

# JUST FOR KIDS

## HOW to measure a tree

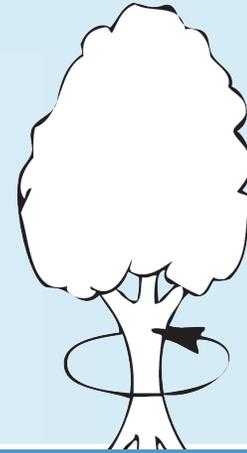
The month of April is all about trees! Marylanders celebrated Arbor Day on the 1st and will celebrate again nationally on the 24th. And what's not to like? Trees grow in all shapes and sizes, give shade and fresh air, provide beautiful scenery, and house birds and other animals.

The largest tree ever recorded in Maryland was a Wye Oak, measuring 31.67 feet around, 119 feet wide and 96 feet high. For comparison, that's nearly as tall as the dome of the State House, which stands at 121 feet!

How big are the trees in your neighborhood? Pick one today — preferably on a sunny day where you can see its shadow — and find out by following the directions!

### What you'll need

A ruler, pen and paper, long piece of string



### Measuring the trunk

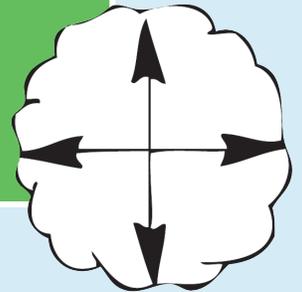
1. Guess the trunk's **circumference**, or how long it is around.
2. Measure the trunk using the piece of string.
3. Match how much string was needed to your ruler to determine the size and write down the measurement.

*How does the actual measurement compare to your guess?*

### Measuring the width

1. Look up to the top of the tree.
2. Use your string to measure from the tip of the longest branch on one side of the trunk to the longest branch on the other side of the trunk.
3. Match how much string was needed to your ruler to determine the size and write down the measurement.
4. Walk  $\frac{1}{4}$  of the way around the tree to see the branches from a different angle.
5. Repeat steps 2 and 3 from there.
6. Add the two numbers together and divide by two.

*Why might a tree with a large **crown spread** — the name for the distance from branch tip to branch tip — be helpful to wildlife? (Answer: More leaves mean more food. More branches mean more shelter.)*



### Measuring the height

1. Stand with your back to the sun, where you can see your shadow.
2. Use your ruler to measure the length of your shadow. Write it down.
3. Do the same for the tree's shadow.
4. Measure your height and write it down.
5. Calculate the tree's height using this formula:

$$\text{TREE HEIGHT} = \frac{\text{YOUR HEIGHT} \times \text{TREE'S SHADOW}}{\text{YOUR SHADOW}}$$

For example, if you are 5 feet tall, your shadow is 8 feet long, and the tree's shadow is 20 feet long, the answer is  $(20 \times 5) / 8 = 12.5$  feet. That's the height of the tree!

