

## Learn to Use a Tree as a Compass

Trees and all other plants need sunlight to make food for themselves and to grow. In the Earth's northern hemisphere, the Sun rises in the east, arcs through the southern sky, and sets in the west each day. The strongest light is during mid-day, when the Sun is in the southern sky. Unless they are shaded by neighboring buildings, trees, or other obstacles, a tree will tend to have more vigorous growth on its southern side as it reaches towards the strongest sunlight. We can use this asymmetrical growth pattern to use tree branches as a "compass." (This tip works even when you view a tree at night --- that's handy to know, too).

Here is a photo of the huge oak tree behind the picnic pavilion at the Scout Hut. Notice that the branches on the left side are not as thick as the branches on the right side. The left-side branches also are more vertical, while the right-side branches are more horizontal. The right-side branches are pointing due south. The left side faces north in this picture. From that we know that the other side of the tree is east, and I am taking the picture standing to the west of the tree:



Here is a fun activity to try. Go for a family walk together and find other "compass trees" in your neighborhood! Look for older undamaged trees that are standing by themselves and are not shaded by anything. Check to see if the thick horizontal tree branches are in fact pointing south (use your smartphone compass or a hand-held compass).

Another cool fact: Thick horizontal on trees growing in Earth's southern hemisphere tend to be on the north side. That is because the Sun rises in the east, passes through the northern sky, and sets in the west in the southern hemisphere. Viewed from the Earth, the Sun passes each day over the Equator.

To learn more outdoor navigation skills, see this book (or other books by the same author):

Gooley, Tristan (2014) The Lost Art of Reading Nature's Signs. New York: The Experiment Publishing Company.