# Using PLT to Fulfill Boy Scout Forestry Merit Badges

**Agenda: pages 1 and 2**

**Forestry Merit Badge Requirements on pages 3 and 4**

**Audience: Boy Scouts**

**Location, Date**

|  |  |
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| 8:15 am | Welcome, Introductions, nametags  **We All Need Trees** – forest products guessing game.  Review [We All Need Trees poster](https://www.dnr.state.mn.us/forestry/education/tree-benefits/poster.html) of forest products. https://www.dnr.state.mn.us/forestry/education/tree-benefits/poster.html  Has anyone already started a field notebook of tree species?  Has anyone read the Forestry Merit Badge pamphlet? |
| 8:30 am | Look at forest stewardship plan (DNR forester)   * type of forest, mgmt. goals, forestry techniques * Identify our local watershed.   Hike to recent timber harvest   * Even or uneven-aged management? * Ring patterns, age, growth rate of stumps?   **Oh Deer** (Project WILD lesson on carrying capacity)   * Erosion control planting   + Invasive, non-native, what else could we plant here? * Buck rubs, signs of beaver, woodpecker, tree den signs * Beaver damage (as sign of overpopulation) * Beetle damage in ash trees   Anything we see related to wildlife habitat, fisheries habitat, clean water.  Discuss: based on what we’ve seen, record. Fill out journals |
| 11 am | Back indoors   * Dendro relay (**Name That Tree Speedy Relay variation**), using posters for reference * Start leaf, seed, twig collections * [Beginner’s Guide to Minnesota Trees:](https://avid.dl.umn.edu/sites/g/files/pua4701/f/media/beginners-guide-minnesota-trees.pdf) <https://avid.dl.umn.edu/sites/g/files/pua4701/f/media/beginners-guide-minnesota-trees.pdf> |
| noon | Lunch |
| 1:15 pm | Continue #1 using foresters, trees on site, and reference books. Also using Gazetteer and maps – identify home watershed |
| 2 pm | CAREERS Interview foresters in four small groups  (Bring some forestry tools for show and tell. [MNDNR Forestry Careers website](https://www.dnr.state.mn.us/forestry/careers/index.html) https://www.dnr.state.mn.us/forestry/careers/index.html |
| 2:20 pm | FIRE Consequences of wildfire and absence of fire  **p. 106 and 107 Forest Ecology module**, fire posters   * Fire seasons as they relate to weather * Burn Law * Role of prescribed burning * Have we seen any areas today that would benefit from fire? * (bring photos of areas that could benefit from burning) * What should we do if we discover a fire? * **Living With Fire** – concept of fireline |
| 3 pm | **Renewable or Not?** sustainable management |
| 3:30 pm | Urbanization – Use aerial photos of local area (**variation of Places We Live #3**) |
| 3:45 pm | Complete notebooks, tree ID collections.  Facilitators: read the scout’s journals and initial blue cards for parts of merit badge that are completed satisfactorily. |
| 4:45 pm | Dismiss |

# FORESTRY MERIT BADGE REQUIREMENTS (We will do everything in blue.)

1. Prepare a field notebook, make a collection, and identify 15 species of trees, wild shrubs, or vines in a local forested area. Write a description in which you identify and discuss the following:
2. The characteristics of leaf, twig, cone, or fruiting bodies
3. The habitat in which these trees, shrubs or vines are found.
4. The important ways each tree, shrub, or vine is used by humans or wildlife and whether the species is native or was introduced to the area. If it is not native, explain whether it is considered invasive or potentially invasive.
5. Do ONE of the following:
6. Collect and identify wood samples of 10 species of trees. List several ways the wood of each species can be used.
7. Find and examine three stumps, logs, or core samples that show variations in the growth rate of their ring patterns. In the field notebook you prepared for requirement 1, describe the location or origin of each example (including elevation, aspect, slope, and the position on the slope), and discuss possible reasons for the variations in growth rate. Photograph or sketch each example.
8. Find and examine two types of animal, insect, or damage on trees. In the field notebook you prepared for requirement 1, identify the damage, explain how the damage was caused, and describe the effects of the damage on the trees. Photograph or sketch each example.
9. Do the following:
   1. Describe contributions forests make to:
10. Our economy in the form of products.
11. Our social well-being, including recreation
12. Soil protection and increased fertility.
13. Clean water.
14. Clean air. (carbon cycling, sequestration)
15. Wildlife habitat
16. Fisheries habitat
17. Threatened and endangered species of plants and animals
18. Tell which watershed or other source your community relies on for its water supply.
19. Describe what forest management means, including the following:
    1. Multiple-use management
20. Sustainable forest management
21. Even-aged and uneven-aged management and silvicultural systems associated with each type.
22. Intermediate cuttings.
23. The role of prescribed burning and related forest management practices.
24. With your parent's and counselor's approval, do ONE of the following:
    1. Visit a managed public or private forest area with its manager or a forester familiar with it. Write a brief report describing the type of forest, the management objectives, and the forestry techniques used to achieve the objectives.
    2. Take a trip to a logging operation or wood-using industrial plant and write a brief report describing:
       1. The species and size of trees being harvested or used and the location of the harvest area or manufacturer.
       2. The origin of the forest or stands of trees being utilized (e.g., planted or natural)
       3. The forest's successional stage. What is its future?
       4. Where the trees are coming from (land ownership) or where they are going (type of mill or processing plant)
       5. The products that are made from the trees
       6. How the products are made and used.
       7. How waste materials from the logging operation or manufacturing plant are disposed of or utilized.
    3. Take part in a forest-fire prevention campaign in cooperation with your local fire warden, state wildfire agency, forester, or counselor. Write a brief report describing the campaign, how it will help prevent wildfires, and your part in it.
25. Do the following:
    1. Describe the consequences to forests that result from FIVE of the following elements: wildfire, absence of fire, insects, tree diseases, air pollution, overgrazing, deer or other wildlife overpopulation, improper harvest, and urbanization.
    2. Explain what can be done to reduce the consequences you discussed in 6a.
    3. Describe what you should do if you discover a forest fire and how a professional firefighting crew might control it. Name your state or local wildfire control agency.
26. Visit one or more local foresters and write a brief report about the person (or persons). Or, write about a forester's occupation including the education, qualifications, career opportunities, and duties related to forestry.