

Make Your Own Diameter Tapes

Use with PLT Activity # 67, "How Big is Your Tree?"

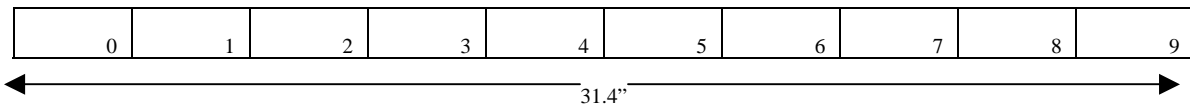
Diameter tapes are used to measure the diameter of a tree. Tree diameters are one of measurement needed to estimate the volume of wood that can be cut from a tree. You can create your own low-cost diameter tape by using the directions below and flagging tape.

How to make a diameter tape:

Diameter tapes are based on the geometric formula

$$d = C/\pi \text{ (diameter = circumference divided by pi)}$$

1. Cut a 31.4-inch strip of flagging tape (or paper)
2. Divide into 10ths (What is 31.4 divided by 10?)
3. Draw lines at each 10th
4. Mark each line: 0, 1, 2, 3, 4, and so on



How to use a diameter tape:

1. Wrap tape around tree 4-½ feet from the base of the tree (this is diameter at breast height, or dbh).
2. The reading on the tape is the tree's diameter.

Tip: Practice measuring circumference and diameter using coffee cans in the classroom.

Alternate method

1. Using a regular tape measure (inches), measure tree's circumference at dbh.
2. Record the circumference, plug into the formula: $d = C/\pi$

Example:

If the circumference reading from tree is 6 inches, then

$$d = 6/\pi$$

$$d = 6/3.14$$

$$d = 1.91 \text{ inches}$$

Always measure tree circumference and diameter 4-½ feet up from the base of the tree (diameter at breast height).



Photo from: Virginia Technical Forestry Department
www.cnr.vt.edu/dendro/forsite/dtape.htm