

Age of a Tree

Extend the Moment

- Use the attached guide from Tree Pittsburgh to Estimate the Age of a Tree
- Check out these other great resources from Tree Pittsburgh attached to this document
 - [Tree Songs and Crafts](#)
 - [Resources for Identifying Trees](#)
 - [Learn about Arbor Day](#)
- Take the time to notice the trees in your neighborhood, see how many you can identify.
- Did you know that trees clean the air we breathe, filter our water, and provide homes for many species? Talk about that with your child.

Resources

Use this Sesame Street Nature Journal to record observations around you!

pbslearningmedia.org/resource/sesame-parks-nature-journal-printable/national-parks-printable-nature-journal-sesame-street/
or bit.ly/3M1YSYm



Books to check out at your local library!

- ❖ [Trees](#) by Lemniscates
- ❖ [Tree: A Peek-Through Picture Book](#) by Britta Teckentrup
- ❖ [The Forever Tree](#) by Tereasa Surratt and Donna Lukas, illustrated by Nicola Slater
- ❖ [Kate, Who Tamed the Wind](#) by Liz Garton Scanlon, illustrated by Lee White
- ❖ [The Lumberjack's Beard](#) by Duncan Beedie

How to estimate the age of a tree:

(note: this works well with forest grown trees, trees out in the open grow at different rates depending on site conditions)

Materials needed: a tree, measuring tape, calculator

Step 1: Identify your tree and find it on the list **below** _____

Step 2: Measure up 54 inches from the ground (4 ½ feet). This is Diameter Breast Height or DBH.

Step 3: Measure around the tree at this height to find the circumference in inches. **Circumference** = _____

Step 4: Divide the circumference by the mathematical pi (3.14). This will give you the tree's Diameter.

$$\frac{\text{Circumference}}{\text{Diameter}} \text{ divided by } 3.14 = \text{Diameter}$$

Step 5: Multiply the Diameter by the growth rate number for the tree species from the chart below and you will have the approximate age of the tree.

$$\text{Diameter} \times \text{growth rate number (below)} = \text{age estimate}$$

Growth Rate Numbers:

American beech	6	Norway spruce	5
American elm	4	Pin oak	3
American sycamore	4	Redbud	7
Austrian pine	4.5	Red maple	4.5
Black cherry	5	Red pine	5.5
Black maple	5	River birch	3.5
Black walnut	4.5	Scarlet oak	4
Bradford pear	3	Scotch pine	3.5
Common horsechestnut	8	Shagbark hickory	7.5
Colorado blue spruce	4.5	Shingle oak	6
Cottonwood	2	Shumard oak	3
Douglas fir	5	Silver maple	3
European beech	4	Sugar maple	5.5
European white birch	5	Sweet gum	4
Green ash	4	Tulip tree	3
Ironwood	7	White ash	5
Kentucky coffee tree	3	White fir	7.5
Littleleaf linden	3	White oak	5
Northern red oak	4	White pine	5
Norway maple	4.5	Yellow buckeye	5

What is Arbor Day?

The first Arbor Day was started by a journalist in the Nebraska territory, Julius Sterling Morton in 1872. Mr. Morton set a date in April to be a day for planting trees, and whoever planted the most trees, whether it was individuals, counties, or neighborhoods, would win prizes. In 1874 the governor of the state of Nebraska proclaimed Arbor Day on April 10th, 1874, and then in 1885 legalized Arbor Day as a state-wide holiday on Morton's birthday, April 22nd. Today Arbor Day is celebrated in all 50 states and all around the world on dates that are best for tree planting in that climate, usually in the Spring.

In Pennsylvania, Arbor Day is celebrated the last Friday in April each year. It is a special holiday, a time to celebrate all that trees provide for us, and a time to plant trees. Most holidays we celebrate are in honor of something that happened in the past, or of a person who did something great. Arbor Day is a holiday that looks to the future—a tree planted today represents the belief that the tree will grow and someday provide shade, beauty and inspiration for generations to come.

Why do we plant trees?

Why should we celebrate trees?

Where would you rather stand when it is 90 degrees out in July?
In the middle of a parking lot or under a tree?

- Trees provide shade and cool our homes, schools, recess yards and playgrounds.
- It can be 10 degrees cooler under the shade of a tree on a hot day.
- Trees convert carbon dioxide, which we breathe out, to oxygen that we can breathe in.
- Trees clean the air and absorb pollution. In Pittsburgh, the air has a higher amount of particulate matter than nearly any other city in the United States. This is due to nearby coal-fired power plants. Microscopic particulate matter gets into your lungs and can make it hard to breathe. Street trees in Pittsburgh remove 12.8 tons of Particulate Matter, Nitrous Oxide, Ozone, and Sulfur Dioxide from the air each year, making it easier for us all to breathe. (Pittsburgh's STRATUM Report, 2005, www.treepittsburgh.org/stratum)
- Trees provide a home and food for wildlife.
- Dead trees decompose and add nutrients to the soil to help other plants grow.
- Trees give us products such as: maple syrup, paper, building materials, fruits like apples, peaches, pears, and more.

What else do trees give us? What sorts of things do you use every day that come from trees? Is it possible to make those useful things out of other materials?



Tree Identification Resources

What Tree is That? © Arbor Day Foundation,
an online tutorial for tree identification.
www.arborday.org/trees/whattree/

Common Trees of Pennsylvania © Pa DCNR
www.dcnr.state.pa.us/forestry/commontr/commontrees.pdf
(may also be available in a small printed book form if you call
your State Representative)

The Trees of Pittsburgh
© Western Pennsylvania Conservancy
www.paconserve.org/alcoa-trees/by_name.html

Summer Key to Pennsylvania Trees
© Pennsylvania State University, 2002:
<http://rnnext.cas.psu.edu/PDFs/Summerkeyfortrees.pdf>

Tree Identification 4H Project
© West Virginia University Extension Service:
www.wvu.edu/~exten/infores/pubs/fypubs/4htreeid.pdf

Tree Finder and Winter Tree Finder, by May T. Watts,
Nature Study Guild Publishers, 1963 ISBN-10: 0912550015

Nature-based and Outdoor Learning Lesson Plans

- Take a Walk Books by Jane Kirkland
www.takeawalk.com
- The ABC's of Ecology by Ecology Education, Inc.,
www.fbes.org

Additional Reading –Tree Themed Children’s Books

Tree Pittsburgh is glad to have a wide variety of great tree-themed children’s books in our library that go beyond Shel Silverstein’s *The Giving Tree* and Dr. Seuss’s *The Lorax!* You can come see for yourself, and we are happy to order any of the following books we love for you from our distributor at a discount.

All books have been approved by the Pittsburgh Public School District

Title	Author	ISBN	Book Type	Publisher	Date
Fall Leaf Project - Greenlight	McNamara, Margaret	9781416915379 1416915370	Paperback	Aladdin Paperbacks	10/2006
Fletcher and the Falling Leaves	Rawlinson, Julia	9780061573972 0061573973	Paperback	HarperTrophy	09/2008
Gas Trees and Car Turds: A Kids’ Guide to the Roots of Global Warming	Johnson, Kirk	9781555916664 155591666X	Paperback	Fulcrum Group	09/2007
The Giving Tree - Reading Counts!	Silverstein, Shel	9780060256654 0060256656	Hardcover	HarperCollins Publishers	01/1964
The Great Kapok Tree: A Tale of the Amazon Rain Forest - Reading Counts!	Cherry, Lynne	9780152026141 0152026142	Paperback	Voyager Paperbacks	03/2000
I Can Name 50 Trees Today!: All about Trees - Accelerated Reader	Worth, Bonnie	9780375822773 0375822771	Hardcover	Random House Books for Young Readers	02/2006
I Wonder Why Pine Trees Have Needles: And Other Questions about Forests	Gaff, Jackie	9780753460962 0753460963	Paperback	Kingfisher	09/2007
Leaf Jumpers - Accelerated Reader	Gerber, Carole	9781570914980 1570914982	Paperback	Charlesbridge Publishing	07/2006
Leaves	Stein, David Ezra	9780399246364 0399246363	Hardcover	Putnam Publishing Group	08/2007

Title	Author	ISBN	Book Type	Publisher	Date
Leaves! Leaves! Leaves! - Accelerated Reader	Wallace, Nancy Elizabeth	9780761453796 0761453792	Paperback	Marshall Cavendish Children's Books	09/2007
The Little Yellow Leaf	Berger, Carin	9780061452239 0061452238	Hardcover	Greenwillow Books	09/2008
A Log's Life - Accelerated Reader	Pfeffer, Wendy	9781416934837 1416934839	Paperback	Aladdin Paperbacks	03/2007
The Lorax - Reading Counts!	Dr Seuss	9780394823379 0394823370	Hardcover	Random House Children's Books	08/1971
My Mother Talks to Trees - Reading Counts!	Gove, Doris	9781561453368 1561453366	Paperback	Peachtree Publishers	03/2005
The Old Tree	Brown, Ruth	9780763634612 0763634611	Hardcover	Candlewick Press (MA)	09/2007
Our Tree Named Steve - Accelerated Reader	Zweibel, Alan	9780142407431 0142407437	Paperback	Puffin Books	03/2007
Pie in the Sky - Reading Counts!	Ehlert, Lois	9780152165840 0152165843	Hardcover	Houghton Mifflin Harcourt Publishing	04/2004
Planting the Trees of Kenya: The Story of Wangari Maathai	Nivola, Claire A.	9780374399184 0374399182	Hardcover	Farrar Straus Giroux	04/2008
Red Leaf, Yellow Leaf - Reading Counts!	Ehlert, Lois	9780152661977 0152661972	Hardcover	Harcourt Children's Books	09/1991
Ruby's Falling Leaves	Wells, Rosemary	9780448446868 0448446863	Paperback	Grosset & Dunlap	09/2007
The Seasons of Arnold's Apple Tree - Reading Counts!	Gibbons, Gail	9780152712457 0152712453	Paperback	Voyager Paperbacks	04/1988
Someday a Tree - Reading Counts!	Bunting, Eve	9780395764787 0395764785	Paperback	Clarion Books	02/1996
Tell Me, Tree: All about Trees for Kids - Reading Counts!	Gibbons, Gail	9780316309035 0316309036	Hardcover	Little Brown and Company	04/2002
Tree (Rev) - Reading Counts!	Burnie, David	9780756610937 0756610931	Hardcover	DK Publishing (Dorling Kindersley)	04/2005
Trees of North America: A Guide to Field Identification, Revised and Updated	Brockman, Frank C.	9781582380926 1582380929	Paperback	Golden Guides from St. Martin's Press	04/2001
Tweedle Dee Dee	Voake, Charlotte	9780763637972 0763637971	Hardcover	Candlewick Press (MA)	05/2008
Wangari's Trees of Peace: A True Story from Africa	Winter, Jeanette	9780152065454 0152065458	Hardcover	Harcourt Children's Books	09/2008
We're Going on a Leaf Hunt	Metzger, Steve	9780439873772 0439873770	Paperback	Cartwheel Books	08/2008
Winter Trees	Gerber, Carole	9781580891684 1580891683	Hardcover	Charlesbridge Publishing	07/2008

The following songs and projects have typically been used with pre-k and kindergarten classes in Pittsburgh Public Schools. Many thanks to Linda Ehrlich, Kim Russo, Mary Moses, and the rest of the Pittsburgh Public Schools Pre-K team.

Tree Songs

Leaves, Leaves, Everywhere (sung to Row, Row, Row Your Boat)

*Leaves, leaves, everywhere,
Falling off the trees.
Red and yellow, orange and brown,
A wonderful sight to see.*

The Dancing Leaves (sung to Clementine)

*Dancing leaves are falling down
Orange, yellow, red and brown.
They are dancing, they are dancing
They are dancing on the ground.
With their crisp and crunchy sounds
They are the child's delight.
Dancing, dancing up and down
From the morning to the night.*

Leaves on the Tree (sung to the Wheels on the Bus)

*The leaves on the trees turn orange and brown.....
In the town.*

*The leaves on the ground go swish, swish, swish.....
Down on the ground.*

*The leaves on the trees come tumbling down.....
Down to the ground.*

*The birds in the trees go tweet, tweet, tweet.....
All over town.*

Other verses can be added by teachers and students.

Simple Tree Art Activities

Leaf Wreath:

Cut the center out of a paper plate. Have children collect leaves and then glue on to the paper plate. Add bow and other decorations by choice.

Leaf Prints and Rubbings:

Collect leaves and make leaf prints using tempera paint. You can do leaf rubbings as well. Put a piece of paper on top of a leaf and rub with crayons.

Leaf Collages and Mobiles:

Collect leaves and other natural materials and have children make individual collages as well as a large collage for the classroom. Use branches as a base for a mobile with natural materials.

Collages can be made by crumbling dried leaves. Then the children use the smaller pieces to create pictures of leaves or other items.

Leaf People:

Glue a large leaf to a piece of paper and then have children add legs, arms, head, etc. You can have the children draw the additions, or use pipe cleaners, construction paper, etc.

Leaf Making:

Have the children discuss colors of leaves. Then paint large sheets of paper the colors they've identified. Then cut out leaf shapes which can be hung on mobiles, on a bulletin board, added to a tree trunk that the children have made out of torn paper, etc.

Window Leaf Display:

Preserve leaves between two sheets of contact paper and hang on window in the classroom. This can be done in both spring and fall so children can be aware of the changing colors of leaves.