



Please contact the Learning Center Coordinator and let us know you are interested in the Scout Ranger Program at Flight 93 National Memorial. We will answer questions and provide further information to help you work toward the patch or certificate.

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Environmental Science



Requirements:

2. Define the following terms: population, community, ecosystem, biosphere, symbiosis, niche, habitat, conservation, threatened species, endangered species, extinction, pollution prevention, brownfield, ozone, airshed, nonpoint source, hybrid vehicle, fuel cell.

3.A. (3) Discuss what is an ecosystem. Tell how it is maintained in nature and how it survives.

B. (2) Record the trips taken, mileage, and fuel consumption of a family car for seven days and calculate how many miles per gallon the car gets. Determine whether any trips could have been combined (“chained”) rather than taken out and back. Using the idea of trip chaining, determine how many miles and gallons of gas could have been saved in those seven days.

D. (3) Photograph an area affected by erosion. Share your photographs with your counselor and discuss why the area has eroded and what might be done to help alleviate the erosion.

E. (1) Do research on one endangered species found in your state. Find out what its natural habitat is, why it is endangered, what is being done to preserve it, and how many individual organisms are left in the wild. Prepare a 100-word report about the organism, including a drawing. Present your report to your patrol or troop.

G. (1) Using photographs or illustrations, point out the differences between a drone and a worker bee. Discuss the stages of bee development (eggs, larvae, pupae). Explain the pollination process, and what propolis is and how it is used by honeybees. Tell how bees make honey and beeswax, and how both are harvested. Explain the part played in the life of the hive by the queen, the drones, and the workers.

G. (2) Present to your counselor a one-page report on how and why honeybees are used in pollinating food crops. In your report, discuss the problems faced by the bee population today, and the impact to humanity if there were no pollinators. Share your report with your troop or patrol, your class at school, or another group approved by your counselor.

G. (3) Hive a swarm OR divide at least one colony of honeybees. Explain how a hive is constructed.

4.A. Choose two outdoor study areas that are very different from one another. For both study areas: mark off a plot of 4 square yards in each study area and count the number of species found there. Estimate how much space is occupied by each plant species and the type and number of non-plant species you find. Write a report that adequately discusses the biodiversity and population density of these study areas. Discuss your report with your counselor.

5. Using the construction project provided or a plan you create on your own, identify the items that would need to be included in an environmental impact statement for the project planned.

6. Find out about three career opportunities in environmental science. Pick one and find out the education, training, and experience required for this profession. Discuss this with your counselor and explain why this profession might interest you.