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An Interdisciplinary Teachers Workshop - Illinois Beach State Park

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Illinois Coastal Zone Management Program

The Illinois Coastal Zone Management Program

Division of Water Resources
Department of Transportation

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COASTAL ZONE
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SOUVENIRS: AN INTERDISCIPLINARY TEACHERS WORKSHOP AT THE ILLINOIS BEACH STATE PARK

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ILLINOIS COASTAL ZONE MANAGEMENT PROGRAM

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

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INTRODUCTION

One of the prime objectives of the Illinois Department of Conservation is its dedication to the preservation, protection, and enhancement of the natural resources of the State of Illinois. Coincidentally, the Illinois Department of Transportation, through the Illinois Coastal Zone Management Program, has been delegated the responsibility of developing a management plan for the protection and enhancement of one of the most valuable resources of the State - Lake Michigan. Clearly, the similarity of goals provides many opportunities for inter-agency cooperation and planning with respect to this valuable resource for the mutual benefit of the citizens of the State.

One area which would benefit from such a relationship is Illinois Beach State Park, a six mile reach of shoreline located near the northern boundary of Illinois. The Department of Conservation in its management of the Park has preserved a major portion of the park in its natural state for the enjoyment of the public. In addition, the park is used by the public for a variety of recreational activities such as interpretative hikes, camping, swimming, etc. The Illinois Coastal Zone Management Program, recognizing the recreational opportunities that the park offers and its unique ecological value, has designated this area as a Geographic Area of Particular Concern.

In a joint effort to generate a public awareness of the benefits of this unique coastal resource, the Department of Conservation and the Illinois Coastal Zone Management Program developed and conducted a pilot workshop for teachers in Northeastern Illinois. With funds provided by the Illinois Coastal Zone Management Program, the Department of Conservation contracted with a group called "Mobius", a consulting partnership of four innovative science teachers, to develop and conduct this workshop. The workshop, attended by 39 teachers, was held over a period of three days (on three consecutive weekends). Three hours of graduate credit from Governors State University was granted to those who successfully fulfilled the requirements. The main emphasis of the workshop was to expose teachers to a multitude of teaching tools and in-field learning experiences which they could recreate in future trips with their students or in their classrooms.

Based on information gained from this pilot workshop and teaching aids assembled from other coastal zone studies, future workshops can be developed to assist teachers in generating student interest in our Great Lakes environment.

CHAPTER 1
ORGANIZATIONAL DETAILS

1. Audience

The target audience for the "Souvenirs" workshop was teachers of kindergarten through eighth grade classes. The actual audience was thirty-nine teachers of kindergarten through tenth grade classes. The scope of experience of the participants ranged from the general classroom to highly specialized areas of science.

Teachers were chosen as the target audience because of the multiplier effect of their contacts. An audience of teachers presented an excellent method for giving the Coastal Zone Management Program of Illinois wide exposure.

2. Promotion

A flyer was prepared and mailed to schools and school administrators in Cook and Lake Counties of Illinois. The mailing labels were obtained from the Illinois Office of Education by Wayne H. Schimpff, Chief Naturalist of the Illinois Department of Conservation. The actual mailing was done by the Coastal Zone Management Program offices in Chicago, Illinois.

3. Other Organizational Details

The conception, promotion, and execution of the workshop was carried out by Mobius, a consulting partnership composed of Dr. Carl Bollwinkel, Science Coordinator, Palatine District #15, Gretchen Hanson, Science Specialist, District #54, Barbara Pavilones, Teacher of Gifted, Palatine District #15, and Larry Small, Science Coordinator, Shaumberg District #54. Assistance was provided by Wayne Schimpff, Chief Naturalist of the Illinois Department of Conservation, Darrell Johnson, Park Naturalist of Illinois Beach State Park, Donna Christman, Liaison and Public Participation Officer of the Illinois Coastal Zone Management Program, Chris Shafer, Program Manager of the Illinois Coastal Zone Management Program, and Peter Wise, Chief of the Bureau of Resource Regulation, Illinois Department of Transportation.

Graduate credit for participants from Governor's State University was arranged through Dr. John Hockett, Dean of Education. The resulting course was entitled: "Ecological Study: Living With the Lake" (#EAS 8500). Competencies were established for course completion.

Coordination of activities and responsibilities of the various agencies and consultants was handled by Wayne Schimpff.

CHAPTER 2
WORKSHOP ACTIVITIES

The activities of the "Souvenirs" workshop have been catagorized under the questions:

"What is Illinois Beach State Park?"
"How Do I Use Illinois Beach State Park?"
"What is the Future Use of Illinois Beach State Park?"

Some activities are included under more than one question.

1. <u>What is Illinois Beach State Park?</u>

a) "Looking at the Park"

This conducted walk through the Dead River Nature Preserve emphasized the topography, composition and successional patterns of vegetation, and the history and impact of man's involvement with the Illinois Coastal Zone.

b) "Geologic History of the Illinois Coastal Zone"

A mini-lecture, observation, and the film "Rise and Fall of the Great Lakes" were used to present the geologic background.

c) "Dawn Chorus Walk"

Park Naturalist Darrell Johnson conducted an early morning hike to familiarize workshop attendants with the birds of the area and their characteristics.

d) "Water Color Painting" and "Photograms"

The aesthetic natural beauty of the Illinois Beach State Park was explored through these two art activities. Initial instruction was provided participants.

e) "Sand Studies" and "Trenching and Panning"

Sand particles were examined for their origin, composition, deposition patterns, and economic importance.

f) "Stream Tables"

Shore line development, erosion patterns, and the impact of man-made structures on the Illinois Coastal Zone were simulated by the use of "stream tables."

g) "Rocks and Charts"

The rocks along the shoreline of Illinois Beach State Park were examined for origin, composition, and conformation. Participants developed classification systems for their rock collections.

h) "Pollution Scavenger Hunt"

A survey of the impact of human litter was conducted by this scavenger hunt.

i) "Food Chain Game"

The Outdoor Biological Instructional Strategies "Food Chain Game" was used to acquaint participants with the food pyramid and food chains of the area.

2. "How Do I Use Illinois Beach State Park?"

a) The Illinois Coastal Zone as a Site for Field Studies

1. Introduction to orienteering
2. Basic outdoor living and camping skills
3. Outdoor cooking skills
4. Creative arts possibilities of photograms, sunprints, watercolors, creative writing
5. Food chain studies
6. Entomology studies
7. Rock collecting and classifying
8. Successional patterns of flora and fauna
9. Erosion patterns

b) The Illinois Coastal Zone as a Resource for Classroom Activities

1. Increased teacher awareness
2. Materials and information resource
3. Focus for land use consideration
4. Initial experience to provide motivation for studies of greater depth

3. "What is the Future Use of Illinois Beach State Park?"

a) "Coast Mime"

This activity was designed to encourage the workshop participants to synthesize their values in regard to the impact of man on the lake and the lake coast.

b) "Stream Tables"

Erosion patterns of the Illinois Coastal Zone and the impact of man-made structures upon them were simulated through stream table activities.

c) "Pollution Scavenger Hunt"

A survey of litter resulting from human use of Illinois Beach State Park opened exploration of the use, both compatible and incompatible, of this area.

d) "Participants Required Written Papers"

Each workshop participant wrote a paper describing a specific plan for using the Illinois Coastal Zone as a teaching resource for his/her own class.

CHAPTER 3
CONCLUSIONS AND RECOMMENDATIONS FOR FUTURE WORKSHOPS

The workshop was deemed an overwhelming success. The participants' "feedback" was favorable and helpful.

1. Audience

Additional workshops for elementary (kindergarten through eighth grade) teachers should definitely be considered.

If a workshop is planned for secondary teachers (ninth grade through twelveth grade) several considerations are necessary. Because of the specific content nature of secondary courses, an earth science specialist, such as a representative of the Illinois Geological Survey, would need to be added to the workshop presentation team. Elementary teachers are generally better equipped to utilize process education techniques than are secondary teachers. If a workshop was designed for high school personnel, careful consideration for and the examination of process learning and its teaching implications should be incorporated into the plan.

2. Promotion

Promotion for future workshops should include the following considerations.

a) More money expended for typesetting of the flyer

b) Mailings to:

1. all participants of the initial workshops
2. Science Supervisors and Science Department Chairpersons in selected counties
3. School districts along the lower Wisconsin Coastal Zone

c) Selected mailings in regard to the designated audience (K-8 or 9-12)

d) Additional funding for mailing

e) Additional funding for the printing of instructional materials

f) Publicity via:

1. Illinois Science Teachers Association newsletter Spectrum
2. County Superintendent of Schools newsletter
3. Illinois Department of Conservation Publications

3. Organizational Details

The same channels should be followed for future workshops with the possible addition of an earth science specialist for a secondary workshop.

4. Activities

The following suggestions should be taken into consideration.

a) Fewer participants per workshop to allow for greater interaction and individual attention.

b) A meeting day (or session) prior to on-site activities for:

1. Familiarization with transect studies, keys, charting.
2. Construction of materials to be used during workshop activities:

   A. stream tables
   B. astrolabe
   C. sunning equipment
   D. transect lines
   E. weather charting equipment

3. Distribution of instructional materials and literature.

c) Inclusion of more individual choice activities as opposed to large group activities.

d) Specifically stating expectations for participant involvement.

e) Assignment of some "camp chores" to participants.

f) Inclusion of "make, use, and take" activities.

g) Division of participants into working groups according to grade levels taught (K-3, 4-6, 7-8 and secondary subject areas.)

h) Introduction of specialist presentation (botany, geology, etc.) after initial activities which have created a "need to know" situation.

i) Inclusion of Outdoor Biological Instructional Activities "Oil Spill" and "Flock to Food."

j) Inclusion of weather station studies.

k) Expansion of "track studies" to include evidence of the interaction of the various elements of the Coastal Zone Ecosystem.

l) Inclusion of more individual experiences in cooking in the out-of-doors.

m) Emphasis on the patterns of the Illinois Coastal Environment.

n) Free workshop conductors from direct responsibility for food preparation.

o) Make a more specific effort to include philosophy of process education, land ethics, attendent literature.

p) Encourage participation in other types of Coastal Zone Management programs.

q) Conduct some of the workshop activities at lake sites other than Illinois Beach State Park.

CHAPTER 4
REFERENCE MATERIALS

*Souvenir List

1. Natural History

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Downing, Elliot, A Naturalist in the Great Lakes Region, University of Chicago Press, Chicago, IL, 1922. Two chapters dealing with the plants and animals of the Indiana sand dunes but not Illinois Beach State Park.

Hungerford, Harold, Ecology, the Circle of Life, Childrens Press, Chicago, IL, 1971. Book on ecology for upper grade students. Explains succession but does not deal with sand succession.

Komaiko, Jean and Schaeffer, Norma, Doing the Dunes, Dunes Enterprises, Beverly Shores, IN, 1973. This book was first considered a "text" for our course, but was eliminated when we found that, out of 232 pages, 48 concerned science and nature. The book deals with the Indiana dunes, but those 48 pages are still very concise, and an excellent sampling of an environment which sports much of the same flora, fauna, and geology of Illinois Beach State Park. It might be well worth the $2.50 to explore the difference.

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2. Art

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* - Latin, Subvenire, to come up with, come to mind

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VOLUME II:	COASTAL GEOLOGICAL STUDIES
VOLUME III:	BEACH & BLUFF PROTECTION
VOLUME IV:	COASTAL BIOLOGICAL STUDIES
VOLUME V:	COASTAL USE NEEDS & CAPACITIES
VOLUME VI:	PUBLIC PARTICIPATION

7. Film Strip

Hungerford, Harold, Life in a Sand Dune Succession, 1345 Diversity Parkway, Chicago, IL, 60614.

8. Sources

Forestry Suppliers, Inc.
Box 8397
205 West Rankin Street
Jackson, MS 39204

Rand McNally & Company
P. O. Box 7600
Chicago, IL 60680

The Science Man - Lee M. Jorik
4738 North Harlem
Harwood Heights, IL 60656

Ward's Natural Science Establishment
P. O. Box 1712
3000 East Ridge Road
Rochester, NY 14603

Webster Division
McGraw-Hill Book Company
5940 Touhy
Niles, IL 60648

CHAPTER 5
CURRICULUM MATERIALS

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Bradbury, Ray, A Sound of Thunder, Harold Matson Company, Inc., 1952.

Coast Mime, game developed specifically for the workshop to simulate the present conditions of the Illinois Coast use.

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