

Measure Me a Tree Activity



At a Glance:

While investigating their own backyard, students understand vertical and horizontal measurements of large objects.

Materials:

- Paper
- Pencil
- Ruler
- String
- Tape measure

Objectives:

- Students will demonstrate measurement of the circumference, crown, and height.
- Students will create a graph of their findings.

Background:

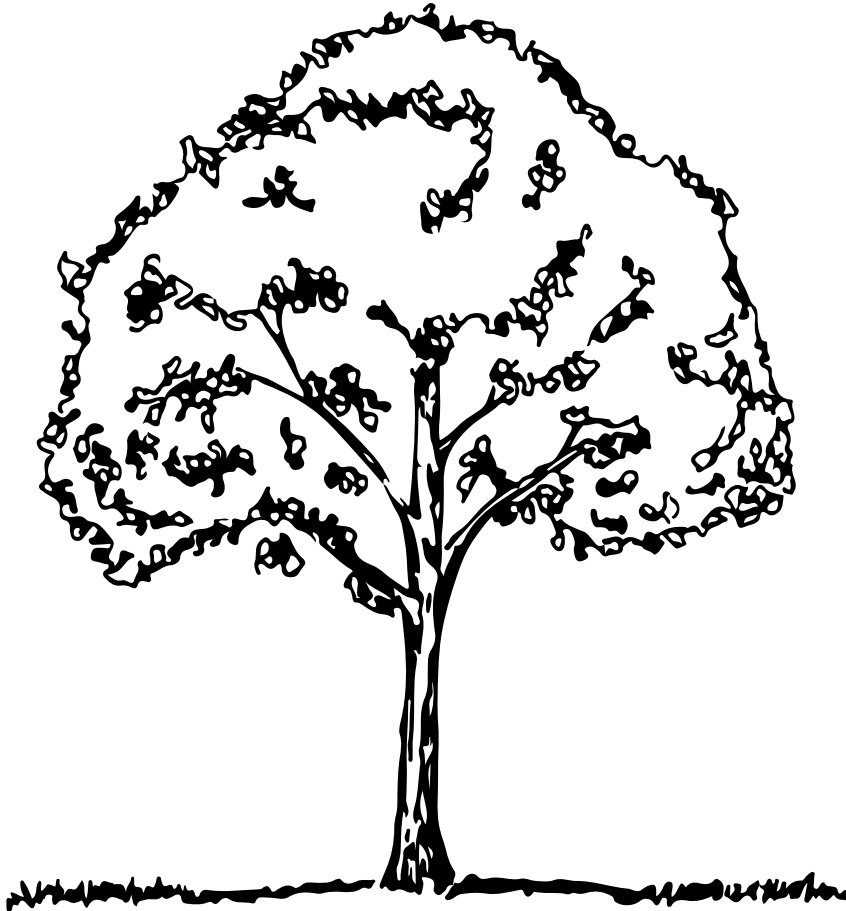
Longwood arborists take excellent care of the trees at Longwood Gardens. Understanding the size of trees is an important part of their job. To take care of the trees, arborists need to determine their height, circumference and crown size. The crown of a tree is the top portion where branches grow out from the main part of the trunk.

Directions:

1. Measure the Circumference
 - Measure from the ground to 4 feet high on the trunk.
 - At that height, measure the trunk's circumference. (Hint: tie a string around the trunk and measure the length of the string). Round to the nearest inch. Record the number and label as circumference.
2. Measure the Crown
 - Find the tree's five longest branches.
 - Have students determine the longest branch and place a marker on the ground beneath the tip of the longest branch.
 - Find a branch that is opposite to it and mark its tip on the ground.
 - Measure along the ground from the first marker to the second marker.
 - Round to the nearest inch. Record the number and label as crown.
3. Measure the Height
 - Have a family member stand at the base of the tree.
 - Back away from the tree, holding your ruler in front of you in a vertical position. Keep your arm straight. Stop when the tree and the ruler appear to be the same size. (Hint: close one eye to help line it up.)
 - Turn your wrist so that the ruler looks level to the ground and is in a horizontal position. Keep your arm straight.
 - Have your family member walk to the spot that you see as the top of the ruler. Be sure the base of the ruler is kept at the base of the tree.
 - Measure how many feet your family member walked by using a measuring tape, starting at the trunk and measuring to where they stopped- that's the tree's height. Round to the nearest inch and label your answer as height.

Use the tree diagram on the next page to label and record your answers.

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Label the parts of the tree:

Circumference: _____

Crown: _____

Height: _____

Follow Up:

1. Have students make bar graphs using the information gathered.
2. Have students locate the biggest tree and smallest tree of the same species.