Collecting Data

It is not practical to measure every tree in a forest, so foresters take samples and make estimates.

The sample plot is a 1/10th of an acre (radius=37.2 ft.). To calculate the volume of the tree we need to count the number of trees and measure their heights and diameters.

1. How many trees per acre? Make a guess! ________

______ number of trees in 1/10 acre plot

× 10 plots per acre

= ______ number of trees per acre

2. What is the average DBH (measured at 4.5 ft. above the ground)? Make a guess! ________

1.______ 2.______ 3.______ 4.______ 5.______ 6.______ 7.______

8.______ 9.______ 10.______ 11.______ 12.______ 13______ 14______

15.______ 16.______ 17.______ 18.______ 19.______ 20.______ 21.______

This activity is continued on the next page.
3. What is the average tree height? - Make a guess! ________ Actual height: ________
   Practice with a clinometer!

4. What is the average bf per tree? ________
   Use the Timber Volume Table!

5. What is the tree volume (bf) in the plot? 6. What is the value of the trees on the plot and acre?
   ________ number of trees in plot ________ bf per plot
   × ________ average bf per tree × $0.60 per bf (= $600 per thousand bf)
   = ________ bf per plot = $_______ per plot
   × 10 plots per acre
   = $_______ per acre

7. How can you tell the age of the trees? - Make a guess! ________
   Practice with reading a core sample!

   Count the years it took to grow an inch ________ Actual Age: ________ years

_______ total DBH (What is the total DBH of trees measured in the 1/10th acre plot?)

÷_______ number of trees

= ________ average DBH

Thinking about Management

1. If you were going to thin this forest (taking out 1/4 of the trees), how would you select what trees to harvest?

2. Can you find an example of a tree that is suppressed with other trees outcompeting it for resources?