



## Forestry

1. Prerequisite: Tree Honor
2. Learn the proper use of the following common forestry tools and practice using them on trees in a forest. Record the information for each tree giving also the common name of each tree:
  - a. DBH (diameter at breast height) tape – measure the diameter of trees (or measure the tree circumference and calculate the diameter)
  - b. Clinometer or Tangent height gauge – measure the height of trees
  - c. Increment borer – count the growth rings to determine age
  - d. Prism – estimate the basal area per acre or hectare
3. Use the information gathered in #2 to determine the board foot volume of the trees in the forest you measured.
4. Calculate the basal area of a tree from the diameter (dbh) or circumference measurement. What is basal area per acre or hectare?
5. Study five tree species important to forestry in your area and give the following information about each:
  - a. common and scientific name
  - b. range of tree
  - c. height and diameter of tree at maturity
  - d. common use and importance of tree
  - e. habitat of tree, forest zone, and elevation
6. List the benefits of forest to the environment, water quality, air quality, wildlife, and recreation.
7. List the uses of wood produced in the forests in your area, and which tree species are important for each use.
8. Discover & Discuss the following: How are forests managed to reduce the damage from insects and disease? What factors influence fire behavior? Considering that wildfires produce both benefits and destruction, what treatments could reduce wildfire severity?
9. Do one of the following in forest regeneration:
  - a. Tour a forest seedling nursery
  - b. Plant forest seedlings or forest seed
10. Explore the biblical stories in Genesis 1-3 and Revelation 22 that talk about the tree of life. In your discussion, discover the role of trees in God's perfect environment, and our responsibility to take care of our environment.

### References:

Silvics of North America, Agriculture Handbook 654 (on the internet at: [www.na.fs.fed.us](http://www.na.fs.fed.us) under the publications tab)

Forestry Suppliers, Inc., 205 West Rankin Street, Jackson, MS 39201 (800-647-5368) (on the internet at: [forestry\\_suppliers.com](http://forestry_suppliers.com))

### Skill Level 2

## Forestry, Advanced

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1. Prerequisites: AY Tree Honor; Forestry Honor.
2. Define the following terms:

a. basal area.	e. selective cutting	i. crown	m. rotation
b. bole	f. shelterwood cut	j. pulpwood	n. sawtimber
c. DBH (diameter)	g. silviculture	k. succession	o. climax forest
d. Seed tree cut	h. canopy	l. thinning	p. habitat
3. Study five tree species important to forestry in your area and give the following information about each:
  - a. common and scientific name
  - b. range of tree
  - c. height and diameter of tree at maturity
  - d. economic importance of tree
  - e. important pests (insects, disease, etc.) of the tree
  - f. habitat of tree, forest zone, and elevation
  - g. common age of rotation (harvesting) for various uses
4. What methods are used to insure reforestation of a harvest area?
5. On a map of your country, draw the forest areas and indicate the types of forest in each area.
6. Write a short report (250 words or more) on the importance of the forests in your country. Include such topics as the importance of wood for timber, paper (pulp), and firewood; wildlife habitat; livestock grazing; good water quality; and recreation for people.
7. Tour one of the following, or write a report with diagrams about operations.

a. Sawmill	b. Pulp mill	c. Furniture factory
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8. Do a forest survey in a typical forest for your area. Using a prism, mark all trees large enough to be counted “in”, and record the following data for each “in” tree, and record the basal area by species for the whole plot:
  - a. common and scientific name
  - b. DBH
  - c. Height
  - d. Age (determined by increment borer)
9. Participate in a reforestation project

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### Skill Level 3