Forestry Merit Badge Program
Cub Adventure Camp, Goochland County
March 1, 2008

8:15 a.m. Welcome, Introductions,nametags
We All Need Trees – forest products guessing game. (Kathleen)
I will try to bring products/labels from the tree species on site.
Review posters of forest products.

Has anyone already started a field notebook of tree species?
Has anyone read the Forestry MB pamphlet?

8:30 a.m. Look at management plan for Brady Saunders. (Chuck)
5A – type of forest, mgmt. goals, forestry techniques
Identify our local watershed. (Chuck)
Hike to recent timber harvest near Retreat Field
4C – even or uneven-aged mgmt?
2B – ring patterns, age, growth rate of stumps?
Open area on the way to Lake Dillon – **Oh Deer** (carrying capacity) (Lisa)
(need graph paper) 6A
Lake Dillon Trail
3A3 – scotchbroom erosion control planting (Kathleen)
Invasive, non-native, what else could we plant here?
2C- buck rubs, signs of beaver, woodpecker, tree den signs
6A – beaver damage (as sign of overpopulation)
6A – beetle damage in Virginia pine (Dave)
3a4,6,&7 – anything we see related to wildlife habitat, fisheries habitat, clean water.
Campfire circle – Discuss 3a, 1-8 based on what we've seen, record.
Fill out journals for numbers listed. Initial blue cards.

11:00 a.m. back at Nature Center
Dendro relay (**Name That Tree Speedy Relay variation**), using posters for reference (Lisa)
Start leaf, seed, twig collections

11:45 a.m. leave for lunch

1:15 p.m. Continue #1 using foresters, trees on site, and reference books
Also do 3B using Gazetteer and maps – identify home watershed

2:00 p.m. CAREERS #7 Interview foresters in four small groups (all of us lead a group)
(Bring some forestry tools for show and tell. Lisa will bring Careers brochures.)

2:20 p.m. FIRE 6A and 3A – consequences of wildfire and absence of fire
Lisa – **p. 106 and 107 Forest Ecology module**, fire posters

Chuck & Dave – Isabel damage, fire seasons as they relate to weather
4 p.m. Burn Law
4e – role of prescribed burning
Have we seen any areas at Brady Saunders that would benefit from fire?
(bring photos of areas that could benefit from burning?)
6C – What should we do if we discover a fire? (Kathleen)
Living With Fire – concept of fireline (Lisa or whoever)

3:00 p.m. **Renewable or Not?** (Kathleen & Lisa) 4b sustainable management
Discuss other topics in #4

3:30 p.m. Urbanization – (Lisa) using aerial photos of Potomac Falls high school
(**variation of Places We Live #3**)

3:45 p.m. Complete MB notebooks, tree ID collections. (Everybody help them.)

Each of us will need to read the scout's journals and initial blue cards for parts of MB that are completed satisfactorily.

4:45 p.m. Dismissed for dinner. (If they are not already done and gone.)

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:
    a. The characteristics of leaf, twig, cone, or fruiting bodies
    b. The habitat in which these trees, shrubs or vines are found.
    c. 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.

2. Do ONE of the following:
    a. Collect and identify wood samples of 10 species of trees. List several ways the wood of each species can be used.
    b. 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.
    c. 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.

3. Do the following:
    a. Describe contributions forests make to:
        1. Our economy in the form of products.
        2. Our social well-being, including recreation
        3. Soil protection and increased fertility.
        4. Clean water.
        5. Clean air. (carbon cycling, sequestration)
        6. Wildlife habitat
        7. Fisheries habitat
        8. Threatened and endangered species of plants and animals
    b. Tell which watershed or other source your community relies on for its water supply.

4. Describe what forest management means, including the following:
    a. Multiple-use management
    b. Sustainable forest management
    c. Even-aged and uneven-aged management and silvicultural systems associated with each type.
    d. Intermediate cuttings.
    e. The role of prescribed burning and related forest management practices.

5. With your parent's and counselor's approval, do ONE of the following:
    a. 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.
    b. 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.

c. 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.

6. Do the following:

a. 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.

b. Explain what can be done to reduce the consequences you discussed in 6a.

c. 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.

7. 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.