Tree Circumference - Student Field Guide

Tree Circumference Team - 2-4 people per group

Task
Make measurements of circumference at breast height (CBH) (1.35m) for all mapped trees (living) greater than 15 cm circumference on your Carbon Cycle Site.

Materials (1 per group)
- ❑ Clipboard
- ❑ Pencil
- ❑ *Tree Data Sheet*
- ❑ Height indicator for 1.35m (optional)
- ❑ Flexible measuring tape (150-300cm)
- ❑ Tree crayon/paintstick (optional, but recommended)
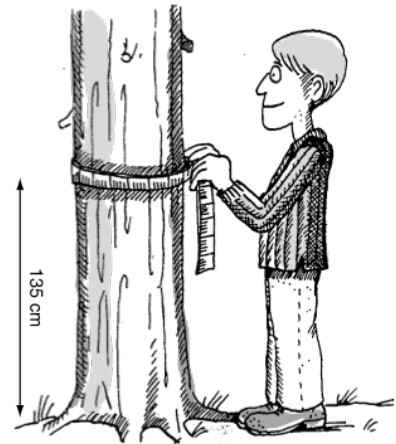
Procedure
1. Review *Tree Circumference Guide: Badly Behaving Trees.*

2. Using your Non-Standard Site Tree Map (either a Google Earth image or a hand-drawn sketch, where each tree has been given a number) divide the trees between Circumference Teams; paying attention to the way trees are positioned, devise a way to ensure each tree is only measured once.

3. When you arrive at the first tree, begin by checking if the tree is alive. If it has died, put a "d" in the circumference column and record DEAD with the date in the "notes" section of the *Tree Data Sheet*.

4. Measure from the highest point of ground at the base of the tree to a height of 1.35m. Use a tree crayon to draw a horizontal line at 1.35m. If the tree is "badly behaving" draw a line at the place where you will measure and then record this height in the "notes" section of the *Data Sheet.*

5. Using the marked height, measure CBH to the **nearest tenth centimeter,** e.g. 16.6.

6. Report this value to the data recorder. The recorder should repeat the value out loud as they write on the *Tree Data Sheet*. (This ensures accurate CBH values.)

7. Repeat this process for all trees in your designated section.

8. NOTE: If you discover **a tree that is not mapped**, i.e. not included on your data sheet, check to see if it has grown larger than 15cm circumference. If so, you will need to measure CBH and record "added" to the data sheet in the notes section. See your teacher for additional instructions about Tree Mapping.

Tree Circumference Guide: Badly Behaving Trees

Circumference — 1.35m
Tree on Level Ground

Circumference — 1.35m
Tree on Slope

Circumference — 1.35m
Leaning Tree

Circumference — Measure Here — 1.35m
Tree with Branch or Deformity at Breast Height

Circumference — 1.35m
Tree Forked Below Breast Height

Circumference — 1.35m — Measure Here
Tree Forked Above Breast Height

GLOBE Carbon Cycle Tree Circumference Protocol adapted from USDA Forest Service DBH Protocol