

## **INTRODUCTION**

All people, regardless of where they live, are resource users. Many, however, do not understand the origins of the resources they use and depend on. Urban dwellers, especially, are often separated from direct experiences that lead to an acquaintance or understanding of natural resources. Without knowledge or understanding of human impact, both harmful and beneficial, we will continue to experience conflict and confusion over the environment. This activity is only a basic introduction to the fascinating knowledge of the Earth around us!

## **THE ACTIVITIES**

## **TIME REQUIRED**

A Resource of  
Many Names

4 hours with discussion

Resource  
Management  
and Attitudes

3 hours plus 8 minutes

## **COMBINING THE ACTIVITIES**

These two activities can be done singly. The first activity provides a foundation for the second activity and, if both activities are completed, maximum learning will be experienced by doing the activities in the order presented.

## **CURRICULUM RELATIONSHIPS**

### Social Studies

1. Explore landscape architect Ian McHarg's system of resource overlays. How has that technique evolved in the last 25 years? Explain how this technique enhanced our understanding of resource management.
2. Follow a local environmental issue. Collect newspaper articles and other information, interview experts and officials, attend public meetings or participate in the planning. Then prepare a fact sheet, briefing paper, or survey to help your community bring the issue to closure.
3. Explore possible work-study commitments with resource management agencies at the local, state, and federal levels.
4. Include resource management agencies in career explorations, as classroom speakers, or at career fairs or days.

### Science



1. Get involved in a school environmental issue, even if it is only locating a site for playground equipment. Explore and offer alternative(s) for managing the site.
2. Compare the Scientific Method of Problem Solving and the methods used for land-use planning. How are these methods the same, different? Indicate which steps are similar. Explain why you think this is.
3. Explore construction methods for a simple item such as a bench. What kinds of construction materials are available (include recycled plastic). Compare costs, etc. Try to build this item using several materials.

#### Mathematics

1. Find out how cost-benefit ratios are applied in environmental issues. Try to use this method on a local environmental issue.
2. Use newspaper advertisements to locate sources of natural resources which are used in building or construction. Compare sources for cost and services.

#### Language Arts

1. Write and illustrate a kids' guide to natural resource management.
2. Write articles for the classroom, school or local newspapers about natural resources and personal choice, management, "supermarket syndrome."
3. Read a book by Thor Heyerdahl such as Kon-Tiki. Write about his philosophy toward the Earth's resources as found in his book. Does this support the statement he made that is known as the supermarket syndrome.
4. Read other well-known naturalists' work such as John Muir, Sigurd Olson, and Aldo Leopold. Find statements that you feel have become conservation philosophy.
5. For elementary or middle-school students, add natural resource words to personal spelling lists.

#### Creative Arts

1. Create a collage or mobile of the different categories of resources discussed in the activities.
2. Create a series of baseball type cards on environmental issues, environmental heroes or environmental resources.



## **A "RESOURCE" OF MANY NAMES**

<b>CONCEPT</b>	Change, Interaction, System
<b>PRINCIPLE</b>	Natural resources are the basis for life. Rural dwellers are often aware of their dependence upon natural resources. Urban dwellers are often apart from the natural environment. These activities are designed to reacquaint all users with knowledge forgotten, taken for granted or possibly, never recognized.
<b>OBJECTIVE</b>	<ul style="list-style-type: none"><li>• The student will be able to define natural resource, renewable resource, non-renewable resource and identify their occurrences in their environment.</li><li>• The student will be able to trace resources used in everyday items to their original source in the environment.</li><li>• The student will be able to describe how he/she feels about resource use in their community.</li></ul>
<b>PREPARATION</b>	Gather materials needed. Take several walks in different directions from your school/site to ascertain what your students will see on their walks. If you plan to have students call, you will need telephone access. Prepare instructions for activities E and F ahead of time on flip chart, overhead transparency or poster board.
<b>MATERIALS NEEDED</b>	<ul style="list-style-type: none"><li>• Activity cards A- C for each participant.<ul style="list-style-type: none"><li>Activity A: <u>Analyze an Object</u></li><li>Activity B: <u>Classification of Natural Resources</u></li><li>Activity C: <u>Quantities of Natural Resources</u></li></ul></li><li>• Masking tape</li><li>• Markers in a variety of colors</li><li>• Flip-chart papers</li><li>• Local phone books for each group</li><li>• Pencils</li><li>• Natural objects such as rocks, shells, water, soil, antler, bird's nest, cocoon, spider web imprint, etc. Strive for variety and diversity. One object per participant.</li></ul>
<b>PROCESSES USED</b>	<ul style="list-style-type: none"><li>• Observe</li><li>• Use Numbers</li><li>• Hypothesize</li><li>• Define Operationally</li><li>• Formulate Models</li><li>• Communicate</li><li>• Classify</li><li>• Infer</li><li>• Predict</li><li>• Question</li></ul>
<b>TIME</b>	4 hours with discussion. Can break into two sessions after Activity C.







(Background: non-renewable resource - resources whose total physical quantity does not increase significantly with time. Thus with the total initial supply being limited in quantity, each use must diminish the total stock.

renewable resource - resources whose supply becomes available for use at different intervals in time. The use of present supply flows does not diminish future flows, and it is possible to maintain use indefinitely provided the use rate does not exceed flow rate. Renewable resources can be living organisms or soil, water or other resources which are closely associated with and affected by living organisms. Non-renewable resources are non-living materials such as minerals and fuels.)

### C. Reteive Data

Begin a discussion based on Activity B. Possible questions to use are:

- (a) What are some ways you can distinguish between renewable and non-renewable resources? (This helps students examine closer the attributes they used to classify objects.)
- (b) What values are there in distinguishing between renewable and non-renewable resources?
- (c) What makes a resource renewable or non-renewable?

### **TRANSITION**

Let's apply what we've learned in the last hour or so. Distribute Activity C. Go over the instructions with the group. Make sure they understand what they are supposed to do--especially what relative quantity means. With younger students, you may need to establish a relative quantity scale.





4. At the end of 15 minutes, groups display results. Each group has three minutes to explain their chart.
5. Summarize Activity C and previous discussion by asking groups to share their thoughts about the resources we use.
6. The next activity takes approximately one hour. Participants work in groups of two or three. Groups may change from previous activities. To each group, distribute local phone books and/or yellow pages.
7. Display the instructions for the next activity around the room. Tell them to work in small groups. This assignment will take about 60 minutes.

chart

Work in small groups. (60 minutes)

**Choose one natural resource from Activity C.  
Find out if this resource is available in the community.  
Where can it be bought? Where does it come from?  
What does it cost? etc—**

Note: This is an assessment of resource supplies in a community or area. If you have access to a telephone, you may want each group to call a few of the sources they have found. It is not necessary to call! Classroom teachers may expand on this by actually visiting a source; however, that drastically alters the time commitment. Exactly how this activity is conducted depends upon age of participants and their readiness to understand concepts of time and available resources.

### C. Retrieve Data

A discussion follows when this activity is complete. Possible questions are:

- (a) What did you discover about the natural resource you chose?
- (b) What methods did you use for gathering information?

### CLOSURE

Thor Heyerdahl wrote, "Modern man seems to believe he can get everything he needs from the supermarket and corner drugstore. He doesn't understand that everything has a source in the land or sea, and that he must respect these sources." How do you feel about this statement? This belief that everything comes from the supermarket has been termed the supermarket syndrome. In what way does the supermarket syndrome affect our attitudes and beliefs about natural resources?



## **RESOURCE MANAGEMENT AND ATTITUDES**

<b>CONCEPT</b>	Cause/Effect, Energy-Matter, Interaction, System, Perception
<b>PRINCIPLE</b>	Beginning with resources and looking at related environmental issues, one can start making some decisions about their use of resources. A leap from personal decisions to natural resource management guidelines helps one understand that natural resource management is a complicated matter often thought about simplistically.
<b>OBJECT</b>	<ul style="list-style-type: none"><li>• The student will be able to identify patterns of resource use which involve urban environmental issues.</li><li>• The student will be able to identify the need for active natural resource management guidelines.</li><li>• The student will be able to develop a natural resource management plan using management guidelines.</li><li>• The student will be able to describe what he/she can do to improve resource utilization in his/her community.</li><li>• The student will be able to describe how he/she feels about natural resource management.</li></ul>
<b>PREPARATION</b>	Gather materials needed.
<b>MATERIALS NEEDED</b>	<ul style="list-style-type: none"><li>• Activity cards for Activity D: <u>Resource Management Issues</u>, E: <u>Issue Analysis</u>, F: <u>Use of Natural Resources</u>, G: <u>Management Guidelines</u></li><li>• Flip-chart and easel</li><li>• Markers in a variety of colors</li><li>• Highway maps of the state, 1/ group</li><li>• One master map</li><li>• Masking tape</li></ul>
<b>PROCESSES USED</b>	<ul style="list-style-type: none"><li>• Observe</li><li>• Question</li><li>• Interpret Data</li><li>• Communicate</li><li>• Predict</li><li>• Classify</li><li>• Hypothesize</li><li>• Infer</li></ul>
<b>TIME</b>	3 hours plus 8 minutes.



**DOING THE ACTIVITY** (indoors)

A. Set Stage:

We ended the previous session with a quote about the supermarket syndrome. We will now explore urban environmental issues and relate resource use to consumer attitude.

B. Procedure:

1. In the first activity, you and your group will identify five local urban environmental issues.

20 min.  
groups

**ACTIVITY D: Resource Management Issues**

Identify 5 urban environmental issues concerning natural resource utilization in this community. For each issue list the natural resources involved.

Issue	Natural Resources Involved
1. _____	_____ _____ _____
2. _____	_____ _____ _____
3. _____	_____ _____ _____
4. _____	_____ _____ _____
5. _____	_____ _____ _____

Choose one issue from above, and trace the natural resources involved back to their source in the environment.

Investigating Your Environment  
Natural Resources in an Urban Environment 

2. Ask each group to share their issue and the results of their tracing the resource back to its environmental source. Ask: How is the issue you have selected related to the supermarket syndrome?
3. Hand each participant Activity E. Ask them to work by themselves for the next 10 minutes to complete the activity. If it seems like they are done early, begin discussion. If more time seems needed, allot it.







3. Display instructions for the next activity. Make available pens, easel, paper, tape, etc. Encourage groups to use a visual aid with their presentation. Allow only 20 minutes for preparation. Each group presentation is only five minutes, but allow eight minutes for transition time.

chart

Work in groups. (20 minutes)

**Using the general management guidelines, develop a management plan for all the resource categories. Prepare a five minute presentation for your management plan including a visual display.**

### C. Retrieve Data

1. Conduct a discussion after all groups have presented and ask:
  - (a) What difficulties do natural resource managers have?
  - (b) What can be said about natural resource management in this present year?  
End the discussion with this statement: There is no such thing as a free lunch.  
How does this relate to natural resource use and management?

**CLOSURE** Display instructions for the next activity. Give participants 10 minutes to respond and ask them to respond to at least one of the following questions displayed.

- (a) What influence does the urban environment have on natural resource use?
- (b) What can we conclude about natural resource use today?
- (c) What can we conclude about resource management today?
- (d) How can we summarize our discussions and investigations?
- (e) What methods and processes did we use in our investigation?

Allow a brief time for statements or questions.

chart

**Describe in writing how you feel about our session today.  
Please take the time to answer one of the questions displayed.**







# ACTIVITY C: Quantities of Natural Resources

15 min.  
small groups

Take a walk down one block that is near this school/site. List all natural resources that have been used there. After each natural resource write how it is used, whether it is renewable or non-renewable, and the relative quantity of it on the block. Come back to the room for discussion after your survey is complete.

Natural Resource	How Used?	Renewable	Non-renewable	Relative Quantity



## ACTIVITY D: Resource Management Issues

20 min.  
groups

Identify 5 urban environmental issues concerning natural resource utilization in this community. For each issue list the natural resources involved.

Issue	Natural Resources Involved
1. _____ _____	_____ _____
2. _____ _____	_____ _____
3. _____ _____	_____ _____
4. _____ _____	_____ _____
5. _____ _____	_____ _____

Choose one issue from above, and trace the natural resources involved back to their source in the environment.



# ACTIVITY E: Issue Analysis

10 min.  
individual

Describe in writing 3 things you can do in your everyday life to overcome the supermarket syndrome.

Select the one you think would be your best contribution. Describe the benefits of this action:

a. Where you live: \_\_\_\_\_

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b. In your consumer habits: \_\_\_\_\_

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c. Other benefits: \_\_\_\_\_

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# ACTIVITY F: Use of Natural Resources

10 min.  
individual/groups

List some natural resources of this state and how they are used. Keep in mind the major products, industries and businesses of this state.

Natural Resources	How Used?



