An outdoor education program is described which has the philosophy that a direct experience is better than a vicarious one, and that the efficiency of education is increased in direct proportion to the amount of direct experience. An historical background which included pilot programs and experimental programs is discussed. Facilities, philosophy of the outdoor school, staff, program costs, staff role, and related developments are also considered. Illustrations and long-range plans conclude the document. A related document is RC 002 651. (SW)
THE PINCHOT INSTITUTE
For
Conservation Studies

ACTION MODEL
OUTDOOR EDUCATION, FREDERICK COUNTY SCHOOL SYSTEM
FREDERICK, MARYLAND

HUGH B. NOLAN

INTRODUCTION

The spring season of 1967 started the second decade of outdoor education in Frederick County, Frederick, Maryland. During this time approximately 14,500 elementary, junior high, and senior high school children have had some experience with the outdoor education curriculum.

Outdoor education in Frederick County is completely interdisciplinary and consists of education in and for the use of the out of doors. It includes the use of the out of doors for the study of all areas of the curriculum when the material can best be learned out of doors. Our philosophy is undergirded by the idea that a direct experience is better than a vicarious one and that the efficiency of education is increased in direct proportion to the direct experience. Pupils learn faster and retain what is learned for a longer period of time after a real experience. The factor of increased motivation is also stressed. Students are obviously very interested in direct experience and the increased motivation cannot help but lead to more efficient learning.

In a resume of the first ten years and a look toward the next ten years the ups and downs encountered while trying to get outdoor education started in our school system become apparent.

HISTORY

The Frederick County program was started under the leadership of Dr. Warren R. Evans, Supervisor of Health, Physical Education, and Recreation. The pilot program of 1957 evolved out of a coffee break in the lobby of the Lord Baltimore Hotel in the fall of 1956. Dr. Evans and Mr. Herb Steiner, State Supervisor of Health, Physical Education, and Recreation, had just returned from an Outdoor Education Project Workshop in Virginia. They were discussing some of the things mentioned at the meeting with Dr. James A. Sensenbaugh, the new Superintendent of Frederick County Schools, and Mrs. Louise Thompson, Elementary Supervisor. They found that Dr. Sensenbaugh was well informed on outdoor education and very much in favor of it. He suggested that a program be started in Frederick County and that is exactly what was done.
With the go-ahead from Dr. Sensenbaugh, a planning committee was formed. This committee included Dr. Evans; the Assistant Superintendent; Supervisors of Elementary Education, Cafeterias, Pupil Services and Transportation; state and county foresters; elementary principals; elementary teachers; soil conservationists; Board of Education members; medical personnel; Maryland colleges faculty; Dr. Byron Ashbaugh; a park naturalist of National Park Services; and Mr. Charles Shank, Superintendent of Catoctin Mountain National Park.

PILOT PROGRAM

The first planning committee meeting was enthusiastically held in December, 1956. Two sixth grade classes were selected for a pilot program during May of 1957. Two action committees grew out of this meeting. One worked on program and the other worked on such administrative problems as food, service, transportation, leadership, and housing. All state conservation agencies and the National Park Service indicated great interest and offered a great deal of help in the development of the program.

It was agreed that the facility, equipment, transportation, and instructional leadership would be provided by the Board of Education and that food and food service would be provided by the parents. The fee per pupil was set at eight dollars with provisions made in each school to provide P.T.A. scholarships for children unable to pay the fee. Every possible effort was made to be sure no child was omitted from the program for financial reasons.

The program committee started by establishing the following general objectives:
1. To recognize the value of our natural resources and to learn to use them wisely.
2. To increase our emphasis on science education and to give every student a chance to develop increased interest and knowledge in several areas of science.
3. To make classroom learnings more meaningful through application of knowledge to practical situations.
4. To learn to live democratically with other children and with adults through experiences in outdoor living.
5. To develop skills and interests in outdoor recreation which will carry over into later life.
6. To improve health and physical fitness.

The camp facility was reserved for the last two weeks in May. The two sixth grades chosen were from East Frederick and North Frederick elementary schools. The principal criterion for selection was the enthusiasm and outdoor experience of the teachers. Thirty-four students from East Frederick and forty-three sixth graders from North Frederick participated.
The program of the groups was as follows:

<table>
<thead>
<tr>
<th>Day</th>
<th>Time</th>
<th>Activity</th>
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<tbody>
<tr>
<td>Monday</td>
<td>2:00 - 5:00 P.M.</td>
<td>Hidden note game (a nature treasure hunt).</td>
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<td></td>
<td>Evening</td>
<td>Introduction to crafts and collection making.</td>
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<tr>
<td>Tuesday</td>
<td>9:30 - 11:45 A.M.</td>
<td>Hike to Foxville Fire Tower.</td>
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<td>1:30 - 5:00 P.M.</td>
<td>Field trip to coal hearth and iron furnace.</td>
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<tr>
<td>Wednesday</td>
<td>9:30 - 11:45 A.M.</td>
<td>Forestry Project - tree planting, tree</td>
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<td></td>
<td>1:30 - 5:00 P.M.</td>
<td>identification, watershed protection,</td>
</tr>
<tr>
<td></td>
<td>Evening</td>
<td>erosion control, fire prevention, etc.</td>
</tr>
<tr>
<td>Thursday</td>
<td>9:30 - 11:45 A.M.</td>
<td>Hike to Chimney Rock.</td>
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<td></td>
<td>1:30 - 5:00 P.M.</td>
<td>Campfire program planned by campers.</td>
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<tr>
<td>Friday</td>
<td>9:30 - 11:45 A.M.</td>
<td>Hike to Cunningham Falls and picnic area</td>
</tr>
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<td></td>
<td></td>
<td>for lunch cook-out.</td>
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<td></td>
<td></td>
<td>Fly, bait, and spin casting demonstrations,</td>
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<td></td>
<td></td>
<td>fishing.</td>
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<td></td>
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<td>Illustrated lecture on birds and snakes of</td>
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<td></td>
<td></td>
<td>the area by the park naturalist.</td>
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CONTINUED EXPERIMENTAL PROGRAM

From this pilot experience it was decided that an experimental program would be scheduled for the school year 1957-58 to gain experience, try different sized groups, try several grade levels, look for the solution to the problem of leadership, and explore as many program areas as possible. It was agreed that all participating teachers would be volunteers during this year since some teachers might feel a great deal of insecurity in this situation.

During the summer of 1957, Dr. Evans, a classroom teacher, and a teacher of elementary physical education spent three weeks at the Gull Lake Biological Station of Michigan State University in a workshop on outdoor education. Leaders in outdoor education and school camping from twenty-one different states attended this workshop. This was a wonderful opportunity to discuss problems with experienced people and to visit several school camp facilities in Michigan. During the workshop, a "Guide for Teachers" was developed for the use of teachers participating in the program in the spring of 1958. It is still in use.

During the fall of 1957, more than 300 children from eight classes took part in the program from September 23rd to October 18th. A former physical education teacher with a great deal of experience was hired as camp director and three visiting teachers of elementary physical education background were hired as his assistant teachers. The staff was hired to operate the outdoor school during the spring and fall and teach elementary physical education in the winter months. The staff worked under the leadership of Dr. Evans, the classroom teachers, resource personnel from the state and county offices in conservation, the National Park Service, and some county school personnel. In the fall of
1958, two more elementary physical education teachers were added to the staff. The staff composed of a principal and five outdoor education teachers has remained at six.

Through their own initiative, staff members with from one to twelve years of experience have taken courses, attended workshops, and worked in the field to become adept in the field of outdoor education. Besides the teaching staff, there is a full time nurse who lives on the camp ground, four full time cooks, and a handyman who is a corpman of the Job Corp whose camp is approximately one mile from the outdoor education facility. Supplementing the permanent staff are students from the various colleges in the state who are studying to become teachers and high school seniors who plan to become teachers. These students are used as cabin leaders and counselors. A student teacher from the State University College of New York at Courtland was a member of the staff for six weeks during 1967.

In 1960, Dr. L.B. Sharp suggested that the county look toward expanding the outdoor education program from grade one through twelve. In October of 1960, three eighth grade earth science classes spent three days at the Outdoor School for earth science studies. This program was successful and thought was given to its continuation.

During the 1960-61 seasons, 1,250 sixth grade children attended the Outdoor School. And at this time we encountered a problem with the Board of Education. After local newspapers reported that certain members of the board felt outdoor education was a frill, parents began ringing the phones of the board members to explain the benefits their children had received from their week at the Outdoor School. Our principal, Roy Okan, invited the members of the board to spend some time with us at the Outdoor School. After several of the members did this, the program received the full support of the board.

Outdoor education now became a stable part of the curriculum. Teachers' contracts required participation in the program. Although three teachers transferred from the sixth grade, there was less opposition than was expected.

Through continuous evaluation the program has improved in content and organization. And the number of participants has increased to the point that more space is needed.

PRESENT PROGRAM: THE OUTDOOR SCHOOL FOR GRADE 6 AT CAMP GREENTOP

Facility and Area: Camp Greentop is located in the 5,765 acre Catoctin Mountain Park, a unit of the National Park Service under the U.S. Department of the Interior. Ninety-five percent of this Appalachian Mountain ridge where the camp is located is wooded with a good number of rock outcroppings and several mountain streams. Adjacent to the Catoctin Mountain Park is the Cunningham Falls State Park of just under 5,000 acres. Included in this state
Park is Cunningham Falls. The camp buildings include a dining and recreation hall, twelve cabins, nature cabin, craft cabin, staff cabins, and infirmary. Most of the buildings are of American Chestnut. The camp was built in 1937. The camp can accommodate up to one hundred and eight campers and staff. It is considered by many to be an excellent facility for outdoor education due to the untouched natural beauty.

Philosophy of the Outdoor School: Since the pilot groups of 1957, the emphasis has been to use the Outdoor School experience as a means for more meaningful learning and to motivate the classroom learning. The program covers all phases of the regular school curriculum with science emphasized. The classroom teacher has always been the KEY person in the program as he works with the class groups throughout the school year. The sixth grade was selected as the age when such learning away from home is beneficial. The working group in the field is the classroom teacher, the resource teacher, and the counselors of the class group.

The Staff: The principal, five resource teachers, a nurse, four cooks, and one handyman are the full time members of the staff for the eight weeks in the spring and the eight weeks in the fall. In addition there are the three classroom teachers and nine college or high school counselors for each week. The high school counselors and college counselors are assigned a cabin group of up to ten children.

Costs of the Program: With a minimal charge by the National Park Service for the camp, the program is quite inexpensive. The Board of Education budgets money for utilities, staff salaries, and instructional supplies. Children pay $6.00 for food costs. If a child doesn't have the fee, the P.T.A. or the Outdoor School pays for the child.

DUTIES OF OUTDOOR SCHOOL STAFF DURING WINTER MONTHS

The five permanent staff members of the Outdoor School teach elementary physical education from November through March.

The duties of the principal, Mr. Okan, during the winter months follow.
1. Visit each sixth grade class which attended the Outdoor School in the fall to assist with the follow-up.
2. Visit each sixth grade group which is scheduled to attend the Outdoor School in the spring to assist with planning.
3. Work with elementary groups in grades one through five on planning field trips, developing conservation education programs, and helping with other projects related to science and outdoor education.
4. Work with eighth grade groups on planning field trips, developing conservation programs, and helping with other projects related to science and outdoor education.
5. Help principals and classroom teachers with program of rhythm activities.
6. Look into the possibility of a winter outdoor education program at Mar-Lu Ridge, the old Foxville school, or another suitable facility.
7. Develop community nature centers.
8. Assist in the development of weather stations at each school.
9. Assist in the geological and ecological study of the school site and the development of a plan to reclaim or maintain as much land as possible as a natural habitat area.
10. Assist in coordination of the program of the Frederick County Outdoor School and the Earth and Space Science Laboratory.

OTHER DEVELOPMENTS

Related to the Outdoor School program is a visitation program planned by Mr. Okan. This takes place on the school grounds and several field trips are included.

Another phase of our program in Frederick County started in 1962. Two three-day earth science studies were held at the winterized camp Mar-Lu Ridge in February. Eighth grade students were involved in this program. This program was staffed by Mr. Okan, classroom teachers, and two people from the Earth and Space Science Laboratory. A visit to the planetarium was taken before going to the camp. The sky in the planetarium was set as it would be seen at camp.

At this time correlation between the sixth grade program and the planetarium also became a reality. Each sixth grade class visited the planetarium before coming to the Outdoor School.

In 1962 another phase of outdoor education was begun. The principal of the Outdoor School was assigned as a visiting Outdoor Science Teacher from November through the middle of April to work with grades one through five on local school grounds in selected science units.

As part of the outdoor education program, 1963 saw a 750 acre site leased on the Frederick City watershed for the development of an Outdoor Laboratory and Nature Center. Byron Ashbaugh of the Nature Centers Division of the National Audubon Society produced a very fine land use survey which is now in the process of implementation. To date the Outdoor Laboratory has been used during the summer for a conservation workshop, by a group of high school students, and by a number of science classes for field trips.
At the same time the Outdoor Laboratory was becoming a reality, a second grade teacher requested a one-day visit to the Outdoor School to study plant and animal differences. This initiative by one teacher began to snowball by 1965. Twelve elementary teachers requested one-day field trips to the Outdoor School site for first-hand science study. Now each staff member from the Outdoor School takes a week away from the resident camp and works with one-day field trips for grades one through five at the Outdoor Laboratory at the Frederick City watershed.

During 1966 the following was tabulated.
1. Ninety-five percent of all sixth grade children attended the Outdoor School.
2. Junior high students selected and cleared the area for nature trails in the Outdoor Laboratory.
3. One-day geology study of Northeastern Frederick County was conducted by two high school groups.
4. Three-day biology camp at Outdoor School was held for three tenth grade biology classes.
5. Sixty-seven teachers in grades one through five requested one-day field trips.
6. Three 3-day earth science camps were held at Mar-Lu Ridge.
7. Budget request for November to April use of Mar-Lu Ridge Camp Earth Science and Biology was submitted and turned down.
8. Daily field trips were held for grades one through five at the Outdoor Laboratory during November and much of December.

In numbers three, four, and six listed above scheduling proved difficult since the teachers involved normally have these children for an hour a day. With team teaching being emphasized in the county, a morning or an afternoon or even two to three days to do more of the learning by doing experiences may be realized.

THE OUTDOOR SCHOOL

The following series of pictures were taken at the Frederick, Maryland camp school under the direction of Mr. Roy Okan of the Frederick County School System.
Mr. Okan and a group of youngsters using their senses are sniffing at the aroma of the Spice Bush.

A very beautiful pattern of lichens is found on the rock nearby. How do lichens grow? How do they feed? What part do they play in the development of soil and deterioration of rocks?
A Jack-in-the-Pulpit has been discovered.

Orientation by the fire tower ranger on fire control of the area of open woodland and fields and forests.
Students learn to use a compass.

Given the proper orientation and encouragement, youngsters keep notebooks in order to evaluate and record more specifically on their return. Note-taking is vital.

Photography by Clifford E. Emanuelson, Pinchot Institute.
LONG RANGE PLANS

Long range plans call for the use of the Outdoor Laboratory by large numbers of classes to study geology, forestry, ecology, soil and water conservation, fish and wildlife management, and many other areas of science conservation. The major aim of this facility is to provide direct experiences in many scientific areas since learning is more effective and lasting if it is acquired by a direct experience rather than a vicarious one.

The population explosion and the urbanization of our society are endangering the very earth itself. We urgently need to conserve our resources if we are to survive. It is much later than most people think and it is vital that our young people do a better job in the conservation of our natural resources than their parents and grandparents. It is hoped that the Outdoor Laboratory and Nature Center can make a positive contribution in this direction.

It is also a part of the long range plan to provide a naturalist and a nature center complex of appropriate buildings so that nature interpretation can be made available to both school students and interested adults in the country.

The basic purpose of a nature center is to provide the community with a green island of nature where children and adults, under competent direction and guidance, can learn about natural resources and develop an understanding and an interest in the natural sciences, nature study, and conservation. The main objectives of a nature center can be grouped under the four headings of educational, scientific, cultural and socio-economic, and recreational.

Educational
1. To increase knowledge and understanding of our natural world and man's place in it.
2. To develop sensitivity, awareness, appreciation, and affection toward nature, natural beauty, and all natural resources.
3. To develop a desire and a will to protect living and non-living resources important to man and to use them wisely.
4. To provide an outdoor laboratory for schools for the enrichment of their science and social studies curriculum and to provide an opportunity for classes to come to the center and benefit from direct, first-hand experiences in the outdoors.

Scientific
1. To provide a reasonably natural area where science-minded students may study physical features.
2. To have an area where the ecology of natural communities can be recorded and studied.
3. To help provide a natural outdoor laboratory for the stimulation of scientific curiosity.
Cultural and Socio-economic
1. To help train persons in awareness and basic skills and thus add to their capacity for enjoyment.
2. To develop in young people and adults a sense of appreciation, respect, and reverence for all living things to strengthen man's moral character.
3. To provide opportunities for useful employment and interest development for teenage school drop-outs.

Recreational
1. To make leisure time more productive and effective.
2. To develop needed outdoor recreation skills and provide a place for more creative outdoor pursuits.

Within the summer school program a Summer Conservation Workshop has been undertaken. This four-week workshop for boys and girls 14-17 years of age provides a practical course in science with emphasis on direct experiences in forestry, soil and water conservation, fish and wildlife management, and related areas. The instructor for the course is a qualified teacher and field trips are held almost daily to outdoor areas where most of the work and instruction take place.

Other future plans include the use of Mar-Lu Ridge Camp and Conference Center for eighth grade earth science and biology camps from November to April.

An enlarged program of one-day field studies in the county and to other parts of the state of Maryland for grade eight earth science and grade ten biology classes is envisioned. Frederick is fortunate in having many environments in the county and state which would improve science learning.

The fifty sixth grade teachers, the twenty-five elementary principals, and the supervisors intend to analyze and evaluate the existing sixth grade program to highlight the successes and plan for the future.

Printed science lessons correlated with the science units for each grade are needed for use on the school grounds. These lessons would enable the teacher to take her class outdoors when the opportunity arose. After the lessons are developed, inservice meetings on the local school ground for the teachers will be considered.

CONCLUSION

The success and progress of outdoor education in the Frederick County School System, Maryland, can be attributed to the extreme cooperation received from the leaders of the community and school system. When the leaders in a system or community are willing to cooperate, dreams, initiatives, and beliefs become a reality.