

PROJECT WOLF: WILDCAT OUTDOOR LABORATORY FACILITY

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Chapter 1

INTRODUCTION

Definition of Terms

1. Outdoor Education--Education which occurs away from the classroom in parks, nature preserves or established outdoor labs.
2. Outdoor Laboratory--An area outside the school that offers the facilities to investigate natural phenomena.
3. School Naturalist--Any member of the school faculty who has the knowledge to accurately interpret natural phenomena.
4. Outdoor Education Program--A part of the school's normal curriculum which places students outside the classroom utilizing natural phenomena.
5. Natural Phenomena--Any facet of the out-of-doors which demonstrates the works of nature.

Introduction and Purpose

At the present time there is no organized outdoor laboratory or outdoor educational program in the Manhattan School System.¹ For several years, however, the high school biology department has utilized a portion of Sunset Park and Wildcat Creek for outdoor ecological studies.

¹Statement by David Mickey, Director of Secondary Education, U.S.D. 383, personal interview, November 2, 1972.

In the meantime, there has been a discussion aimed at making a large portion of Wildcat Creek into a multipurpose parkway. Many community people have realized the intrinsic value of this area and wish to see it preserved. The complete parkway area would include such features as hiking and bicycling trails, picnic and ice skating areas, bridle paths and nature preserves.²

It is the intention of this report to add another facet to the park complex. The author suggests that a portion of the proposed Wildcat Creek Parkway be set aside as a Wildcat Outdoor Laboratory Facility, Project WOLF, for the Manhattan School System.

Justification of the Project

This author believes that classroom learning is not enough. The classroom has its place, but learning from experiencing is a basic way of achieving education.³ Outdoor education is a method which can utilize resources beyond the classroom as a stimulus for learning. By extending the learning environment outside the classroom, theoretical knowledge is enriched by practical knowledge gained through firsthand experiences with people, places and things. The knowledge gained through this direct approach to learning enables the individual to better understand the unity of all life. In addition, it may help him to develop a sense of pride for the historical, educational, recreational and inspirational values that are a part of his heritage.

²Wildcat Creek Linear Park, Civil Engineering Department, Kansas State University, pp. 4-5.

³Reynold E. Carlson, "Why Outdoor Education," Journal of Outdoor Education, Fall, 1971, p. 6.

Ultimately, he should be able to play a more constructive role in the society of which he is a part.

The basic philosophy which coalesces this project is that man will properly care for nature only when he both understands and appreciates it.

It has been said that man is the only animal that befouls his own nest. It appears that before we can get a significant percentage of the population to stop befouling the environment, we must first find ways to help people evolve realistic values and attitudes towards their natural surroundings.

Unless our nation's schools begin to consider environmental education at least as important as the other disciplines in rounding out a child's education . . . then the day may very well come that we will have no need for 'readin, writin, and rithmetic' simply because there will be little use for these skills in a dying society.⁴

It seems futile to clean up the environment if the next generation makes the same mistakes. If we fail to give our students an understanding and appreciation for their natural environment, starting with kindergarten and going through senior high, they will express the same attitudes which have caused the present environmental crises.

Looking now from the philosophical to the practical, Project WOLF fulfills the three main criteria one must consider in selecting an outdoor educational site.⁵

⁴H. D. Brunner and A. T. Wilcox, K-12 Curriculum Guide for Environmental Education, U.S., Department of Health, Education and Welfare, 1970, p. 5.

⁵W. N. Smith, "The Design of an Outdoor Laboratory Program for the Environmental Sciences," School Science and Mathematics, May, 1972, p. 400.

1. Availability. "The walking distance to and from cannot exceed 1/4 of the class hour." The closest area is four minutes from the school and the furthest area requires seven.

2. Pertinence. The area displays the potential for relating to the entire spectrum of academic disciplines. For science it contains a native grassland, a seral forest and a fresh water stream. For social studies it offers an interesting Indian history. For English and art it offers the inspiration for many stories, poems and paintings.

3. Safety. Students can be taken into the project area and returned in complete safety. No major roads are to be crossed and school property joins the proposed lab site.

Chapter 2

PROJECT WOLF

Objectives

Community Objectives:

1. To preserve a section of Wildcat Creek for future generations.
2. To establish an outdoor learning laboratory for the Manhattan School District.
3. To provide an educationally oriented recreation area for the Manhattan community.

Student Objectives:⁶

1. To develop an awareness, appreciation and understanding of the natural environment and man's relation to it.
2. To utilize fully and constructively resources beyond the classroom as a stimulus for learning and a means of curriculum enrichment.
3. To provide an atmosphere conducive to the aesthetic development of the individual.
4. To help the individual become more civic-minded through the utilization of community resources.
5. Through outdoor education realize the full potential of the individual with regard to the development of his mind, body and spirit.
6. Learn the value of accurately observing, measuring and recording.
7. To interact personally with tasks involving living objects.

⁶John E. Jacobus, "A Team Effort to Develop a Curriculum for a School Nature Site," Science Education, December, 1969, p. 429.

Even though the preceding objectives were not written specifically for WOLF, they do have direct applicability. Outdoor education, because of its nature, has a certain common denominator wherever it is attempted. I believe that the seven objectives state that common denominator very well and lend strength to the overall project.

Project WOLF: An Interdisciplinary Approach

Suggested Learning Activities:⁷

Science

1. Constellation and star study
2. Botany
3. Zoology
4. Ecology--soil, water, plant and animal interdependence
5. Weather and cloud formation
6. Soil as the living mantle of the earth
7. Natural succession
8. Life history studies
9. Fossil collecting

Conservation

1. Wide use of natural resources; water, forest, soil, natural beauty and wildlife
2. Animal habitats
3. Use of bird and other wildlife studies for recreation
4. Erosion problems
5. Water supply and sewage disposal

Social Studies

1. Learn about the early history of the area
2. What geographical and historical sites are in or near the area
3. Past, present and future uses for the region

⁷R. A. Burgess and W. C. Gilfillan, Teacher's Handbook for the Outdoor School, U.S., Department of Health, Education and Welfare, 1966, pp. 19-20.

Mathematics

1. Learn to estimate and measure distance, time and space
2. Learn to use standard measuring instruments
3. Figure total distance to and from the school
4. Compute the time needed to make the trip
5. Learn compass orientation and map reading

Language Arts

1. Creative writing based upon the outdoors
2. Dramatize conservation charades and plays
3. Develop word list
4. Do supplementary reading in subject areas studied at the outdoor lab
5. Write letters to various agencies regarding natural resources

Art

1. Sketching and drawing with pencil or charcoal
2. Painting
3. Woodcrafts--small wood carvings or wood burning
4. Photography
5. Creative expression through design and model
6. Star charts
7. Make a model of some natural item
8. Make plaster casts of animal tracks
9. Build feeders for birds and other animals

Music

1. Listen to the sounds of nature
2. Listen to bird songs and mark them on a musical scale
3. Compose a song about outdoor experiences or feelings

Physical Education, Health and Safety

1. Discuss types of clothing needed
2. Formulate safety guidelines
3. Identify good health habits to be followed in the out-of-doors
4. Learn the proper use of outdoor tools
5. Learn how to climb trees and banks safely

To assure that the area is used in an inter-disciplinary approach, a slide tape program will be made. This presentation will explain where project WOLF is located and how it can be used in the different fields of study. Also during inservice days, tours of the area will be given to individual teachers and administrators.

Non Compatible Use

1. Motorcycle, bike or horseback riding
2. Hunting
3. Target shooting with any device
4. Pesticide testing
5. Camping
6. Any other activity which would harm the native flora and fauna.

WOLF Nature Trail

A nature trail is planned for the woodland-stream area of the project site. The trail will have a number of "learning posts" which will denote important features about the area.⁸ The unifying theme will be, "what role does this object play in nature?" For example, several learning posts will point out rock formations. The guide could explain such things as how rocks slowly break down into soil and consequently provide nutrients for other forms of life. In total, the trail will be approximately 600 yards long and will have 15 learning posts.

The learning post will be clearly marked with permanent metal signs. The signs will consist of numbers which will correspond to a guide book that can be obtained at the beginning of the trail. In addition to the signs, small name tags will be placed on important vegetation species along the way. School naturalists, who can go beyond the guidebook level of information, should be available to conduct many of the walks.

⁸Forest Service (USDA), Developing the Self-Guiding Trail in the National Forest, Publication 968, 1964, pp. 5-7.

Permanent Study Plots

In order to know how areas change from year to year, or over an extended period of time, permanent study plots will be identified.⁹ The corners will be marked by driving metal posts into the ground. Eight such plots will be established in each of the following areas: grassland unit; succession unit and woodland unit.

Cooking and Camping

Because "men centered activities" such as cooking of meals and camping overnight often slowly degrade an area aesthetically, these two activities will be discouraged. Other outdoor labs have attempted to allow this, but gave up after litter, woodcutting and landscape alteration became uncontrollable.¹⁰

The WOLF's Lair

Many instructors have wished for a place away from the school where formal or informal classes could be conducted.¹¹ Project WOLF will accommodate such desires. The WOLF's Lair will essentially be an outdoor classroom. Located in the protected woodland area, it will serve as a place for lectures, discussions and demonstrations. Under the shade of natural foliage, the students will be seated on rocks, logs

⁹Byron L. Ashbaugh, "Scientific Uses of the Outdoors in Education," Science Teacher, April, 1967, p. 54.

¹⁰Helen Ross Russel, "Let's Try Day Camping," Journal of Outdoor Education, Fall, 1971, p. 9.

¹¹Eunice Bradley, Director of Elementary Education, U.S.D. 383, personal interview, November 2, 1972.

or just in a comfortable area on the ground. The teacher's area will consist of large limestone rocks piled upon one another to form a table.

The area will be selected so that a minimal amount of vegetation will have to be removed. The lair itself will be aesthetically pleasing and educationally functional. The student's area will be along the base of the wooded hillside with the teacher's demonstration table a few degrees below. The lair will be situated off the nature trail in order to avoid disruptions.

Status of Project and Implimentation

Endorsement for project WOLF has been given by the Northern Flint Hills Audubon Society, the Manhattan Advisory Council for Environmental Education and the City Environmental Board. Official approval has been given by the school board and the park board. The City Commission has unofficially stated their support and will officially give their support at an upcoming commission meeting.

Upon the author's request, he has been hired by the school system to begin the actual work in July. Educational materials and the nature trail will be the first objectives.

The possibilities look positive that the Manhattan High School Student Council will provide the necessary funds for the materials. If all goes well, the opening of the trail with its supplementary educational materials will be August 25, 1973.

Project WOLF Cost

At this point all costs are simply an estimate. If the project is greeted with enthusiasm, bids for individual items will be obtained. Assistance from welding, woodworking and biology classes will be requested to keep cost to a minimum.

Unit Signs (3)	\$100.00
Steps (to assist students down the steep banks)	100.00
Labels for the nature trail	20.00
Signs for the nature trail learning stations	100.00
Written Trail Guides	50.00
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	\$370.00

Boundaries of the Project Site

The proposed location for Project WOLF is as follows: The grassland unit is boarded by the high school football practice field and Sunset Cemetery on the north, the private property of D. O. Cook, 2128 Oak, on the east, and Oak Street on the south and west. The grassland unit will take in the top of the described hill, excluding the water tower, until where the cottonwood limestone outcrops around the perimeter. The ecological succession unit will be the hillside between the west wall of Sunset Cemetery and Oak Street. The woodland and stream unit will be boarded on the east by Oak Street, on the south by Sunset Zoo and Wildcat Creek, on the west by Wildcat Creek and on the north by a line running due west from the end of Oak Street.

Administration of Project WOLF

Project WOLF will be administered by a board of directors consisting of three people. One director will be a member of the Manhattan Park Board and will be chosen by that group. The second director will be a faculty member of the Manhattan School System and will be appointed by the superintendent of schools. The third director will be a resident of the Manhattan community who is interested in outdoor education. This person will be selected by the other two directors. Directors must be chosen by the last day of July and will serve for two years.

WOLF Director's Job Description

1. Inform the community about the purposes of Project WOLF.
2. Establish educational materials such as labels, signs, printed guidebooks, etc., for the project.
3. Identify funds which may be used to maintain the project.
4. Make recommendations concerning policy.

Agreements

The author has agreed to the considerations recommended by Laura Varney in her April 16 letter to the City Commission.

1. That there be a written agreement.
2. That only approved signs be used.
3. That the city will reserve the land for Wolf until such time as the city decides to put a building or structure on said property and then the project will decrease by that amount.

4. That WOLF be responsible for all litter.
5. That each step of the project be approved by the Park Board.

Resource Personnel

A list of qualified and interested community people should be established. These people may be called upon whenever the board of directors needs advice.

Forestry	John Strickler
Division of Biology--KSU	Steve Fretwell
National Audubon Society	Ronald Klataske
Soil Conservation Service	Dan Burris
Department of Geology--KSU	Claude Shenkle
Park Board	Frank Anneberg
Manhattan School System	Bob Chalender

Outline of Procedure

I hope that at a later time some other individual might attempt such a project. The following advice is offered. Items are listed in order.

1. Locate a natural area close to a school.
2. Research the literature to see what kinds of things could be done with the area. In the WOLF study there was no one article which served as a basis for the project, rather many small bits and pieces were obtained from the articles listed in the bibliography.
3. Approach school and city officials as to the feasibility of the project and gain their support.

4. Identify people in the community who will serve as resource personnel.
5. Secure funds for whatever materials are needed.
6. Develop facilities and educational materials.

Chapter 3

CONCLUSION

The task is a most difficult one. Not from the standpoint of gaining approval from the park board or school board, but from the standpoint that we will try to establish an ecologically oriented value system. The author hopes that students going through a curriculum which utilizes Project WOLF will evolve a new "land ethic." That is to say, it is hoped that students will see their natural surroundings as something they are intrusted with to enjoy and become a part of. They should feel that it is their responsibility to maintain the environment in an ecologically balanced state; that it is simply their turn to take care of and preserve their natural heritage.

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ABSTRACT

At the present time there is no organized outdoor laboratory or outdoor educational program in the Manhattan School System. For several years, however, the high school biology department has utilized a portion of a nearby park and Wildcat Creek for ecological studies.

In the meantime, there has been a discussion aimed at making a large portion of Wildcat Creek, including the area mentioned above, into a multipurpose parkway. It is the intention of this report to add another facet to the park complex. The author suggests that a portion of the proposed Wildcat Creek Parkway be set aside as a Wildcat Outdoor Laboratory Facility, Project WOLF, for the Manhattan School System.

A literature research was conducted to establish justification for the project and ways in which the area could be used. Immediately after the library work, the appropriate decision-making boards were contacted. They included the school and park board and the city commission. Each group was given a complete written outline of Project WOLF for their consideration. Little or no opposition to the project was identified so all three groups voiced their support.

The actual work is now ready to begin. The outdoor lab itself will contain a nature trail, outdoor classroom and study plots. Funds have been secured from the school administration and the Senior High Student Council to complete phase one which will be construction of the trail and appropriate supplementary education materials.

The most difficult task lies ahead, however. We hope that students using Project WOLF will evolve a new "land ethic." That is

to say, it is hoped that students will see their natural surroundings as something they are intrusted with; that it is simply their turn to take care of and preserve their natural heritage.