**Measuring Tree Height with a Pencil**

Unless you climb to the top of a tree and drop a tape measure all the way to the ground (not recommended), it is difficult to actually get an accurate measure of the height of a tree. However, foresters and botanists have learned a few tricks to get fairly accurate measurements without all the work and risk of climbing a tree. This method uses a pencil, but any straight object will do, like a ruler.

**What you will need**

- Pencil
- 2 people
- Measuring tape (optional)

**How to measure tree height**

Make sure your tree is in a safe location before you begin and that there is plenty of open space around your tree. While one person stands beside the tree, the other person carrying the pencil walks a distance away from the tree. Holding the pencil vertically with arm straight out, move toward or away from the tree until the bottom of the pencil lines up with the base of the tree and the top point of the pencil lines up with the top of the tree.

Now rotate the pencil 90 degrees, keeping the base of the pencil lined up with the base of the tree. The top of the pencil now marks a spot on the ground that represents the height of the tree. The person standing next to the tree now paces away from the tree at a right angle to the person holding the pencil until they reach the mark on the ground at the “point” of the pencil. The pencil holder will tell them when they have reached that spot.

The distance from the base of the tree to this spot is the same as the height of the tree. You can measure this distance with the measuring tape, or if you know the distance of your stride, you can pace off the distance and calculate the height of the tree by multiplying the number of paces times the length of your stride.