

Soil and Water Conservation Merit Badge Prework

- The Soil and Water Conservation merit badge is a four-hour session.
- Scouts are required to wear masks and follow social distancing recommendations both in the classroom and outside.
- Scouts must submit prework to their counselor by email ahead of the merit badge session. Counselors will not collect physical copies of prework during the class. Please note that we are unable to open Google Docs on Fairfax County Government computers. Prework requirements must be sent as an attachment.
- Counselors will provide Blue Cards that have been signed and completed before the merit badge session.
- Water fountains will not be available
- Scouts should bring a snack and plenty of water. Please no red liquids.
- Scouts will be outside. Please wear sunscreen, insect repellent, and appropriate shoes.

Prework

1. Do the following:

- (a) Tell what soil is. Tell how it is formed.
- (b) Describe three kinds of soil. Tell how they differ.
- (c) Name the three main plant nutrients in fertile soil. Tell how they can be put back when used up.

5a. Make a drawing to show the hydrologic cycle.

6c. Tell what is meant by “primary water treatment,” “secondary waste treatment,” and biochemical oxygen demand.”

6d. Make a drawing showing the principles of complete waste treatment.

7. Do TWO of the following:

- (a) Make a trip to TWO of the following places. Write a report of more than 500 words about the soil and water and energy conservation practices you saw. (1) An agricultural experiment; (2) A managed forest or woodlot, range, or pasture; (3) A wildlife refuge or a fish or game management area; (4) A conservation-managed farm or ranch; (5) A managed watershed; (6) A waste-treatment plant; (7) A public drinking water treatment plant; (8) An industry water use installation; (9) A desalinization plant.
- (b) Plant 100 trees, bushes, and/or vines for a good purpose.
- (c) Seed an area of at least $\frac{1}{5}$ acre for some worthwhile conservation purpose, using suitable grasses or legumes alone or in a mixture.

- (d) Study a soil survey report. Describe the things in it. On tracing paper over any of the soil maps, outline an area with three or more different kinds of soil. List each kind of soil by full name and map symbol.
- (e) Make a list of places in your neighborhood, camps, school ground, or park that have erosion, sedimentation, or pollution problems. Describe how these could be corrected through individual or group action.
- (f) Carry out any other soil and water conservation project approved by your merit badge counselor.

For help or questions, contact Emily Cole at Emily.cole@fairfaxcounty.gov, or at (703) 941-1065.