



## Measure a Tree

Nowadays we have electronic tools that can tell us the exact height of trees. Before these tools were invented, how do you think Native Americans measured the height of trees? How do you think pioneers knew which tree was the correct height for the length of their cabins? Both of these groups used this natural resource for many things. You will attempt to accurately measure the same tree using two different methods that these groups may have also used. You will then see how accurate you were by using the electronic device foresters use today to measure the tree.

To begin, ***estimate*** the height of your tree *in meters*.

? I think the height of my tree is \_\_\_\_\_ meters.

### Method 1:

Use a meter stick to measure a straight line 18 meters away from the tree you want to measure. Then have your partner stand at that spot and hold the meter stick straight up with the bottom touching the ground. Now walk 2 meters past your partner following the same straight line (you are now 20 meters from the tree). Lie down with your head very close to the ground, or on the ground at the 20 meter spot. Now look up to the top of the tree and notice where the top of the tree comes up to on the meter stick (if you need to add another meter stick because the top of the tree appears taller than the meter stick, do so). Have your partner mark that spot on the meter stick (you'll have to guide your partner to make a mark in the right place by saying, "A little lower...a little higher..." until he or she finds the right place). The height of the tree is about 10 times the height marked on the meter stick. For example, if the place marked on the meter stick(s) is 120cm, the height of your tree is 1,200 cm. This would be 12 meters. Find the height of *your* tree in meters.

? Using method one, I found the height of my tree to be \_\_\_\_\_ meters.

### Method 2:

Hold onto your ankles and walk away from the tree until you can see the very top of the tree through your legs. Turn around and measure the number of meters back to the tree.

Using method two, I found the height of my tree to be \_\_\_\_\_ meters.

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Now have an adult measure the tree using a modern device designed to measure the height of trees accurately.

? Using this method, I found the height of my tree to be \_\_\_\_\_ meters.

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On the back of this page, I will write about what I learned from this activity.