

How Old Is That Tree?

Have you ever wondered how old the trees in your yard or neighborhood are? While trees may not celebrate birthdays, they still grow a little each year just like you. Trees grow a new layer of wood beneath their bark annually. When trees are cut down or fall down naturally, botanists can use **dendrochronology** (counting the rings inside a tree trunk) to find out its exact age. Did you know you can estimate the age of a tree without chopping it down or waiting for it to fall over? Follow the activity below to estimate the age of the trees in your neighborhood.



Materials

- measuring tape
- paper
- pencil or pen



Instructions

1. Head outside and find some trees.
2. Wrap your measuring tape around the widest part of the tree's trunk. (This measurement is known as the tree's **circumference**.)
3. On your paper, record the circumference of the tree in inches.
4. Trees grow approximately 1 inch of new trunk every year. The size of the tree in inches is an estimate of the tree's age in years. For example, if your tree has a 12 inch circumference, it is about 12 years old.
5. Measure more trees in your neighborhood and try to find the oldest tree on your block!





Extra Credit Science for Advanced Botanists

Looking for a math challenge? Use these instructions to find an even more precise estimate of the age of a tree.

1. Determine what type of tree you're measuring. For help identifying your tree, visit <https://www.arborday.org/trees/whattree>.
2. Determine your tree's diameter in inches. (Diameter = circumference ÷ 3.14)
3. Use the table below to find the growth factor of your tree.
4. Multiply the diameter in inches by your tree's growth factor to estimate the age of your tree.

Example: Let's say you're measuring a Kentucky coffee tree. It's growth factor is 3. If its trunk has a diameter of 6 inches, you would multiply that number by 3 to get an estimated age of 18 years (diameter in inches x growth factor = tree age).

Tree Species	Growth Factor	Tree Species	Growth Factor
Aspen	2	Norway Spruce	5
Austrian Pine	4.5	Pin Oak	3
Black Walnut	4.5	Red Oak	4
Bradford Pear	3	Redbud	7
Horse Chestnut	8	River Birch	3.5
Colorado Blue Spruce	4.5	Scotch Pine	3.5
Cottonwood	2	Silver Maple	3
Douglas Fir	5	Sweet Gum	4
Honey Locust	3.5	White Fir	7.5
Kentucky Coffee Tree	3	White Oak	5
Norway Maple	4.5		



Learn more about dendrochronology:

- Life as a Tree! by SciShow Kids, <https://tinyurl.com/LifeAsATree>
- The Living Forest by the Arbor Day Foundation, <https://tinyurl.com/LivingForest>

