Connecting Kids to Nature

Try this activity in a forest—a natural place to learn!

For over 30 years, Project Learning Tree® has used the forest as a "window" to help young people gain an awareness of the world around them and their place within it. Blending a walk in the forest with a fun and engaging PLT activity creates a powerful learning experience for children of all ages. Here's one idea from PLT that introduces the concept of **measurement**.

Activity 67: How Big Is Your Tree?

Trees come in various shapes and sizes. In this activity, children will measure trees in different ways and become familiar with tree scale and structure. They will also learn the importance of standard units of measure and measuring techniques.

Doing the Activity

Any time you are outside, select a tree for children to measure. Begin by asking youth how they might measure something without the proper tools. Then challenge children to measure small outdoor objects (leaves, branches, rocks) using their own body parts: a foot, hand, arm, or finger. Guide children to your selected tree and ask them to estimate the following:

- Height
- Circumference
- Diameter at Breast Height (DBH)
- Width of Canopy (or Crown Spread)

> **WEST VIRGINIA TREE FACT**
> West Virginia's famous Mingo White Oak was located on Pigeon Creek in Mingo County. It died in 1938 at the age of 582 years, having a circumference of 27'4", a height of 145', and a crown spread of 96'.

Depending on the age and ability of the children, you may want to provide a six inch ruler or five foot piece of string for assistance. You can request that calculations be estimated in body measurements (hand spans, arm lengths, etc.) or accepted units of measure (feet, meters, etc.) Ask: why might it be useful to measure trees?

On a sunny day, show students how to measure shadows and use a ratio comparison to determine tree height. The mathematical proportions are outlined in the box below. Invite children to practice using the illustrated example.

Tree's Height = x
Tree's Shadow = 63 feet
Child's Height = 4 feet
Child's Shadow = 6 feet

$$\frac{\text{Tree's Height}}{\text{Tree's Shadow}} = \frac{\text{Child's Height}}{\text{Child's Shadow}}$$

OR

$$\text{Tree's Height} = \frac{\text{Child's Height} \times \text{Tree's Shadow}}{\text{Child's Shadow}}$$

Adapted from Activity 67: How Big Is Your Tree? from *Project Learning Tree's PreK-8 Environmental Education Activity Guide*.

Discover how PLT can help you teach… from nature!
- Attend a workshop near you to receive PLT activity guides, ideas, and materials.
- Contact your West Virginia PLT State Coordinator: Cinda Francis, cfrancis@wvadventures.net or toll-free at (888) 372-9663.

Answer: x = 42 feet

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Project Learning Tree® (PLT) is a program of the American Forest Foundation.