

## BOONE TRAILS DISTRICT

### ENVIRONMENTAL SCIENCE SKILL CENTER 2008

**When:** Saturday, May 3, 2008

**Where:** Sent with registration confirmation

<b>Time:</b> Registration	8:00 am
Orientation	8:15 am
Sessions 1-3	8:30 am
Lunch	11:35 am
Sessions 4 & 5	12:05 pm
Closing	1:20 pm
End	1:30 pm

**Fee:** \$1.00 (Due at registration on May 3)



**Registration: Scout must be Second Class rank or above**  
**Center will be limited to first 50 Scouts to register**  
**All Scouts must be pre-registered – No walk-ins will be accepted**  
**Pre-Registration Deadline Is April 20, 2008**  
***Only ONE registration form will be accepted per Unit. If there is a waiting list then troops will be limited to 5 per troop. Boone Trails District has priority.***

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- Environmental Science Merit Badge requirements 1, 2 and 6 will be covered in the skill center. Requirements 3, 4 & 5 will be discussed, but the Scout will have to complete them outside the skill center.
  - All Scouts must do the following prior to the skill center:
    - Read the merit badge book thoroughly. Bring completed Worksheet.
  - Each Scout should bring with him:
    - The merit badge book
    - Paper and pencil
    - A merit badge card signed by his Scoutmaster
    - A sack lunch and drink
    - Chair
    - The Completed Worksheet attached or found at [usscouts.org](http://usscouts.org)
  - All sessions will be held outside. Bring rain gear.
  - All Scouts must be in full field uniform and each unit must have a leader present for the entire session.



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The Unit Leader or troop advancement chairman should send e-mail registration to:  
[dpelikan351@charter.net](mailto:dpelikan351@charter.net) E-mail must include: Leader's name, Leader's phone number, each Scout's name and each Scout's rank.



# Environmental Science

## Merit Badge Workbook

This workbook can help you organize your notes but you still need to read the merit badge pamphlet (book).  
Requirements revised: 2006, Workbook updated: January 2008.

Scout's Name: \_\_\_\_\_ Unit: \_\_\_\_\_

Counselor's Name: \_\_\_\_\_ Counselor's Ph #: \_\_\_\_\_

### 1. Make a timeline of the history of environmental science in America.

1500	1600	1700	1800	1900	2000

Identify the contribution made by the Boy Scouts of America to environmental science. Include dates, names of people or organizations, and important events.

### **Date Person or Organization Event**


### 2. Define the following terms:

population, \_\_\_\_\_

community, \_\_\_\_\_

ecosystem, \_\_\_\_\_

biosphere, \_\_\_\_\_

symbiosis, \_\_\_\_\_

niche, \_\_\_\_\_

habitat, \_\_\_\_\_

conservation, \_\_\_\_\_

threatened species, \_\_\_\_\_

endangered species, \_\_\_\_\_

extinction \_\_\_\_\_

pollution prevention, \_\_\_\_\_

**brownfield,** \_\_\_\_\_

**ozone,** \_\_\_\_\_

**watershed,** \_\_\_\_\_

**airshed,** \_\_\_\_\_

**nonpoint source,** \_\_\_\_\_

**hybrid vehicle,** \_\_\_\_\_

**fuel cell.** \_\_\_\_\_

**3. Do ONE activity in EACH of the following categories (using the activities in this pamphlet as the bases for planning and carrying out your projects):**

**A. Ecology**

1. Conduct an experiment to find out how living things respond to changes in their environments. Discuss your observations with your counselor. **-OR-**

2. Conduct an experiment illustrating the greenhouse effect. Keep a journal of your data and observations. Discuss your conclusions with your counselor. **-OR-**

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

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**B. Air Pollution**

1. Perform an experiment to test for particulates that contribute to air pollution. Discuss your findings with your counselor. **-OR-**

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. **-OR-**

3. Explain what is acid rain. In your explanation, tell how it affects plants and the environment and the steps society can take to help reduce its effects.

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**C. Water Pollution**

1. Conduct an experiment to show how living things react to thermal pollution. Discuss your observations with your counselor. **-OR-**





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-OR-

*b. Make at least three visits to each of the two study areas (for a total of six visits), staying for at least 20 minutes each time, to observe the living and nonliving parts of the ecosystem.*

*Space each visit far enough apart that there are readily apparent differences in the observations. Keep a journal that includes the differences you observe. Then, write a short report that adequately addresses your observations, including how the differences of the study areas might relate to the differences noted, and discuss this with your counselor.*

**Visit 1 Date:** \_\_\_\_\_ **Time Started:** \_\_\_\_\_ **Time Ended:** \_\_\_\_\_

Observations of living parts: \_\_\_\_\_

Observations of nonliving parts: \_\_\_\_\_

Differences noted: \_\_\_\_\_

**Visit 2 Date:** \_\_\_\_\_ **Time Started:** \_\_\_\_\_ **Time Ended:** \_\_\_\_\_

Observations of living parts: \_\_\_\_\_

Observations of nonliving parts: \_\_\_\_\_

Differences noted: \_\_\_\_\_

**Visit 3 Date:** \_\_\_\_\_ **Time Started:** \_\_\_\_\_ **Time Ended:** \_\_\_\_\_

Observations of living parts: \_\_\_\_\_

Observations of nonliving parts: \_\_\_\_\_

Differences noted: \_\_\_\_\_

Then, write a short report that adequately addresses your observations, including how the differences of the study areas might relate to the differences noted, and discuss this with your counselor. \_\_\_\_\_

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\_\_\_\_\_  
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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.

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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. \_\_\_\_\_

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