

# Environmental Conservation

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1. What is the difference between ecology and environmental conservation?
2. Write a 500 word essay on how the increase in human population is threatening our existence on earth.
3. What does the term “death” of a lake or river mean? Is there a lake or river in your area or country which is classified as “dead”?
4. Carry out a stream investigation of a small stream flowing through or near your home town. Check for the following:
  - a. Signs of Purity
    - (1) Abundance of small fish present
    - (2) Water visually clear and fresh smelling
    - (3) Stream banks covered with vegetation down to water's edge.
    - (4) Small amounts of green algae in water (light green in color)
    - (5) Some aquatic plants present, such as cattails, arrow-leaf, or pickerel weed.
    - (6) Turtles present in the stream
    - (7) Crayfish under stones in the stream
    - (8) Sandbars covered with growing weeds indicating relatively stable water level
  - b. Signs of Stream Deterioration and Death
    - (1) Large masses of blue-green algae present (dark green in color)
    - (2) Scoured banks from high water level during storms
    - (3) Putrid smell of the water
    - (4) Detergent foam present
    - (5) Trash sticking out of mud and sand bars along the stream
    - (6) Water loaded with silt
    - (7) No aquatic insects or fish present
    - (8) Presence of raw sewage
    - (9) Presence of oil on the surface of the water
    - (10) No salamanders or frogs under rocks along stream bank
    - (11) Stores or small factories dumping their wastes into the stream
5. If your stream is showing some of the above signs of death, do something about cleaning it up. Contact the closest government agency to ask what you and/or your group can do to help improve the stream. Organize a group of young people to help in cleaning the trash along your stream. If possible, get businesses to help in your campaign.
6. Make a visit to the city or county trash dump to see how this waste is handled. Find out the following:
  - a. How many tons of trash are dumped daily? Yearly?
  - b. What attempts are made to recycle any of this trash?
  - c. Is any of the trash burned or is all of it buried?
  - d. What is the cost per person per year for handling the trash?
  - e. What happens to junked autos in your area?
7. Make a visit to the nearest sewage plant. Draw and label a detailed diagram of what happens to the liquid and solid wastes from the time they come into the plant until they leave. In what form do they leave? Is any further use made of this waste?

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8. Visit the nearest water purification plant. Construct a flow diagram of the steps in water purification from the time the water enters the plant until it leaves for distribution to homes and stores. Through reading and discussion with water works officials, determine whether water resources in the future are going to be enough to meet the demand.
9. Read and write a book report on an environment issues book such as Rachel Carson's *Silent Spring*.
10. What are rare and endangered species? Determine what efforts are being put forth to protect such species in your area. What can you do to help? Write a 300-500 word paper on your ideas.

## **Skill Level 2**

**Original Honor 1973**