Timber

Volunteer Name: _____

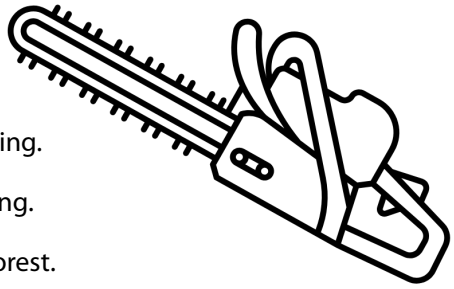
Profession: _____

Employer: _____

Managed forests can produce wood sustainably because landowners:

- Regrow forests after harvesting
- Use science and data to make management decisions

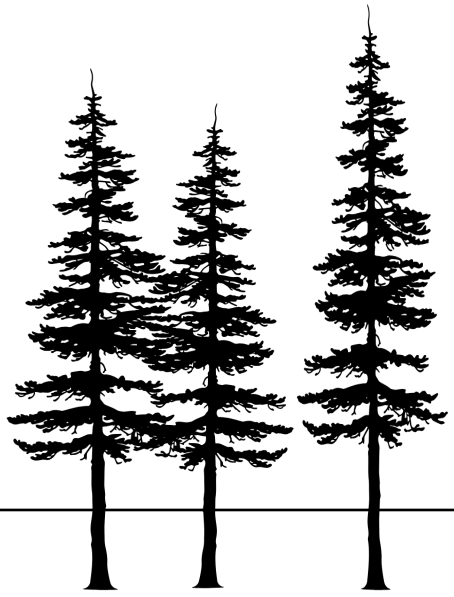
1 **Oregon's Forest Practices Act** has rules to ensure timber is harvested sustainably. The rules include (fill in the blanks!):



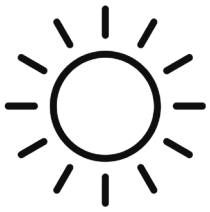
- Clearcuts cannot exceed 120 acres.
- Landowners must replant clearcuts within 2 years of harvesting.
- Young trees must be free-to-grow within 6 years of harvesting.
- At least 200 trees per acre must survive and grow into a new forest.

2 What is the **Northwest's most common tree** and the dominant tree on this tree farm?

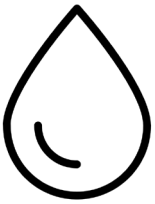
Douglas-fir .



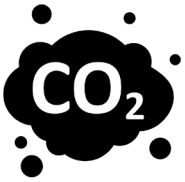
3 Put a check (✓) by the **resources** trees need to grow:



☑ Sunlight



☑ Water



☑ CO_2

☑ Nutrients

COLLECTING DATA

Foresters collect data so they can make science-based management decisions and determine how much money the trees are worth. Sampling is used to estimate: 1) the volume of wood in a timber stand and 2) how fast the trees are growing.

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

4

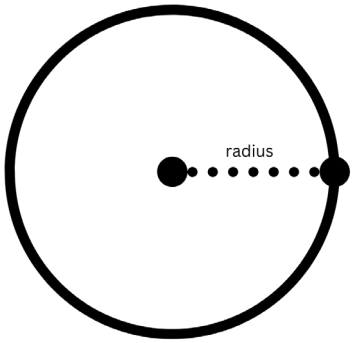
Trees per Acre

How many trees per acre? Make a guess! _____

_____number of tree in 1/10th acre plot

x10 plots per acre

=_____number of trees per acre



5

Average Diameter at Breast Height (DBH)

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

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

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

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

Circle the largest and smallest DBH measured in the plot. Then, find the average DBH for the plot:

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

÷_____ number of trees

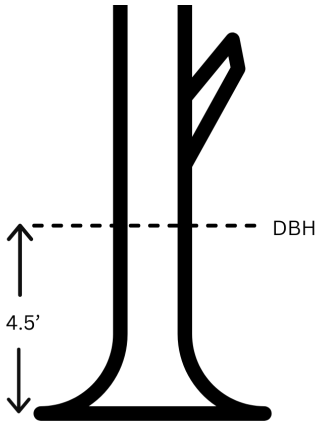
=_____ average DBH

Circle the correct answers to the statements below:

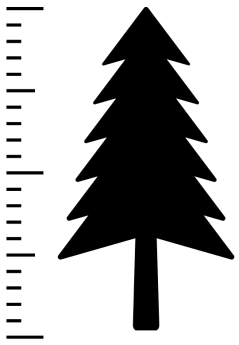
To calculate average DBH, foresters should only measure the largest trees.
TRUE (FALSE)

The more trees that are measured, the more accurate the data collected.
(TRUE) FALSE

One plot will provide all the data needed to evaluate a timber stand of any size.
TRUE (FALSE)



6



Tree Height

How tall are the trees in this stand?

Make a guess!

_____ft.

Actual height of a tree

_____ft.

7

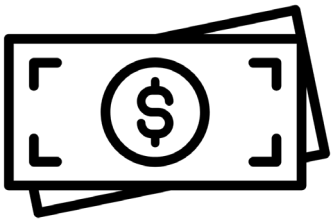
Board Feet (BF)

Choose a tree in the plot. Determine the BF for that tree using its DBH, the tree height measured in #6, and the Timber Volume Table.

_____ BF

8

Monetary Value



What is the value of that tree?

Make a guess!

$_____

Now, calculate the actual value if wood is selling for $0.65 per board foot.

_____BF x $0.65= $_____

Put a check (✓) next to the factors that influence the monetary value of a tree:

☑ Defects ☑ Form ☑ Species

9

Tree Growth

How old are the trees in this plot?

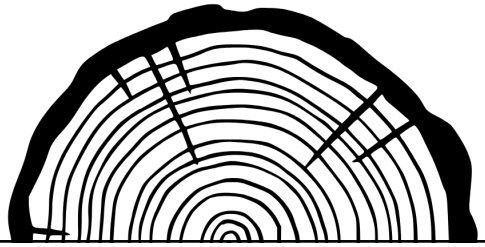
Make a guess! _____ years

Actual Age _____ years

Now, practice reading a core sample to evaluate tree growth.

Count the years it took to grow an inch.

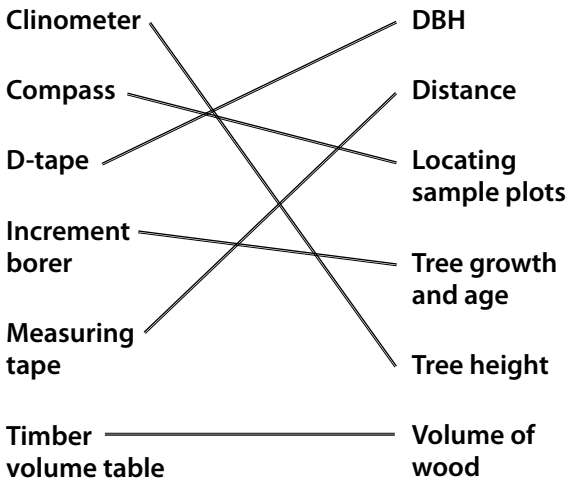
_____ years.



10

Tool Review

Draw a line from the tool to how it's used to collect sample plot data in a timber stand:



DISCUSSION QUESTIONS:

1. How likely is it that a fire will start, grow, and spread into a wildfire in a managed forest like this one?
2. Trees need CO_2 to survive. Knowing this, how does growing trees and using wood products benefit the planet?