

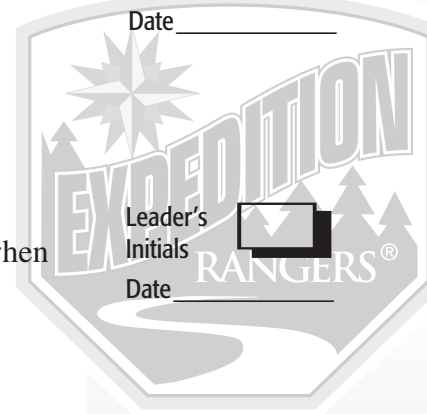


# Soil and Water Conservation Merit

1. Explain the statement “Soil is the most important mineral in the world.”
2. Complete the following:
  - a. Define *soil*.
  - b. Describe three kinds of soil and how they are different.
  - c. Name the three major nutrients in soil and how they can be replaced when missing from the soil.
3. Complete the following:
  - a. Define *soil erosion*.
  - b. Explain the importance of preventing soil erosion.
  - c. Draw or show in photographs two kinds of soil erosion.
4. Complete the following:
  - a. Define three soil conservation practices.
  - b. Draw or photograph three soil conservation practices. Indicate the effect each practice is engineered to achieve.
5. Complete the following:
  - a. Define a *watershed*. Describe the largest watershed in North America. Describe the elements of the smallest watershed.
  - b. Identify a watershed by outlining it on a contour map.
6. Complete the following:
  - a. Draw the water cycle.
  - b. Demonstrate two of the following interactions between water and soil.
    - condensation
    - percolation
    - evaporation
    - transpiration
    - runoffUse a terrarium with a cover for condensation and a container of dry soil (large jar or aquarium) for the other interactions.

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- c. Explain how the removal of vegetation affects a watershed.
- d. Explain how a forest, prairie, or cultivated land affects usable water.

7. Complete the following:

- a. Explain the term *water pollution*.
- b. List some common causes of water pollution.
- c. Describe some common effects of water pollution on living things.
- d. Show in a drawing the principles of complete wastewater treatment including primary treatment and secondary treatment.

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8. Choose TWO of the following:

- a. Visit ONE of the following places. Write a report of at least three hundred words about the soil and water conservation practices you observed.
  - A managed forest/woodlot or prairie/pasture
  - A wildlife refuge or a fish/game management area
  - A farm or ranch where conservation practices are in place
  - A waste treatment plant
  - A water treatment plant
- b. Plant fifty erosion control plants where erosion is a problem. You may complete this as a working member in a patrol project.
- c. Seed an area of at least twenty-five hundred square feet using native grasses and flowering plants. This seeding should be designed to meet an identified soil conservation need. You may complete this as a working member in a patrol project.
- d. Outline on a soil survey map an area that has three or more soil types. Identify each soil type by name and map symbol.
- e. Make a map of your neighborhood, identifying areas of erosion, sedimentation, or pollution. Outline a plan for correcting each.
- f. Complete any other soil and water conservation project that is approved by your commander.

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