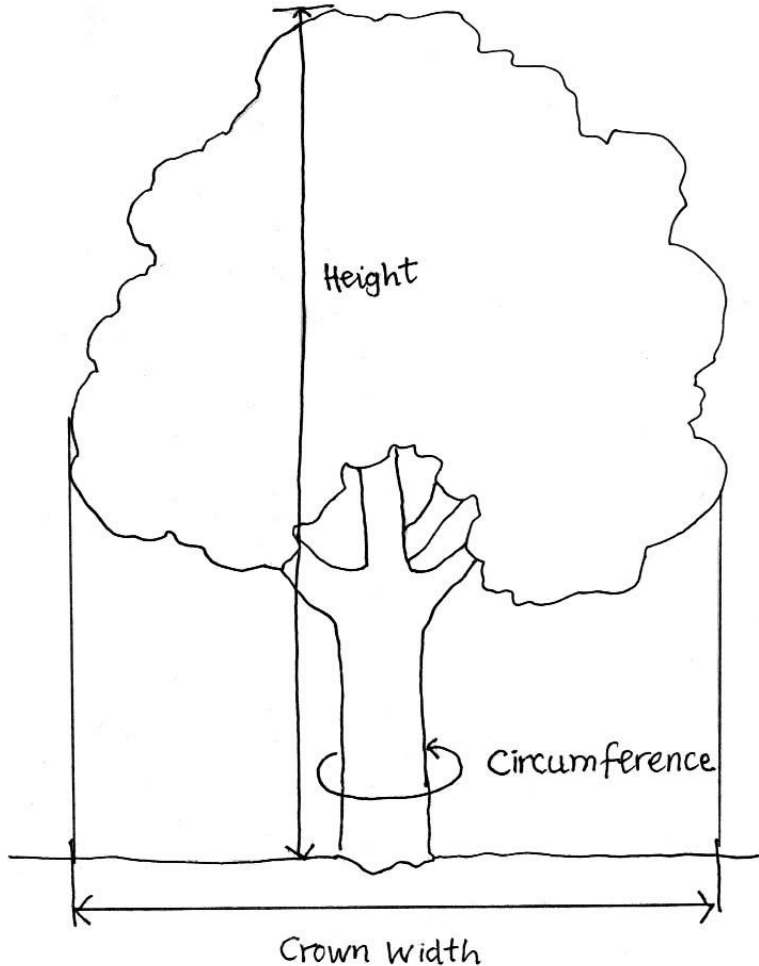
Now take a close-up look at your tree. Divide a new page in four parts. Collect a leaf from your tree and make a rubbing in one quarter. In another part, draw a closeup view of the edge of your leaf. Lay the paper against the trunk and use your crayon to make a rubbing of the bark in the third quarter. On the fourth part, try to find a flower, fruit or seed (apple, acorn, maple key) to draw. Add labels, observations, and questions to your drawings.

## Day Three: Tree Measurements

### **MEASURING TREES**

**What you'll need:** clipboards and pencils, tape measures or a rope marked off for measuring, rulers; *optional:* calculators.

Just like people, trees come in many different shapes and sizes. Many people record their growth on a chart to keep a record of how they grow and change. Let's see how some trees measure up by looking at how tall they are (height), how wide around their trunk is (circumference) and how wide their leafy branches grow (crown width).



**To estimate the height of a tree:** Ask a family member to volunteer to stand next to a tree. Now walk away from the tree until you can see the whole tree from top to bottom. Estimate how many of your person would fit if stacked up from the base to the top of the tree. It helps if you hold a ruler up at arm's length in front of you, close one eye and mark off the height of the person from that distance. Then count how many of that measurement fit from ground to treetop. Multiply this number by the person's height to get the approximate height of your tree.

**To measure the circumference of the tree's trunk:** This measurement is taken 4 ½ feet above ground level on the tree's trunk. Measure around the trunk at this height, using a tape measure. This is the tree's circumference. If you don't have a measuring tape you can make your own with string or rope. Use an indelible marker to mark off every 6 inches (or go metric and mark every 10 centimeters). You can also use tape, different color markers, or knots to mark your increments.

**To measure the average crown width:** Place two sticks into the ground opposite each other where the tree's crown is the widest, then measure this distance. Place two more sticks across from each other where the crown is the narrowest and measure this distance. Add these together and divide by 2 to get the average width.

## **BIG TREES**

Big trees are awesome, and every state keeps track of their champions. Checkout the website for your state to see where these trees are located. Do you think a tree in your neighborhood can compete with these giants? Take some measurements and find out.

Vermont: <https://fpr.vermont.gov/forest/vermonts-forests/vermont-big-trees>

New Hampshire: <https://extension.unh.edu/programs/nh-big-trees>

Massachusetts: <https://www.mass.gov/guides/massachusetts-legacy-tree-program>

Maine: [https://www.maine.gov/dacf/mfs/policy\\_management/project\\_canopy/programs/big\\_trees.html](https://www.maine.gov/dacf/mfs/policy_management/project_canopy/programs/big_trees.html)

## **THE BIGGEST TREE**

Compare your tree to General Sherman, a famous giant Sequoia, the largest known living tree in the world. Measure a line thirty-two feet long. Place markers at each end of this line and one in the middle. Now measure and mark the ends of another thirty-two foot line that crosses the first at a 90 angle right through the middle. Between these 4 outer points place more markers to form a circle. Now you have the circumference or the distance around General Sherman, which is about 100 feet. Imagine a tree trunk as big as the space in the middle of the circle. How many kids would it take to hug General Sherman?

## Day Four: Puppet Show and

### **PUPPET SHOW** "Tree-mendous Trees"

**What you'll need:** [Print-out of puppets](#), colored pencils or crayons, sticks, [script](#), tape, stage. (A sheet over the back of two chairs makes a fine puppet stage.)

Put on a puppet show about trees. Print out the puppets; color and cut them out and tape them to sticks or wooden spoons. Print out the puppet show script and tape it to your stage to read. Try using different voices for the different characters.

## READING THE RINGS

**What you'll need:** [Things to Look for in a Slice of Wood diagram](#),

Trees and shrubs grow in a way no other plants can. Each year the tree adds a layer of wood all around each twig, branch and the trunk. Cells just under the bark make the new wood cells in spring and early summer, then slow down and stop in the fall and winter. This change in cell growth creates rings in the wood. Look at the number of rings and the distance between them for clues to age and growth rate.



This is a cross-section of an American Chestnut stump. To figure how old this tree was when it was cut, just count the rings. Can you see where it grew a branch?





This is a slice of a red oak that blew down in a hurricane in 2006. Sanded and polished, we counted the rings back to about 1896. The rings were very close together until 1965. What does that tell you about this tree's early growth rate? What could have happened that allowed it to grow much faster in the following years? (The note says "released.")

