

OUR VERY Own TREE

Observing Tree Rings

As a tree grows, it develops a layer of new wood to its circumference each year. Find a fallen tree or one that is being taken down. Make a smooth cut across the trunk or a large branch. Have readers look at the cut. They will see the tree's rings. Each ring represents one year of growth.

Using observations and inferences, the reader can discover that woody stems increase in diameter each year. Here are some things you can do and think about when you study the rings of a tree:

- Start at the center of the tree and count the rings to the outer edge, where the bark is. The number will tell you the age of the tree. If the sample you have is from a branch, the rings in the branch will tell you the age of the branch, not the age of the tree.
- Consider the sample questions accompanying the illustration of tree rings on this page when you observe a sample from a real tree. You might also point out that each tree ring has two parts—a light part and a dark part. The light-colored part is the wood that grew at the start of a year, in spring and early summer. The darker color indicates growth in the late summer, fall, and winter. The light and dark parts of a ring together represent one year of growth.



Count the rings on this crosscut of a pine tree.
How many rings did you count?

Have someone else count the rings.
Did they get the same number?

How old is the tree?

In what year did it first start to grow?

Is the tree older or younger than you?

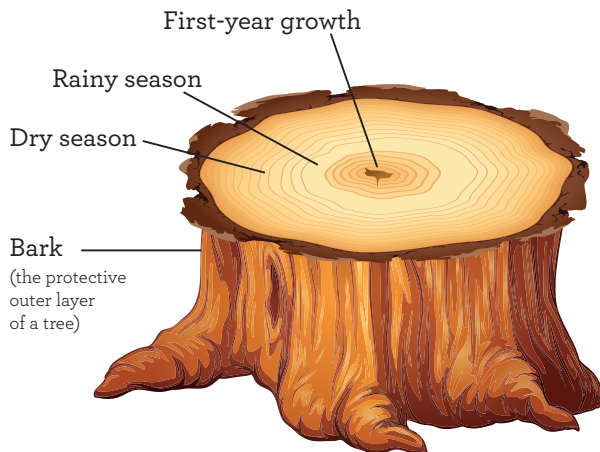


- If a ring is wide, it means that there was a lot of rain and warmth that year and the tree had a lot of growth. If a ring is thin, it means that there was not much rain. Varying sizes of the rings indicate climatic effects on growth.
- If the tree was leaning when it grew, like on the side of a hill, the tree rings will be wider on one side (the downhill side) than on the other.

Some tree records, based on studies of rings, go back a thousand years or more, which allows scientists to make inferences about an area's climate at a particular time in history.

Observing Seasonal Changes in a Tree

A photograph is a good way to study a tree. To see the seasonal changes in a tree, take four photographs of a deciduous tree (a tree that loses its leaves every year) at three-month intervals (e.g., February, May, August, and November). Be sure to take the photo from the same position each time. Line up the photos in the order in which they were taken. Make a listing of the changes you see from one photo to the next. When does the tree lose its leaves? When does the tree grow new leaves? If you take a photo of the tree once a week, you can staple the photos in order and flip the pictures to see a “movie” of the changes throughout the year.



You can learn a lot about a tree by observing the rings in its trunk. To see the rings, a cross section of the trunk must be cut.