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CRITERIA FOR DEVELOPING A MODEL OUTDOOR
EDUCATION RESOURCE CENTER

presented by

Marjorie Musolf Baclawski

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of the requirements for

Ph.D. degree in Secondary Education &
Curriculum

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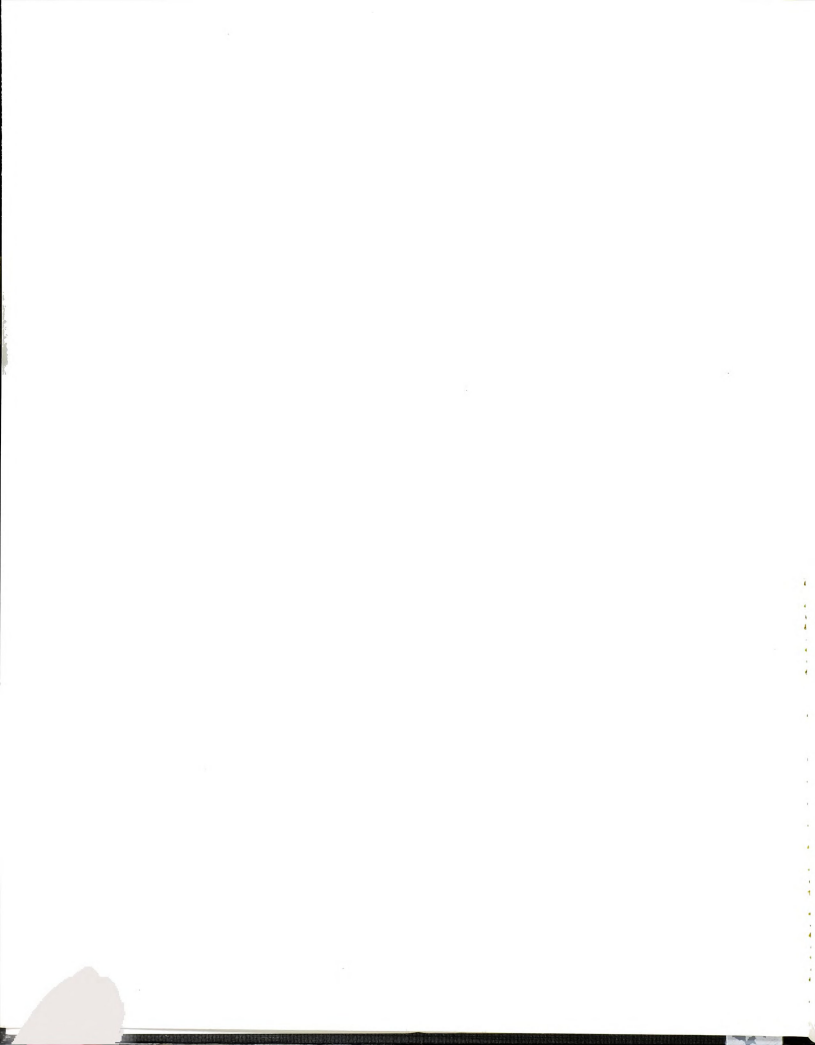


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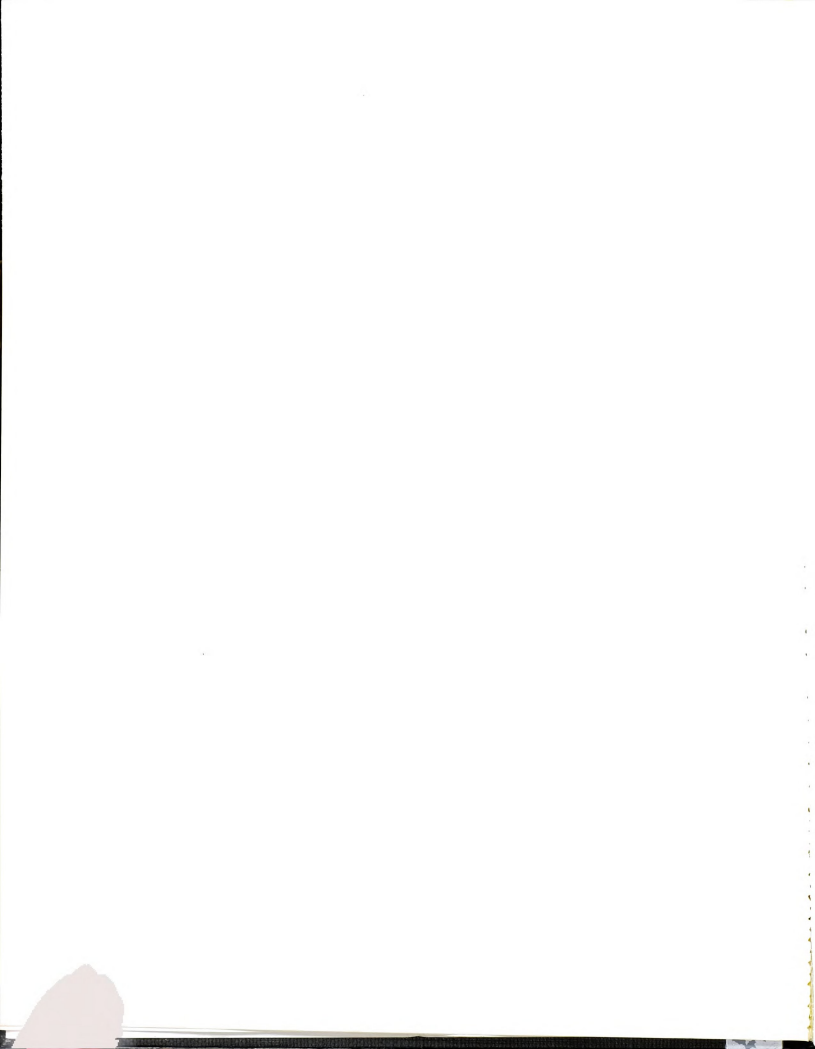




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CRITERIA FOR DEVELOPING A MODEL OUTDOOR
EDUCATION RESOURCE CENTER

By

Marjorie Musolf Baclawski

A DISSERTATION

Submitted to
Michigan State University
in partial fulfillment of the requirements
for the degree of

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Department of Secondary Education and Curriculum

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ABSTRACT

CRITERIA FOR DEVELOPING A MODEL OUTDOOR
EDUCATION RESOURCE CENTER

By

Marjorie Musolf Baclawski

Purpose of the Study

The purpose of this study has been to determine the type of resources, related services, and professional staff necessary for a model Outdoor Education Resource Center.

The major objectives were to:

1. Establish criteria that would be of assistance in:
 - a. determining the resource materials and equipment needed by outdoor educators for outdoor programs in various settings
 - b. providing information on staff positions, services, and the potential role of an Outdoor Education Resource Center
 - c. offering guidelines for the selection of Outdoor Education resource materials
2. Utilize these criteria in developing a model for an Outdoor Education Resource Center

Methodology

This study employed a descriptive mode of research based on:

1. A review of literature in three major areas:
Outdoor Education literature--past, present, and future;
Literature describing the settings where Outdoor Education occurs and the implications of these settings for resources and programs;
Information describing other resource centers used by outdoor educators that had adaptable features for an Outdoor Education Resource Center.
2. A written survey given to selected outdoor educators to identify specific types of resources
3. Face-to-face interviews with Outdoor Education specialists, resource center directors, and curriculum specialists to provide additional insight on resource center services and staffing

Major Findings

The research indicated that there are no centralized collections of resources designed specifically for outdoor educators. Existing centers are designed for the general public and are generally inadequate for the professional requirements of such a specialized group of users. College courses and services are nonexistent in outlying areas.

Research, personal contacts, and discussions have demonstrated the need to provide Outdoor Education Resource Centers in teacher education institutions and within school districts throughout the nation. Such centers would answer questions regarding the development and administration of Outdoor Education activities and assist in locating resources and consultants from the community. They could also serve as storage and retrieval facilities for resource materials needed for limited amounts of time.

As a result of the findings of the study, the researcher concluded that the major focus of an Outdoor Education Resource Center should be on its resources, services, and professional staff. Its major user group would be outdoor educators. This focus would be best achieved through six major components--library, audio-visual equipment and technology, crafts, adventure program, environmental education, and human resources.

The following criteria have been derived from the research and are used as guidelines for the Center:

1. The integration of resources, services, and staff should be reflected in the organizational structure of the six Center resource components.
2. The functions of the Center should be directed primarily to the Outdoor Education needs of classroom teachers.

3. The Center should make a wide range of resource materials and equipment available to teachers.
4. A Center staff should offer professional assistance through individual and group consultant services and through in-service training.
5. The Center requires a central location to allow its user group ready access to its facilities.

At the Outdoor Education Resource Center, Outdoor Education is viewed in its broadest sense--education concerned with the out-of-doors regardless of whether the emphasis is on increasing human well-being through outdoor activities or on increasing human awareness and knowledge about the preservation and future utilization of the physical environment itself.

Outdoor Education embraces a wide range of outdoor-oriented activities including subject matter enrichment, recreation, environmental education, adventure, work-study projects, outdoor living, pioneer living, crafts, and leisure time interests.

The concept of the Outdoor Education Resource Center is based on an understanding of the totality of these interrelationships and the need to bring these understandings to a critical population group which will face the necessary "trade-offs" of the future.

DEDICATION

To the memory of my father who gave me all of a National
Forest for a playground--and to the memory of my mother
who gave me my first books to interpret it.

ACKNOWLEDGMENTS

The writer expresses her appreciation to the members of her Doctoral Committee: Dr. Charles Blackman, Dr. Sam Corl, Dr. Gilbert Mouser, Dr. Lee Quinn, Dr. Peggy Riethmiller, and Dr. Fred Schuette.

A very special recognition must be given to the late Dr. Julian Smith who shared my love for the resource materials which help to interpret the out-of-doors and who smiled in understanding at my need to share them with others.

The writer also extends sincere appreciation to Dr. Mildred B. Erickson and the Erickson Fellowship Committee whose assistance, encouragement, and friendship provided the real meaning for the development of my own Outdoor Education Resource Center.

My gratitude is expressed to all the secretaries in Erickson Hall whose friendliness made each day a better day to work.

Very little is accomplished without the support of one's family. To my family, especially Diane for her continuous support, and to Joe, Kristie, Karen, and Fritz-- a special thank you for your belief and encouragement.

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"Nature and books belong to the eyes that see them."

Ralph Waldo Emerson

"What we see in Nature depends
on what we know about it."

Millicent Selsam

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CHAPTER I

INTRODUCTION TO THE STUDY

The great concerns of the average man in regard to his outdoor environment, his own well-being, and the interrelationships of the two constitute the background which provide the framework for this study. These concerns will be briefly summarized in the following statements:

1. The environmental crisis with all its ramifications of diminishing natural resources, waste, pollution, over-population, crowded living space, and food shortages demands an immediate re-assessment of man's use of the world environment.¹
2. The changing values of large segments of society and the recognition of cultural as well as resource interdependency within the world community have led to an awareness of the intricate balance needed for future planning and development. For example, it is now generally recognized that programs involving energy use and anti-pollution cannot be restricted to one locality,

state, or even one continent without cognizance of the related effects in neighboring areas.

3. There is a widespread search for moral and spiritual values which has created a tendency to look for answers in the past or "good old days." The current emphasis on crafts and leisure pursuits includes a variety of activities which utilize the outdoor environment. This trend has been further stimulated by nationwide interest in the Bicentennial of 1976.

These interests have increased the range of outdoor activities in settings from the local community to wilderness areas and the scope of educational need and attention from that of school children to large segments of the adult population. The long-term effects of these activities remain in doubt.

Dr. Julian Smith writes, "Outdoor education is needed to enrich and vitalize education,"² and "Outdoor education, like other kinds of education, came about in response to (1) the needs of the society in which it originated and (2) the nature and needs of the learners of that society."³ Perhaps there has never been a period in our history when education so needed revitalization as the learners in our society are in such need of educational purpose and direction in developing

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attitudes that would promote the acceptance of responsibilities for self, for society, and for the world.

Often quoted is L. B. Sharp's philosophy that the teaching and learning that can best be done in the outdoors be done there.⁴ This philosophy remains sound but it becomes increasingly more difficult to teach in rural outdoors that becomes more remote as urbanization increases. Those most in need of a close understanding of the environment are often deprived of that opportunity. A understanding of urban and rural natural environments can be utilized as a basis for understanding the complexity of world environmental and human relationships. Modern media bring the world environment into the home and into the classroom and establish the need for such understanding. Outdoor Education utilizes Sharp's philosophy, urban open spaces, and modern media to bridge time and distance in order to help inner-city students develop desirable attitudes in regard to rural and world environments upon which they are dependent.

The agency that reaches out to educate the greatest number of people and the most critical population group is the public school system. Therefore, the concerns and goals to which Outdoor Education speaks should be dealt with through the public schools. Teachers, school administrators, and the associated community consultants entrusted with and responsible for public

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tion should be provided with adequate training in
 or Education. Donaldson and Goering state:

Utilization of the outdoors and the materials
 found in the outdoors in education programs is not
 new practice. Primitive man prepared his children
 to assume the responsibilities of adulthood and of
 his society primarily through direct experiences in
 the outdoors.

In modern times, however, schools have placed
 their major emphasis on vicarious experiences for
 children. Teachers who regularly take their
 classes into an outdoor setting for learning exper-
 iences as an integral part of their curriculum are
 probably in the minority.

These factors are particularly interesting when
 seen in relationship to the movement of a large
 segment of our population from agrarian to urban
 settings. Whereas, in the past, the majority of
 children were directly involved in meaningful
 agrarian activities contributing directly to the
 sustenance of the family unit, today most children
 are growing up in "asphalt jungles" of the city and
 suburbs, removed from rural life and void of par-
 ticipation in meaningful work activities dealing
 directly with soil, plants, and animals.

This great social change, itself a response to
 a rapidly industrializing economy, has been identi-
 fied in research as the foremost basis of the
 modern need for outdoor education. While no claims
 are made that outdoor education solves all the
 problems of rapid technological change, it is held
 that it meets some of the educational needs.⁵

Today too many teachers and other educators have
 fragmentary knowledge of the totality and the edu-
 cational potential of an interdisciplinary Outdoor Edu-
 cation program. Typically the professional education of
 teachers has been solely within the confines of a specific
 subject matter area. When they teach, their teaching
 is to be in a single curricular content area. They
 usually regard Outdoor Education as a narrow field,

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ally science or recreation, or as a "token subject" used for a resident outdoor school experience. In fact, the goals of Outdoor Education are essentially the same as those of general education and Outdoor Education is applied to all the areas of the curriculum. Outdoor Education emphasizes that these goals may be achieved in outdoor settings. Smith stresses this point in the second edition of Outdoor Education:

Since outdoor education . . . is an approach to teaching, and a setting and process whereby learning is facilitated, outdoor education becomes a means rather than an end. Since outdoor education has no identifiable content of its own, it has no goals other than those of general education. A task force of the Council on Outdoor Education and Camping of the American Association for Health, Physical Education, and Recreation, after much study, identified the relationship between some goals of general education and the means by which they might be achieved through outdoor education. In an interim report, submitted in 1971 for further consideration by the Council, a number of goals and means to achieve them were listed. Some of these appear in the chart below.

EDUCATIONAL GOALS AND MEANS IN THE OUTDOORS

Goal	Means in the outdoors
To develop the full potential of the individual	through optimum exposure to and involvement with the natural environment.
To develop knowledge, skills, attitudes and appreciations for the constructive and creative use of leisure time	through exposure to outdoor interests and instruction in outdoor sports and component skills.

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To promote the development of social relations and individual responsibility

through group living experiences, particularly in resident outdoor education, where there are unique opportunities for student-teacher planning and participation in the camp community.

To promote the development of civic responsibility

through active participation and problem-solving situations in: the community, the improvement of the physical environment, and the development of good human relationships through cooperative projects and activities.

To promote the development of aesthetic interests and appreciations

through participation in positive experiences in the natural environment which contribute to the creative expression of talents and interests.

To help the individual become more self-reliant and secure

through adventuresome and challenging outdoor pursuits and skills which require initiative and active participation in solving problems related to comfort, safety, and survival.

To provide opportunities for the individual to strengthen his self-concept

through achieving success and accomplishments in activities which are meaningful to the learner.

Other general goals of education relate to the link between man and the world of nature about him; outdoor education contributes to the achievement of such goals. Examples:

To develop awareness, appreciation, understanding and respect for man's relationship and stewardship responsibility to the natural environment

through opportunities for exploration and problem solving in the outdoors.⁶

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Need for the Study

Socially desirable educational knowledge today necessitates not only an understanding of the factual knowledge of environmental problems but an empathy for the cultures and aspirations of different groups of people in both developed and undeveloped nations. Such knowledge is acquired from informed instructors, by use of a variety of media and other material resources, and by work-learn experiences in various environments and with other culture groups. Professional educators and students need to have a variety of Outdoor Education resources and the opportunity for varied outdoor experiences in order to acquire sufficient environmental understanding to teach effectively and to learn. Outdoor Education links the well-being of people in their own natural environment with the need to learn more about and to effectively care for and share the world's physical environment.

Outdoor Education has grown into a recognized area within the total educational curriculum, within governmental and private organizations, and within business and industry. It has become increasingly important to the leisure time and recreational activities of society. The existence of these trends can be demonstrated by:

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3. The steady increase in number and types of programs being implemented by schools, colleges, recreational industries, and outdoor organizations
4. The wide-age range of participants in both urban and rural settings
5. Increasing recognition of the cultural, social, physical, spiritual, and recreational benefits to be derived
6. Widespread interest in and extensive development of programs and activities to improve the quality of life in all environments
7. An expanding emphasis on planning for the future in all phases of the curriculum including subject matter enrichment through outdoor experiences

These factors provide the impetus for student, teacher, and community demand for a variety of forms of Outdoor Education training and experience. Some of this demand is being met by volunteer and agency groups but on an intermittent basis. This study is focused on better guidance for the response of educators to this impetus. One aspect of this is providing assistance to teachers.

Teachers must understand that the goals of education listed by Smith are best accomplished when they are interwoven and emphasized throughout the curriculum and that an outdoor setting often provides an excellent

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portunity for doing so. Personal contacts and discussions have demonstrated the need to provide Outdoor Education Resource Centers in teacher education institutions and within school districts in order to answer questions regarding the development and administration of Outdoor Education programs, to develop professional educators' competencies in implementing programs, and to assist in finding and using the resources and consultants of the community.

Such centers could also serve the need for a storage and retrieval facility for materials, equipment, and other resources needed for limited amounts of time by any one group of users. The size and specific needs of a school district, institution, or individual school could determine the precise character of a Center.

At the present time, some departments within institutions of higher education and many individual schools within school districts are collecting Outdoor Education resources of diverse types, providing instruction related to the outdoors, but often there is no coordinated effort among departments or schools to centralize this effort or even share it. Examination of college catalogs reveals that departments and Colleges of Education, Natural Resources, Agriculture, Parks and Recreation, Fisheries and Wildlife, Conservation and Forestry, Physical Education, Environmental Education, and

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Continuing Education all house resources and teach courses which reflect the broad concept of Outdoor Education. A similar situation exists among federal, state, and local governmental agencies which publicize, develop materials, establish outdoor facilities, maintain offices and equipment, and provide other related services to the public.

The latest addition to the ranks of those who offer consultant services for outdoor activities is that of the equipment manufacturers. Many of these business industry resources are valuable but their often-vested viewpoints and emphases must be taken into consideration when they are recommended or used. On the other hand, the quality and availability of materials and equipment offered by commercial sources and governmental agencies often surpass those of educational institutions. Teachers find and use these resources but require assistance in relating them to the school curriculum and the learners.

Public agencies often provide resources and services which largely duplicate those provided by public education and yet frequently fail to meet new demands in servicing wider segments of the population and in relating unique materials and services. Such costly duplication, especially within public agencies, consumes available funds and thus slows down the needed expansion of innovative Outdoor Education programs needed for

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cial groups. For example, innovative programs are needed which can meet the requirements of regular students and special groups such as senior citizens and the handicapped. Other special programs such as community work-study projects for youth and family groups and summer enrichment activities for public school children are needed in both urban and rural areas.

For many years those interested in Outdoor Education have needed focal areas to meet, share ideas, organize and store information, study, do research, prepare teaching materials, utilize media, and hold conferences. This need exists for graduate and undergraduate students on campuses, for faculty responsible for teacher education, and especially for teachers and outdoor leaders in school districts and community settings. One major step forward would be the development of an Outdoor Education Resource Center to centralize resources and services to those who teach perhaps the most critical student population group (K-12th grade children) in local settings. Centralization of resources and instructional efforts at college level could improve the quality of faculty instruction and teacher preparation by promoting an understanding of curriculum enrichment through the interdisciplinary approach utilized by outdoor educators.

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Purpose of the Study

The major objectives of this study are: (1) to establish criteria and (2) to utilize these criteria in developing a model for an Outdoor Education Resource Center by:

1. Determining the types of resource materials and equipment needed by outdoor educators for different types of outdoor programs in various settings
2. Providing information as to staff positions, services, and the potential role of an Outdoor Education Resource Center in a school district or other setting
3. Offering guidelines for Outdoor Education resource material selection ranging from a shelf in the classroom to a complete Outdoor Education Resource Center

Methodology

This study will employ a descriptive mode of search based on:

1. An intensive examination of literature which reflects the past, present, and future trends in Outdoor Education programs
2. A written survey given to selected outdoor educators

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3. Face-to-face interviews with Outdoor Education specialists, resource center administrators, and curriculum developers

Criteria extracted from the review of literature will assist in determining the types of programs being offered in Outdoor Education and the settings in which they are being implemented. The results of the written survey will provide specific data on the types of resource materials and equipment which outdoor educators feel necessary for carrying out outdoor activities. The interviews with outdoor specialists, resource center administrators, and curriculum developers will provide insight on the role of the resource center--its functions, services, staffing, and focus on user groups.

Significance of the Study

There have been few studies, if any, done in the area of a campus or school district Outdoor Education Resource Center. Most work has been done on the concept of the Outdoor Education field laboratory, which is most often located in an idyllic setting--far removed from the urban centers of large school populations. Many school systems and communities cannot or do not wish to participate in the more extensive and expensive school program of owning and operating a generally distant resident outdoor school. Thus, the special significance

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of a local Resource Center lies in its proximity to the user groups and in the variety and immediate availability of its resource materials. It is there and available for the teacher's use for one hour or several hours.

This study has further significance in describing how the centralized resources of such a model Center could create opportunities for curriculum enrichment in designated settings. Such enrichment through Outdoor Education might occur by:

1. Greatly extending the opportunities for developing materials and providing experiences specific to the various educational settings in the community
2. Expanding teacher understanding of Outdoor Education as an integral part of the total instructional program
3. Helping teachers recognize the types and kinds of outdoor-oriented resources
4. Creating opportunities for greater understanding of the natural world and the skills and appreciations needed for pursuing life-time pursuits that are in harmony with the environment

Modifications of the model Center are also possible for the development of smaller Outdoor Education programs in single schools or in communities beyond easy

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travel time to larger Centers. Portions of this study will be useful in establishing criteria for the development of Outdoor Education sections in existing educational centers of a more general nature (libraries, nature centers, museums, teacher centers). Guidance in priority selection of resource materials for a specific program or by an individual teacher with a limited budget can be found in other sections of the study.

The resources of the Center should be used to enrich classroom experiences, stimulate independent study projects, provide a setting for preservice and in-service teacher workshops, and facilitate field experiences for both teachers and students.

Parameters of the Study

This study will be restricted to investigating the types of resources needed by outdoor educators for the purpose of determining which resources would be most useful in developing an Outdoor Education Resource Center serving in a school, school district, college, or community setting.

While the types of Outdoor Education programs examined in the literature are representative of Outdoor Education throughout the country, the survey and the interviews were limited to outdoor educators and resource center specialists in Michigan. The teacher-perceived needs of the survey are a key to the selection of

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materials but should not be viewed as the solely definitive source of data. By the same standard, the results of the interviews cannot be accepted apart from the other sources of data. However, the combined data from the three sources, although partly limited by the geographic factor, are representative of the resource needs of outdoor educators throughout the country.

It is not the purpose of this study to explore the planning and development of a field-centered laboratory for Outdoor Education, although such a facility would certainly complement a school district or college Outdoor Education Resource Center. Nor is the purpose of the study to determine the financial costs, size, or structure of any given Center. There are limitations on what can be accomplished in one study, but there are no limitations on the further development of the basic idea of a specialized Center for Outdoor Education.

Assumptions

1. Outdoor Education is a socially and educationally important concept in a technologically advanced society
2. Outdoor educated people can provide solutions to some of the environmental problems
3. Resources and resource materials are crucial and necessary to all forms of organized learning

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4. In any area of curriculum, trained professional personnel can facilitate the effective learning of others

Definition of Terms

Outdoor Education.--The term "Outdoor Education" has had many connotations over the past years. Often it has been used interchangeably with other terms, changing with time and place as the Outdoor Education movement developed and spread around the country. Frequently terminology was modified in an effort to be more specific or to fit into a more formalized and acceptable curriculum concept. "Outdoor Education" is still used interchangeably with other terms, and the confusion continues to mount as the movement grows and organizations with special interests adopt existing terminology to explain their own programs. These special emphases or organizations and the specific interests and interpretations of an individual writer or educator precludes any attempt to standardize the definition or endow it with precise limitations.

For the purposes of this study, Outdoor Education will be used as an all-inclusive term which includes various programs and emphases such as curriculum enrichment, recreation education, environmental education, crafts, camping education, pioneer living, and leisure-time pursuits. Outdoor Education will be used in

reference to the total concept and all other terms will be used to denote a specific aspect or special emphasis of Outdoor Education.

The writer accepts Smith's definition and philosophy of Outdoor Education:

Outdoor education means learning in and for the outdoors. It is a means of curriculum extension and enrichment through outdoor experiences. It is not a separate discipline with prescribed objectives, like science and mathematics; it is simply a learning climate offering opportunities for direct laboratory experiences in identifying and resolving real-life problems for acquiring skills with which to enjoy a lifetime of creative living, for building concepts and developing concern about man and his natural environment, and for getting us back in touch with those aspects of living where our roots were once firm and deep.

This concept of outdoor education brings it within reach of every school, college, and educational agency in the land. Most teachers and youth leaders will find outdoor resources which they can use to enhance learning and to provide opportunities for acquiring knowledge and skills necessary for wholesome outdoor pursuits.⁷

Interdisciplinary Approach.--Outdoor educators speak frequently about an "interdisciplinary approach" to the teaching of Outdoor Education. An interdisciplinary approach simply means educational experiences in which more than one--and ideally all--of the traditional subject matter areas of the curriculum are included. Outdoor educators use this approach to stress the interrelationships of the traditional subject matter areas in outdoor settings.

Resource Center.--Another term which requires clarification is "resource center." For the purposes of this study, an Outdoor Education Resource Center will be a central location where resources for Outdoor Education are stored in an organized manner.

Resources.--Webster defines resources as "a source of information or expertise."⁸

Services.--Webster defines services as "the work performed by one that serves."⁹

Staff.--Webster defines staff as "the personnel who assist a director in carrying out an assigned task."¹⁰

Overview of the Study

In this chapter the need or rationale for developing Outdoor Education Resource Centers has been presented. This rationale is based on human concern for future environmental use and for the physical and mental well-being of humans in that environment. The major objectives of this study have been to establish criteria and to utilize these criteria in developing a model Outdoor Education Resource Center by:

1. Determining the types of resource materials and equipment needed for an Outdoor Education Resource Center

2. Providing information as to staff positions, services, and potential roles of an Outdoor Education Resource Center
3. Offering guidelines for the selection of resource materials

The review of literature in Chapter II will be presented in three sections:

1. Selected Outdoor Education literature--past, present, future
2. Literature describing the "settings" where Outdoor Education occurs
3. Literature identifying specific features of other types of resource centers

In Chapter III, the various sources of data from the survey and the interviews are identified and the procedures used in conducting this study are outlined.

Chapter IV is a presentation and a summarization of the data collected by the methods described in Chapter III.

In Chapter V, the study is concluded with a summary, conclusions drawn from the data sources, and recommendations for further study. The model Outdoor Education Resource Center is described in terms of its three major features--resources, services, and professional staff. The plan of organization for the Center is illustrated by its six major components.

CHAPTER I--NOTES

¹Rachel Carson, Silent Spring (Boston: Houghton Mifflin Company, 1962).

²Julian W. Smith, Reynold E. Carlson, George W. Donaldson, and Hugh B. Masters, Outdoor Education (2d ed.; Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1972), p. 13.

³Ibid., p. 38.

⁴Lloyd B. Sharp, "Introduction," Outdoor Education for American Youth (Washington, D.C.: American Association for Health, Physical Education, and Recreation, 1957).

⁵George W. Donaldson and Oswald H. Goering, Outdoor Education: A Synthesis (Las Cruces, New Mexico: ERIC CRESS, 1970), p. 1.

⁶Smith et al., Outdoor Education, p. 31.

⁷Ibid., p. 20.

⁸Webster's New Collegiate Dictionary (Springfield, Mass.: G. & C. Merriam-Webster, 1974), p. 986.

⁹Ibid., p. 1059.

¹⁰Ibid., p. 1131.

CHAPTER II

REVIEW OF LITERATURE

The review of literature will be divided into three major sections:

- I. Outdoor Education--Past, Present, Future
- II. Locational Settings for Outdoor Education
- III. Selected Information on Resource Centers

It is necessary to understand the background, current status, and future projections of Outdoor Education in order to delineate the areas where resource help is necessary. The location in which Outdoor Education occurs has many built-in resources available. Thus, it is important to look at the interaction between locales and the material resources needed to augment those which are a natural part of the setting. Thirdly, resources and resource materials are critical and crucial to all organized learning activities. Thus, an examination is made of literature pertaining to resource centers in general for what these centers may suggest for the development of a specialized center serving Outdoor Education.

Section I

Outdoor Education--Past, Present, Future

The purpose of this section is to review literature which describes the past, present, and future of Outdoor Education. Any trends in programs should be reflected in the resources of a Resource Center. However, this review will be brief, sufficient only to introduce the basic concepts of Outdoor Education as several other writers have dealt comprehensively with the history, philosophy, and the pioneers of the program in their studies on Outdoor Education (see Wiener,¹ Williams,² Hammerman,³ and Lewis⁴).

There seems to be little question that Outdoor Education as we know it today evolved from early camping and nature-study programs. Bennett indicated in the Fall 1966 issue of the Journal of Outdoor Education:

The origin of school camping and outdoor education in the United States has been credited to Frederick William Gunn, founder and headmaster of the Gunnery School in Connecticut. However, more recent research discloses that this distinction properly belongs to Joseph Cogswell and the Round Hill School, which existed in Northampton, Massachusetts, from 1823 to 1834. This remarkable but little known institution offered an education for boys which was superior in its academic content and unique in the allotment of two hours per day to physical education and outdoor activities. . . . There is no question that the boys of Round Hill School enjoyed hiking and camping activities almost forty years before the Gunnery School youngsters.⁵

Bennett's article is well documented as to the activities of the students at Round Hill School and there is little

doubt that the boys were involved in an early form of Outdoor Education. Donaldson and Goering, however, writing in 1970, distinguish between these early outdoor camping experiences and present-day Outdoor Education.

They write:

Outdoor Education is largely a "post-World War II" phenomenon in the United States. Although various students trace its beginnings to earlier efforts--such as those at the Round Hill School, 1823, or the Gunnery School, 1861--it is impossible to document an organic connection between them and the present-day movement.⁶

Early writers of the 1930s (see Sharp,⁷ Lieberman,⁸ and Blumenthal⁹) recognized the relationship between certain camping activities and education and were able to relate the goals of education in general to those of specific camping experiences. Wiener covers this transition period from the early writings about camping to the advent of the educational philosophy applied to camping which became Outdoor Education as we know it today.¹⁰

Outdoor Education has been a rapidly growing movement since World War II. Donaldson and Goering summarize this recent history:

Outdoor Education in the United States has been an active movement since the late 1940's. While operating under changing designations, there are clearly visible threads of continuity in it. Only within the last few years have historical studies been made which connect these threads. Other in-depth studies are needed.

It is clear that what is currently called Outdoor Education in this country owes its beginnings to the thrust of children's camping in the latter years of the nineteenth century. Organized children's camping was, during its earlier stages, primarily

recreation-oriented. Its basic activities related to skills for outdoor living. However, it paralleled a strong movement in nature education taking place in the schools, and its activities reflected that movement. As organized camping matured, educators were attracted by the potential that camping experiences had for the total development of children.

It may be impossible to determine when the first American teacher went camping with his pupils; it doubtless happened early. But, in retrospect, it is clear that current American outdoor education programs owe their beginnings to two interesting parallel movements:

1. Activities centering around the Life Camps-National Camp (New Jersey) programs of the late 1930's and early 1940's.
and
2. Activities stemming from the Kellogg Foundation's three children's camps in Michigan over about the same time span.

Two men, L. B. Sharp in New Jersey and Julian W. Smith in Michigan, were key figures in a movement which seemed to burst onto the educational scene at the close of World War II. Actually, the war had simply postponed the plans of both men. Smith, operating largely within the public school establishment, and Sharp, generally outside it, played complementary roles. Both eventually joined university faculties; both achieved a national working base.

Within the United States, the 1950's saw outdoor education move out from New Jersey and Michigan to touch, in one fashion or another, practically every state. The same period also witnessed a considerable shift away from school camping as the sole activity. Increased emphasis was placed on the use of school sites, neighborhood parks, and more remote sites. A corresponding shift took place in the commonly stated objectives of outdoor education. Earlier programs had justified their existence largely in terms of gains in the affective domain. The 1950's, possibly in response to Sputnik, witnessed an increased emphasis on the cognitive aspects of education. Much new terminology also came into being.¹¹

Outdoor Education as a recognized dimension of education in the schools is less than forty years old. Two outdoor educators, L. B. Sharp and Julian W. Smith, contributed much to its recognition as an important

aspect of modern education. Sharp, identified initially with camping education, recognized the relationship between learning activities in camp and learning in school situations. He is known for his many contributions to outdoor learning, but is noted most for his often-quoted definition which has set the tone for much of past and present thinking and writing about Outdoor Education. His famous quotation is: "That which can best be learned inside the classroom should be learned there; and that which can best be learned through direct experience outside the classroom, in contact with native materials and life situations, should there be learned."¹² The authors of most books written by outdoor educators in the 1960s and early 1970s accept and use Sharp's definition of Outdoor Education. The same authors accepted the curricular philosophy of Julian Smith.

The 1950s found Outdoor Education spreading throughout much of the country, taking on new dimensions, and developing in many different settings. Inherent in most programs, however, were those threads of old programs with recreation-oriented skills for outdoor living combining with nature-oriented or environmental emphases. About this time, the term "camping education" became unpopular and was replaced with resident outdoor school education. Guidelines were developed for entire classes of school children to go to resident outdoor schools for a week

where teachers and consultants gave an outdoor emphasis to the traditional subject matter areas of the curriculum.

Publications

A number of books on Outdoor Education have appeared since 1960. They cover history and philosophy, curriculum emphases for each subject matter area, the administration of resident outdoor schools, health and safety in the outdoors, program funding, using the community as a resource, crafts using natural materials, and environmental issues. Outdoor recreation skills include archery, casting and angling, camping, and boating activities.

Perhaps the best known of the books of the 1960s is Julian W. Smith's first edition (1963) of Outdoor Education. It was written in collaboration with three other well-known outdoor educators: Reynold E. Carlson, Department of Recreation, Indiana University; George W. Donaldson, Northern Illinois University; and Hugh B. Masters, University of Georgia. The table of contents of this text indicates not only the range of topics now covered in Outdoor Education but also shows the impact of Outdoor Education on the total academic scene. Smith's book became the standard text for many college courses and the "take off" for much of the later writing. Colleges offered a variety of courses in Outdoor Education

as it became necessary to get teachers into outdoor settings for real-life experiences.

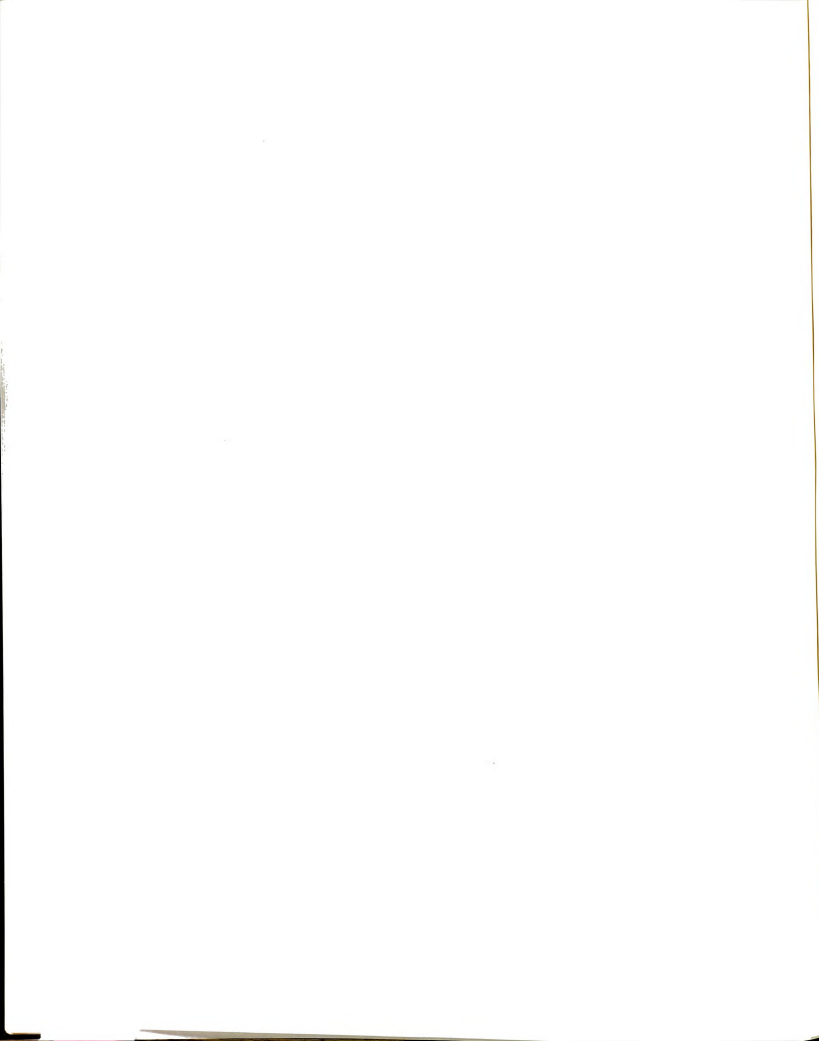
Julian Smith pointed out the need for adults to have outdoor experiences in order to understand how to utilize the out-of-doors for curriculum enrichment:

"Today's adults--products, too, of an industrial society--need educative experiences in the outdoors if they are to make full and creative use of our great outdoor heritage."¹³

He outlined outdoor teaching/learning characteristics:

Outdoor education is truly an interdisciplinary field, cutting across many curricular areas. It possesses no subject matter of its own; its major contributions are ways of learning. Eight characteristics distinguish outdoor education, all of them relating to the methodology of learning.

1. Direct experience. Probably the key characteristic of outdoor education is the direct exposure to learning experiences. Without depreciating the values of vicarious experience--lectures, books, visual aids--outdoor education holds that much learning is best achieved when the materials of learning are experienced directly.
2. Discovery, exploration, adventure. Although students in the outdoors may never make a truly original discovery, the excitement of exploring can be theirs. Good teaching in the outdoors will seek to employ the methods of science, working from the specific to the general.
3. Sensory learning. Good outdoor teaching will employ every applicable sense to the learning experience. The feel and the smell of rich soil adds depth to the learner's appreciation; the sound of birds singing adds new perspective.
4. Activities natural to childhood and youth. Because outdoor activities are lively, exciting, even thrilling, they have an inherent appeal for youngsters. None of the gimmicks of artificial motivation are needed.
5. Intense interest. Interest is high when learners are totally involved in learning experiences. Because of the natural appeal of the outdoors to



most children and youth, it is a relatively simple matter to secure total involvement and intense interest.

6. Reality. Problems in the outdoors are real to learners. They are not problems of words, pictures, charts, or diagrams. An eroded hillside is stark reality. The colors of sunrise have only been approximated by artists and photographers.
7. Problems in context. Problems encountered by learners in the outdoors exist in a real setting. In many instances, the setting is as significant as the problem itself. A problem of soil erosion in a little-used wilderness area suggests certain treatment. The same issue in a city park or camp site requires a quite different solution. The context makes the difference.
8. Learners most active. It is almost a truism in educational theory that purposeful activity educates. The outdoors provides many real challenges of such character as to stimulate the learner--not just the teacher. Learners become truly active in the learning process.¹⁴

The same methodology of learning which applies to students in outdoor classes in public schools also applies to teachers in graduate classes in Outdoor Education. The outdoor experience should be reinforced with resource materials and equipment to assist the teacher in knowing how to use field equipment and how to enrich his own subject matter area by such use. For example, a science teacher should be able to use and interpret soil and water testing kits, use an increment borer, collect and preserve plant specimens, and use weather instruments. A social studies teacher should be able to use church records on a field trip to the cemetery as a part of the historical study of the community.

The growing development and implementation of resident outdoor school programs in past years required additional administrative planning and action. School systems acquired winterized facilities in natural areas and resident outdoor schools were carried out throughout the school year in many of the larger systems. Other school systems rented or leased camps to provide resident outdoor experiences. Administrative and teaching personnel began to develop their own curriculum guides for grades K through 12, including both educational objectives and evaluation designs.

In education, the word "objectives" carries with it its own history and is indicative of social change. Donaldson and Goering (1970) provide insight on this trend of changing objectives in Outdoor Education:

Stated educational objectives provide interesting indications of the transition of outdoor education from its "camping" phase to the more nearly academic orientation of today. Early claims as to the values of outdoor education experiences were clearly derived from the practices and the assumed values of private and agency camps for children. Indeed, the very language used reflects the "health and welfare" era of children's camping in the United States.

The oft-repeated early objective of health-welfare camping--

- | | |
|-----------------------|-----------------------|
| 1. Healthful, living, | 3. Social living, |
| 2. Working, | 4. Leisure pursuits-- |

became in the 1940's:

1. Learning to live together,
2. Learning to work,
3. Learning about the physical environment,
4. Learning to live healthfully.

By the early 1950's, such statements had been modified to read:

1. Social living,
2. Work experience,
3. Healthy living,
4. Outdoor education,
5. Supplement to classroom instruction.

In the 1960's a student was much more likely to see outdoor education justified in terms of traditional subject matter.¹⁵

Recent Trends in Outdoor Education Programming

Recent years have brought about some changes in emphases in Outdoor Education programs, in types of leadership training, and in material resources and services. The changes are represented by greater attention to various environmental projects; a wide range of activities described under the title of "adventure" programs; many types of winter activities; programs for handicapped people; work-study projects for youth; pioneer living (crafts and outdoor living skills); and an emphasis on developing worthy leisure-time activities for all ages.

Environmental Education

Environmental education has become one of the major emphases of Outdoor Education programs for all grade levels within the school system. Some schools emphasize environmental education as the major focus of their outdoor programs. Julian Smith discussed environmental education in the Fall/Winter 1971/72 issue of the Newsletter:

There never was a time in the past quarter of a century that strong and sound leadership in outdoor education could make such an important contribution to education as today. Two major factors contribute to the timeliness of outdoor education: (1) the increasing concern about the quality of the physical environment accompanied by public interest and political action; and (2) the near-frantic efforts to "do something" in education toward improving the environment. Today's public concern about the deterioration or loss of our natural resources gives added impetus to the initiation and development, or expansion of outdoor education programs which will affect attitudes and behavior necessary to insure a quality environment. This has long been one of the major objectives of outdoor education and it is inconceivable that there can be effective education for environmental quality without the outdoor education approach.

There have been many developments in outdoor education in recent months that give added impetus to environmental studies, in addition to the achievement of broad educational objectives that have characterized education in and for the outdoors for many years.¹⁶

Smith comments further on the role of environmental education as a part of Outdoor Education:

Outdoor education, taking place as it does in the environment and using outdoor resources for educational purposes, is in a unique position to influence both understanding of and feelings about the environment. Indeed, outdoor educators were among the earliest practitioners of what has come to be called environmental education, because their outdoor education programs have usually stressed the need to understand, to appreciate, and to protect the environment.¹⁷

Environmental education is developing in a number of directions--on school sites, school gardens and farms, as science projects in high schools, field experiences in camps and biological study areas, and as work-study programs. The impetus for developing environmental

emphases in education has moved rapidly because people have a great "need to do something" and funding is often available. This interest in environmental education projects is reflected in such resource needs as tools, specialized equipment, seeds, and books and pamphlets which tell what to do, how to do it, and when to do it. This need is also reflected in what teachers require in professional development classes.

Adventure Programs

One of the most rapidly growing emphases in Outdoor Education is that of "adventure programs"--outdoor activities which challenge and test youth. Adventure programs include a variety of outdoor experiences which combine outdoor learning with situations that are characterized by vigorous physical training, working cooperatively with others, and overcoming some hardship which involves a certain amount of risk. The programs are usually geared to high school and college youth; the settings are usually mountains, deserts, or streams in wilderness areas. The activities involve risk-taking and stress situations which test the physical and emotional endurance of individuals and their abilities to adjust and cooperate with a small group of other individuals in difficult situations.

Private groups, colleges, and high schools offer adventure programs which include mountain climbing,

backpacking, wilderness survival, bicycle trips, canoe trips, and foreign travel. Adventure activities are not new to this era but the variety of programs and the fact that colleges now offer credit courses for them is.

This Fall/Winter 1972/73 issue of the Newsletter comments on adventure programs:

Among the promising developments in the growth of outdoor education are adventure kinds of programs, particularly appropriate for secondary schools, colleges, and older youth. From the beginning, outdoor education has been an "adventure" in education. To date, resident outdoor education and the use of the outdoors as a laboratory for learning have centered largely in the elementary schools.

A newer emphasis in outdoor education is now reaching secondary schools, colleges, and older youth groups. These developments are illustrated by work-learn experiences on the land and in the forest; by survival-type programs, expeditions to wilderness areas and out-post camping; vigorous outdoor sports and activities such as downhill skiing, cross country skiing and canoe trips; teaching outdoor skills such as archery, casting and angling, shooting sports, and others.

Many feel that older youth could find wholesome and challenging activities in the outdoors which in many instances would provide the adventure (and the "kicks") that would help meet many of the needs of today's youth. It may well be that outdoor education can provide some of the opportunities that are constructive and wholesome, and thus deter some of the less desirable activities that constitute some of the major social ills of our times. Outward Bound and similar programs are making impacts on outdoor education for older youth and there are already many appropriate adaptations of these programs finding their way into the educational curriculums of schools and colleges. Historically, depressions, unemployment, and delinquency have given impetus to educational programs that relate good education to the land and our programs for "pre-delinquent" youth that will help solve some of the problems of human erosion as well as land

erosion--that will develop a citizenry who will be stewards of the natural resources that are necessary for quality living.

Outdoor education could develop modern Paul Bunyans who will rebuild our land rather than pillage and destroy it. Vigorous programs of action and adventure will be far more important in improving the physical world than all the verbiage of the prophets of gloom. Knowledge and action are not incompatible--they are essential components of building a better society. Outdoor Education offers the opportunity--the incentives--the motivation--and the spirit of adventure to create a citizenry that has respect for self--for all people--for the kind of a world that supports democracy and peace.¹⁸

Metcalfe, who has participated in several of the adventure programs, provides some insight into them:

Wilderness camping, backpacking, climbing, caving, orienteering, canoeing, rafting, pack animal trips, sailing, cross country skiing, and snowshoeing are some of the activities that are considered adventure programming. All involve some risk that can be minimized with proper instruction, adequate equipment, and good judgment. . . .

Adventurous activities seem to have great appeal for young people. They can provide great motivation for learning; develop physical fitness and awareness; and help develop social interactions, while being exhilarating.

Adventure programs not only need a worthwhile goal, but that goal must be somewhat difficult to attain if it is to be worthy in the eyes of those who seek it. At the end, students need to know that they have been tested and have accomplished something unusual or, better yet, something exceptional.

Adventure programs contain a collection of ideas from many sources. Programs vary greatly but do have some commonalities. Most have an aura of risk, real or developed. New experiences, skill development, and thought patterns are usual. Close interaction with people in small groups usually is called for. The student must look at himself very objectively. The student group is put into an environment that cannot be ignored.¹⁹

Today, adventure programs come in a variety of forms and are often developed around the interests and

skills of an individual with an outdoor orientation who recognizes that "adventure" has to be something out of the ordinary and that it can serve a very real and useful purpose with young people. Such programs are not new, they were being done successfully by youth groups for the same purposes twenty years ago.²⁰ What is significant is that high schools and colleges are developing guidelines for the use of adventure programs and implementing them for special groups. Under proper direction, both the individual and society benefit. Of importance to this study is the fact that if adventure programs continue as a part of Outdoor Education, additional types of resource materials, equipment, teacher training, and locational settings will be needed. The most frequently used equipment will include backpacking gear, cooking equipment, lightweight tents, and special survival items.

Winter Activities

Often closely associated with adventure programs is another important segment of Outdoor Education programs--especially for states in northern climates. Previously many Outdoor Education Programs were in operation only during the warmer seasons of the year, but the past few years have seen an increase in the number and types of winter activities being implemented by schools and colleges. It is not unusual to see an elementary teacher

and students in the schoolyard doing temperature charts, snow sculpture, or even having a winter cookout. Many resident outdoor schools have been winterized, and one can find students learning the techniques of skiing and snowshoeing in the schoolyard in anticipation of a trip to resident outdoor school.

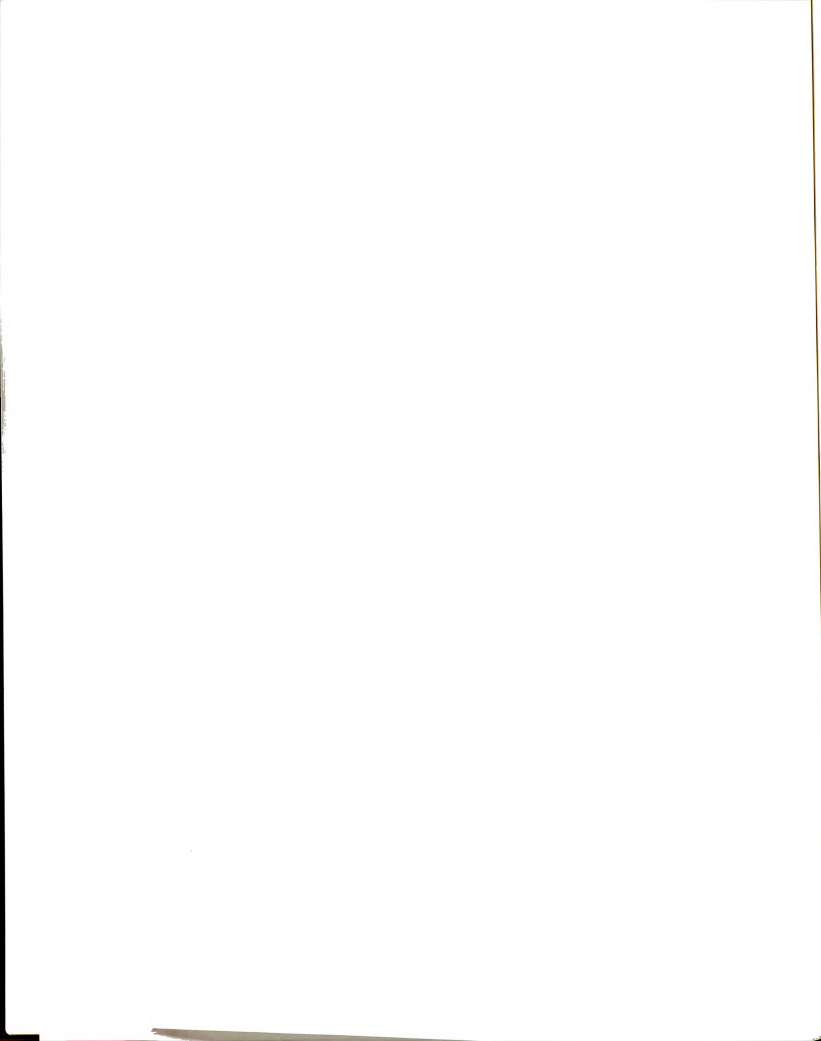
Winter workshops are also held for teachers. Michigan recently conducted its Fifth Annual Winter Workshop at the Ralph McMullan Conservation School, Higgins Lake, Michigan. Its program description read:

This workshop is designed to help school, college, and recreation leaders initiate winter outdoor education activities in their own institutions and agencies. It will be of special interest to those in elementary schools, middle schools, high schools, community schools, colleges, and recreation agencies. The following areas will be featured. . . .

- (A) Winter Outdoor Activities for the Classroom Teacher
- (B) Winter Outdoor Recreation Activities
- (C) Winter Adventure in the Outdoors.²¹

It should be noted that three major areas of Outdoor Education were emphasized--curriculum enrichment for the classroom teacher, recreational skills for leisure time interests, and adventure program which combined skills, environmental knowledge, and the challenge of a stress situation.

The interest in winter activities stimulates the need for winter camping equipment--warm clothing, snug tents, ski and snowshoe equipment, orienteering knowledge,



books on winter survival, and a very special need for teacher training in outdoor winter programming skills.

Special Education

One special area of Outdoor Education programming that has been receiving attention is that of Outdoor Education for the handicapped. There seems to be a special satisfaction for those outdoor educators and special education teachers who work with the handicapped . . . perhaps it is because impaired children seem to highly enjoy any form of outdoor activity despite their limitations. Numerous programs were stimulated in the latter half of the 1960s after the passage of the Elementary and Secondary Education Act in 1965. The E.S.E.A. Title III Project "Discovery Through Outdoor Education" was one of the programs developed after receiving federal funds for three years. Created and administered by the late Ed Alexander in fall, 1971, the project was to serve the impaired children in the twenty-one school districts of Macomb County, Michigan. This project was designed to "involve all special education students and their parents."²²

This E.S.E.A. Title III Project has been successfully operating since it began in 1971. In 1975, under the direction of its present Project Coordinator, Kristine Bott, a kit containing a curriculum guide

and a set of filmstrips and tapes was prepared which describes the purpose, goals, and the objectives of the activities for the handicapped. The Discovery Script reads:

"Discovery Through Outdoor Education's" purpose is to 1) establish a model program which will improve youngster's achievement in regular school subjects by building their self-concept, interpersonal relationships, and leisure skills; 2) train special education teachers to use the outdoors to provide new and varied learning opportunities for impaired children; 3) test an outdoor education model for improving the learning and lives of impaired children; and 4) use high school students as instructor aides for impaired students to the benefit of each.²³

Participation in outdoor activities has great satisfactions for the handicapped. Understanding, patience, and creativity are needed in planning programs and special facilities for their use.

Special education in an outdoor setting will need the usual resource materials for teaching the handicapped. Special facilities such as nature trails wide enough for wheel chairs, special ramps at resident camps, and special tools and equipment for the handicapped to work and learn in outdoor settings will be needed. These special needs will also be reflected in direct experiences for teachers who work with the handicapped. This means on-the-site experiences with the tools and equipment that will be used later with the handicapped students.

Work-Study Programs

Another area of Outdoor Education which has developed successfully within the school curriculum is the work-study program. One of the assumptions made in Outdoor Education is that students learn best by "doing." In his writings and speeches, Julian Smith often mentioned "purposeful work activities." These work-study activities fall into two categories:

1. those which revolve around the daily routine of just living and are related to food, shelter, and comfort
2. those which revolve around projects which improve the physical environment.²⁴

The first category involves students in "doing" to serve their own comfort and well-being. This learning to live together exists in many outdoor activities but is especially effective in resident outdoor school experiences, in adventure programs, and in the work-study projects set up to provide opportunities for young adults of high school age or older. The second category "is particularly significant in developing good citizenship and desirable attitudes toward natural resources and the improvement of the natural environment."²⁵ Such school projects are often developed for secondary youth groups who are not finding satisfaction in regular academic curriculum programs. The resource needs for work-study projects, usually for secondary students, will be tools, books or

manuals which explain what is being done, and adult staff with a real interest in both the student and the value of the project.

Pioneer Studies

The Bicentennial of 1976 gave impetus to another type of Outdoor Education program. Pioneer Studies or Pioneer Living courses have increased in the school curriculum in a number of schools as a part of their Outdoor Education program. Several schools have taught or provided some aspects of Pioneer Studies for a number of years, but the Bicentennial celebration added depth and increased interest in this phase of Outdoor Education.

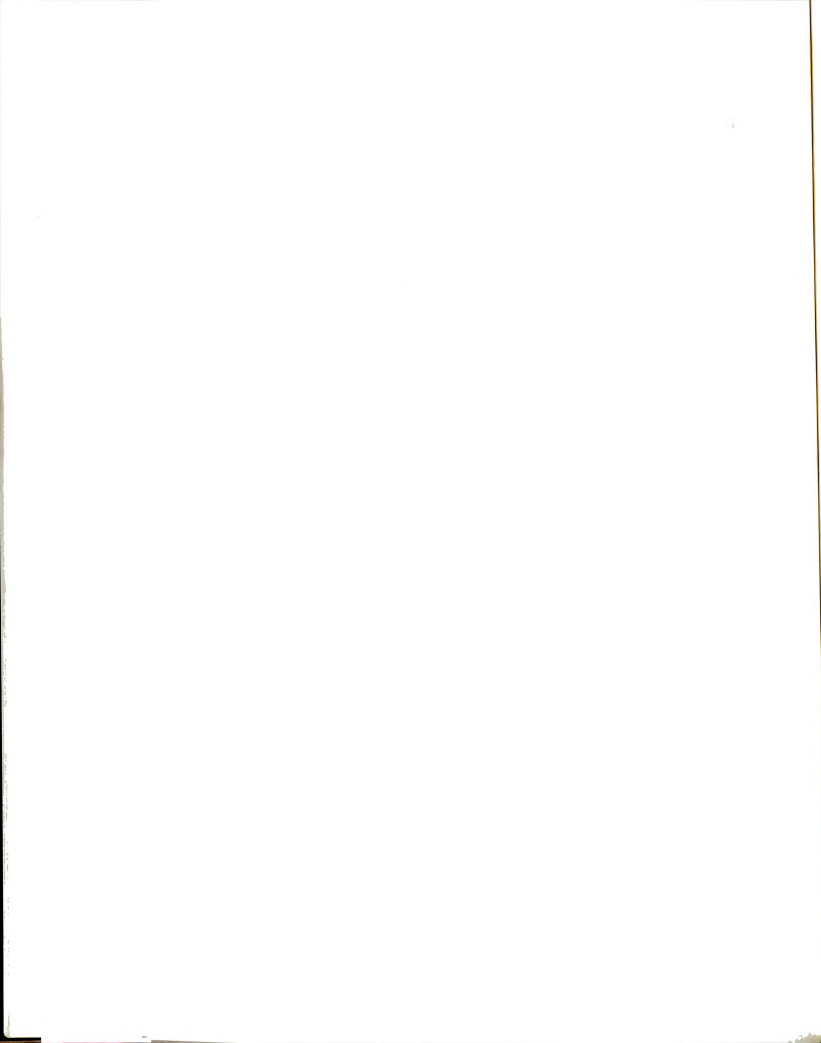
Pioneer Studies may be related to a variety of subject matter areas or may be expressed in a more limited fashion in one or two areas such as Art (using natural materials as the pioneers did) and Home Economics (cooking from "scratch" with grandmother's recipes). Haslett Middle School, Haslett, Michigan, has a Pioneer Living unit built around an authentic log cabin. The log cabin was donated to the school district in 1971 by Ervin R. Vanderjagt, Associate Professor Emeritus of Natural Science at Michigan State University. The cabin was moved to the school site on Haslett Road in Williamston Township by a cooperative community project involving students, teachers, University faculty, and an Army

reserve unit.²⁶ A formal dedication of the cabin was held as a part of Michigan Week in May, 1977.

Pioneer Studies is perhaps one of the lesser known programs in Outdoor Education but it is one with great potential. The ideas of seeking "roots," of looking at our heritage, of knowing the history of the community and the people who settled it, of re-discovering old crafts and skills--all are laudable aspects of an Outdoor Education program to enrich the curriculum.

Pioneer Studies has an attraction for youth, but it can also involve senior citizens who are willing to share their knowledge and their treasured recollections of other times with young people. Pioneer Studies can be done in the community with a minimum of funds and with maximum use of community resources. It has many aspects which can develop into lifetime skills and hobbies for worthy use of leisure time.

Pioneer Studies can require an endless number of resource books and materials for pioneer cooking, outdoor skills, toy making, weaving, quilting, basketry, wood-working and woodcarving, study of tools, using natural materials for art projects, and other old crafts which may be characteristic of a community or culture group. Professional staff will need guidance in learning these special skills and in finding resource people, such as older citizens who possess an almost forgotten skill which can be revived.



Worthy Use of Leisure Time

The concept of the worthy use of leisure time cuts across the total Outdoor Education program. Outdoor pursuits provide a healthful and satisfying atmosphere for recreation and hobbies. Smith wrote of leisure time, "Worthy use of leisure time is related to the individual's knowledge, understanding, and capacity to choose, from among all the activities to which his time can be devoted, those which contribute to the achievement of his purposes and to the satisfaction of his needs."²⁷

Nash credits David Sarnoff with a quotation on leisure which reflects a future need for additional emphasis and planning for Outdoor Education. It is, "Leisure rather than labor will be the great problem in the years ahead."²⁸

Worthy leisure time activities are lasting benefits from interest in and participation in most Outdoor Education programs. Examples of these lifetime leisure activities are found in recreational interests such as fishing, archery, boating, and hunting; in crafts and hobbies using natural materials; in environmental projects such as gardening and community beautification efforts; in outdoor living such as camping and outdoor cooking; and in teaching others through school and community programs.

Worthy use of leisure time may be found in the other activities examined but a direct approach and a recognition that a skill or hobby has real value to the individual and use in teaching others often places that skill or hobby in new perspective. The real value is in the sense of creative satisfaction derived. The student may need to try a variety of activities before discovering one which meets his individual need. The resource materials and the opportunities to use them must be available and presented by enthusiastic staff.

Summary

Section I of Chapter II has focused on a review of literature which examined the past, present, and future program trends of Outdoor Education. While the first part of this review explored Outdoor Education in general, most of the examples used in depicting current trends were programs currently in operation.

The history and philosophy of Outdoor Education in the past has provided a background for present-day programs and current program trends reflect the types of resources needed by outdoor educators. Section II of this chapter will examine the settings for Outdoor Education.

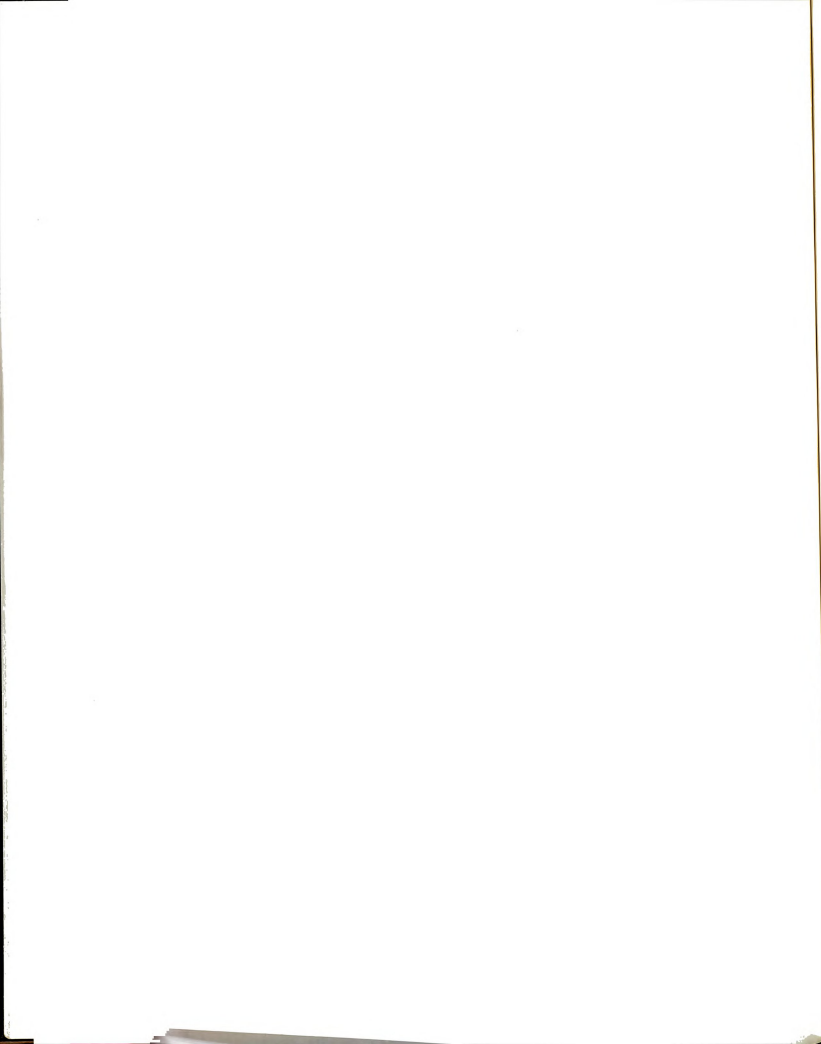
Section II

Locational Settings for Outdoor
Education

Within this section the "settings" where Outdoor Education takes place will be described. For the purposes of this study, the site type of setting will be referred to as a "locational setting." The locational setting involves specific types of outdoor environments where teachers use the site as an outdoor laboratory. Examples of locational settings might be that of a schoolyard or a resident outdoor school. In each case, the effect of the following section is to identify resources and equipment needed for specific site activities.

Since it would obviously be impossible to examine in detail all of the locational settings where Outdoor Education takes place for students, four representative types of locational settings have been selected. All four types of settings are typical of other general settings around the country. There is some variation in how much or how little a specific locational setting has to offer, but certain features of the setting and the requirements for program are inherent in each type regardless of geographic location.

The individual type of setting and the specific opportunities for teaching and learning are indicators for the categories of material resources and equipment



necessary beyond the environment itself. The four settings are: (1) the school site, (2) community sites, (3) resident outdoor school, and (4) adventure program sites. The settings or sites will be examined in the above order as there is a progression of learning experiences made possible by beginning at the school site and extending the outdoor studies through the resident outdoor school and possibly into some form of adventure program (Appendix B).

The School Site

The school site is the most familiar and probably the most widely used site for Outdoor Education in the public schools. It includes the building and the grounds adjacent to it--the area subject to administrative control. It can vary from the small two-story building with a blacktop playground and almost nonexistent natural area in the inner city to the suburban school with its spacious buildings and its own acreage of lawns, shrubs, woodlot, fields and pond or stream. Each school is different and must be developed as such. There are, however, certain key points for teachers utilizing any school site. One of these points is to accept the school as a part of the environment and to use what is found on the school site to initiate a relevant program of outdoor study. Helen Russell states it very well:

School grounds are almost always reflectors of the neighborhood in which they are located. The hard-topped play area of a metropolitan school is touched by rain, wind, pollution, noise, and overcrowding in the same way as the streets that surround it; similarly, the bare soil of a hillside school develops gulleys in the same way as the farms that surround it.²⁹

The school site has other built-in advantages as a starting point for outdoor studies--advantages that will offer reassurance to the teacher and the school administrator:

1. there are no scheduling problems
2. no waiting for a bus date
3. no streets to cross
4. no permission slips, bus fees, and additional insurance to worry about
5. it is familiar to the teacher
6. it is easily accessible for short periods of time, an entire period, or for repeated trips to record changes
7. constant use will improve the teacher's ability to use the site³⁰
8. parents, other teachers, teacher aides, and community consultants will be available for assistance
9. projects can be continued from year to year
10. materials and equipment of the school will be available (last three items mine)

Each teacher must approach the idea of using the school site in the manner with which she feels most comfortable. There are, however, some suggestions which will help in getting started. An inventory of the school site will provide some clues for study. The most obvious features for study will include: (1) plant life; (2) animal life; (3) soil and rocks; (4) water and run-off; (5) air and water pollution; (6) building, parking lot, and traffic patterns; (7) adjacent streets

and traffic; (8) litter and other forms of pollution; (9) recycling possibilities; (10) evidence of vandalism destroying natural and public resources; (11) waste; (12) micro-climates; (13) sun and shade; (14) awareness potential (sounds, odors, sights, textures, and possibly tastes); (15) weather changes (temperatures in different locations, humidity, wind direction and velocity, use of rain gauges); (16) nature photography and use of tapes.

Resource materials designed for use on school sites are becoming more available. One of the earlier books, Curriculum Enrichment Outdoors by Hug and Wilson (1965), is devoted entirely to explanations on how to use the site and ways of weaving the outdoor experiences into the subject matter areas with specific chapters devoted to language arts, social studies, mathematics, arts and crafts, music and movement, science, and recreation.³¹ It is primarily for elementary levels but secondary teachers will be able to adapt ideas to upper class level teaching.

Another useful resource providing guidelines for teachers using the school site is Discovering Your Environment, a set of discovery guide sheets covering air; area, perimeter, and shape; automobiles; children; colors; direction; earthworms; flagpole; litter, weathering, and man's lack of action; rain, school building and ground; school lawns; school parking lot; sounds in our

environment; temperature; trees; utilities and services; and word hunt.³² It is possible to duplicate the discovery sheet masters for school use.

Use of prepared guidelines is very helpful for the teacher but an intensive study of the site itself will reveal additional opportunities for outdoor study. Imagination, creativity, and planning with students will uncover other possibilities peculiar to each site--rock outcrops, a fencerow, nature trails, bird feeders, special types of vegetation for wildlife or screening, and an area for a small garden. Growing things is very important for all children and even the most barren inner city school can find room for window boxes or street boxes. Nor does all development need to be environmental--there are opportunities for more creative play areas. Miller describes many possibilities for creative playgrounds which combine the use of both man-made equipment and natural materials just for play.³³ Naturally the activities developed for the school site will require materials and equipment beyond that which is found in the usual elementary school classroom.

Suggestions for equipment for specific activities in outdoor teaching can be found in Curriculum Enrichment Outdoors³⁴ and in the Outdoor Education Teacher's Manual published by Haslett Public Schools.³⁵ Chapter IV will elaborate on resource materials and equipment.

Community Sites

School field trips to various sites in the adjacent community are the next logical step in outdoor studies and experiences beyond the schoolyard. The community, once explored and inventoried, will reveal a rich storehouse of outdoor resource areas, resource people, and outdoor-related agencies available to school groups.

Experiences in outdoor learning for students have extensive possibilities but should be geared to age and grade level, previous experiences, interests, subject matter orientation, resource consultants available, and the physical and cultural resources of the community. Perhaps the two most important considerations for the teacher to keep in mind are that the outdoor experience be related to classroom and living experiences and that the progression in activities show the relationships between man and his environment.

There are two approaches possible in using the community as a resource for educational purposes. The idea is the same--only the degree of organized use and availability is different:

1. The efforts of the individual school teacher and administrator to find and use community resources.
2. The community-school concept envisions the school as a service agency for the community. "This concept furthers the realization of the goals and purposes of education by meeting individual growth needs while providing social training for democracy."³⁶

Either approach is possible--the first depends on the initiative of the individual teacher and school. The second makes full use of all the community agencies for learning experiences in a more organized manner since community planning has included use of its resources for educational purposes and often provides a school-community coordinator to facilitate such activities. However, the opportunities are there in either situation.

The first step is to make some form of inventory of the possibilities. A school administrator alert to the educational possibilities of the school field trip has a three-fold task:

1. He has to educate his teachers through general meetings, committee assignments, and in-service workshops as to the instructional possibilities of learning outside the classroom. Since the teacher is in direct control of the students the success of the journey will depend upon her skill in utilizing, planning, and conducting it.
2. The second task of the school administrator is to educate the parents and citizens of the community to the instructional benefits and educational possibilities which the community can offer the school.
3. The third job of the school administrator is to instigate and implement a survey of the community for instructional possibilities and resources for education.³⁷

Only journeys which are legitimate and worthwhile educationally should be selected. Pertinent materials and information regarding each trip should be included. The following information should be included with each suggested journey: (1) relation to the curriculum;

(2) value in terms of the contribution it will make to children's previous experiences, needs, and interests.

. . . "38

Outdoor experiences for elementary students may progress from the schoolyard to walks around the immediate neighborhood, to the park, to a pet shop or greenhouse, to the local nature center or museum, and beyond to a school farm, fish hatchery, or lumber mill. Trips may be scheduled for the short walking trip of an hour or less to the day trip of upper elementary and perhaps a trip of several days for secondary students. Often trips may be made to the same site at different seasons of the year to note seasonal changes or for more intensive study the following year to discover new aspects of the same environment. Older students can often combine more specialized study with community service projects of a conservation nature or serve as high school counselors for younger students at resident outdoor schools.

Smith provides insight on potential field trips to study conservation practices which include both wise and unwise use of land and the results of such practices:

- (1) eroded and devastated areas, (2) farms and forest with good conservation practices, (3) deserted farms,
- (4) fire lookout stations, (5) reforestation projects,
- (6) fish and game hatcheries, (7) wildlife sanctuaries,
- (8) parks or natural areas, (9) water supply systems,

(10) city or camp sewage systems, (11) city dumps, and (12) flood plain areas.³⁹

Use of community sites really involves more than just a site--use involves various types of sites, the consultants and the services which are offered, use of private sites (farms and gardens), seeking out individuals who may have hobbies, skills, treasured momentos, knowledge of the history and development of the area, or individuals or groups interested in community projects with an outdoor emphasis.

Resident Outdoor Schools

Resident outdoor schools (formerly called school camps) are a part of the public school Outdoor Education program in many school systems. It involves a period of time, usually a week, when students and teachers go to a resident outdoor school where they participate together in additional outdoor experiences related to the curriculum of the classroom and explore potential leisure time skills, crafts, and hobbies. The school system may own the resident outdoor school, use one owned by the state, or rent a facility owned by a private organization. The week in the resident outdoor school should be an extension of regular classroom learnings and should be planned beforehand by teachers and students, shared during the week, and followed up with additional activities upon returning to school.

The type of site for a resident outdoor school cannot be systemized nor can the program be defined for all resident outdoor schools. Sites are acquired in various ways and few schools have the opportunity of finding a site with all the right natural features and a reasonable price. Outdoor educators and classroom teachers build the program around the assets of a given site, therefore it is customary for teachers to visit a site beforehand for program planning.

Teachers should have a good understanding of the educational objectives of the outdoor experience as well as knowledge of the site before taking students to the outdoor school. Smith classifies the educational objectives of outdoor classroom programs in resident outdoor school as: (1) social living, (2) healthful living, (3) work experience, (4) recreational living, and (5) outdoor education activities related to classroom subject matter.⁴⁰

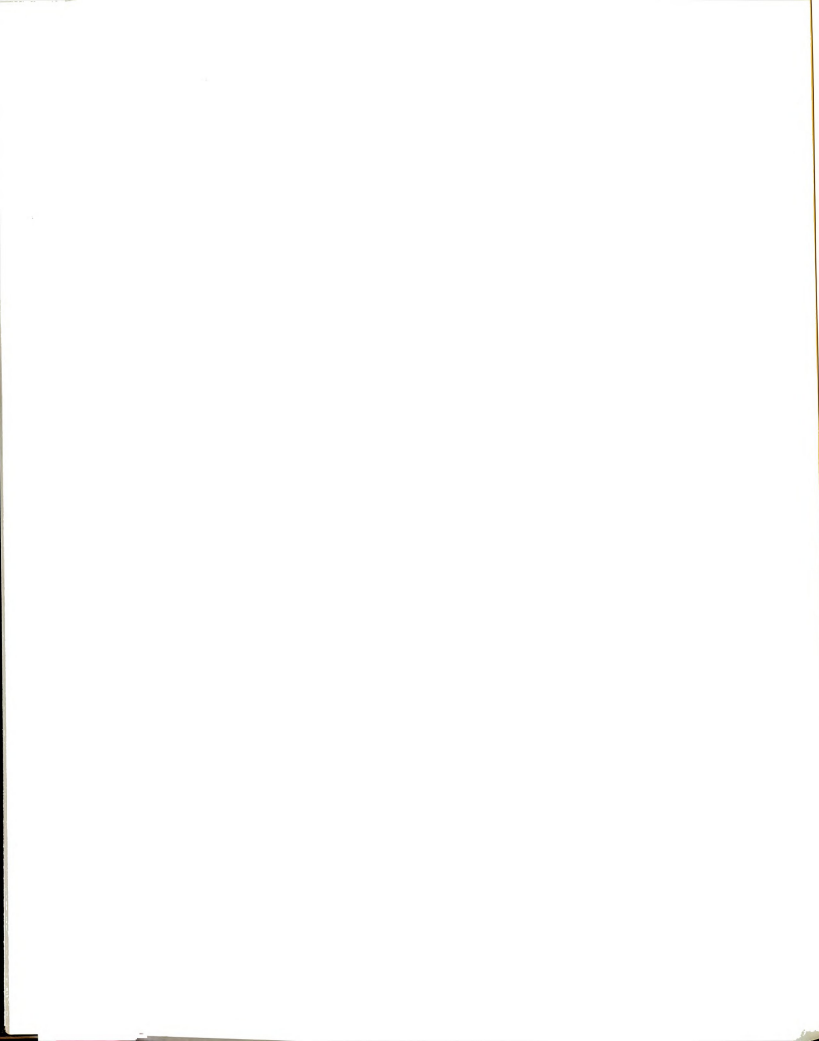
It is customary to think in terms of curriculum enrichment for certain subject matter areas--science, social studies, language arts, mathematics, and art and music. The thinking on what is included in the curriculum has broadened and now includes all of the subject matter areas. Outdoor Education programs now include home economics, industrial arts, health and physical education, and a greater variety of recreational skills.

A Michigan Department of Education publication says of outdoor skills and sports:

An increasing number of Michigan schools now include some of the outdoor skills and sports in the curriculum, often as a part of physical education or school recreation. In a number of community schools this phase of outdoor education is a regular part of a complete community education program. The following are examples of varying kinds of programs involving the teaching of outdoor skills and sports.

1. Casting and Angling in physical education in secondary schools, in the school recreation program, and through high school and junior high school clubs. Many outdoor schools also include casting in the program.
2. Archery. This is an increasingly popular sport in schools and in most instances is included in physical education classes, intramural activities, school recreation, and in resident outdoor schools. . . .
3. Shooting and hunter safety. These outdoor-related activities are appropriate aspects of physical education, school recreation, or club programs. . . .
4. Boating, canoeing and other water activities. . . .
5. Winter sports. An increasing number of schools are offering instruction in winter sports through physical education and school recreation programs. Instruction in snow skiing, for example, is included in both elementary and secondary physical education in several school districts. . . .
6. Other sports and skills. There are many other outdoor-related skills, crafts, and hobbies in school programs that are conducted as a part of classroom learnings. . . . Examples include: lapidary activities, making outdoor equipment in school shops, orienteering and compass games, outdoor cooking, hiking, cycling, fly tying, and camping skills.⁴¹

The important aspect of Outdoor Education in the schools and at resident outdoor schools is the fact that its flexibility permits the inclusion of any outdoor experiences or other activities related to outdoor living and working. No one area of the curriculum has the "edge"



over any other area. A balance of interests and activities which fit the community are desirable. Resident outdoor schools present many different and unusual opportunities for trying out a variety of activities and experiences based on the diversity of settings and resource consultants available. The sites of resident outdoor schools lend themselves to planned activities and to the discovery of new ones.

Lewis comments on the basic principles for planning a resident school Outdoor Education experience:

1. The program must provide direct experiences in democratic living and group cooperation.
2. There should be provision for informal self-government by the students to whatever extent their age and experience will permit.
3. Students should participate in planning and evaluating their activities, and time should be set aside for this planning and evaluation.
4. Emphasis in the program should be on doing instructional work rather than on observing others at work.
5. Time should be allowed for discussion and questions so that the classroom follow-up will be more meaningful. It is also suggested that the preplanning in the classroom be thorough so that time is not wasted by explanation and talk during the outdoor experience when it might be used in activity.
6. Activities should be so far as possible those which would not be possible at home, in school, or in the community.
7. Skills in living out-of-doors should be developed.
8. Where possible, the program should provide a laboratory experience in the natural science and conservation of our natural resources.
9. There should, where possible, be work experiences providing community service. This may be to the living or classroom group, to the camp, to the local community, to the state, or to the nation.

10. Students should have a choice in activities.
11. Work and recreation activities should be planned to encourage the social development of the student.
12. The program should put emphasis on the appreciation and understanding of nature, the inter-relationships between soil, vegetation, water, game and man.
13. Activities planned should be indigenous to the environment.
14. Activities should include those which compel the students to observe accurately--to look and to see, not merely to look.
15. Indoor activities should be planned to meet the emergency of inclement weather.
16. Periods of quiet and rest should be included in the program for each day.⁴²

The resident outdoor school is unique in that it presents so many opportunities for experiences that cannot be duplicated in the classroom, on the school site, and in the local community. For many children, it is a "once in a lifetime" experience to be with their classmates and teachers on a round-the-clock basis. Smith comments on the program activities:

The program consists of a series of complete activities centered around (1) the natural living situations that occur, and (2) the best use of the camp environment for learning activities that grow out of the children's interests and the on-going school curriculum. . . . A helpful device in planning outdoor experiences is to conceive of the camp setting as another school laboratory. Pupils and teachers go to the outdoors to have certain experiences just as they go to the library or the science room, the bank or the post office. The emphasis is consistently on the direct (experience) as opposed to vicarious.⁴³

Adventure Program Sites

Adventure programs have been discussed in Section I of Chapter II as one of the most rapidly growing trends in Outdoor Education programming. In the

progression of outdoor experiences from the school site to community sites to resident outdoor schools, it should be noted that despite their growing popularity, adventure programs are often highly specialized and most public school students will not continue on into adventure programs.

The specialized nature of the activities and the age level required for most adventure programs limit the number of students who have the interest, time, and financial ability to participate. Therefore, it is necessary to view adventure programs as an elective type of activity not automatically required as a part of general Outdoor Education for everyone. It is hoped that by the time students have reached high school and college, they will have acquired a general knowledge of all aspects of Outdoor Education and perhaps have selected one or more of these aspects of worthy leisure time skills, hobbies, or recreation as a life-long interest. For some, adventure programs may present the ultimate challenge; for others, they may become the starting point for a lifetime hobby of scaling mountains or exploring wilderness areas.

To review briefly, the characteristics of adventure programs involve:

1. Outdoor activities which challenge and test the physical and emotional endurance of youth

2. Outdoor programs geared primarily for high school and college age youth
3. Events which are implemented in primitive and wilderness settings (deserts, mountains, streams)
4. Extensive training and preparation in the use of equipment and in knowledge of outdoor living skills
5. Difficult situations which necessitate working cooperatively within a small group

This section will review the sites or settings used for adventure programs and the types of resource materials and equipment needed. The flexibility of Outdoor Education is apparent in the type of experience offered and in the sites used for adventure programs.

Project BACSTOP

The BACSTOP adventure program is implemented at the Clear Lake Outdoor Center in a resident outdoor school setting. The participants are high school students from biracial schools in Battle Creek. Snooks presents an overview of the program which, in this instance, shows the importance of the societal setting over that of the locational setting:

The general goals and objectives of Project BACSTOP are to: (1) improve learning and the potential for learning by (2) improving communication and interpersonal relationships among students and teaching staff.

Additional benefits other than increased biracial understanding, integration, and subsequent cognitive growth are recognized and viable by-products of BACSTOP programming. Such "affective" benefits include:

- Humanization of the learning process.

- Improved teacher/student cooperation and understanding.

- Increased environmental awareness.

- Promoting self responsibility and problem solving abilities.

- Alternative for potential drop-out and troubled students.

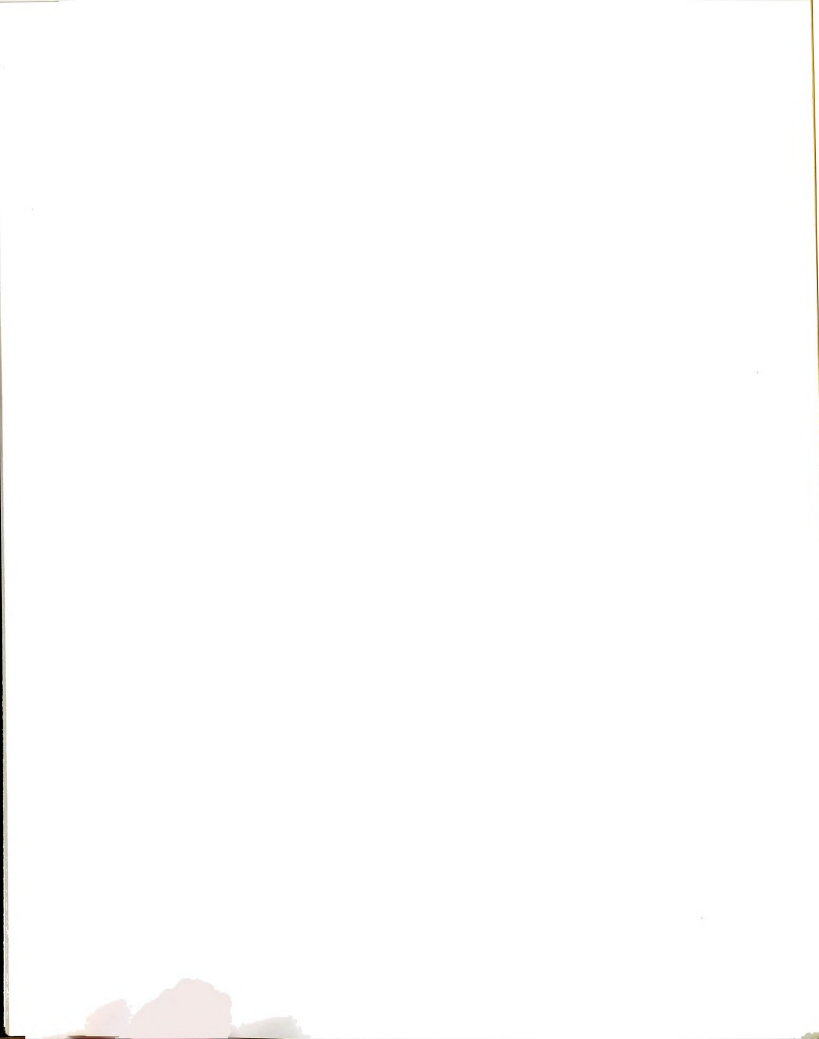
- Development of more affirmative self-concepts.

Activities designed to facilitate BACSTOP goals emphasize interracial student interaction in small groups. Activities demand communication, cooperation and by design challenge students to perform physically, mentally, and socially.

BACSTOP utilizes a variety of outdoor experiences designed to facilitate the above mentioned objectives. Examples of activities are: climbing and rappelling, ropes course, outdoor living, canoe trips, cycle tours, backpacking, caving, and cross-country skiing.

The BACSTOP philosophy is a solid reaffirmation of Battle Creek's commitments in the field of Outdoor Education. School Camping with its beginnings in the early thirties was a clear recognition of the value of socialization in the camping movement to promote better self concepts, individual sense of responsibility, and positive student interaction. Through primitive living students must encounter themselves and others with no convenient avenue of escape. Such confrontations not only afford healthy hard work and mental stress but provide non-contrived living/learning experiences that exploit to the fullest wholesome development of citizenship and character.⁴⁴

An interview with Lee Snooks at the Battle Creek Outdoor Education Center revealed that a variety of sites were used in addition to the home base at the Clear Lake Center. Part of the training and preparation is accomplished at the "ropes" course set up in a wooded area of the camp. It is highly reminiscent of the obstacle courses or basic training conditioning courses of the



Army. Most equipment and other resource materials are owned by the Battle Creek school system.⁴⁵ The above mentioned activities indicate that the variety of equipment needed is rather extensive. Sites vary but do not involve long-distance travel to wilderness areas.

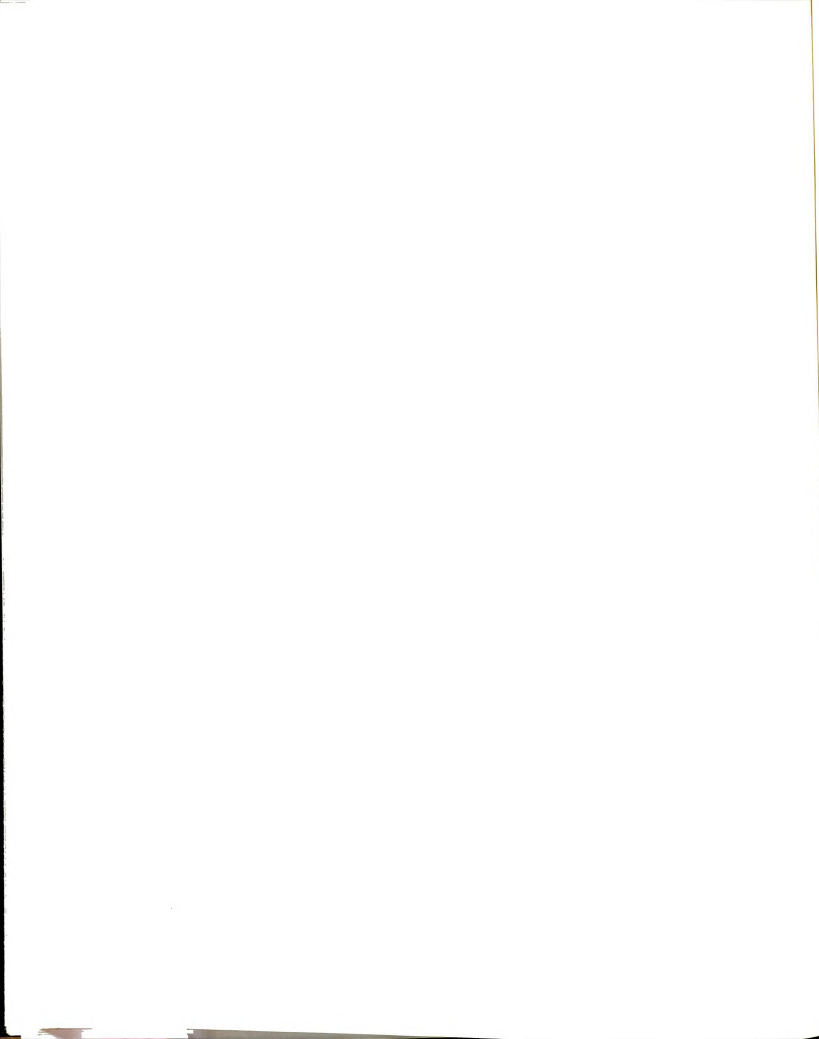
Outward Bound and the National Outdoor Leadership School

Outward Bound and The National Outdoor Leadership School have many common characteristics--among them are the types of settings used for activities. Each has a central location or headquarters but operates in a number of varied settings for the major part of each program.

Outward Bound was started in Colorado in 1962. At that time, the program was already twenty years old as it had its origin in Wales in 1942. Since 1962, several other schools have been founded around this country. Each school has a special program setting such as the mountains, in wilderness areas, and on the water.⁴⁶ Many Outward Bound Schools operate on a year-round basis.

Metcalfe comments on the variety of Outward Bound program emphases and its widespread locations around the world:

Programs vary greatly from school to school. National objectives play an important role in this, i.e., the goal of the African School is development of civil service people who can do physical work in harmony with members of other tribes, the Malaysian School stresses interracial harmony, etc. A major influence is the physical surroundings of the



schools: those near the sea use sailing and pulling boats as major emphases; mountain schools emphasize climbing, etc.

Some commonalities in programs do exist, of course. Each school provides students with instruction on skills that will enable them to cope with the physical demands of the terrain. The students of each school make up an emergency rescue crew. All schools have expeditions, trips into wild environment--first with the patrol and later with smaller groups that are not made up of members of the same patrol. Each school has a "marathon" where students test their endurance and travel skills. Service projects are a part of every course.⁴⁷

The National Outdoor Leadership School holds its basic course in Lander, Wyoming. The basic course is the wilderness expedition but a number of different types of programs are held in several locations. Lander is in the Wind River Range of Wyoming with 2,000 square miles of lakes, glaciers, mountains, and forests for a classroom. Paul Petzold, Director of NOLS, describes a portion of the program and some of the settings:

NOLS is a total wilderness adventure. Most courses last five weeks. Our teaching method is demonstrated under realistic conditions followed by action. To teach mountaineering, we climb mountains; to teach fishing, we catch trout; to teach river crossing, we cross wild rivers; to teach conservation, we practice conservation.

Our courses include instruction in practical conservation, leadership, organization, supply, equipment, logistics, mountaineering, rock climbing, glacier and snow techniques, rescue, first aid, survival, accident prevention, fishing, rations, cooking, map reading, expedition behavior, and camping. We cannot make students experts in all of these fields in five weeks, but we do provide them with adequate skills, judgment, and understanding to produce capable, safe outdoor leaders with a superior standard of excellence.

Besides our Wyoming school, which we limit to about one thousand students a year, we have a high-altitude expeditionary school in Alaska, kayaking

courses along the Alaskan coast, mountaineering sessions in Washington's Northern Cascades and Utah's Uintas. On the sea and wild beaches of Baja California, Mexico, we teach sailing and skin diving. In wintertime, we schedule courses in winter camping and mountaineering in the Winder Rivers and Tetons. All schools have the same purpose: to teach how to enjoy and conserve the wild outdoors.

Everything we teach is oriented toward enjoyment and conservation. Ours is not a grim exhibition of endurance, although carrying a pack over a high pass or climbing a mountain can be exhausting as well as enjoyable.

Perhaps our most important purpose is to teach practical conservation. Even after all of the wilderness laws are passed, there will still be only one way to insure preservation, and that is through the education of users in the techniques, skills, and methods that will enable them to enjoy and still conserve.⁴⁸

It is apparent from the written materials that adventure programs have a great range of flexibility in both program and setting. The above description might give the impression that these activities were only for older youth of college age. A NOLS publication for 1975 lists minimum age limits of thirteen years.⁴⁹

Summary

Section II of Chapter II has examined the settings for Outdoor Education. Locational settings where Outdoor Education occurs were examined and reviewed in relation to resource and equipment needs. Section III of this chapter will explore different types of resource centers.

Section III

Selected Information on Resource
Centers

Sections I and II of this chapter have examined the methodology, the various types of programs, and the settings for Outdoor Education. This section will focus on selected literature describing each of the different types of resource centers in order to identify specific features that are adaptable for an Outdoor Education Resource Center.

There are many types of resource centers and almost as many definitions and descriptions. For the purposes of this study, however, a resource center is a central location where the resources of the outdoor educator are stored in an organized manner. Concomitant with the organization of these resources is the implied understanding that specific services to facilitate their use will be available.

At the present time, outdoor educators receive their training from a variety of sources and utilize various community facilities both for the preparation of programs and for the actual implementation of outdoor programs with students. Teacher preparation of materials and trends in programs indicate that various types of resource centers offer "bits and pieces" of the materials and outdoor training needed by teachers.

Seven types of centers will be discussed in order to obtain a specific description of each type. The seven types are: (1) library, (2) media center, (3) teacher center, (4) nature center, (5) museum, (6) recreation center, and (7) crafts center. Each center has some of the elements needed in an Outdoor Education Resource Center. Each will be examined from three aspects--the definition or description, function or services, and its focus in regard to the public.

Library

No resource center for educators could be complete without the printed word. The common definition for a library is "a collection of print and non-print materials." There are, however, many shades of meaning in the definitions and descriptions of a library today. Webster defines a library as "a place in which literary, musical, artistic, or reference materials (as books, manuscripts, recordings, or films) are kept for use but not for sale."⁵⁰

The average person could be overwhelmed by the concept, terminology, and contents of a multi-media library. Shifrin simplifies the idea and clarifies its purposes in a way which fits into the concept of an Outdoor Education Resource Center:

The multi-media library is largely the result of an attitude of mind; an attitude which has bypassed the irrelevancy of the materials having different physical shapes, and an attitude which sees the collections not as additions, but as alternatives.

Of course, this is not to say that they are mutually exclusive alternatives, or that one treatment of a theme will oust another. What is implied is the realization that it is not the container which is important but that which is contained. It is the information itself which is of primary importance.

The true multi-media library, therefore, is one in which the information content is organized as a single entity. Wherever different containers may require to be stored--be they books, or tapes, or films--access to the information within them is by means of an approach which is wholly integrated.⁵¹

There are many types of libraries at all levels of administrative organization (national, state, county, city, university, school, and private) and there are general, technical, and special libraries. The library for an Outdoor Education Resource Center would be considered a special or specialized library--part of a larger unit designed for a specific group of people with specific objectives to achieve.

Certain words appear repeatedly in most of the literature describing the services and organization of a library regardless of whether it is a general or specialized library. The key words are collections and services.

Building Library Collections: In every type of library, the processes of selecting and acquiring materials for its collections are related directly to its service policies. These policies are, of course, formulated with regard to the reading habits and information needs of the community or clientele that it serves. Consequently any description of selection and acquisition procedures must take account of differences between types of libraries and perhaps more important, differences in the ways readers use books and other documentary materials.

Selection: The right book for the right reader at the right time is a watchword for library service, especially as service is rooted in the selection of materials for the collections. The wide range of human knowledge and the infinite variety of individual interests and needs places heavy responsibilities on the librarian.

His first duty is to acquire an intimate knowledge of the clientele to be served, whether this be the population of an urban community, the students and teachers in a school, or a small group of specialists in an institution devoted exclusively to research. In each case, the criteria for selection are directed to the reading interests and information needs of the group served.

The librarian's second responsibility is to become familiar with all of the varied materials that may be appropriate to the purposes of his library. To acquire personal knowledge and appreciation of the relative importance of classes of library materials and of individual titles must be his ultimate objective. No one individual, however, can be sufficiently expert to pass judgment on every item selected.⁵²

The selection and acquisition of appropriate materials for any library collection and the services offered specific to that collection appear to be the major considerations for developing a specialized library for an Outdoor Education Resource Center. It is obvious that the library functions as a storehouse of knowledge utilized for education, recreation, and research. This makes it a prime source of potential assistance and a necessary component of any Outdoor Education Resource Center.

Media Center

Whether one views a media center as a separate entity or as an adjunct of a library does not matter because media centers are found as entirely separate

units and as a specialized segment of many libraries. This portion of the study will examine media centers only from its strictest connotation--that a media center is defined as "those things which are manipulated, seen, heard, read, or talked about, plus the instruments which facilitate such activity. . . ."53

Current literature reveals that a media center may be found under various combinations of terminology--such as "instructional resources center," "multi-media center," "audiovisual center," "educational technology center," or as a section in an existing library with no special designation. Regardless of terminology, this study is concerned with a center which contains various types of audiovisual equipment, graphics laboratory supplies, materials related to their use, and the services necessary for facilitating their use. A graphics laboratory functioning in conjunction with various types of media is essential for a well-developed teaching and learning situation.

Resource materials within a media center can vary almost as much as the titles for a media center. In line with the purposes of this study, the assumption that learning occurs through all the senses is accepted as a truism. Therefore, the most important aspect of the media center involves "communication"--communication involving a variety of methods of utilizing all the

senses in the teaching-learning process. Webster defines communication as "a process by which information is exchanged between individuals through a common system of symbols, signs, or behavior."⁵⁴

Communication and learning through a variety of materials and methods have always been a major emphasis in Outdoor Education. Using the five senses for observing, listening, reading, doing, teaching, tasting, experimenting--all parts of effective learning outdoors as well as indoors.

Audiovisual materials play major roles in most schools today and enhance outdoor experiences and learning. Dale classifies audiovisual materials used in three types of communication (listening, observing, reading) which are also involved and encouraged in one of Outdoor Education's greatest emphases--direct experience or doing.

Audiovisual materials are used in all three types of communication noted above. Pictures, maps, and diagrams appear in most textbooks. Materials presented in computer-assisted instruction may be pictures, graphs, reading material, recordings, typed messages. Some educators include in audiovisual materials the illustrated textbook and the newer self-instructional materials. Others suggest a more rigorous classification and include only materials using pictures and sounds in presenting facts and ideas.

Within the broad area of audiovisual materials itself we may have various sub-classes depending upon the choice of a particular logical structure. We can, for example, classify audiovisual materials as audio, visual, and audiovisual.

Audio Materials. Radio, language laboratories, tape and disc recordings, telephone, telelectures, sound distribution systems.

Visual Materials. Illustrated books and self-instructional materials, pictures, photographs, flash cards, flip books, charts, maps, posters, exhibits, bulletin boards, magnetic boards, flannel-graphs, dioramas, models, mock-ups, filmstrips, slides, transparencies (overhead and 2" x 2"), silent films, chalk boards, drawings, cartoons.

Audiovisual Materials. Television, films (8 mm, 16 mm, 35 mm), videotapes, sound filmstrips, printed materials with recorded sound, study trips, demonstrations.⁵⁵

The use of audiovisual aids in teaching and learning, especially in Outdoor Education, should be combined with direct experiences in the outdoors. For example, the visual aids a teacher uses to introduce plant and animal life can be created in the graphics laboratory and used at the school site, on community trips, and in resident outdoor school. A tape recorder and camera will add dimension to sensory awareness experiences and provide continuing enjoyment following the experience.

Teacher Center

The third type of resource center to be examined is that of the teacher center. The words "teacher center" almost define what it is--a center for teachers. But the concept still lacks clarity regarding purpose.

Judson defines teacher centers:

Teacher centers are created, designed and operated to assist teachers in their continuing personal and professional development in, for and through the use of inservice teaching and learning. . . .

Teacher centers can be and must be immediately and continuously responsive to teachers and the community and directly responsive to the children all of us are concerned with by the attractive and exciting demonstrable use of developing knowledge, stuffs and styles, increasing the range of available materials and methods known likely, shown likely, to be effective in improving the quality of life, excellence of life, breadth of life, depth of life, here and now and tomorrow for all of the children of the people.⁵⁶

One of the most complete references to materials on teacher centers comes from an ERIC article entitled Teacher Centers: An Outline of Current Information.

The functions of a teacher center are described:

- A. Teacher centers should concern themselves with curriculum. In particular, they should:
 - 1. serve as a well-supplied resource base for teachers in curriculum and instructional materials . . .
 - 2. review curricula . . .
 - 3. review, develop, and use instructional materials supportive of the teaching activities being taught . . .
 - 4. develop programs and materials but remain service-oriented . . .
 - 5. field-test new curriculum materials . . .
- B. Teacher centers are vehicles for general change. They:
 - 1. create self-sustaining reform mechanisms . . .
 - 2. are useful for installing innovative, yet enduring, mechanisms . . .
 - 3. train in the change process . . .
 - 4. encourage change . . .
 - 5. act as a center for innovation . . .
- C. Several dissemination roles for teacher centers have been suggested, including the following:
 - 1. delivery system for educational materials and systems from local and national sources . . .
 - 2. one or two cooperatives in each state performing the bulk of diffusion activities . . .
 - 3. delivery system for education innovation . . .

4. link to industry for mass production and marketing of materials . . .
5. regional network of dissemination and diffusion . . .
6. delivery system for educational R&D efforts and/or new programs to public schools . . .
7. dissemination system for experienced teachers . . .
8. dissemination of training information and materials . . .
- D. Teacher centers should offer in-service education. . . . Particular areas of training include:
 1. skill development of refinement . . .
 2. innovations in staffing, curriculum, media, and materials . . .
 3. reading, handicapped, drug abuse, and other particular subjects or populations . . .
 4. training for beginning teachers . . .
- E. Teacher centers should have a broad trainee population. . . . They would train:
 1. aides and teachers to work with them . . .
 2. parents and older students to supplement staff . . .
 3. administrative, supervisory, and ancillary personnel . . .
 4. nonsupervisory personnel involved in the instructional/learning process . . .
- F. Preservice education should be a function of teacher centers. . . .
- G. Teacher centers should encourage cooperation. They can operate as:
 1. a locus for community action programs . . .
 2. a vehicle for collaboration and efficiency in using new uncoordinated resources . . .
 3. a mechanism to get federal, state, and local inservice programs to cooperate . . .
 4. an interinstitutional delivery mechanism . . .
- H. Teacher centers should serve children as well as teachers. They can:
 1. maintain exemplary programs for children . . .
 2. identify behavioral and instructional needs of children . . .
 3. raise the performance of school children from low-income, rural, and urban families . . .
 4. provide individualized instruction for children . . .
 5. upgrade educational performance . . .
- I. Teacher centers should be performance-based. . . .
- J. Research should be a function of each teacher center . . . or one or two centers in each state. . . .

- K. An educational service district should place teachers. . . .
- L. An educational service should recruit paraprofessionals. . . .
- M. An evaluation component should be included. . . .
- N. The performance-based certification needs of state agencies should be served. . . .
- O. A center should have the power to grant credit for inservice work. . . .
- P. The function of a center is to help local school districts serving substantial numbers of children from low-income families to help themselves. . . .
- Q. A state teacher center would train state personnel to assist local renewal sites. . . .
- R. Some centers should refer school personnel to other agencies, but they should be mainly service-oriented. . . .
- S. Specific school problems should be attacked in specific geographic sites with a concentration of federal monies. . . .
- T. An educational renewal site should be concerned with fiscal changes. . . .⁵⁷

Poliakoff's article refers to the functions of teacher centers in the above article and through the functions identifies many of the users.

Perhaps the two most important factors regarding teacher centers are flexibility and teacher involvement. Teacher centers should be concerned with curriculum and have available a large resource base of instructional materials. Resource materials and services should be used for preservice and in-service training and should be constantly renewed.

Nature Center

The nature center concept is a relatively new idea and originated to fill an educational need in a rapidly growing world. The indigenous landscape of the

country has been vanishing with industrial programs and a demanding population. That which has not vanished has been altered, sometimes dramatically. Mankind can no longer live in rural areas in constant contact with the natural outdoor environment. Thus, man no longer understands his dependence on the environment nor does he recognize himself as a part of it.

Ashbaugh sums it up with,

People will not safeguard that which they don't know, let alone what they don't understand. They will not protect and treat kindly what they do not appreciate. A nature and conservation center is designed to help them become good stewards of the land and all related natural resources. . . . A nature and conservation center, then, is really an institutional device that brings land and people together on intimate terms, where young people, as well as old, under the inspiration and guidance of trained teacher-naturalists, are taught to comprehend the natural world about them, where they can develop the kind of personal conscience they need in order to live as better citizens. In short, it is a new idea in education, a concept of "land for learning" in an outdoor situation.⁵⁸

Shomon writes about the description and purposes of the nature center:

A nature center can be defined as an area of undeveloped land near or within a city or town and having on it the facilities and services designed to conduct community outdoor programs in natural sciences, nature study and appreciation and conservation. It is, in essence, an outdoor focal point where the citizens of a community, both young and old, can enjoy a segment of the natural world and learn something about the interrelationship of living and non-living things, including man's place in the ecological community. Thus conceived, a dynamic and operating nature center, scientific, cultural, and recreational benefits to the community, values that are far-reaching at the local level where the sinews of our free society are built.

The nature center is a fairly new concept in community education and recreation and as such should not be confused with some of the older and well-known facilities located in or close to a city.⁵⁹

Shomon explains further the necessary elements of a nature center:

A nature center embraces three basic elements: land, buildings, and people. The land element is basic. Without it there is no nature center. The land should be large enough to meet immediate and future needs of the community, and it should be as undeveloped and varied as possible. . . .

The second important element of a nature center is buildings. To run a nature center effectively one must have a place where people can meet. An education building, then, with an orientation-assembly room, exhibits, displays, book store, offices, restrooms, and a workshop is essential.

. . .

The central education building should be large enough to include, if possible, a museum wing: thus, a separate natural history museum can be erected and properly equipped with interpretative material. . . .

The third and final element necessary in a true nature center is, of course, people. Two groups are involved here: the administrative and operational staff of the center itself, and the visitors who come to the center to learn and understand and enjoy what the center has to offer.⁶⁰

Nature centers vary in amount of land, number of buildings, and in number of people they serve. They do, however, have certain objectives in common.

A community nature center is designed to help the people of a community pursue programs of educational, scientific, cultural and recreational value. The various goals of the nature center may be listed under four major categories.

Educational

1. To increase knowledge and understanding of our natural world and man's place in it.
2. To develop an awareness, appreciation and an affection for nature.

3. To develop a desire and will, based upon understanding, to protect, safeguard from and use wisely the living and non-living resources of the earth important to man. These are the first steps in the development of a geobiotic ethic.

Scientific

1. To have a natural area near a community where students may study physical features and native fauna and flora.
2. To have an area where the ecology of natural communities can be studied.
3. To hold in perpetuity in and around urban areas some representative samples of the native landscape.
4. To help provide a natural outdoor laboratory for the stimulation of scientific curiosity, especially among young people.

Cultural

1. To help train persons in awareness and skills and thus to add to their capacity for enjoyment.
2. To teach good outdoor manners and conduct, thus helping to curb vandalism and juvenile delinquency.
3. To develop in young and old a sense of appreciation, respect and reverence for all living things, thus adding to man's moral character.
4. To promote better citizenship by stressing individual responsibility.

Recreational

1. To promote wholesome and productive outdoor activity.
2. To help promote more active instead of passive recreation.
3. To add a new dimension to physical and mental health.
4. To show that more "quality" in outdoor recreation is worth pursuing.
5. To help make leisure time productive.⁶¹

While nature centers possess much in common with other resource centers, there are, however, some characteristics which are generally not part of a nature center. Shomon lists some things which a nature center is not:

1. A nature center is not, for example, a park. In the former the emphasis is on natural features. A park is known for many of its man-made

- recreational facilities and often contains fauna and flora not native to the area. Some park lands can be set aside as special natural areas, however, and when properly developed for educational use can very well become nature centers.
2. A nature center is not a zoo. A zoo specializes largely in exhibiting caged animals, native and exotic. A nature center specializes in exhibiting mostly local native fauna, flora and geological features as they are actually seen in nature.
 3. A nature center is not a museum, although it may incorporate some of the features of a museum such as a natural science building with exhibits. A museum houses inanimate materials mostly in a state of preservation. A nature center emphasizes the exhibition of living and non-living things in their natural state out-of-doors.
 4. A nature center is not a community forest per se, that is, managed for watershed protection and forest management by and for the community. Again, however, it may incorporate some of these desirable features, but the purpose and uses are different. A nature center is for educational, scientific, cultural, and recreational use and includes as varied a terrain and landscape as possible--woods, fields, meadows, swamps, marshes, streams, shorelines, and so on.

The ideal nature center, then, is a representative sample of the natural landscape of a community, whatever the local environment may be, such as forest, prairie, tidelands, hill country--a part of wild America set aside and interpreted for the enjoyment and the edification of the people of a community. It is designed to orient the community to ecological realities and in this way to help its citizens plan their uses of the land scientifically and responsibly.⁶²

Nature centers originated to fill an educational need in a rapidly growing urban world where man's contact with his natural environment has all but disappeared. Nature centers are undeveloped pieces of land which are representative of the natural landscape of the area they are in. A nature center has three basic elements--land, buildings, and people. The nature center is designed to

help the people of a community understand and enjoy the natural world through programs of educational, scientific, cultural, and recreational value.

Museum

The fifth type of resource center to be examined is the museum. Museums are much older than many of the other types of resource centers and, like libraries, have their origins in early history. Today's museums, however, are quite different than those of earlier years.

Williams provides some data on the early history of museums and their purposes:

The word museum comes from the Greek museion--a place for learning, imagination, and inspiration. In the third century B.C. the Greeks had at least one collection of pictures on display for the public, but they did not have museums as we know them today. Even the idea that a museum is a place of learning was lost through the years, and it was not until the European Renaissance--a time of great interest in art, music, exploration, and scientific discovery--that the idea of museums was revived.

During this time, kings, princes, and wealthy people made collections of things they found interesting--paintings, rocks, plants, stuffed animals, souvenirs of their travels--and kept these items in cabinets or cases to show to friends and guests. Of course, some people collected things in order to study them as well. Churches, too, made collections, but these were usually limited to religious art.

As collections outgrew the cabinets, some people built special rooms or halls onto their homes to house the increasing number of things they had to display. At first, these, too, were called "cabinets." Books were written on how to arrange such collections in an orderly way, and these encouraged even more people to start collections of their own. Even as they grew larger and more orderly, however, the collections continued to be private and were not open to the public.⁶³

It is evident that museums, like libraries, were only for the wealthy in Europe in the early days. However, museums developed somewhat differently in America:

. . ., the museum was off to a very different start in America. One would think that the colonists would have been so busy establishing homes, businesses, schools, and, in fact, the nation, that they would hardly have had time to give a passing thought to a museum. However, even before Paul Revere went for his famous ride or the Liberty Bell was rung, an American museum for all the people was begun.

In 1773, three years before the colonies joined together to form the United States of America, a committee of the Charleston Library Society, which itself had been formed in 1748, was appointed to collect materials on the natural history of South Carolina. The committee put an ad in a newspaper requesting

. . . Specimens of all the various Fossils, Minerals, and Ores, the different Soils, Earths, Clays, Marbles, Stones, Sands, Shells, and the Productions of this Province, with the best Accounts of their several Natures, Qualities, Situations and Uses.

. . . Of the Animal Tribe they (wanted) to have every species. . . . Of Vegetables, they (asked for) every Kind, from the loftiest Tree in the Forest, to the smallest Plant of the Fields. . . . A complete Specimen of a Tree or Plant, will be two small Branches of Each, one having the Flower in full bloom, the other the ripe Fruit. . . . At the same Time the Society (wished) to be furnished with the best Accounts that can be given of the Uses and Virtues, either in Agriculture, Commerce, or Medicine, of which such Tree or Plant is possessed . . . the Soil in which it most commonly grows . . . the Season in which it flowers, and when it bears its fruit.

Clearly, this museum would not only be open to the public, but the public was also expected to help stock it.⁶⁴

It appears that in this country a precedent was set early for the public involvement in museum collections. Collections were directed primarily to items of natural history.

The Revolutionary War destroyed the museum in South Carolina, but in 1792, a new home was found. The idea had spread. In Philadelphia in 1782, Charles Wilson Peale founded another museum in his home. "His tickets of admission read: 'The Birds and Beasts will teach thee! Admit the Bearer to Peale's Museum, containing the wonderful works of Nature and the curious works of Art.'"⁶⁵

There are several different types of museums. The one which is of greatest importance to this study is that of the natural history museum. The natural history museum emphasizes four areas--anthropology, botany, geology, and zoology and has always been of great interest and value to the outdoor educator.

What is a natural history museum and why is it important to the outdoor educator?

Natural history museums help us understand man and his natural world. The world--its beginnings, its history, its present, and its future--is the unlimited territory of the natural history museum.

Museum scientists study the plants, animals, and even people of the earth--as well as the earth itself. Specifically, they are concerned with geology, botany, anthropology, and zoology and all the divisions and subdivisions of these sciences. Natural history museums work to explain nature as it is, not after man has changed it or put it to work. They explain what coal is and

how it is formed, but not coal mining. They seek to detail the makeup of the solar system and the moon, but not that of a rocket ship.

These museums send out expeditions, conduct research, gather collections, build halls of exhibits, establish libraries, publish books, develop education programs--all in an effort to understand our natural world and share that understanding.

Natural history museums come in all sizes. Some are found in one or two rooms of an old, probably historic, house; others are in impressively huge buildings covering many acres.

Some museums try to include the entire world of nature in their studies; others limit themselves to one or two fields of interest or, as most state or national park museums do, to the natural history of their immediate region. Many museums maintain large research collections. In contrast, others keep only enough in their collections to be used as exhibition material and teaching aids.

There are three kinds of natural history museums that need special definition: university, trailside, and children's museums. University museums are often open to the public--and, in fact, may be the only natural history museums in the area--but they do not exist primarily to serve the general public. University museums are basically established for the research purposes of university students and faculty.

Trailside museums are usually found in national parks and are rather small museums limited in scope to the natural history of the local area or park. Trailside museums are an American invention. The first was founded in Yosemite Park in 1920.

Finally, there are children's museums. Although art museums display art and history museums relate history, children's museums do not display children. They are for children and are the only museums named for the age group they are designed to serve. There are no "middle-aged museums," "senior citizens museums," or "family museums." . . .

Big and small, with collections and without, children's or trailside, all natural history museums have one thing in common--people. More and more people of all ages visit museums every year, and, in return, the museum employees work to share their knowledge and the treasures they have gathered.⁶⁶

The preceding quotation has described in a general manner the natural history museum in terms of its function and the user group it is intended to serve. There are specific aspects of the museum, however, which deserve a closer examination. The values of collecting, exhibiting, and interpreting are prime functions of the museum and are worthy considerations in the development of an Outdoor Education Resource Center.

It is often said that the real value of a museum lies in its collections. "Edgar P. Richardson, a former museum director, once called the enormous collections of America's museums a new national resource. . . ." ⁶⁷ This statement seems to be borne out by statements made by Neal in 1973 concerning the rapid growth of museums. "Currently there are some 5,000 museums in the United States--over a thousand more than in 1950." ⁶⁸

Natural history museums today are also maintaining field stations for long-range, in-depth research--with continuous collecting, preserving, and documenting. This in-the-field research which goes on behind the scenes is one of the museum's most important functions. Williams clarifies this function:

Natural history museums are not mere exhibit halls. They are concerned with helping us understand our earth and the life on it, both as it was and as it is now. To accomplish this incredibly complex and difficult task, natural history museums make collections of samples of nature--rocks, fossils, minerals, plants, animals, and bits of human culture. The collections are then classified

and stored or displayed in exhibits. Once classified, the collections may be studied. This study or research has been called "the invisible function of a museum." The general public is seldom aware of the museum's research function, but it is very important. A surprising amount of a natural history museum's activity is research-connected. Without research, the museum's goal of helping man understand his world certainly could not be reached. Without research, the collections would have little value. . . .

Museum collections have grown increasingly valuable for yet another reason. As more and more species become extinct, as fewer and fewer forests, meadows, and prairies are left in peace, museums protect our past. They show us what we had and lost--and remind us of what we still have and must protect against extinction.⁶⁹

An equally important function of the natural history museum is that of exhibiting. The quality of the exhibit determines its educational value.

It is the function of a natural history museum to both gather and share information about the world around it. One way that this sharing is done is through exhibits. . . . Exhibits today try to explain the how and why of the world around us; their creators are not content with just showing samples of that world.

Armed with new educational goals and new display methods, museums today are faced with reviewing their exhibits--many of which may be over fifty years old. Ideally, an exhibit hall should be redone every twenty to twenty-five years in order to keep up with scientific and educational advances as well as improved design techniques.⁷⁰

Another function of a museum is that of publishing and selling. The goal of publishing is more to share scientific information than to make money. Often publications are exchanged with other museums, universities, and scientists. Frequently museums publish inexpensive booklets for children or on special topics which emphasize a current exhibit.⁷¹

Perhaps of greatest importance to this study is the fact that educational programs are becoming an increasingly important function of the natural history museum.

Over 90 percent of all American museums offer at least one educational program and many, particularly the larger ones, offer a wide range of programs--not all confined to the museum building. More and more, traveling exhibits are rolling down the nation's expressways to visit school classes. Museum guides go to schools to give lectures. Small museum branches are being opened. Television programs presented by museum education staffs electronically deliver the museum to the school.

Unlike a school or university, museums are not for any one specific age or educational level. Natural history museums reach all levels--preschool, elementary, secondary, college, and beyond. The department of education at the American Museum of Natural History hosted a Golden Age Day not long ago that was attended by over 800 senior citizens. Instructors from this same department visited many centers for the aged and presented lecture-demonstrations tailored for this age group on a variety of subjects. . . .

Natural history museums have long maintained a working relationship with universities and colleges, and that relationship is growing stronger. Service to scholarly research is a function basic to any museum with good-sized collections. These collections provide one-of-a-kind training grounds for students, and, although at the present time natural history museums do not grant degrees, many museums maintain credit-granting partnerships with universities. For example, The Center for Graduate Studies at the Field Museum is a cooperative effort by the museum, the University of Chicago, the University of Illinois Medical Center, and Northwestern University. This center oversees the work of graduate students and offers courses presented by museum staff, university staff, and a mixture of both.⁷²

Larger museums have programs for college undergraduate students, high school and elementary pupils,

preschool age children, non-English speaking groups, and handicapped individuals. All of these are in addition to research and graduate offerings.

All these programs are worked out by members of the museum's education departments. Museum educators keep up on current trends and techniques in education and in museums. They work closely with museum scientists and exhibit designers to develop tours and programs. Museum educators usually have a bachelor's or a master's degree in one scientific field plus experience or training in education. More and more, with education programs growing increasingly complex, museum education departments are headed by people trained only in education. These people run the departments and work with others who prepare and present the program.

But there are not enough educators in museums--nor is this situation likely to improve soon. Museums simply do not have enough money to hire the number of people needed to handle all the requests for tours and programs. To combat this problem, many museums have turned to volunteers. Over 50,000 persons throughout the country contribute their time as museum volunteers and fill a very real need.⁷³

The natural history museum is important to Outdoor Education because their purposes are similar and their sphere of interest is directed toward man and his natural world. Natural history museums collect, preserve, and document, exhibit, do research, and provide educational programs for the general public. More and more, museums are entering into public education as a major function.

Recreation Center

Literature providing specific information on the type of resource component for recreation activities for an Outdoor Education Resource center seem to be

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lacking. The basic ideas for this component in recreation resources and equipment came from four personal experiences extending over a number of years with different agencies doing outdoor programming.

The four experiences involved the use of equipment and materials from a central location for the teaching of Outdoor Education classes for teachers and students. The effectiveness and flexibility of these experiences provide some basis for the inclusion of recreation materials and equipment as a component of a model Outdoor Education Resource Center.

The organizations which owned and loaned recreation equipment and materials were the Outdoor Education Project, Haslett Middle School, Girl Scouts of the U.S.A., and the Michigan State Health, Physical Education, and Recreation Department. The equipment and materials were made available to college instructors, classroom teachers, or youth leaders for instructional purposes with students or youth groups of all ages.

Recreation has always been a major emphasis in Outdoor Education. Webster defines recreation as "restoration to health, . . . to create anew, restore, refresh, . . . refreshment of strength and spirits after work, . . . also a means of refreshment or diversion."⁷⁴

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Julian Smith describes recreation within the Outdoor Education philosophy:

Recreation in its broadest sense is interdisciplinary in character. The term encompasses man's activities during the time that is freed from survival needs. . . .

Recreation, . . . includes both self-directed and organized activities. All too often the word is construed to mean only organized activities at the community level, usually requiring supervision and rules. Creative and self-directed activities are becoming increasingly important in our culture where people have both time and means to engage in activities of their own choice. This broader aspect of recreation places a greater responsibility on educational agencies and on the organizations concerned with providing the opportunities for participation and for the expression of satisfying recreational interests. Let us look then at recreation today rather than cling to the patterns more suitable to the early part of the century.

Recreation as thus conceived cuts across all phases of man's life--physical, social, cultural and spiritual. At the community level recreation consists largely of educating for leisure and in providing the opportunities, through leadership and facilities, for people to engage in leisure-related activities.⁷⁵

While Outdoor Education includes many organized physical activities, its emphasis has not been group competition, but rather those activities which promote individual enjoyment and skill. Examples of such activities include casting and angling, the shooting sports, and archery. Other recreation-oriented outdoor activities include camping, backpacking, skiing, bicycling, canoeing, and hunting. Recently recreation has focused more on the individual's need to develop worthy leisure time activities. This includes many noncompetitive activities

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and especially activities which an individual can participate in for his entire lifetime (bird watching or outdoor photography, for example).

Dr. Jay Nash stresses a reinterpretation of the word "recreation":

The word "recreation" must be redefined. Only in this way will it take its place in our educational program and philosophy. A definition:

As work becomes mechanized and routinized and ceases to be an outlet for creativity, recreation is those activities which form an outlet to creativity, both in a physical and spiritual sense.

This definition limits the recreational use of leisure time to purposeful acts. Recreation constitutes only a small part of leisure; but as needs can be established, it should become more and more the major part.

Through accomplishment, by work and craftsmanship, man's ego, small enough at best, gets a chance to expand. His work is partly himself. An eighteenth-century motto notes:

No handicraft can with our art compare,

For pots are made of what we potters are.

When work ceases to give man a feeling of importance and belonging, recreation must supply that basic need.⁷⁶

Today many humans spend less time at the work which provides their livelihood. They also find less satisfaction in the time they do spend working. Recreation can fill part of this "time" gained, and also may provide certain satisfactions and feelings of self-fulfillment.

Smith establishes the need for a variety of forms of recreation and points to the school system as the facilitator for recreation education in all forms. Nash points out the need for a re-thinking and re-defining of the recreation concept. Both individuals stress the need

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for self-directed activities and a broadening of the entire recreation concept as it fits into increased leisure time, the need for creative expression, and physical fitness.

It might be said, then, that recreation in Outdoor Education is oriented to a variety of outdoor activities, and is found in those activities which provide individuals with relaxation through physical effort, skill development, and/or creation of some object or experience which provides spiritual satisfaction (such as wood carving or gardening).

Crafts Center

The last of the different types of resource centers to be examined is that of the crafts center. The literature reviewed did not reveal specific information regarding a "crafts center." The only crafts areas available for inspection were craft supply stores and arts and crafts rooms in local schools. Some information was derived from these two sources, but the concept for a crafts center as a component of an Outdoor Education Resource Center stems primarily from personal experiences in resident outdoor schools for students, summer craft workshops for teachers, and from comments from teachers in Outdoor Education classes where craft sessions were given. Additional ideas about Outdoor

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Education crafts and craft materials came from staff members in the Higgins Lake, Michigan, Outdoor Education Summer Workshop.

Most craft areas in schools contain many craft supplies that are not needed in an Outdoor Education Resource Center where the emphasis would be on crafts using natural materials, crafts which involve outdoor living, and crafts which were used by the pioneers. Crafts using natural materials are those using wood products, grasses, reeds, cones and nuts; those using rocks and minerals, and shells; those involving outdoor skills such as shelter building, nets, and snares; and those involving pioneer crafts such as quilt-making, woodcarving, and tin ware.

A crafts center involves many things beyond a variety of craft books and supplies. It must include adequate space for storage of materials and tools, and for working on crafts. It must have a person in charge who is skilled in crafts, in teaching, and one who is knowledgeable about the outdoors. The staff person for crafts would need to know proper collecting procedures in the wild, when to collect and where, how to obtain materials for basket weaving, and use of wild plants for dyes in addition to construction of craft items.

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Summary

Section III of Chapter II has examined seven types of resource centers for features which are acaptable for an Outdoor Education Resource Center. The resource centers were examined from the viewpoint of the outdoor educator in regard to description, resources, function and services, and focus (user group each one served).

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CHAPTER III

DESIGN OF THE STUDY

Introduction

The research dimension of the study involves the collection of data to ascertain what forms of equipment and informational resources are considered most useful by classroom teachers and other professional outdoor educators who work with teachers in Outdoor Education. Accordingly, two methods of research were selected for obtaining the necessary data:

1. A survey was employed to obtain the data necessary to identify essential types of resource materials and potential staff for an Outdoor Education Resource Center and to assist in assigning priorities to the identified resources on the basis of their perceived value to different groups of potential users of an Outdoor Education Resource Center.
2. The interview technique was used to obtain specific information regarding the description, function, and focus of different types of

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resource centers. Interviews were conducted with individuals either having expertise in resource center administration or with a knowledge of Outdoor Education, resource materials, and equipment.

Survey Design

The survey was chosen as the form of research method most appropriate for obtaining data about the types of resources and equipment that classroom teachers and other outdoor educators in the field consider most useful in their Outdoor Education work. The survey method would also fulfill a second objective by allowing participants to assign values to various categories of equipment and informational resources.

The categories for the survey were compiled by the writer and were based on experiences with teachers requesting resources in Outdoor Education classes. The categories were then checked for accuracy with a specialist in each category area and with a curriculum coordinator in a school district Outdoor Education program.

A six-part, self-administered questionnaire was designed to obtain the desired information from a sample of four groups of potential Outdoor Education Resource Center users. In all parts of the survey, respondents

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were required to indicate their perceptions of the relative value of each Resource Center component by the use of a four-point, Likert-type scale (see Appendix A). The survey was divided into categories. At the end of each category, participants were encouraged to make suggestions or additions to the listed items in each category.

The questionnaire was accompanied by an introductory information sheet which explained the purpose of the study. The introductory sheet of the questionnaire also included a Personal Data section to be completed by each respondent so that demographic characteristics of the population sample could be determined. The survey was then field-tested in a graduate Outdoor Education seminar at Michigan State University in January, 1976. The necessary revisions were made under the direction of the Office of Research in the College of Education at Michigan State University.

Category I of the survey required participants to evaluate twenty-three different types of library-type resources. Responses were to be made on the basis of the value each respondent would assign to each resource type with respect to the participant's own area of Outdoor Education interest. Examples of the twenty-three library resources included: textbooks, encyclopedias, fiction and nonfiction books, vertical file materials, charts and maps, bibliographies, curriculum and program

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guides, kits, children's books and periodicals, special subject periodicals, and collections of special subject books.

The types of resources included in Category I were suggested by several sources. The usual inventory of school libraries provided many of the listed items. Visits to resource centers for teachers furnished other indications of resource categories.

Category II of the questionnaire called for the participants to indicate their perceptions of the value of different types of audiovisual materials and equipment. The twelve-item list included examples of equipment such as slide and movie cameras, various types of projectors and recorders, laminating and duplicating machines, and graphic and photographic materials and equipment.

The list of resource types in Category II was primarily derived from the equipment and resource inventory usually found in larger school media centers and in teacher centers. Personal contacts with teachers in Outdoor Education workshops and classes provided suggestions for other items included in the list.

Adventure program equipment was the subject of Category III of the survey. Respondents indicated their rating of various types of recreation equipment according to their views of each item's potential use in Outdoor Education adventure programs. The list was composed of

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equipment for the shooting sports, camping and backpacking gear, fishing tackle, canoeing, skiing, snowshoeing, rapelling, and orienteering.

The examples in this category were suggested by personal participation in adventure programs, conferences, and recreation workshops offered by colleges and various other agencies at national, state, and local levels over a period of many years. Program and equipment planning for various summer and winter workshops in Outdoor Education provided additional corroboration for this list of items. Examination of school programs such as the Battle Creek, Michigan, BACSTOP Project and the winter camping programs of selected school districts supplied additional evidence of similar equipment needs for school programs.

Category IV of the survey consisted of a nine-example list of different types of equipment and materials used in various outdoor-related arts, crafts, and hobbies. The listing included supplies and equipment for activities such as lapidary, woodcarving, basketry, weaving, ceramics, natural crafts, and collecting. Personal participation in and observation of Outdoor Education crafts-oriented programs provided suggestions of examples for inclusion in this category. Conversations with crafts workshop staff provided additional ideas on this topic.

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Equipment for specialized study in subjects such as the biological and physical sciences made up Category V of the questionnaire. This section consisted of fifteen examples of equipment such as binoculars, microscopes and magnifying lenses, thermometers and barometers, dissection kits, garden and woodworking tools, a greenhouse, and various types of collection and specimen containers. Examples in this category were suggested primarily by personal experiences in conducting nature-science classes for public school students, youth groups, and teachers in a variety of settings around the country.

Category VI of the survey was the human resources section. Participants were required to indicate the value they would assign to different human consultants who might be considered for positions as full-time or part-time staff members of an Outdoor Education Resource Center. The list of potential staff members included such positions as a curriculum coordinator, a librarian, an audiovisual specialist, a naturalist, a custodian, a community resource consultant, and specialists in arts, crafts, and outdoor recreation. The list of these positions was derived from the types of positions found in different instructional resource centers (i.e., library, media center, teacher center, nature center, museum, recreation center, craft center). Addition ideas resulted from conversations with numerous outdoor educators.

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Procedures for Conducting
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After the design of the survey had been completed, procedures for conducting the survey were determined. The survey distribution was conducted according to a four-point plan to insure that the sample population would come from a variety of areas and educational levels and would include both elementary and secondary teachers, faculty/professionals involved in Outdoor Education, and Outdoor Education graduate students. Surveys were distributed: (1) at two on-campus graduate Outdoor Education seminars, (2) at three off-campus Outdoor Education courses, (3) at two state-wide Outdoor Education events, and (4) on a selected basis to professionals working in Outdoor Education related positions. Survey forms were handed directly to the individual respondents.

During 1976, with the consent of the instructor, survey forms were supplied to students in the spring, 1976 and winter, 1977 graduate Outdoor Education seminars taught on the Michigan State University campus. Fourteen students seeking degrees in education, recreation, and fisheries and wildlife responded.

Surveys were also distributed to sixty-two members of three off-campus graduate Outdoor Education classes. Two of these classes were held in Jackson, Michigan, in spring and fall, 1976. The remaining

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course was held in Owosso, Michigan in winter, 1976.

The students in these three courses were primarily elementary and secondary teachers.

The third part of the distribution plan consisted of furnishing survey forms to participants in two statewide Outdoor Education events. Approximately twenty questionnaires were distributed at the 1976 State Outdoor Education Conference at Clear Lake, Dowling, Michigan. An additional eighteen questionnaires were given to participants at the 1976 Outdoor Education Summer Workshop at Higgins Lake, Michigan. The participants at these two events included classroom teachers from all over the state, other professionals representing a variety of Outdoor Education positions, and graduate students with an interest in various forms of Outdoor Education. The survey forms at these two events were distributed with a stamped, self-addressed envelope to allow participants to return the forms by mail. A total of thirty-four questionnaires was returned by the participants in these two groups. The response of these groups was 90 percent.

Survey forms with an attached, stamped, self-addressed envelope were also given to selected professionals who were working in Outdoor Education related positions. The participants in this group included Michigan State University faculty members, resource center staff, and other professionals engaged in outdoor

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activities. A total of twenty-five questionnaires was distributed to this group; twelve surveys were returned. The response of this group was 48 percent.

Sample Population

A total of 123 completed questionnaires was returned through the implementation of the four procedures described in the previous section. Only one of the forms had to be classified as invalid because the respondent did not understand the directions and did not fill out the survey correctly.

As each questionnaire was received, responses to the Personal Data section were coded. The survey sheet was then assigned to one of the four categories based on the status of the respondent. These categories included elementary teachers, secondary teachers, graduate students in Outdoor Education, and Outdoor Education faculty/professionals.

The decision to group respondents into one of these classifications was based on the need to identify interests and objectives of special interest groups representative of potential users of an Outdoor Education Resource Center. Participants were classified into these four categories on the basis of their responses in the Personal Data section. Elementary teachers included any teacher working in nursery school or in a K-6 situation.

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The category of secondary teachers included teachers working with grades 7-12 and teachers working in middle schools.

There were two criteria for inclusion in the Outdoor Education graduate student category--those who were enrolled full time in a university and whose major emphasis was an outdoor-oriented field of study.

The faculty/professional classification was comprised primarily of university faculty members, resource center and agency staff members, directors of Outdoor Education programs, and other individuals engaged in community or adult activities allied to use of the out-of-doors.

Procedures for Analyzing Data

The data obtained in the survey questionnaires were treated according to the following steps. Within each of the four classifications described above, an analysis of the characteristics of the sample population was made to determine teaching level, position, outdoor teaching experience, and age. For each participant category, the percentages of responses to each question were derived. These percentages indicate the value each group of respondents assigned to a particular classification of resource or equipment. The percentages for each participant group were then compared with those of other

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groups for each question, and a total sample average for each question was determined. Finally, suggestions made by participants for additional resources or equipment were grouped according to the six questionnaire sections and reported.

Characteristics of the Respondent Groups

The Personal Data section of the survey furnished relevant information about the 122 outdoor educators who responded to the questionnaire. Completed surveys were assigned to one of four classifications based on the background of the respondent: elementary school teacher, secondary school teacher, Outdoor Education graduate student, and university faculty/professional outdoor educator.

Data in Table 3.1 show the composition of the total group as divided into the four classifications.

TABLE 3.1
PROFESSIONAL STATUS OF RESPONDENTS

Group	Classification	Number of Respondents	Percentage
(1)	Elementary Teachers	44	36
(2)	Secondary Teachers	30	25
(3)	Outdoor Education Graduate Students	21	17
(4)	Faculty/Professionals Outdoor Educators	27	22
	Total	122	100

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Four types of data were obtained through an examination of the responses to the Personal Data section of the survey. The data include: (1) teaching level distribution of respondents, (2) position title, (3) Outdoor Education teaching experience, and (4) age group.

(1) Teaching Level Distribution of Respondents

As a group, the survey respondents held positions ranging in level from nursery school teachers to university professors.

Survey respondents in the elementary and secondary school teacher classifications generally held single grade level or single subject teaching responsibility. Table 3.2 shows the teaching level distribution by frequency and percentage for the seventy-four respondents in these two groups.

TABLE 3.2
TEACHING LEVEL DISTRIBUTIONS

Teaching Level	Number of Respondents	Percentage of Groups 1 & 2
Nursery School	2	3
Elementary School	42	57
Middle School	14	19
High School	15	20
High School/Adult (Special Education)	1	1
Total Number of Respondents in Groups 1 & 2	74	
Percentage of all Groups	61	

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There was a total of forty-eight respondents in the Outdoor Education graduate and the higher education faculty/professional classifications. The majority of participants in these two groups held multiple grade level or multiple subject teaching responsibilities. Table 3.3 shows the number of respondents who indicated they served in one or more designated levels.

TABLE 3.3

TEACHING LEVEL DISTRIBUTION OF MEMBERS OF THE OUTDOOR
EDUCATION GRADUATE STUDENT AND FACULTY/
PROFESSIONAL CLASSIFICATIONS

Teaching Level	Number of Respondents
Community	8
Elementary School	14
Middle School	6
Secondary School	5
Special Education	3
College	18
Adults	13
Teacher Training	2
Coordinator (of several levels)	10
Total Number of Responses	79
Total Number of Respondents in Groups 3 & 4	48
Percentage of all Groups	39

(2) Positions Held

As a total group, the participants in the survey held positions in a wide range of areas. Many participants classified themselves under more than one position title. Table 3.4 shows the distribution of respondents by position title.

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TABLE 3.4

POSITION TITLE AS INDICATED BY GROUP MEMBERS

Position	Group			
	1	2	3	4
Teacher	44	30	4	2
Outdoor Education Graduate Students	7	6	20	2
Faculty (College and University)	-	-	-	7
Elementary and Secondary School				
Administrators	-	-	-	2
Agency Staff Member	2	-	-	3
Resource Center Staff Member	-	1	-	7
Resident Camp Staff Member	-	-	-	1
Student Teacher in Outdoor or				
Environmental Education	3	3	-	4
Other	-	-	-	2
Totals	56	40	24	30
Total Number in Each Group	44	30	21	27

(3) Outdoor Education Teaching Experience

Respondents were asked to report if they had had any outdoor teaching experience. Thirty percent of the total number of respondents indicated that they had participated in an outdoor experience as a teacher. Table 3.5 shows the number of respondents in each group who indicated that they had outdoor teaching experience.

It should be noted, however, that this category applies only to teachers who have had outdoor experience. Several respondents, particularly those in the faculty/professional and graduate student groups, have had outdoor experience in education, recreation, or in some other area, but not as a teacher.

TABLE 3.5

OUTDOOR TEACHING EXPERIENCE BY GROUP

Group	Number of Position Responses	Percentage of Total Group
(1) Elementary School Teachers	18	41
(2) Secondary School Teachers	13	43
(3) Outdoor Education Graduate Students	4	19
(4) Faculty/Professional Outdoor Educators	2	7
Total Number	37	
Total Percentage of all Respondents	30	

(4) Age Distribution

As a group, the respondents ranged in age from under twenty to over fifty years of age. Table 3.6 indicates the age distribution of survey participants according to their respective groups.

Interview Goals and Procedures

The interview was selected as the form of research method most appropriate for eliciting specific information regarding the description, function, and focus of various types of resource centers. A series of interviews was conducted with various professionals having expertise in resource center administration or in Outdoor Education.

The use of the interview as a research method permitted the researcher to obtain specific factual information about adopting and adapting selected features

of different types of resource centers from the resource specialists working in these centers. The interview method also allowed the researcher to consult with professionals about the special resource needs of curriculum development and Outdoor Education. Both groups of specialists supplied factual information that could not be obtained from written sources or current research.

TABLE 3.6
AGE DISTRIBUTION OF RESPONDENTS

Group	Age Groups				
	Under 20	21-30	31-40	41-50	Over 50
(1) Elementary Teachers	-	29	10	1	4
(2) Secondary Teachers	1	15	11	2	1
(3) Outdoor Education Graduate Students	-	19	2	-	-
(4) Faculty/Professional Outdoor Educators	-	5	10	5	5
Total Frequency	1	68	33	10	10
Total Percentage	1	56	27	8	8

The interview procedure began with the identification and selection of professional/specialists who might be able to supply information and solutions to the problems involved in the design of an Outdoor Education Center.

A total of sixteen candidates was selected for consultation on a specific aspect of the Outdoor Education

Resource Center problem. The candidates were contacted by telephone or by letter. The problem was explained during this initial contact and an appointment was made for the interview at a later date.

Interviews were conducted during the time period from August, 1975 to May, 1977. Each interview generally lasted from 1.5 to 2 hours. With the consent of each consultant, the interviews were recorded on cassette tapes for later reference.

Guidelines for Selection of Interviewees

The purpose of the interview process was to obtain specific types of information that was not available from other sources; i.e., books and research reports. The information requested was to relate to either the resource needs of Outdoor Education and curriculum development, or to the functional or service capabilities of different kinds of resource centers.

Therefore, individuals were selected for interviews on the basis of two general qualifications--for their knowledge of Outdoor Education and curriculum development, or for their affiliation with a particular type of resource center. Additional criteria included availability, previous experience in working with teacher resource needs, and participation in various types of Outdoor Education programs for teachers and students.

Sixteen interviews were conducted with individuals who met the above general criteria. Included in the interviews were two State Department of Education curriculum specialists, one school district curriculum specialist, one teacher center specialist, two Outdoor Education program directors, one crafts specialist, four university Outdoor Education faculty instructors, and five members of different types of resource center staff.

In order to take full advantage of the different qualifications of each interviewee, the interviews were individualized. Thus, specialists in Outdoor Education or in curriculum development were consulted about designing and conducting Outdoor Education programs in various locational settings. Their expertise regarding teacher and student informational needs in these programs provided solutions to critical questions.

Similarly, resource center administrators and specialists were asked to provide information regarding the capabilities of their particular type of resource center in meeting the informational and instructional needs of teachers and students who were participating in various kinds of outdoor-related programs.

Procedures for Analyzing Interview Data

After each interview was completed, the tapes were classified according to the interviewee's area of

expertise; that is, either Outdoor Education program needs or capabilities of different resource center types.

The interviews with the curriculum specialists and the Outdoor Education program directors were examined for statements regarding the basic information and curricular needs of teachers and students participating in Outdoor Education programs in different locational settings. These locational settings included school sites, community sites, resident outdoor schools, and adventure program sites.

In a similar manner, the interviews with the different resource center personnel were reviewed for information related to the capabilities of each type of resource center. Specifically, information was solicited regarding the description or definition of the resource center where the consultant was employed; the interviewee was also asked to identify the functions or services provided by his resource center and to characterize the user group the center was designed to serve.

The statements of the interviewees were then compiled for each of the two groups. The results are presented in Chapter IV.

Summary

The purpose of Chapter III has been to describe the research methods and procedures used to fulfill the objectives of the study. First, a detailed description

of the questionnaire design and construction was presented. An explanation of the methods used in conducting the survey was given. The characteristics of the population sample categories were reported. Finally, the procedures used to analyze the collected data were defined.

The second research method was the interview. A description of the goals and procedures of the interview was followed with an identification of the guidelines used in selecting interviewees. A description of the procedure used in analyzing the interview data concluded the chapter.

CHAPTER IV

PRESENTATION OF THE DATA

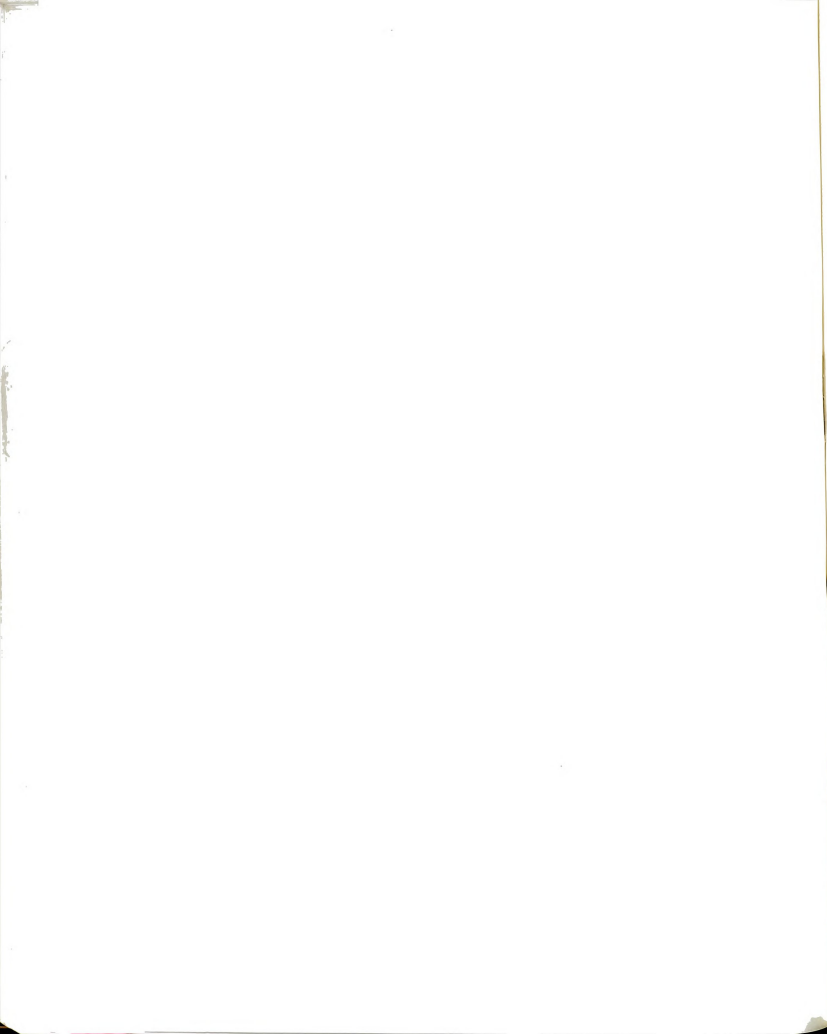
The survey and the interview were designed to obtain data concerning the types of resources necessary in an Outdoor Education Resource Center. Results of the use of these two procedures are reported in this chapter.

Survey Categories

The survey included the following three data categories:

1. The types of resources and equipment considered useful in outdoor teaching by each group of survey respondents
2. The relative usefulness assigned by the respondents to each resource or equipment type
3. Suggestions made by respondents for the addition or deletion of specific resources or equipment types

The four survey groups responding to questions regarding resources that could be included in an Outdoor



Education Resource Center were (1) elementary teachers, (2) secondary teachers, (3) graduate students in Outdoor Education, and (4) Outdoor Education faculty/professionals.

In the following sections responses are summarized. In all categories, a 4-point Likert-type scale was utilized to collect these data. The four points of the scale were given verbal identifiers: 1--nonessential, 2--highly specialized, 3--important or nice to have, 4--absolutely essential. Responses in the third and fourth points of the scale were regarded as positive indicators.

In analyzing survey results, the percentage distributions for each question were determined for each respondent group. Mean percentages of all four survey groups were also derived for each part of each question.

Library Resources

The first category of resources identified by the questionnaire was library resources. This category referred to four classifications of print materials: books, reference materials, periodicals, and maps and charts.

In analyzing survey data for this section, it was determined that the majority of respondents regarded Library Resources as "Important to Have" or "Absolutely Essential." Total group mean percentages for these two scale indicators ranged from 58 percent to 97 percent for the different examples of printed materials. Table 4.1

TABLE 4.1
LIBRARY RESOURCES

	Individual Group Percentages					Mean Percentage of Four Groups
	Elementary Teachers	Secondary Teachers	Outdoor Education Students	Outdoor Education Faculty/Prof. Outdoor Ed.		
	1	2	3	4		
Books						
Agency publications	87	96	100	100		96
Reference materials	91	100	96	90		95
Fiction	91	80	92	100		91
Children's books	93	83	92	95		91
Fiction-adventure	89	77	78	91		84
Special book collections	82	87	89	77		84
Textbooks	75	80	78	81		79
Technical manuals	71	66	56	72		67
Reference						
Michigan Outdoor Education	90	96	100	100		97
Outdoor Education	86	96	97	90		92
National Outdoor Education	85	93	97	90		92
Program guides	91	96	89	90		92
Encyclopedias	96	87	97	86		92
Curriculum guides	88	94	86	96		91
Bibliographies						
International Outdoor Edu-	62	66	71	76		69
cation program guides	63	63	67	53		61
Commercial kits						
Periodicals						
Environmental	91	90	93	95		93
Children's outdoor	93	84	92	95		92
Recreational	77	83	96	86		86
Arts and Crafts	84	84	81	67		79
Garden and Farm	61	53	86	58		65
Science	59	63	56	52		58
Maps and Charts						
Charts	96	93	96	86		96
Maps	80	83	93	77		84

shows the distribution of positive responses for the four groups. It also includes the mean positive percentage in rank order for each example.

The data in Table 4.1 illustrate that maps and charts, books, and reference materials were valued slightly higher than the different periodicals. Science periodicals, commercial kits, and garden-farm periodicals received the lowest ratings.

Audiovisual Equipment

Audiovisual equipment was the second category of the survey. The category referred both to the equipment used in showing or utilizing various forms of audiovisual materials and to the equipment and materials used in the production of graphics.

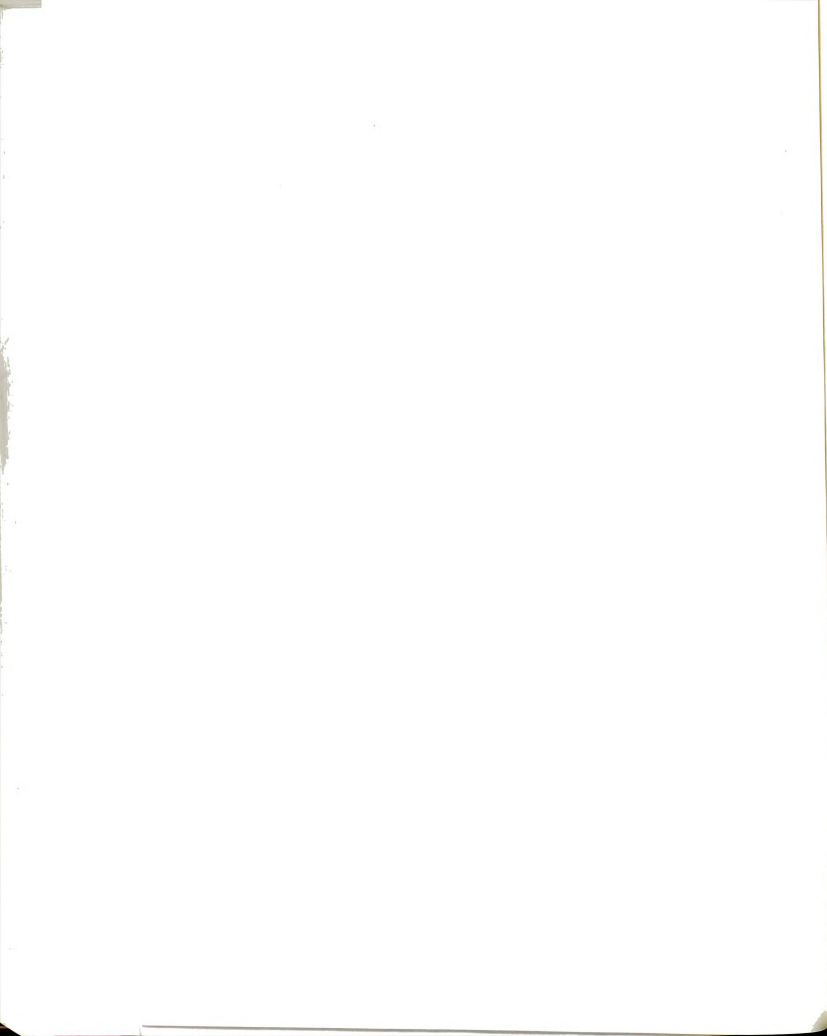
The various examples of audiovisual equipment were reported as "Important to Have" or "Absolutely Essential" by the majority of respondents. The total group mean percentage for the third and fourth scale indicators ranged from 62 percent to 99 percent for the different examples. The specific data are reported in Table 4.2.

Table 4.2 indicates that respondents placed a higher value on projectors, slide cameras, duplicating machines, a slide-tape library, and the film file. Darkroom equipment received the lowest ratings. These results show that the majority of survey participants

TABLE 4.2

AUDIOVISUAL EQUIPMENT

Equipment Type	Individual Group Percentages				Mean Percentage of Four Groups
	Elementary Teachers	Secondary Teachers	Outdoor	Outdoor	
			Education Graduate Students	Education Faculty/Prof. Outdoor Ed.	
	Group Number				
	1	2	3	4	
File of films on Outdoor Education (free and low cost)	100	97	97	100	99
Projectors	95	97	100	95	97
Duplicating machines	95	97	100	86	95
Tape and slide library	93	93	85	100	93
Slide camera	88	90	89	95	90
Tape recorders	86	87	93	91	89
Overhead projectors	95	93	82	81	88
Laminating machines	96	76	82	76	83
Opaque projectors	93	93	70	62	80
Graphics laboratory	79	74	89	76	79
Movie camera	82	80	63	91	79
Darkroom equipment	68	47	63	67	62



regard graphic and audiovisual equipment as important components of an Outdoor Education Resource Center.

Adventure Program Equipment

Equipment for different types of adventure programs comprised the third survey category. The majority of survey respondents considered the various examples in this category as "Important to Have" or "Absolutely Essential." The mean percentages for the total group ranged from 59 percent to 92 percent for these two positive indicators. Table 4.3 illustrates these results.

As Table 4.3 indicates, respondents' opinions on the value of adventure program equipment were diverse. As a group, elementary teachers gave this category of resources its lowest rating. In contrast, secondary teachers and Outdoor Education graduate students gave higher valuations. This variation in response was not unexpected since most elementary students would not be participating in adventure programs.

The results of the survey show that equipment for camp cooking, camping, orienteering, survival, archery and backpacking received the highest valuations by all four respondent groups. Equipment for the shooting sports, rapelling, and skiing all received lower positive ratings. These trends show that the majority of participants view equipment for certain types of adventure

TABLE 4.3
ADVENTURE PROGRAM EQUIPMENT

Equipment Type	Individual Group Percentages					Mean Percentage of Four Groups
	Elementary Teachers	Secondary Teachers	Outdoor Education		Outdoor Education Faculty/Prof. Outdoor Ed.	
			Graduate Students	Students		
	1	2	3	4		
Camp cooking	91	97	96	81	92	
Camping	79	90	96	86	88	
Orienteering	79	87	89	90	86	
Survival	68	96	85	81	83	
Archery	75	83	85	81	81	
Backpacking	73	83	89	81	81	
Canoes	71	74	89	85	80	
Casting and angling	66	86	86	72	77	
Snowshoes	55	83	93	72	76	
Ice fishing	57	73	89	62	71	
Skiing	53	76	85	62	69	
Rapelling	50	64	71	62	62	
Shooting sports	47	70	71	48	59	

programs as an essential part of an Outdoor Education Resource Center.

Crafts, Handicrafts, and Hobbies

Examples of equipment and supplies for crafts, handicrafts, and hobbies made up the fourth survey category. From an analysis of the survey data for this section, it was determined that a high proportion of respondents regarded equipment and supplies for these types of activities as "Important to Have" or "Absolutely Essential." Total group mean percentages for the two positive scale indicators ranged from a low of 69 percent to a high of 92 percent. Table 4.4 displays the percentages for each question and each group as well as the total group mean percentages.

Table 4.4 indicates that survey participants give the highest value ratings to equipment for general crafts, natural crafts, and to having the necessary materials available for collecting. Ceramics and shellcraft received the lowest positive ratings. The results from this part of the survey indicate that the great majority of respondents consider equipment and supplies for crafts and hobbies as a vital or important part of the resources for an Outdoor Education Resource Center.

TABLE 4.4
CRAFTS, HANDICRAFTS, AND HOBBIES

Individual Group Percentages					
Equipment Type	Elementary Teachers	Secondary Teachers	Outdoor Education		
			Graduate Students	Faculty/Prof. Outdoor Ed.	Mean Percentage of Four Groups
	1	2	Group Number		
			3	4	
Collection supplies (display boxes, mounting materials)	100	87	92	85	92
Natural crafts supplies	93	90	96	81	90
General craft supplies	98	87	93	76	90
Woodcarving tools and supplies	82	87	78	85	83
Weaving supplies	84	84	85	76	82
Basketry supplies	82	83	81	72	80
Lapidary equipment and supplies	86	73	82	72	79
Shellcraft supplies	77	73	67	67	71
Ceramic equipment and supplies	77	73	63	62	69

Specialized Study Equipment

The fifth category of resources included in the survey was equipment for specialized study in the natural sciences. This category refers to equipment used in various types of field studies such as weather and water studies, soil sampling, and animal observation.

After an examination of the survey data, it is evident that a definite majority of respondents regarded the various types of equipment in this section as "Important to Have" or "Absolutely Essential." The total group mean percentages for questions in this survey category ranged from 75 percent to 95 percent for the positive scale indicators. Table 4.5 presents data for this group.

Table 4.5 indicates that magnifying glasses, thermometers, miscellaneous supplies, and binoculars received the highest positive evaluations by survey respondents. Increment borers and dissecting kits were given lower ratings. These results show that the majority of survey participants regard equipment for different types of specialized study as an integral part of an Outdoor Education Resource Center.

Human Resources

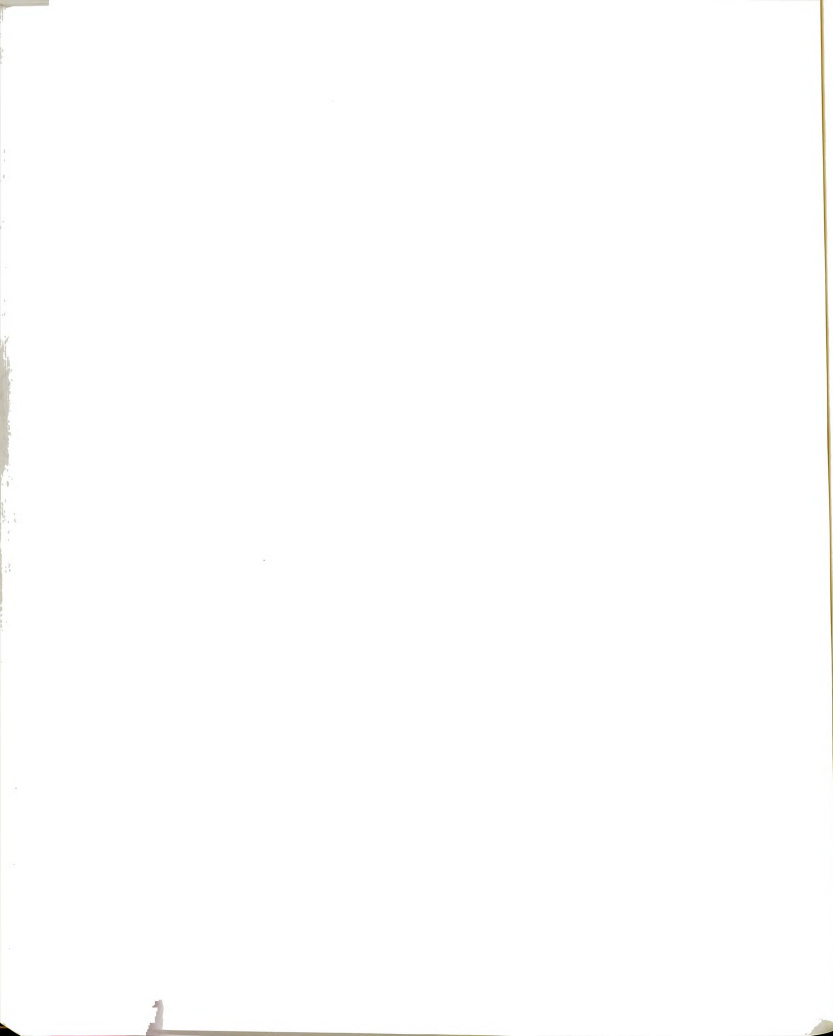
The sixth category of the survey asked respondents to consider the human resources that might be included as staff members for an Outdoor Education Resource Center.

TABLE 4.5

SPECIALIZED STUDY EQUIPMENT

Individual Group Percentages					
Equipment Type	Elementary Teachers	Secondary Teachers	Outdoor Education		Mean Percentage of Four Groups
			Graduate Students	Faculty/Prof. Outdoor Ed.	
	1	2	Group Number		
			3	4	
Magnifying glasses	100	100	92	86	95
Thermometers (various types)	96	96	92	86	93
Binoculars	95	100	93	76	91
Miscellaneous supplies (wood, wire, screen, paper, plastic)	96	93	93	81	91
Microscopes	95	93	81	81	88
Containers (pans, cans, tubes)	90	90	93	81	88
Basic woodworking tools	93	86	82	85	87
Basic garden tools	86	97	88	72	86
Weather study equipment	87	83	81	81	84
Terrestrial study equipment	78	83	85	81	84
Soil test kits	84	90	85	71	83
Aquatic equipment	72	80	92	77	80
Greenhouse	84	86	63	81	78
Dissection kits	82	87	78	66	78
Increment borers	61	80	78	81	75

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The majority of respondents considered the different examples of human resources as "Important to Have" or "Absolutely Essential." Total group mean percentages for these two scale indicators ranged from a low of 61 percent to a high of 97 percent for the different examples of human resources. Table 4.6 presents the survey data for this category.

As Table 4.6 shows, respondents' opinions on the value of different types of staff and consultants were varied. The graduate student group gave most of the examples of potential staff members the lowest ratings. The center curriculum coordinator (the outdoor generalist) received the highest positive ratings from all groups. All survey respondents gave their lowest evaluations to the audiovisual specialist and the librarian.

The results of the survey indicate that most of the professional consultants and possible staff members in this category were considered essential to the functioning of a larger Outdoor Education Resource Center.

Suggestions and Comments

The last question in each category of the survey gave respondents an opportunity to offer suggestions for the addition of other desirable resources, equipment, or staff to the Outdoor Education Resource Center.

TABLE 4.6

HUMAN RESOURCES

Individual Group Percentages						
	Elementary Teachers	Secondary Teachers	Group Number			Mean Percentage of Four Groups
			Outdoor Education Graduate Students	Outdoor Education Faculty/Prof. Outdoor Ed.	Outdoor Education	
	1	2	3	4		
<u>Human Resources</u>						
Center curriculum coordinator (outdoor generalist)	97 86	100 90	100 85	90 95		97 89
Naturalist	84	93	86	85		87
Community resources consultant	86	90	89	76		85
Outdoor recreation specialist	88	90	81	76		84
Maintenance custodian			75	57		75
Arts and crafts specialist	84 75 81 68	83 90 73 67	52 48 48	76 52 58		74 64 61
Curriculum specialist						
Librarian						
Audiovisual specialist						

In the library resources category, three respondents thought that records, tapes, films, and filmstrips should be added to the library resources collection. Samples of periodicals, Outdoor Education programs, lessons and kits were also suggested for this category.

There were three suggestions for audiovisual materials--a record player, a picture file, and a thermofax machine.

Spelunking equipment and books or other information on adventure programs that are actually in operation were proposed by respondents as possible additions to the equipment and resource inventory for adventure programs.

Two participants recommended that taxidermy supplies and crafts and hobby books be added to Category IV.

Category V included equipment for specialized study. Respondents suggested that a mini-greenhouse, a telescope, sky charts, and soil sampling equipment should be added to the list for this category.

Several participants had recommendations for the human resources category for the Outdoor Education Resource Center. A secretary was considered essential by one participant. Another respondent thought that part-time specialists could be hired if it was not possible to have a full-time naturalist, librarian, etc., at the Center. Two survey participants proposed that a list be made of the Outdoor Education resource people

available in defined geographical areas. One other participant felt strongly that the naturalist should be a Science major.

Additional comments were offered by respondents. Several cited the need for a greater variety of resources and equipment in an Outdoor Education Resource Center. Other respondents expressed a concern for the financing and the locations of the Outdoor Education Resource Centers stating that they are especially needed in outlying areas where there are no college/resource center facilities to assist teachers.

Interview Statements

The information from the interviews was classified into two categories:

1. Statements relating to resource, equipment, and staff needs in an Outdoor Education Resource Center
2. Statements regarding the response capabilities of different types of resource centers

As was previously indicated, because of the interviewees' diverse fields of specialization no attempt was made to ask exactly the same questions regarding resource needs or the centralization of resources for Outdoor Education. The interviews were informal discussions used as a further validation of

the data from the review of literature and the survey. All interviewees had had some experience with Outdoor Education--either as school personnel involved directly in program planning or as the director of a resource center used by teachers to aid in some aspect of outdoor programming. Each interviewee knew that the ultimate purpose of the interview was to determine the types of resources and equipment for an Outdoor Education Resource Center and what features of other resource centers might be incorporated in an Outdoor Education Resource Center.

Statements Relating to Resource, Equipment,
and Staff Needs for an Outdoor
Education Resource Center

Because of their background in Outdoor Education and curriculum development, nine of the sixteen interviewees were consulted about resources, services, and staff needs for an Outdoor Education Resource Center designed to serve the different locational settings where programs would be conducted. Pertinent points from the interviewees are summarized in which the following statements are arranged into three classifications:

1. The concept of the Center and the types of resources needed
2. The services offered by the Center
3. The personnel of the Center



The Center and Its Resources

1. All interviewees felt that:
 - a. the centralization of resources and equipment in a Center would increase the availability of materials for all levels of outdoor teaching
 - b. the flexibility and adaptability of each Center to the community was important
 - c. the Center should remain nontechnical (technical information could be obtained from a university or agency).
2. Two interviewees felt that they were not fully qualified to judge curriculum-oriented materials outside of their own specialty area and stressed that the Center maintain a "balanced" variety of materials.
3. All interviewees had priorities among the six categories of resources (library resources; audiovisual equipment; adventure program equipment; crafts, handicrafts, and hobbies; specialized study equipment; human resources) on the survey, but they also felt that priority of acquisition should depend on the specific needs in each community.

Services Offered by the Center

The following suggestions were given:

1. Preservice and in-service training should be an essential service.
2. Consultant assistance should be available for teachers both at the Center and at individual school sites.
3. Student teachers could be involved in Center programs and training.

Center Staff

The following comments were made by interviewees:

1. The Center coordinator should be an outdoor generalist with both indoor and outdoor teaching experience.
2. The librarian of the Center should have an active teaching role.
3. Some staff requirements could be met by one person with multiple talents (for example, the librarian and the audiovisual technician).
4. The job description of the maintenance custodian might include the distribution, repair, and upkeep of most Center equipment including that loaned to schools.

5. Center staff should also provide assistance to resident outdoor school programs within the Center's service area.

Statements Regarding the Response Capabilities of Different Types of Resource Centers

Seven of the sixteen interviewees were consulted about the response capabilities of different types of resource centers to Outdoor Education program needs. The seven types of resource centers are currently being used by some outdoor educators to find resource materials, equipment, staff services, and for consultant help when such centers are available.

The following statements represent the important points from the interviews with these consultants. Statements are arranged according to the type of center referred to by the interviewee.

Library

The librarian interviewed made the following observations concerning the library as a integral part of an Outdoor Education Resource Center.

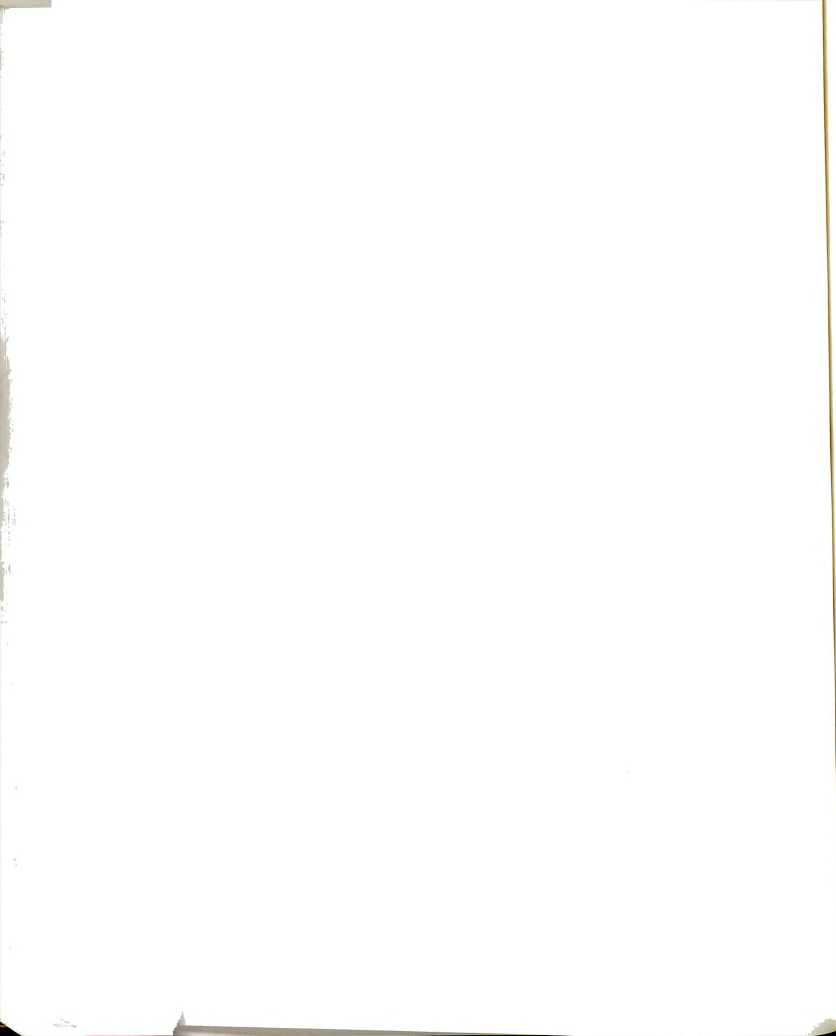
1. An Outdoor Education Resource Center library is a specialized library and as such should have an outdoor-oriented emphasis with the focus on the needs of the user group (teachers teaching in the outdoors).

2. Libraries are used by outdoor educators who often request materials which are not available or are buried in the resources of larger libraries. Two further observations were made--teachers do not have the time nor background knowledge to sift through the resources of a larger library to find the desired information, or if they find it, need assistance in preparing it to meet their specific needs.
3. The librarian faces similar problems in trying to serve the outdoor educator--a lack of knowledge in just what the teacher needs, not enough time or background to provide the services teachers often request.
4. A librarian affiliated with an Outdoor Education Resource Center should have an active teaching and consultative role.

Media Center

The media center specialist interviewed made the following comments:

1. Audiovisual resource centers are used by outdoor educators especially in the preparation of teaching materials--preparation of slides, using the graphic arts section, and requesting specific materials and assistance for outdoor projects.



Media centers are not equipped with all of the resource materials needed for their projects and are not able to loan cameras. Staff time is needed by many interests.

2. The role of an audiovisual specialist in a proposed Outdoor Education Resource Center would be both interesting and challenging and could provide additional dimensions for teachers in the classroom and outdoors.
3. The question was raised regarding the cost and care of equipment, amount of direction necessary for use in outdoor situations as well as indoor preparation, and if this would be a duplication of services offered in each school.
4. The nonprint materials and the accompanying technological equipment of audiovisual resources offer another dimension which dovetails with and reinforces the print materials of the library.

Teacher Centers

The following observations were extracted from the interviewee regarding teacher centers.

1. Teacher centers:
 - a. are flexible, the prime requisite is "teacher involvement"--taking active roles, sharing

their interests and talents, being able to teach and be taught.

- b. are in places where people congregate, accessibility is especially important, and teachers will return for further participation if the resources are available, services helpful, and hours convenient.
 - c. should reflect the interests and needs of the user group.
2. Teacher centers often provide a "social situation" which teachers enjoy--a place to develop materials of their choice, to work with others interested in similar projects, to have a cup of coffee, and to find the resource materials and staff available in an informal way.
 3. An Outdoor Education Resource Center appears to be a highly specialized type of teacher center.

Nature Center

The nature center director was very interested in the idea of an Outdoor Education Resource Center and felt that the two centers could work together for the benefit of both.

1. An Outdoor Education Resource Center would incorporate the major objectives of nature



center programs in the educational, scientific, cultural, and recreational objectives of Outdoor Education.

2. A nature center serves the entire public who come to enjoy and learn but generally not with a purpose of teaching others. Therefore, a nature center cannot focus on the specific needs of one group of users.
3. Certain aspects of nature center resources (exhibits, dioramas, collections) could be a segment of resources for an Outdoor Education Resource Center.
4. Interpretative skills of nature center naturalists could be adapted for in-service training for teachers.

Museum

The director of a museum welcomed the idea of working with an Outdoor Education Resource Center staff to enrich and supplement community Outdoor Education programs. This director was especially interested in pioneer studies and crafts and felt there were other avenues of mutual interest. He stated:

1. Four areas of natural history (anthropology, botany, geology, and zoology) and social studies were of special interest to both types of Centers

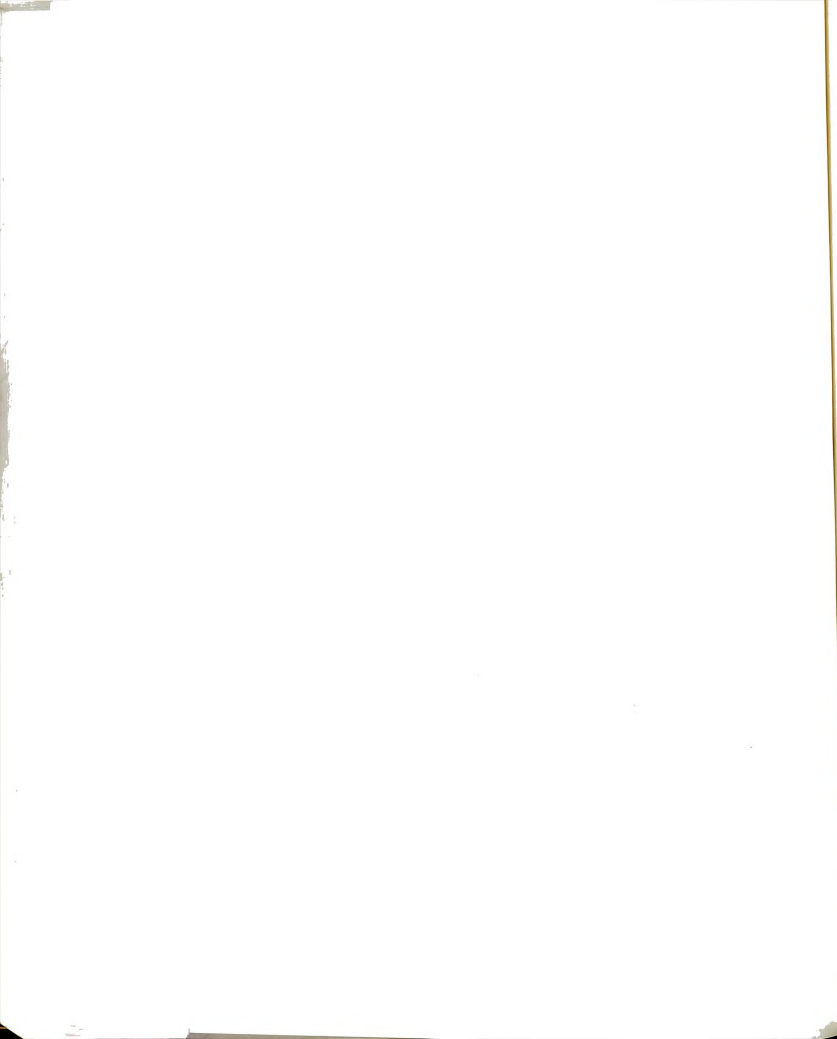
and that they could reinforce each other. He felt that the museum would be willing to loan specific items to facilitate teaching.

2. A museum could offer guidance in establishing collections, making exhibits, and preparing materials. The identification of items is often in question and museum staff members could provide that service.
3. The museum serves the entire public who come for personal enjoyment and not necessarily for direct experiences in learning how to teach others.

Recreation Center

The interview with the recreation specialist was conducted in relation to the resources listed on the survey and with the understanding that the equipment for competitive sports used in the athletic programs in schools was not included. The specialist was familiar with the resources and equipment used in outdoor programs and felt that the idea of owning and loaning equipment would work if definite procedures were established for reserving, loaning, returning, and repairing. Other observations were:

1. The range of equipment listed under adventure program of the survey was adequate for most outdoor programs, but possible emphasis might be



put on survival resources and on resources for lifelong recreational activities.

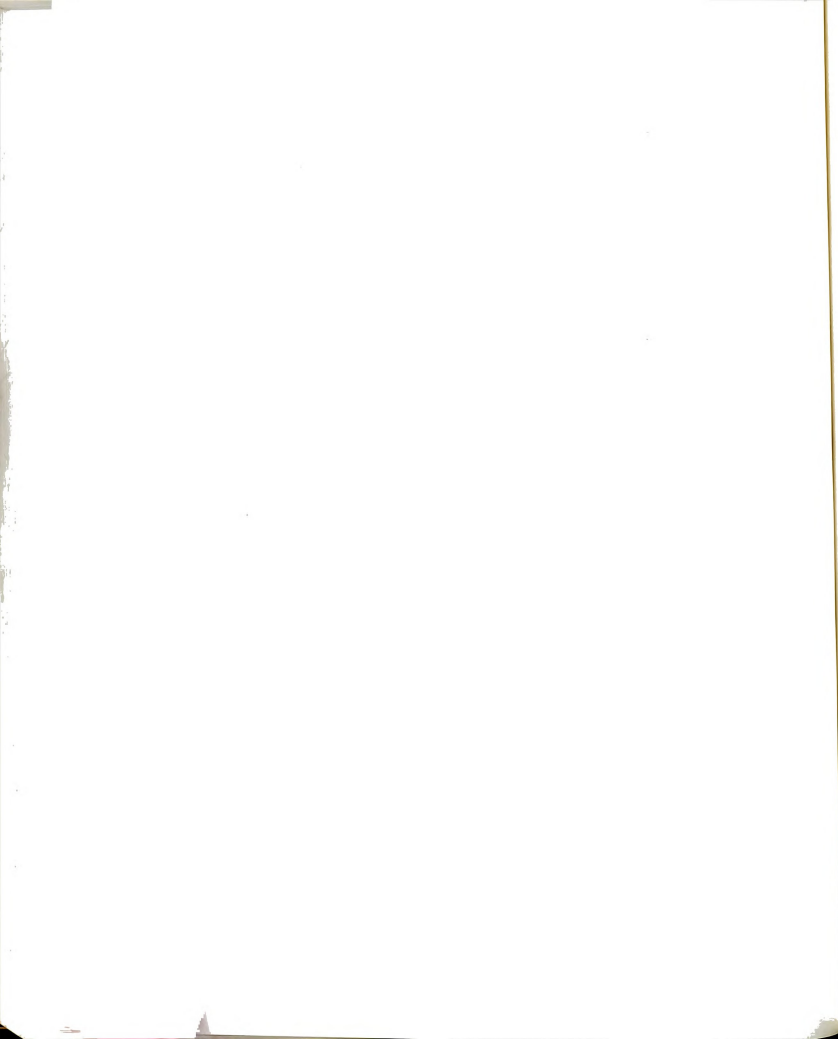
2. The availability of equipment for use in school programs would facilitate many activities which schools could not consider now.

Crafts Center

The crafts specialist interviewed was familiar with and had worked with crafts in Outdoor Education programs. The idea of a central location appealed to her as the transportation of craft supplies for classes becomes time consuming and requires great organization. She commented:

1. In Outdoor Education, the emphasis should be on use of natural materials and those involving pioneer skills.
2. Adequate space separate from other storage and work areas should be planned in a Center craft area as they take more room than print materials. The crafts projects should be offered at specific times with staff direction even though some participants might be doing individually oriented projects. Further questions revealed that such supervision aided the staff specialist in maintaining control over supplies and proper clean-up of work areas.

3. The question of cost was discussed and the suggestion made that many supplies could be collected as a part of training classes.



CHAPTER V

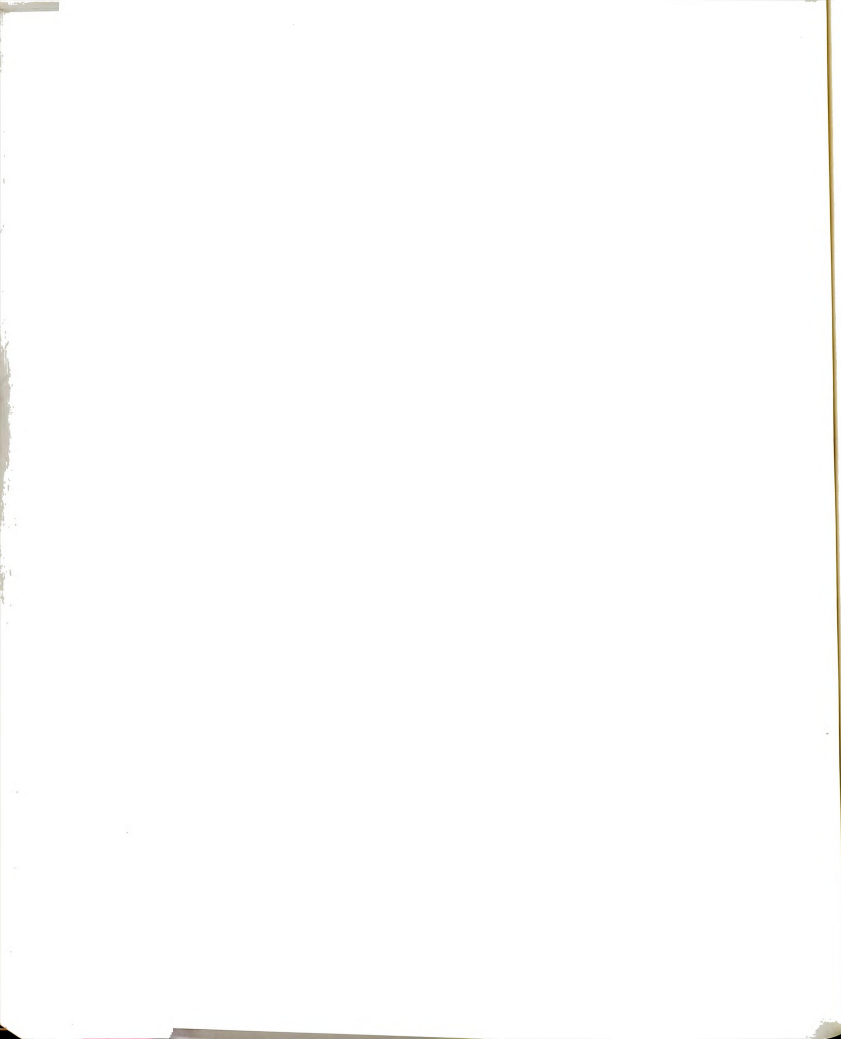
SUMMARY, CONCLUSIONS, IMPLICATIONS, RECOMMENDATIONS, AND SUGGESTIONS FOR FURTHER STUDY

Summary

The purpose of this study has been to determine the types of resources, related services, and professional staff necessary for developing a model Outdoor Education Resource Center for a school district or higher education setting.

The major objectives of this study were to establish criteria and to utilize these criteria in developing a model Outdoor Education Resource Center by:

1. Determining the types of resource materials and equipment needed by outdoor educators for different types of outdoor programs in various settings
2. Providing information as to staff positions, services and the potential role of an Outdoor Education Resource Center



3. Offering guidelines for Outdoor Education resource material selection ranging from a shelf in the classroom to a complete Outdoor Education Resource Center

Review of Literature

The literature was reviewed in the following three major areas:

1. Outdoor Education literature--past, present, and future
2. Literature describing the settings where Outdoor Education occurs and the implications of these settings on resources and programs
3. Information describing other types of resource centers used by outdoor educators that have adaptable features for an Outdoor Education Resource Center

The literature indicated that camping programs and nature study were early trends in Outdoor Education programming. The literature on more recent trends indicates that the emphasis has been on curriculum enrichment but with a heavy emphasis on environmental concerns, use of natural resources, pollution control, and on recreational activities which stress health and such lifelong interests as crafts, hobbies, and adventure-type programs.

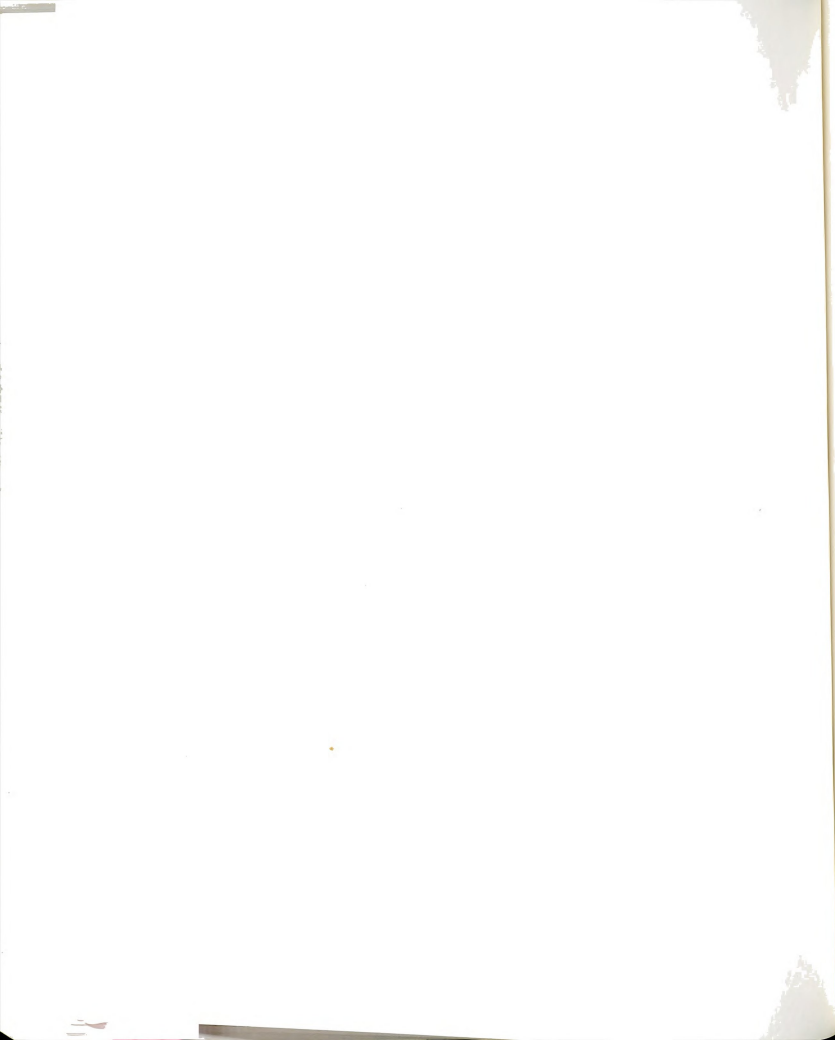
A review of literature on the seven types of pertinent resource centers indicates that, in order to obtain the specialized services and information necessary to conduct Outdoor Education programs, an outdoor educator must seek assistance at several resource centers. The literature also shows that none of the seven types of centers examined were specifically designed to meet the needs of Outdoor Education programming. Furthermore, not all of these resource center types are available in all communities or even in larger intermediate school districts.

Design of the Study

Two research methods--the survey and the interview--were used to assist in determining the resources, professional staff, and service elements needed for a model Outdoor Education Resource Center.

A survey was employed to identify essential types of resource materials and to assist in assigning priorities to the identified resources on the basis of their perceived value to different groups of potential users of an Outdoor Education Resource Center. The survey was supplemented by interviews designed to obtain additional information regarding the special resources and features of various existing centers used by outdoor educators.

A total of 122 individuals participated in the survey. Respondents were grouped into one of four categories because of the need to better identify the specific



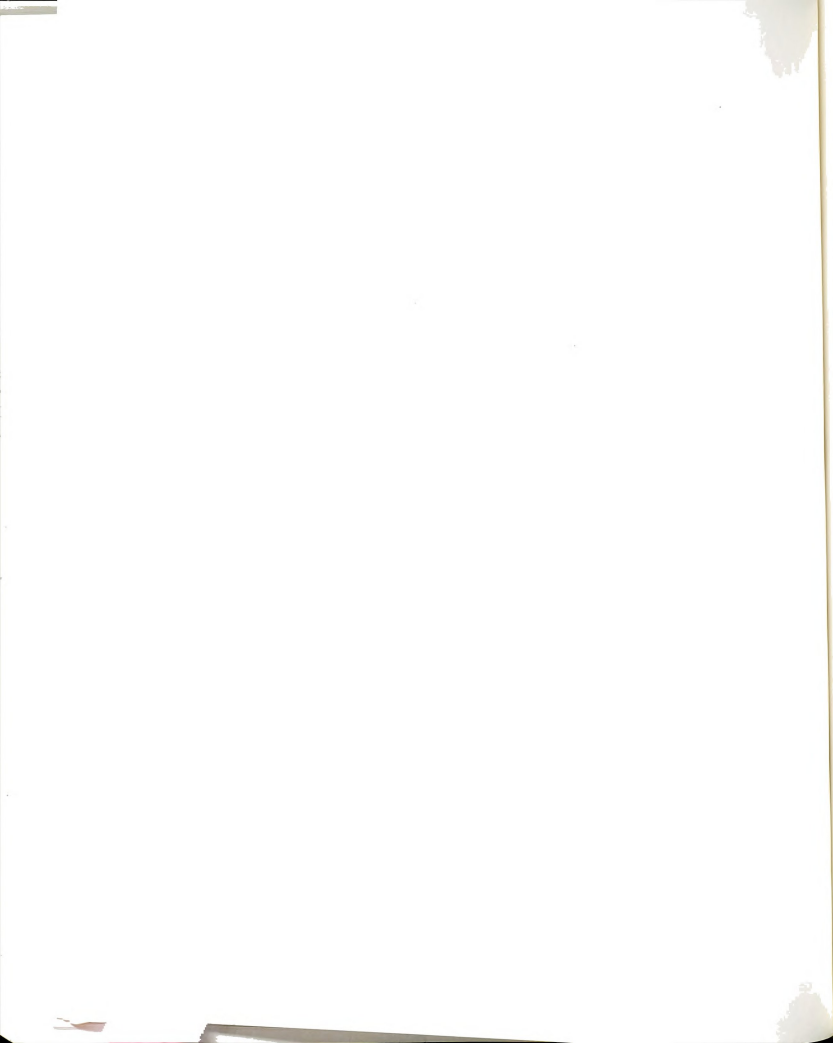
interests and objectives of the various special interest groups representative of potential users of an Outdoor Education Resource Center. These categories included elementary school teachers, secondary school teachers, Outdoor Education graduate students, and university faculty/professional outdoor educators.

In order to take full advantage of the different qualifications of each of the sixteen interviewees, the interviews were individualized. Nine of the sixteen interviews dealt with programs and resources; seven discussed the adaptable features of different resource centers for an Outdoor Education Resource Center.

Conclusions

The research indicates that there are no centralized collections of resources designed specifically for the outdoor educator and they must locate them on a "hit or miss" basis in a variety of centers or not find them at all. The findings show that the services of existing centers are designed for the general public and are generally inadequate for the professional requirements of such a specialized group of users. College courses are usually limited to "an emphasis" in Outdoor Education. Courses and services are nonexistent in outlying areas away from universities and larger population centers.

The research, personal contacts, and discussions have demonstrated the need to provide Outdoor Education

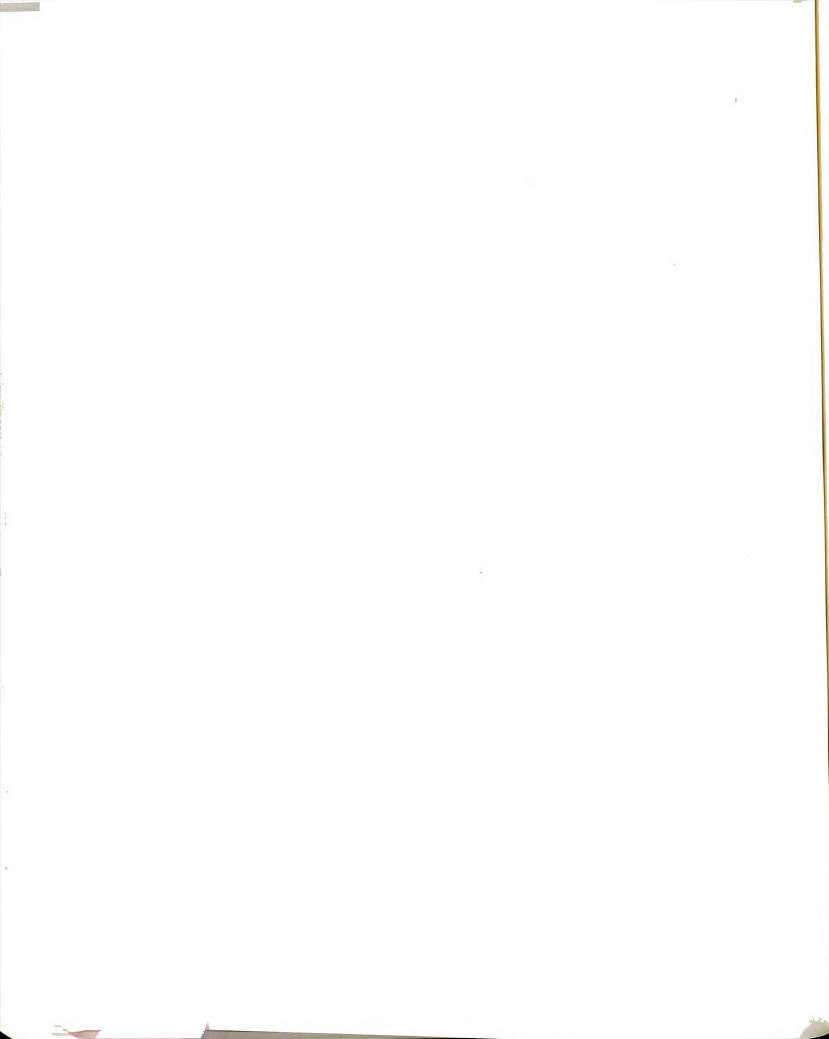


Resource Centers in teacher education institutions and within school districts throughout the nation in order to answer questions regarding the development and administration of Outdoor Education activities, to develop professional educators' competencies in implementing programs, and to assist in finding and using the resources and consultants from the community. Such Centers can also serve as storage and retrieval facilities for materials, equipment, and other resources needed for limited amounts of time by any one group of users.

As a result of the findings of the study, the researcher concluded that the major focus of an Outdoor Education Resource Center should be on its resources, services, and its professional staff. This focus would be best achieved through six major components--library resources, audiovisual equipment and technology, a crafts section, an adventure program section, an environmental educational component, and a human resources section.

The following criteria have been derived from the research and will be used as guidelines for the Center:

1. The integration of resources, services, and staff should be reflected in the organizational structure of the six Center resource components.
2. The functions of the Center should be directed primarily to the Outdoor Education needs of classroom teachers.



3. The Center should make a wide range of resource materials and equipment available to teachers.
4. A Center staff should offer professional assistance through consultant services on an individual and group basis and through in-service training.
5. The Center requires a central location to allow its user group ready access to its facilities.

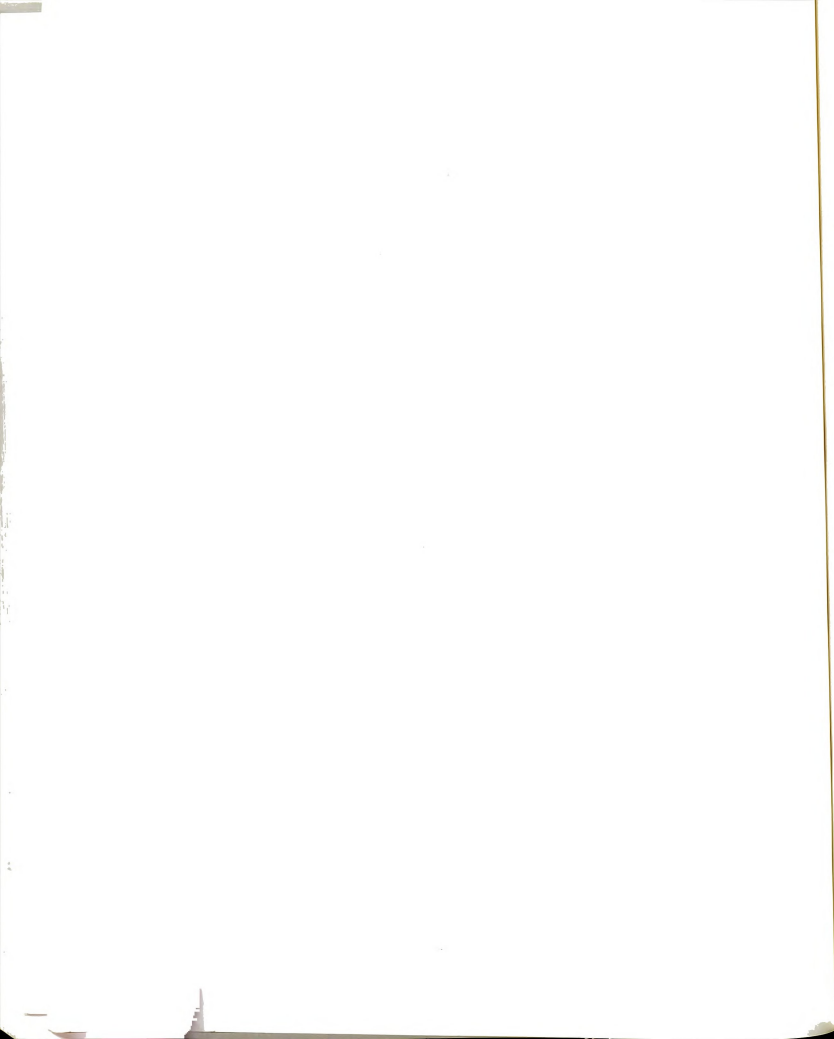
Implications

This study has specific implications for an Outdoor Education Resource Center model and it has general implications for Outdoor Education and the conceptual development of resource centers. The specific implications will be discussed first.

Specific Implications for a Model Outdoor Education Resource Center

Since none of the seven types of existing resource centers satisfy the majority of Outdoor Education programming needs, this chapter will propose the concept of an Outdoor Education Resource Center model which is specifically designed to meet the needs of outdoor educators. Its focus will be on serving one user group--classroom teachers involved in public school Outdoor Education programs.

The model for this Center has been developed by synthesizing the most useful and pertinent features of

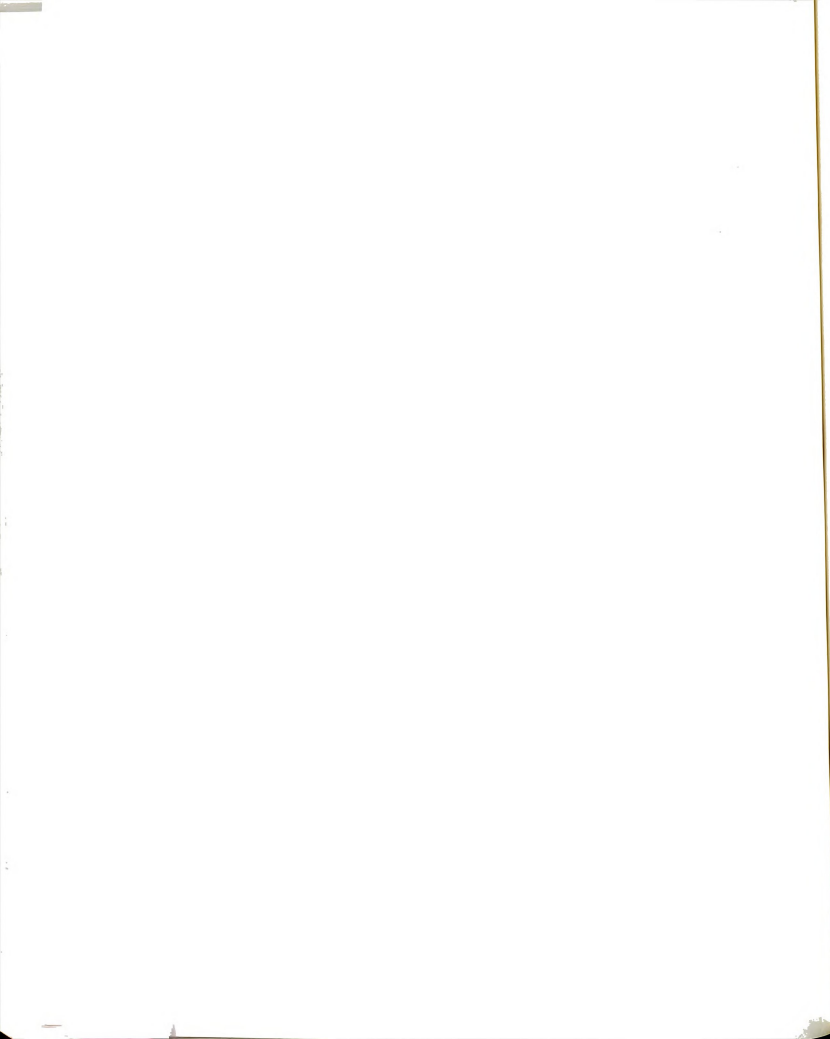


the seven types of centers previously described, and of the data derived from the review of literature, the survey, and the interviews. This model, an Outdoor Education Resource Center, would provide the entire range of facilities for instruction and research, consultant services, a professional Outdoor Education staff, equipment, and an up-to-date diversified resource collection. All of these facilities and services would be directed by trained outdoor educators with curriculum and teaching backgrounds.

It would be pertinent at this time to re-state the definition of an Outdoor Education Resource Center--a central location where the resources of the outdoor educator are stored in an organized manner.

At the Outdoor Education Resource Center, Outdoor Education is viewed in its broadest sense--education concerned with the out-of-doors regardless of whether the emphasis is on increasing human well-being through outdoor activities or on increasing human awareness and knowledge about the preservation and future utilization of the physical environment itself.

Outdoor Education is also viewed as a means of curriculum enrichment and lifelong education, and, as such, is used as an all-inclusive term which embraces a wide range of outdoor-oriented activities including enrichment of subject matter areas, recreation education, environmental education, adventure education, work-study



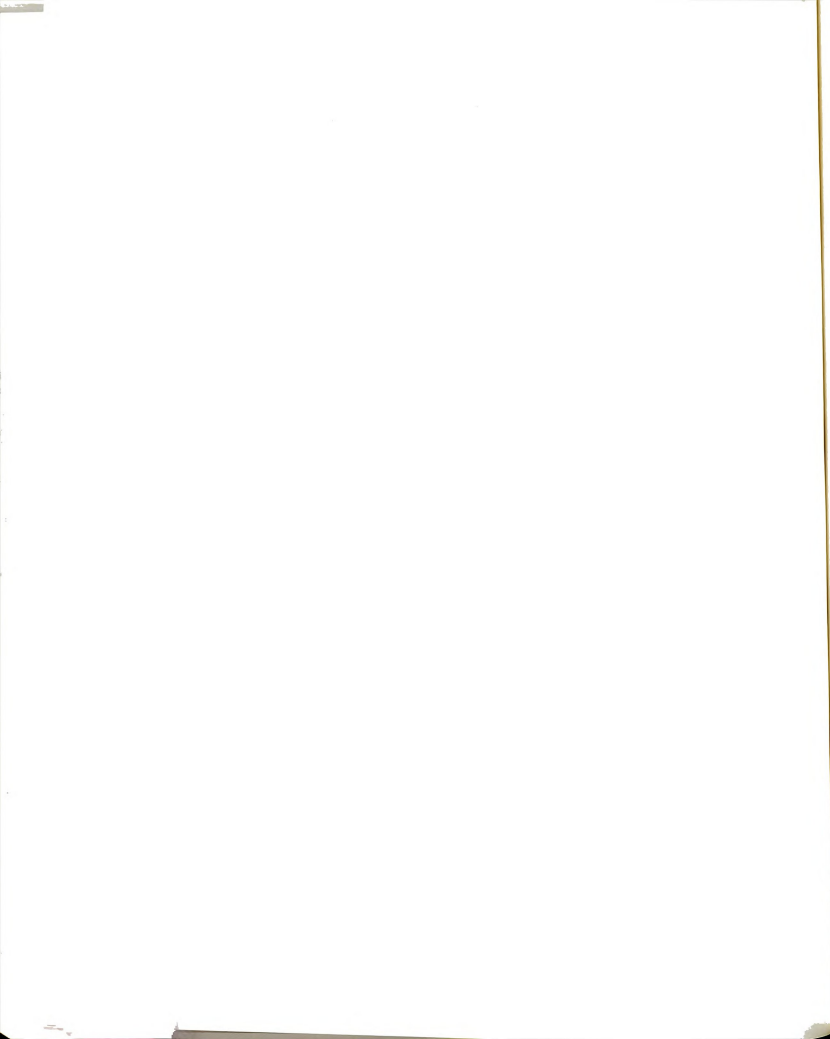
projects, outdoor living skills, various aspects of pioneer living, crafts and hobbies, and other leisure-time interests.

Each of the outdoor activities listed above are deemed to be only one emphasis of a much broader concept which involves all of these aspects of Outdoor Education to a greater or lesser degree. No outdoor educator is fully competent unless he is cognizant of the close interrelationships and interdependencies of all aspects of outdoor programming.

The concept of the model Outdoor Education Resource Center is based on an understanding of the totality of these interrelationships and the need to bring these understandings to a critical population group who will be facing the necessary "trade-offs" of the future. This study has emphasized the need for adequate resources, services, and professional staff.

An analysis of all the data indicates that a model Outdoor Education Resource Center serving an educational system should have six major components:

1. An adventure program component including resource materials and the equipment needed for adventure activities
2. An audiovisual section with technological equipment and a graphics laboratory



3. A natural crafts section with adequate supplies, storage space, and work area
4. An environmental education component including resource materials and the "hands on" type of natural materials
5. A specialized library with the print and nonprint materials of the outdoor educator
6. A professional staff of outdoor educators

Throughout this study the various types of resource centers, their resources, and outdoor programs have been examined as separate entities. The creation of the model Outdoor Education Resource Center has added the term "facility"--the physical and practical dimension of the concept. The facility provides the site, the center of activities, and the "home and joining together" for all of the components of the Center. The facility is not only the physical location of the Center but it is the focal place where all of the resource materials, equipment, professional staff, and the users gather to work out their Outdoor Education programs. The Center is the merging of all the components which provide the resources and the services to facilitate Outdoor Education programming.

Although this study is concerned with the material resources and the professional staff needed within the

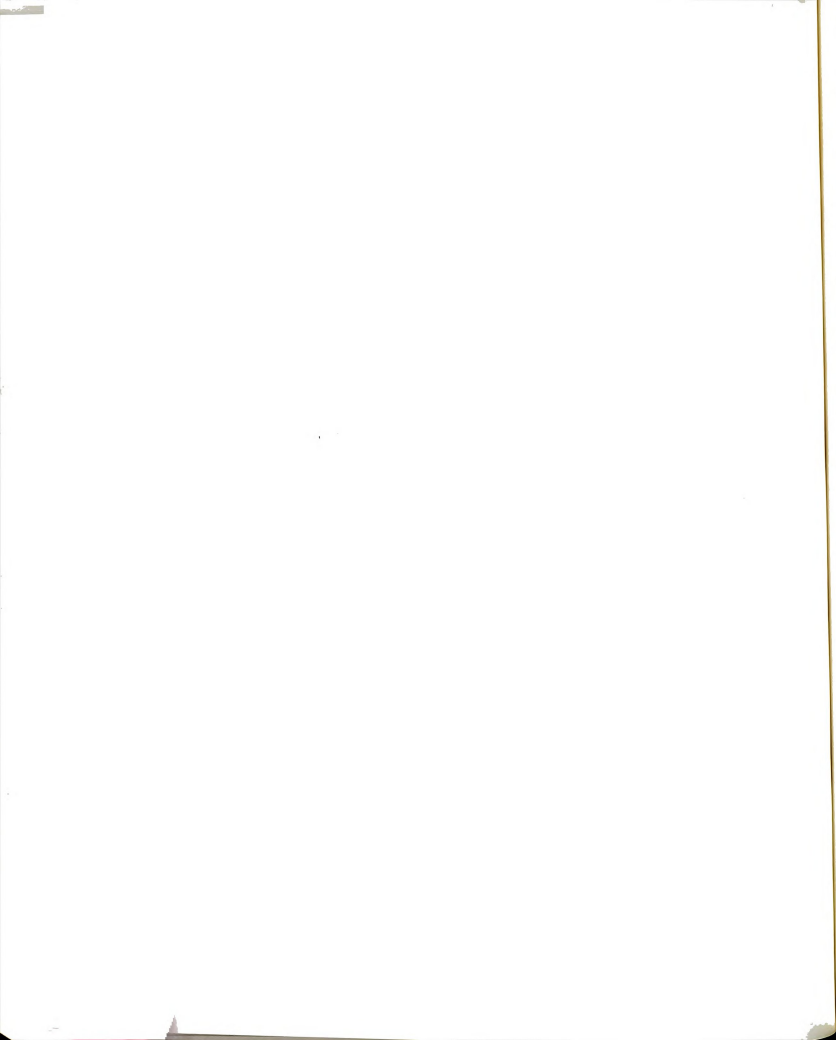
facility and not with the physical facility itself, certain physical aspects of the facility are sufficiently critical to require mention.

The facility of a model Center should be located within the geographic area it will service and it should be readily accessible to its users. Ideally, it is located on several acres of land typical of the surrounding service area. The amount of acreage is not fixed, but it should include enough natural landscape to complement the facility and provide a limited outdoor teaching laboratory immediately outside the facility.

The facility is large enough to adequately house the six components of the Center which contribute directly to the total concept and needs of Outdoor Education. In addition to the six resource components, which will be discussed separately, the facility would need an administrative area complete with the necessary offices and equipment; an equipment storage, check out, and repair area separate from other storage areas; and the usual restroom facilities, kitchen area, and lounge.

Elements of the Center

The basic elements of the Center are its resources, services, and professional staff. A discussion of each of these elements precedes a description of its components.

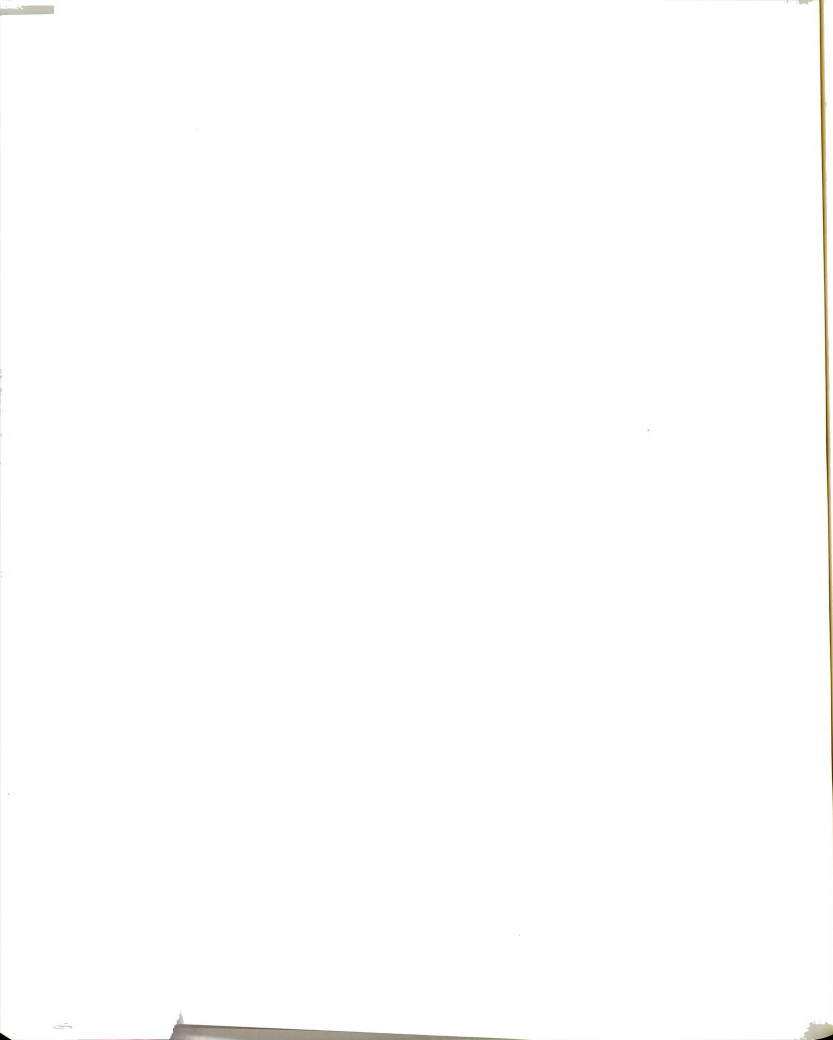


Resources

The preceding chapters have identified the essential resources for Outdoor Education programs and learning situations. Resources have been discussed in relation to the various teaching requirements needed in different locational settings. Resources have been examined from the aspect of the professional development of teachers--the materials, equipment, and experiences that teachers need to implement new activities. The broad concept of resources also included a trained staff who become a resource to the teacher and who have the expertise to make material resources more meaningful. Resources have also taken the form of books, audiovisual equipment and technology, craft materials, specialized equipment, and adventure program equipment. Resources have been discussed from the viewpoint of collections, exhibits, and experiences.

The resources of an Outdoor Education Resource Center, then, would be diversified, they would include materials suitable for instructional purposes on a K through 12th grade basis, and resources suitable for the professional development of teachers, and for research in Outdoor Education.

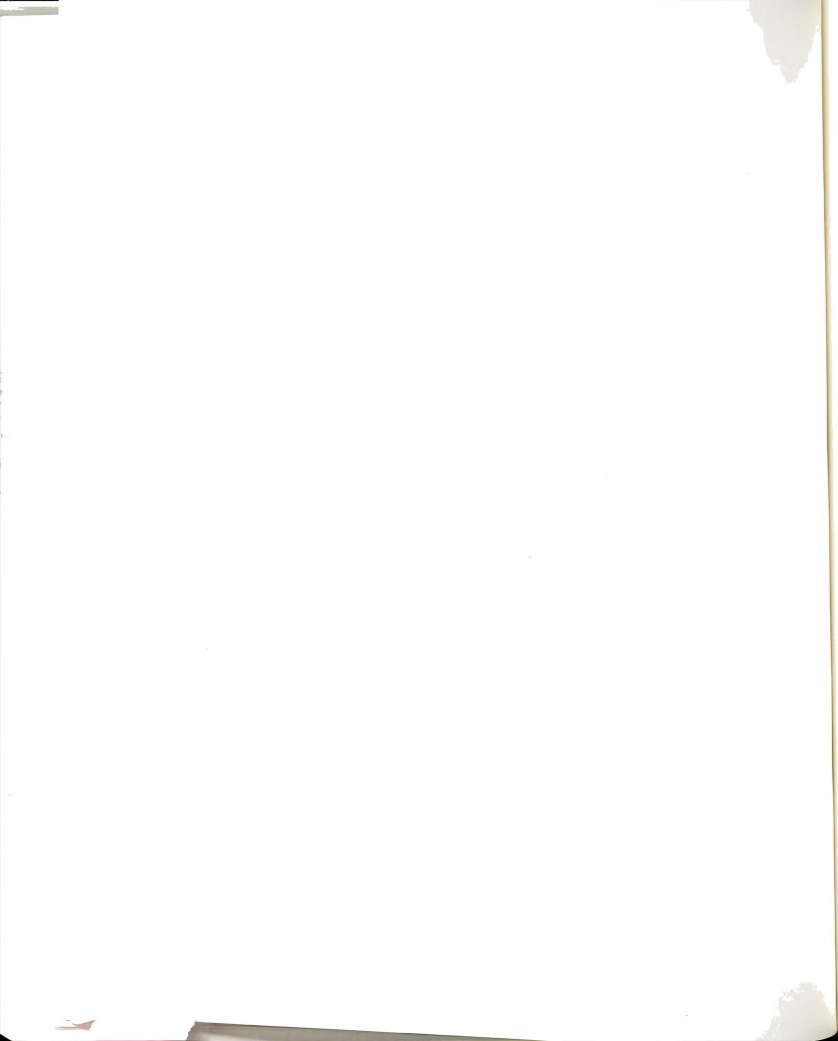
Resources in such a Center would focus directly on the total Outdoor Education program and would all be available in one central facility--eliminating the



necessity of running from one type of resource center to another. To cite one example: a teacher with an Outdoor Education activity in mind would be able to utilize the print materials of the library, develop specific key points by making visual aids in the graphics laboratory, consult with a staff specialist, join an in-service class, or even request individual or group assistance for his school. The teacher is using a variety of resources to achieve his objective. Another more specific example: a teacher wishing to develop a school garden project can find books, manuals, periodicals, bulletins, and pictures about school site gardens; borrow a camera to take before and after pictures of the students and the garden, and talk with a consultant who would advise and assist with putting the garden project into proper perspective with classroom learning. The teacher will initiate the project and carry it out with his students. The Center will provide assistance and make resources available as needed to save the teacher time and numerous trips to find them.

Services

The title of Outdoor Education Resource Center places the emphasis on resources, but equally important to the teacher using the Center is the quality of its services. Services are the essential factors which make the inanimate objects of material resources come to life



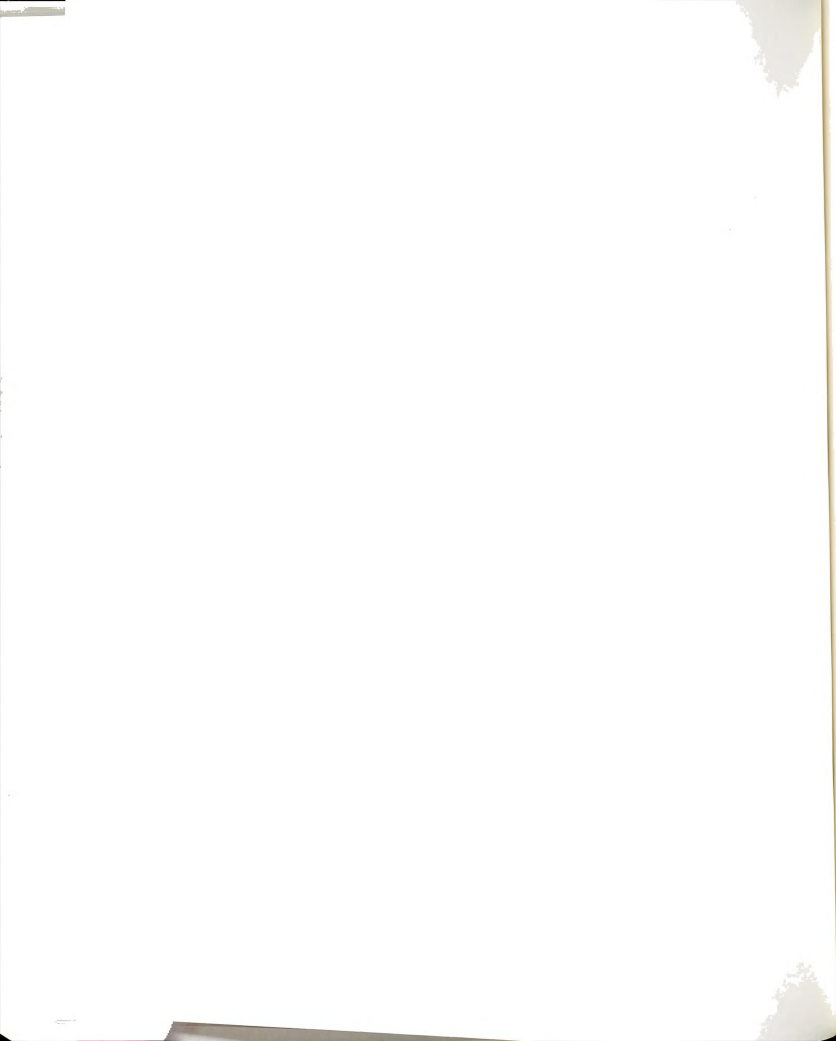
as exciting and vital tools for teaching. The important factor is what is said and done in conjunction with resources.

This study has defined the resources of the Outdoor Education Resource Center as almost anything which help a teacher teach Outdoor Education. Services denote "help or assistance"--in this instance, assistance in the use of resources.

An Outdoor Education Resource Center would provide services to facilitate the effective use of its resources. The research for this study pointed out that often resources are available, but are scattered throughout university facilities or are located in various agencies and organizations at state and national level. There was generally no staff person to provide effective services for outdoor educators.

From the viewpoint of the teacher, the services of the Outdoor Education Resource Center should include:

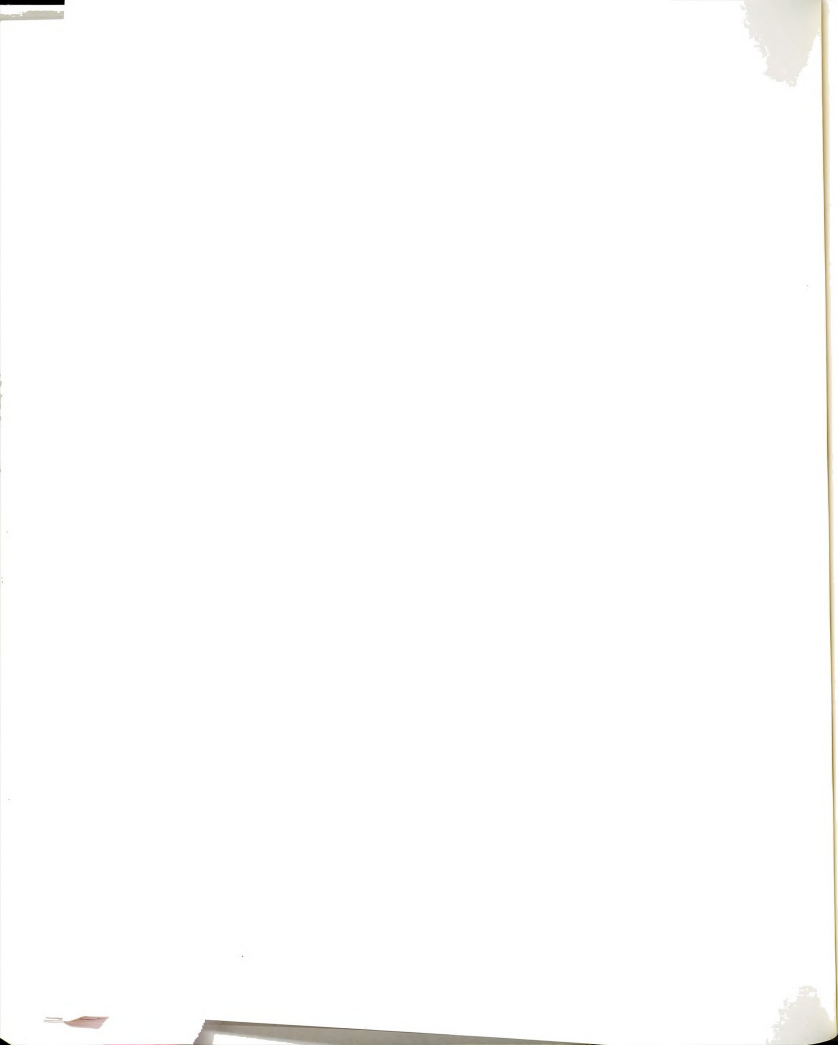
1. A central facility with available outdoor-oriented resources organized and maintained by qualified staff
2. An opportunity to reserve, borrow, and use various types of material resources and equipment for Outdoor Education classes with students



3. Assistance from outdoor specialists on resource use, ideas, or actual "how to do it" help
4. In-service workshops on a variety of activities designed for school use at various grade levels
5. Consultant help for the individual school, for oneself or for a group of teachers
6. An opportunity to meet and work with other teachers interested in similar projects
7. An opportunity to "socialize" with others interested in Outdoor Education, build professional contacts and friendships, develop new ideas and implement outdoor events, develop leadership, and carry out community projects
8. A newsletter from the Center providing information on Outdoor Education

Professional Staff

The special demands that Outdoor Education requires of teachers makes the availability of specialized assistance from Center staff an essential element of an Outdoor Education Resource Center. Volunteer assistance may be available and useful up to a point, but a well-established core staff is essential in developing an effective Center. The size of the staff would be dependent upon the size of the facility, the size of the geographic area and the

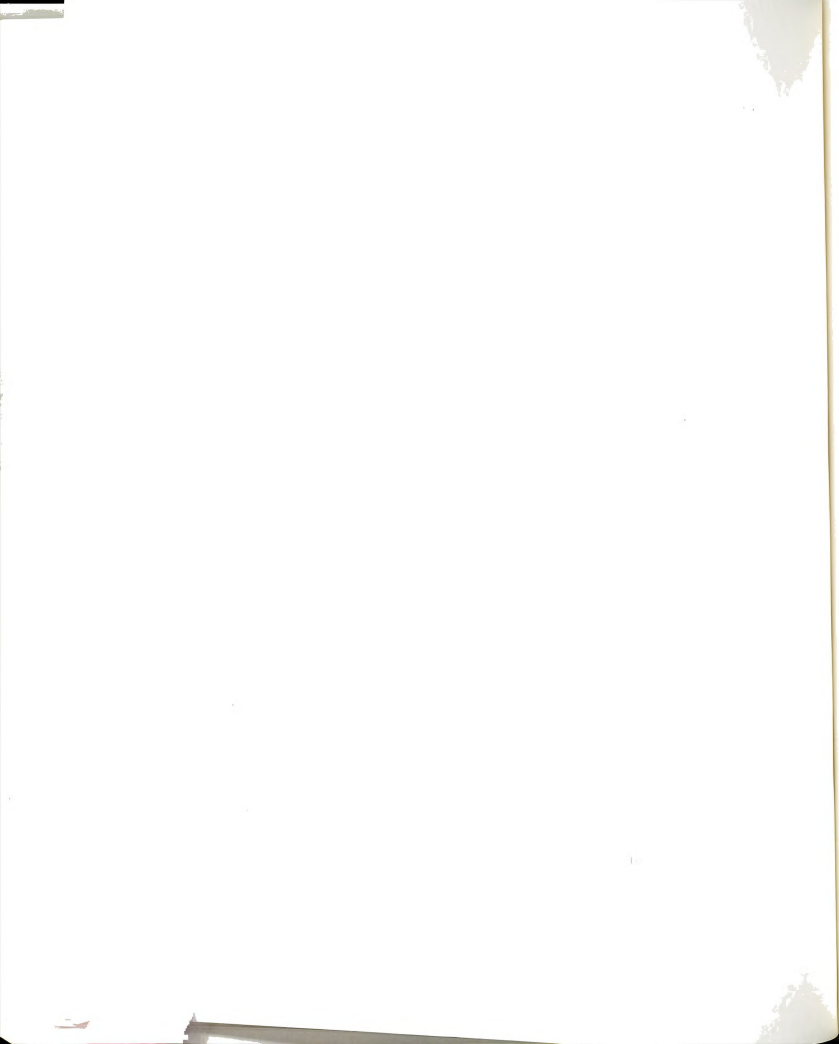


number of teachers in the service area, and in the outdoor experiences of the teachers served by the Center.

The professional staff of the Center should be under the direction of a Coordinator who possesses a variety of skills--administrative experience and especially an ability to work with all types of people; outdoor experience and skills in both program and teaching; classroom experience in subject matter areas; and curriculum specialist training.

The size of the Center and its financial resources will determine the priorities for the other staff members. A model Center serving an intermediate school district or college setting might have a staff specialist for each of its components or it might be feasible to combine two of the staff positions. Ideally, a Center should have staff with expertise in organization, teaching, and outdoor knowledge for its library, audiovisual section, crafts area, environmental education section, and adventure program component. Other staff positions might include an assistant director with skills to complement those of the Director, a full-time secretary, and an equipment and maintenance custodian.

The extent of the services provided by the Center would be governed to a large extent by the size of the staff. Priorities should be:

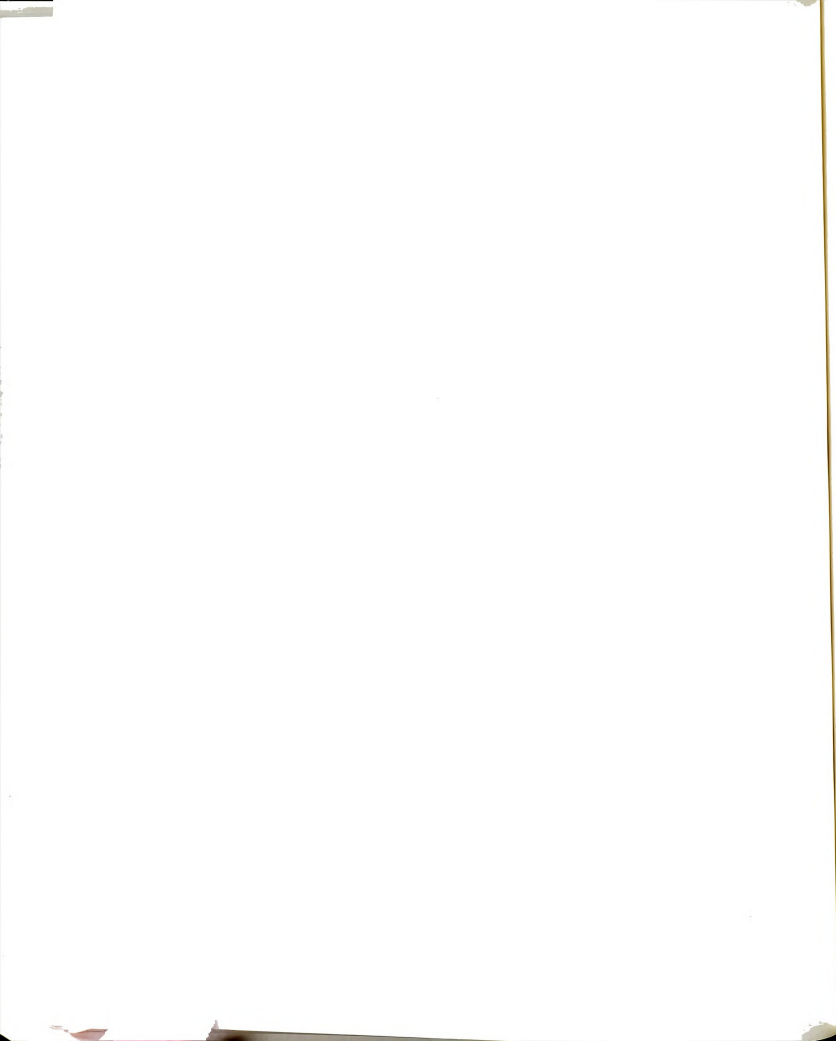


1. Services within the Center--providing the setting for teachers to work effectively with available resources and providing the services directly related to the use of those resources
2. In-service workshops designed to meet the requested needs of teachers in the service area
3. Providing consultant assistance for teachers at school sites and service area resident outdoor schools

Any subsequent priorities might be focused on the community, on any resident outdoor schools owned and operated by the school system, and on maintaining professional exchange with university, agency, or other school-related groups. Top priorities should always be governed by the needs of the basic user group. In this instance, since the focus is on classroom teachers teaching Outdoor Education, the first priority should be determined by that factor.

Plan of Organization for the Center

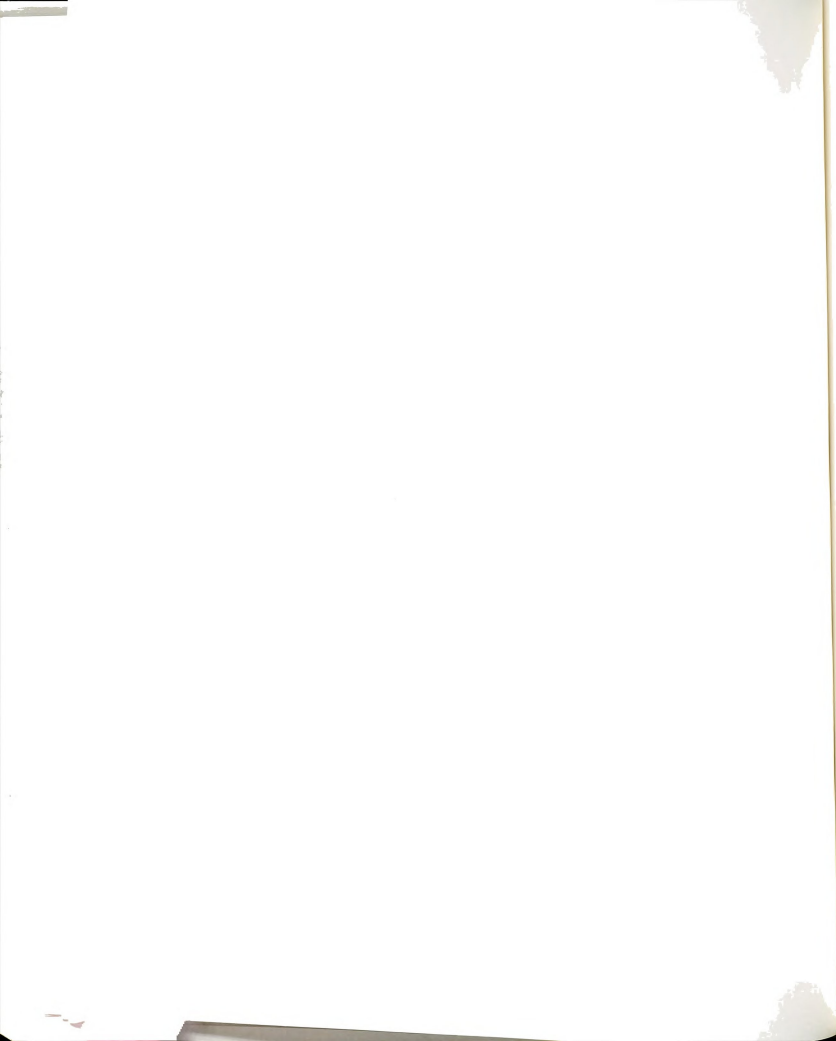
The following paragraphs will illustrate the specific application of these three elements of resources, services, and professional staff to the organization and functions of each of the six major components of the Center.



Adventure Program Component

The adventure program component of the Outdoor Education Resource Center should include the resource materials and equipment needed for the desired adventure program activities. These program activities could vary greatly depending on the interests and the locale but would focus on individual and group activities of a non-competitive nature. The important aspect of this component is that the Center possesses the equipment to facilitate the desired programs, that individual teachers be able to reserve, use, and return the equipment after the activity so that another school could have the experience. For instance, a secondary teacher with a backpacking adventure program could borrow the desired number of backpacks, lightweight cooking utensils and tents, compasses, and tools--use them for pre-trip training, for the experience itself, and then return them to the Center so that they would be available for another group's use. Availability of such equipment permits programs to exist, provides an opportunity for students to explore various activities, and maximizes the use of equipment and minimizes the dead storage periods.

The adventure program component could include many of the recreational activities--camping and backpacking, canoeing, skiing, snowshoeing, the shooting sports, archery, casting and angling, mountain climbing, and

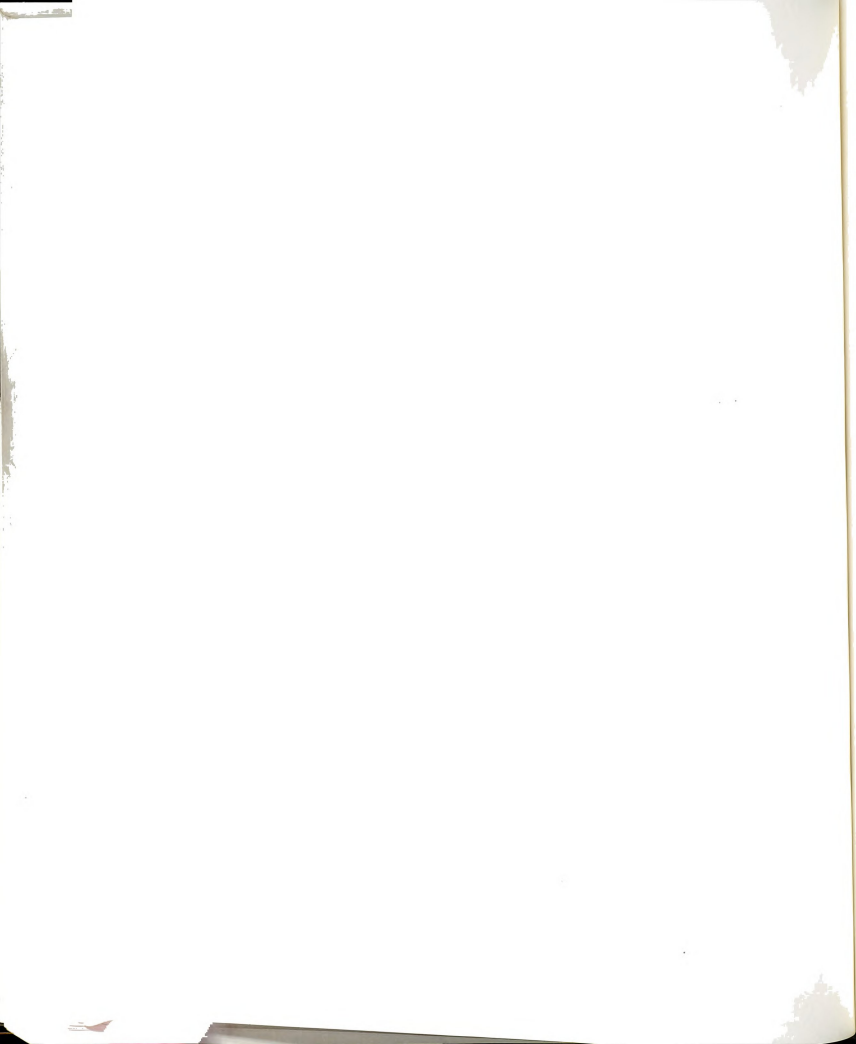


survival. The emphasis should be on those activities which involve the individual on a personal basis, which require "doing," and have certain inherent satisfactions in skill building, lifelong interests, and outdoor appreciations.

Preference in equipment selection should be given to equipment which is most usable for the maximum number of people, equipment which can be used in the community as well as in wilderness areas, and equipment which is suitable for the Outdoor Education user group.

The services provided by the Center for adventure programs would be of a consultative nature--a resource person to provide guidance on the use of the equipment, assist the teacher in planning, provide instruction if necessary, and possibly serve as a staff consultant on some adventure program trips. The staff specialist should also be familiar with other resource consultants, knowledgeable about adventure program sites within easy travel time, and be familiar with different types of equipment and equipment suppliers.

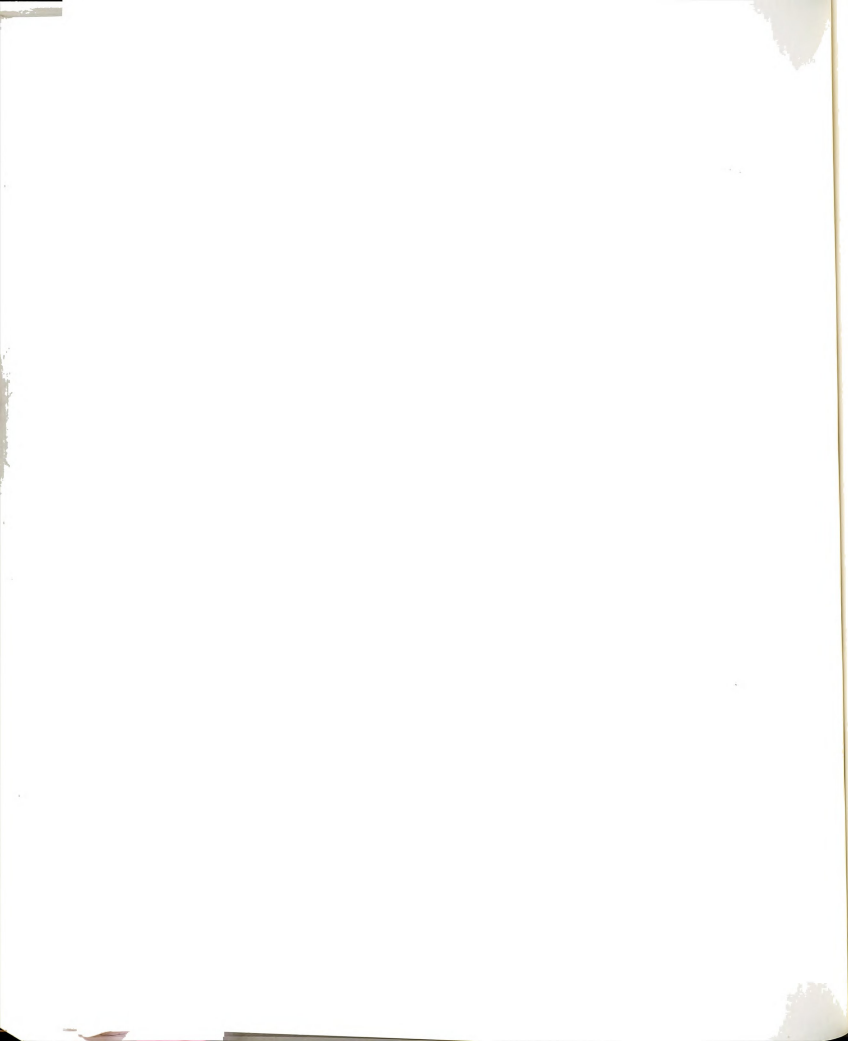
Since adventure programs differ greatly, the professional staff person would need a wide variety of recreation-oriented skills, be cognizant of environmental use in wilderness areas, and be able to use the adventure program experience as a setting for fun, skill development, and personal growth for students.



Audiovisual Component

The material resources of an audiovisual component of an Outdoor Education Resource Center should include standard audiovisual equipment and a graphics laboratory. The number of free and low-cost films available on most aspects of outdoor programming makes the basic features of audiovisual technology a necessity. Equipment such as projectors and duplicating machines is essential for presenting such materials. A graphics laboratory is an essential factor in preparation of inexpensive materials for study of plant and animal life.

The services of this component would include use of equipment and technological assistance within the Center on an individual or group basis, assistance in using some types of equipment in the outdoors (as tape recording and nature photography), and in providing consultant and in-service help in the production of graphics materials. One essential aspect of service would be to show audiovisual technology as an additional dimension of resources which reinforce print materials. Another aspect of service would be to show how to utilize tape recorders and cameras to enhance the use of the senses in outdoor study. Use of audiovisual technology as an added dimension to outdoor study, enrichment of subject matter areas, and for handicapped students is a vital factor for Outdoor Education programming.



The job description of the media specialist for the Center should include a teaching and consultant role with knowledge and experience in nature photography and outdoor taping, plant identification, land use, and sensory awareness. Indoor skills would be similar to those of any other media center specialist.

Crafts Component

The concept of a crafts component has much to offer an Outdoor Education Resource Center. Arts and crafts have always been an important part of Outdoor Education programs. The crafts component of the Center would focus on crafts using natural materials and on the hobbies, handicrafts, and outdoor living skills included in pioneer studies. The actual crafts taught would depend on the natural craft materials of the area and somewhat on the interests and skills of the crafts specialist. The crafts component would not try to duplicate all the crafts taught in schools--just those related to the outdoors. Additional features of the Center should include adequate storage space for a great variety of natural materials, the supplies for their use, and sufficient work space for several activities. The craft work and storage space should be separate from other areas for greatest efficiency.

The services offered at the Center should be totally oriented to the concerns involving environmental



use. At this time, teachers interested in crafts are forced to seek them out from any available source. Often these classes fail to teach the orientation needed for Outdoor Education. Instructors are concerned with a visible "end product" and fail to teach anything but the techniques involved in constructing that "end product." Outdoor educators should teach and must be taught all the ramifications of the materials they collect and use. What to collect, where to collect, when to collect, and how to collect are important bits of knowledge, but equally important is the knowledge of what not, where not, when not, and how not to collect!

The crafts specialist would serve in both a teaching and consultant role--available at the Center at specified times for individual help and in-service classes, and as a craft consultant for resident outdoor school experiences. The crafts specialist would hold an important position in developing attitudes toward lifelong interests and hobbies related to the "wise use of leisure time."

Environmental Education Component

The environmental education component of an Outdoor Education Resource Center would focus on the environment, its plants and animals, and man's use of the environment in the past, the present, and the future. The

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environmental component would incorporate many of the functions of the nature center--collections, exhibits, and specimens of natural history.

The staff person for this section of the Center would hold both a teaching and consultant role. Services would include the use of a vast array of science materials and equipment, in-service classes, and visiting school sites to assist teachers. Science-oriented exhibits, "hands on" collections, and herbarium specimens would be typical features of the environmental component. School site development, nature trails, and resident outdoor school experiences in science would be a part of the staff specialist's duties. Acquisition of materials, keeping current information on the constantly changing environmental concerns, and acting as a liaison for community environmental work-study projects for older students would be under the direction of the environmental specialist.

Library Component

An Outdoor Education Resource Center library is a specialized library designed to house only specific information for outdoor educators. The library would serve as a storage and retrieval center for print and nonprint materials--reference books, fiction and non-fiction, free agency materials, curriculum guides for

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Outdoor Education and subject matter areas, periodicals, and a vertical file system--all focused on Outdoor Education.

Services would include a major teaching and consultant role which would require familiarity with interdisciplinary teaching needs and methods in outdoor programming. The librarian for the Center would be charged with the selection, acquisition, organization, and reference collections of Outdoor Education library materials. The librarian's job description would include knowledge of the various emphases of Outdoor Education programming and the print materials needed for them.

Specific materials for an Outdoor Education library may be found in Appendix A and ideas for their use in various settings may be found in Appendix B. Acquisition of free materials for the vertical file and for teacher use in the graphics laboratory would be a part of the librarian's duties. The preparation of the Center's newsletter could be a part of the librarian's duties--possibly done in conjunction with the audio-visual specialist.

Professional Staff Component

The professional staff of an Outdoor Education Resource Center constitute a "resource component" which is only as good as the commitment of the staff to its



task. An Outdoor Education Resource Center would require dedication--the hours would be irregular and include weekends and evenings when teachers would be free to use the Center. The demands would be many and varied.

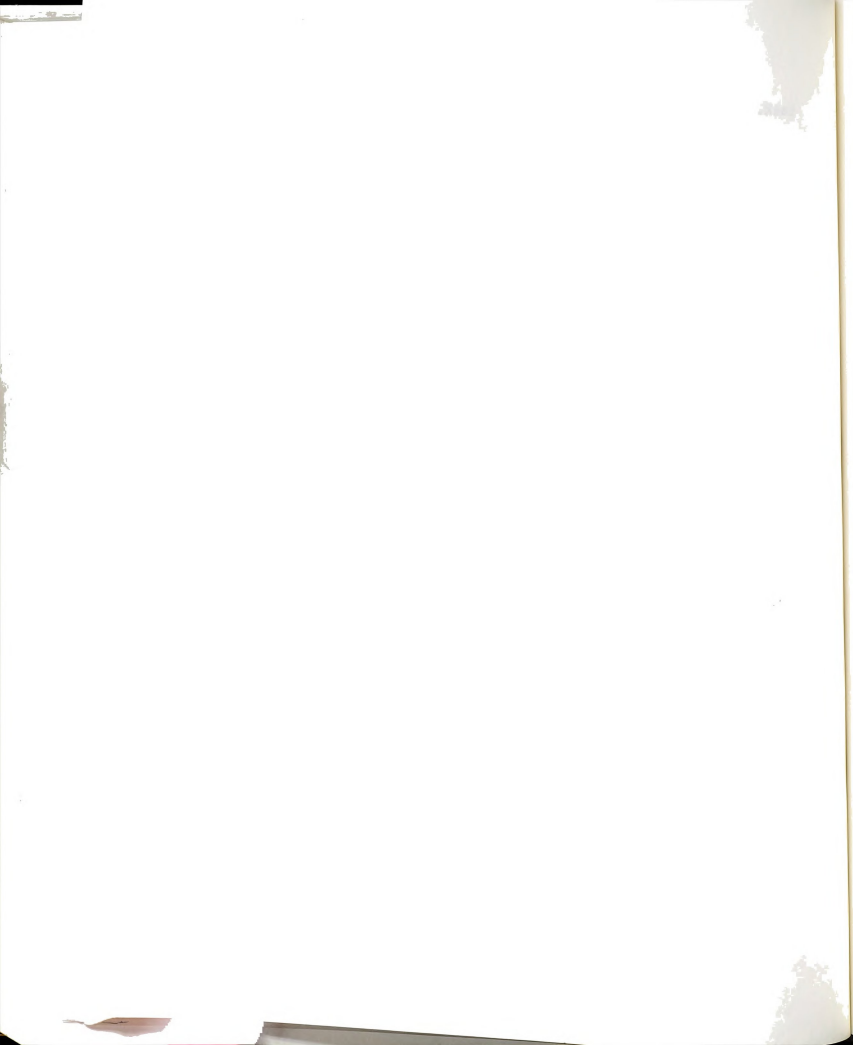
Each staff member would need to be a specialist in his own component section of the Center but also an outdoor generalist with teaching experience in both the classroom and the out-of-doors. Services would include the direction and administration of his specialty area, consultant services on an individual and group basis, and the professional development of teachers and student teachers through in-service and preservice training.

The professional staff of an Outdoor Education Resource Center, like the staff in any good camp, should be examples of the best in outdoor conduct and teaching as their philosophy and deeds will be reflected in the deeds of those they teach.

General Implications of the Study

This study has general implications for schools and school districts interested in:

1. Establishing Outdoor Education programs
2. Developing teacher training in outdoor activities
3. Providing guidance for resource materials and equipment selection

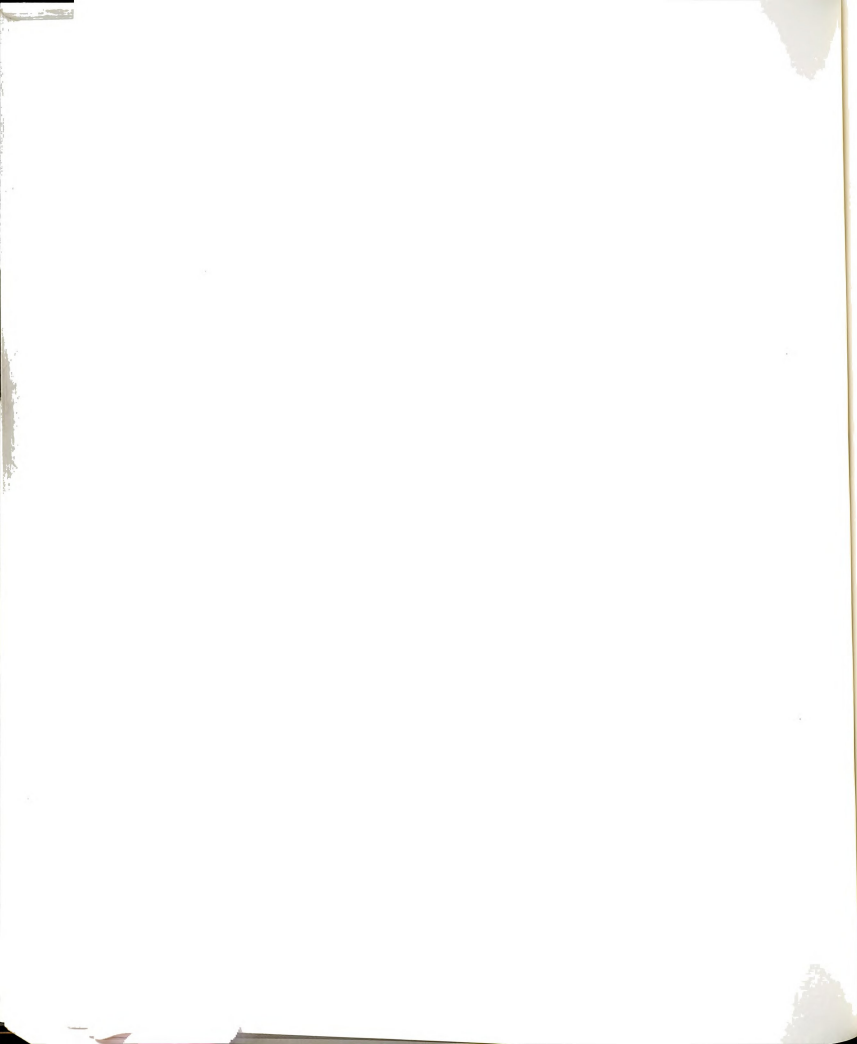


4. Promoting the understanding of the Outdoor Education movement in the United States
5. Creating awareness of world concern regarding environmental use

This study also has broad implications for the Outdoor Education movement in the United States. The establishment of an Outdoor Education Resource Center has great potential for encouraging the nationwide development of Outdoor Education, stimulating educational innovations in teaching with and for the outdoors, and sparking interest in the Outdoor Education movement.

This study also has implications at a higher level. In the past few years, the programming needs of outdoor educators have increased dramatically. If education is to contribute to the solution of these problems, new methods of training teachers and providing the necessary material resources, equipment, and experiences must be found.

Professional development courses must reflect a broader approach which involves the use of new types of equipment, opportunities for creating materials designed for specific settings, and direct experiences with other teachers on those specific settings. Seminars and workshops must be developed to relate Outdoor Education teaching on the local level to the broad world picture



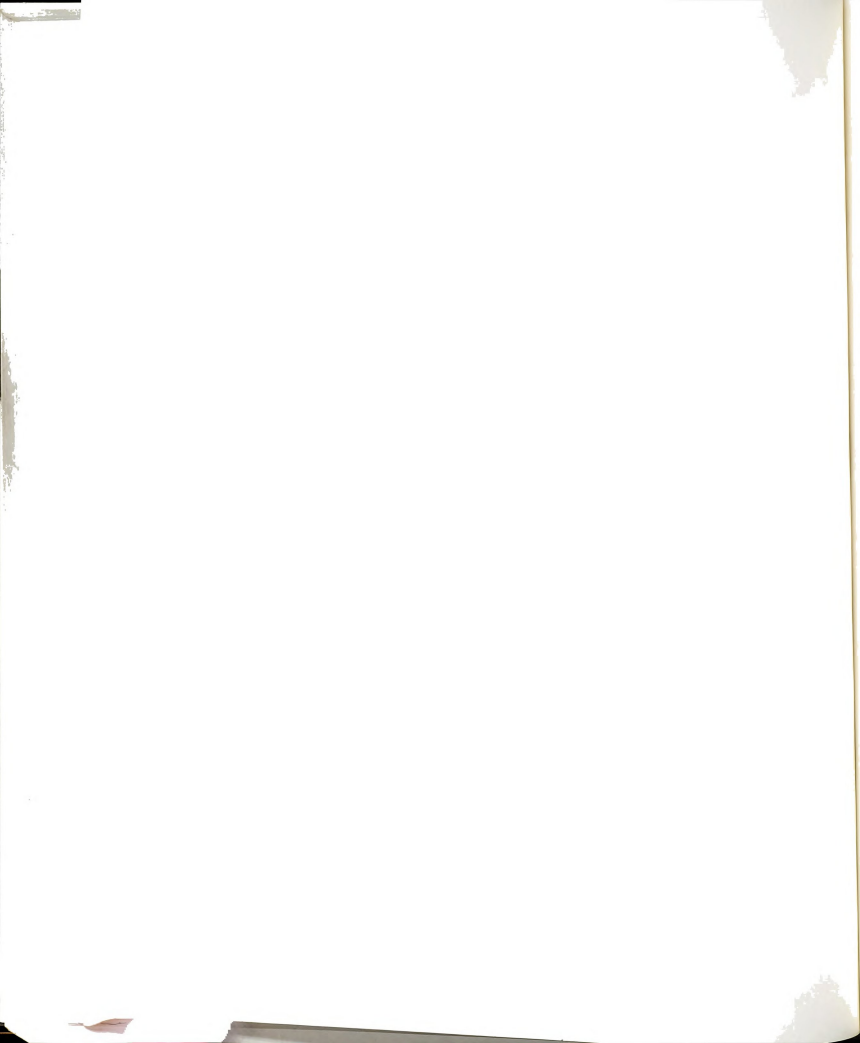
of resource use and management. Professional development courses of the future must also be adjusted to accommodate the wide age range of people interest in lifelong outdoor activities.

Finally, on a more abstract level, the model of an Outdoor Education Resource Center has implications for the concept and definitions of resource centers. Traditional resource centers have classified themselves according to the specific types of resources housed within their walls. Libraries have print materials, audiovisual centers have audiovisual materials, craft centers carry craft materials. The Outdoor Education Resource center is based on a multi-disciplinary, multi-media response to a specific need. As such, the model has an educationally valid contribution to make in the area of need-based resource response.

Recommendations

As a result of the research and the findings of this study, the following recommendations are made in regard to the needs of teachers in Outdoor Education programming:

1. Educators need to take a comprehensive look at the role of Outdoor Education in the total educational picture of the future.

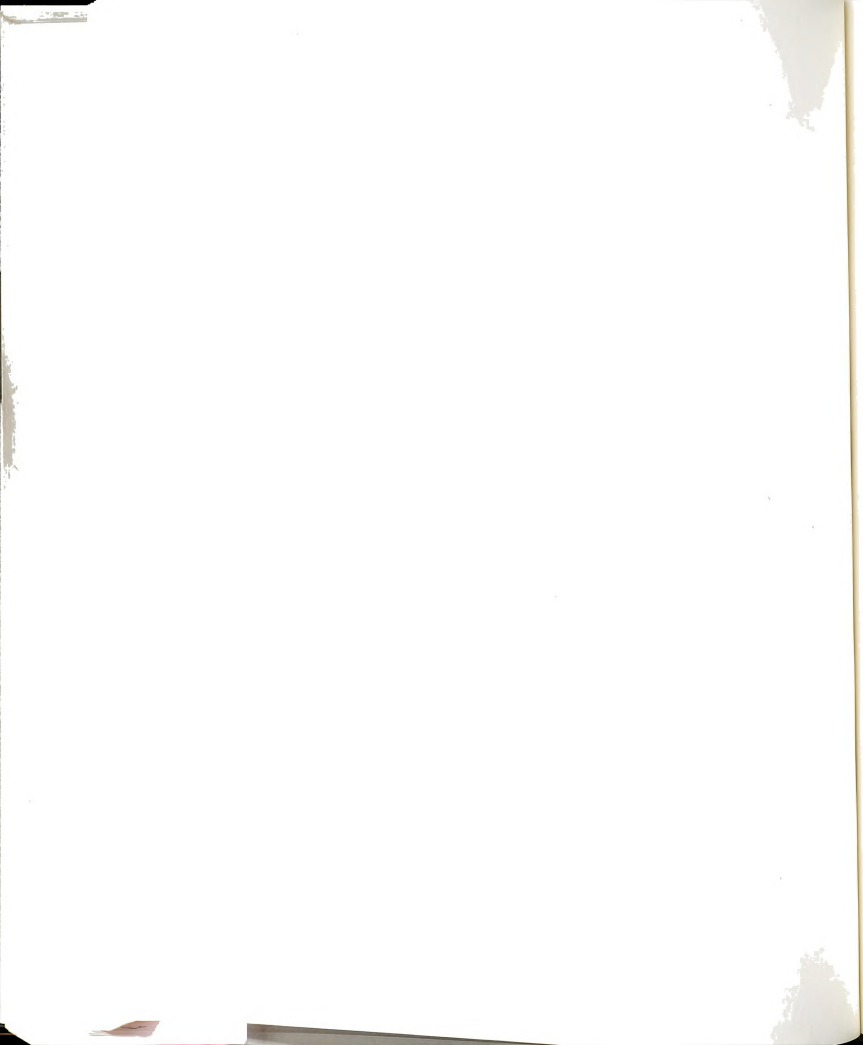


2. An effective plan for a total Outdoor Education program in the public schools should begin at the state level, with supplementary regional and local centers to ensure adequate resources, services, and facilities for all geographic areas of the state.
3. Education facilitators at state and local levels should establish one or more model Outdoor Education Resource Centers as pilot projects in intermediate school districts in areas not served by a university or a large center of population.
4. The model Outdoor Education Resource Center should be established by working through and with the existing educational structure but guided by the best known criteria for integrating outdoor studies into the existing curriculum.
5. New and innovative approaches to professional development requirements of outdoor educators (mostly classroom teachers) should be adapted to the needs of the area to be served. Individualized instruction at the Center, an emphasis on field experiences, development of materials, and in-service training should be evaluated for university credit.

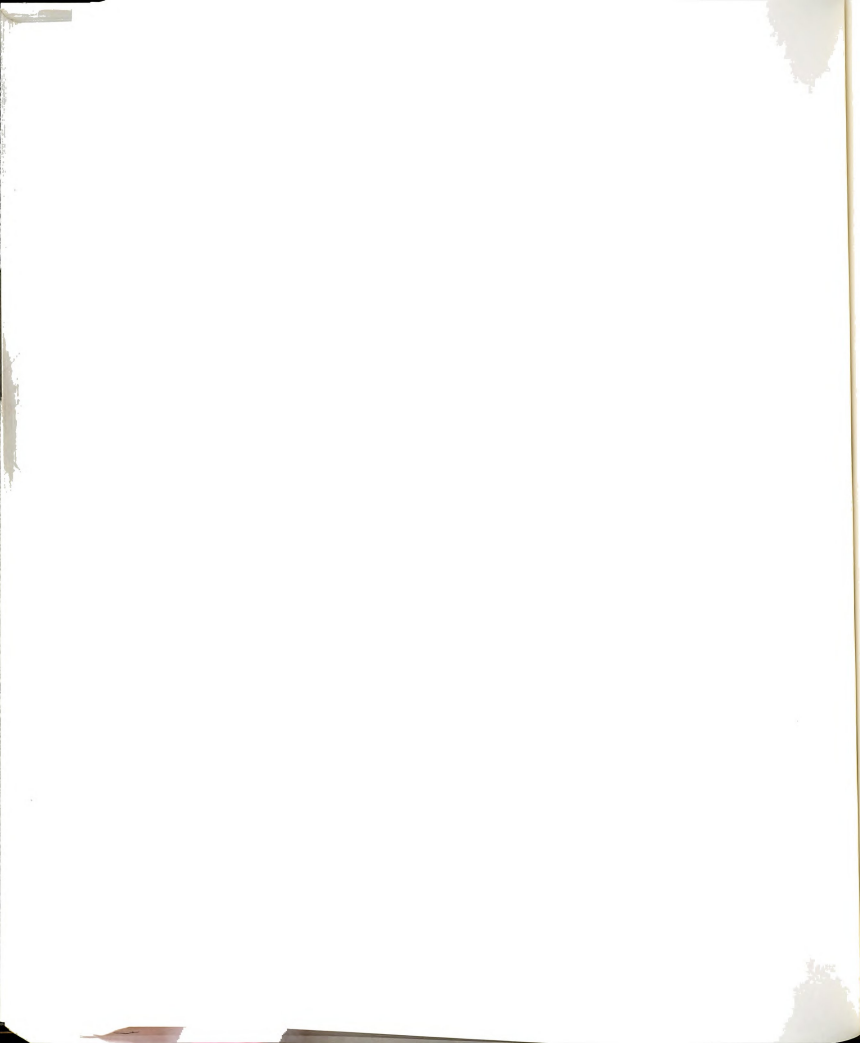


6. Each component of a model Outdoor Education Resource Center should be examined with reference to its resources and its services and evaluated for its contribution to the total professional development program. The resources, accompanying technological equipment, and services of each should be identified, listed, organized, and a cost analysis made in reference to original purchase price, expense of operating, and predicted future replacements.
7. An in-depth look at Center staff should be made with reference to full-time staff, part-time staff, combining the roles of two types of positions, and the use of teachers from the service area. The use of volunteer staff (such as senior citizens), the role of student teachers as apprentice staff, and the relationship with a college or university visiting staff need to be explored.

This study generated several additional considerations regarding Outdoor Education programs and the establishment of a model Outdoor Education Resource Center. The ideal situation for implementing Outdoor Education in any educational system would be to have two Outdoor Education facilities which complement each other:



1. A model Outdoor Education Resource Center as a central facility complete with the necessary resource materials and services for outdoor programming. The model Outdoor Education Resource Center would have as its key features:
 - a. its accessibility for all teachers in the service area
 - b. the abundant availability of pertinent resources, equipment, and services for use within the Center and at local school sites
 - c. a reciprocal relationship with both the State Department of Education and a university for exchange of services, materials, research.
2. A Field Laboratory or Resident Outdoor School usable for both public school students and teachers to provide the direct experiences essential in outdoor studies. The Field Laboratory would have as its key features:
 - a. a facility to serve as a resident outdoor school for public school students during the weeks of the school year and part of the summer
 - b. a facility to serve as a field laboratory for teachers for outdoor studies, in-service training, and conferences on weekends and part of the summer



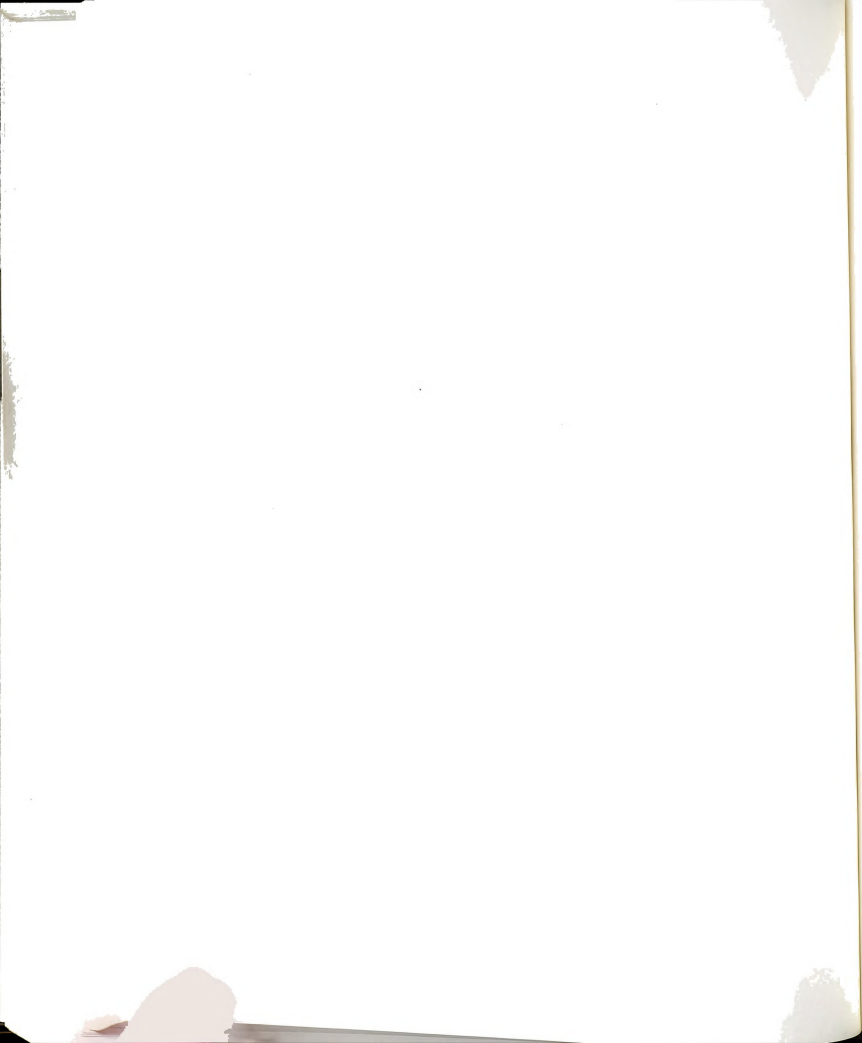
- c. a representative sample of natural landscape sufficiently large for outdoor studies and practical work-study experiences.

It should be further noted that each facility should have its own staff but that staff members could and should be used on either site as needed. The emphasis for professional development at the Center would be curriculum enrichment through use of resource materials, services for the preparation of materials and introduction to the use of specialized equipment, and direction for school site and community Outdoor Education programs. The emphasis at the Field Laboratory would be on direct experiences involving the actual use of equipment, development of skills, study of natural features, and on on-site preparation of teachers for taking students to resident outdoor school.

Such a comprehensive program would clarify the totality of Outdoor Education as a means of curriculum enrichment and serve to enlighten the entire school population as to their responsibilities for being wise--rather than destructive--users of the environment.

Suggestions for Further Study

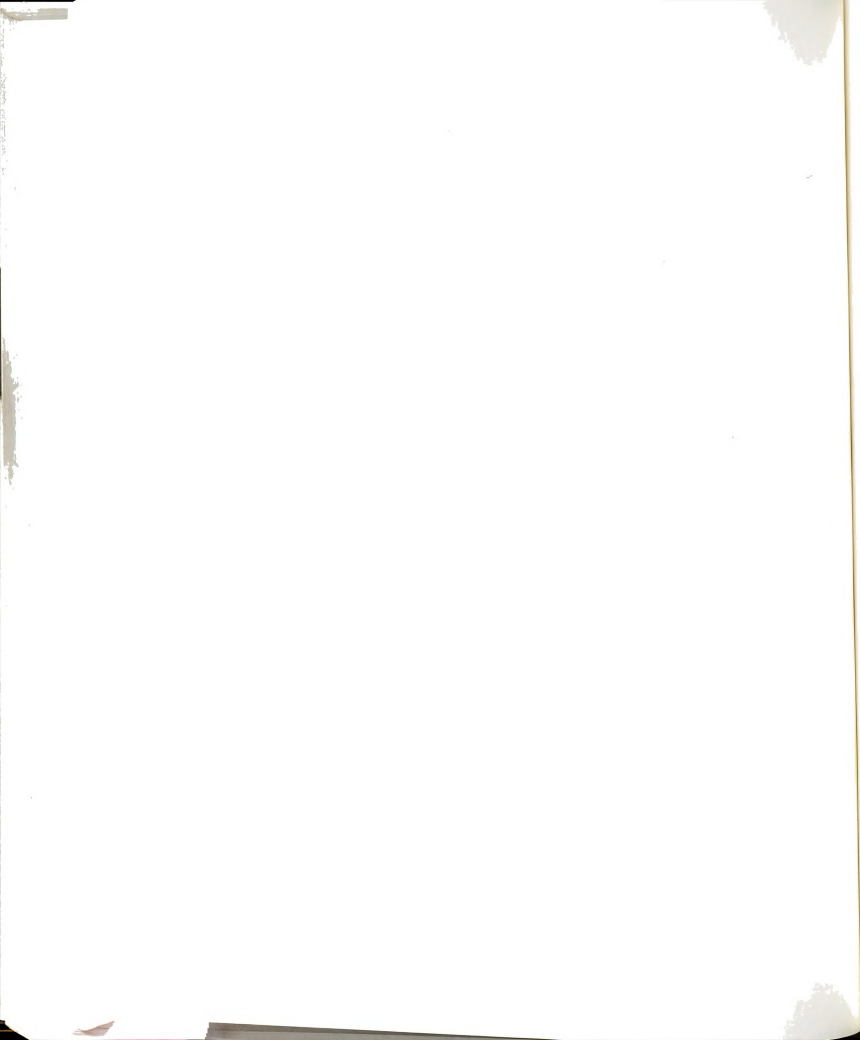
In the course of this study, additional topics for further study were generated:



1. Determining the financial aspects regarding the facility and each of its components
2. Contrasting the roles of a model Outdoor Education Resource Center and a Field Laboratory at three levels--state and regional facilities, university facilities, intermediate school district facilities
3. Developing guidelines for cooperative efforts between university and school districts--on reciprocal relationships involving use of student teachers in the Center, granting university credit for in-service training, collaborating in areas of curriculum development and Outdoor Education research especially for graduate students in curriculum and in Outdoor Education
4. Studying the role of Outdoor Education activities for lifelong interests--especially with reference to older people



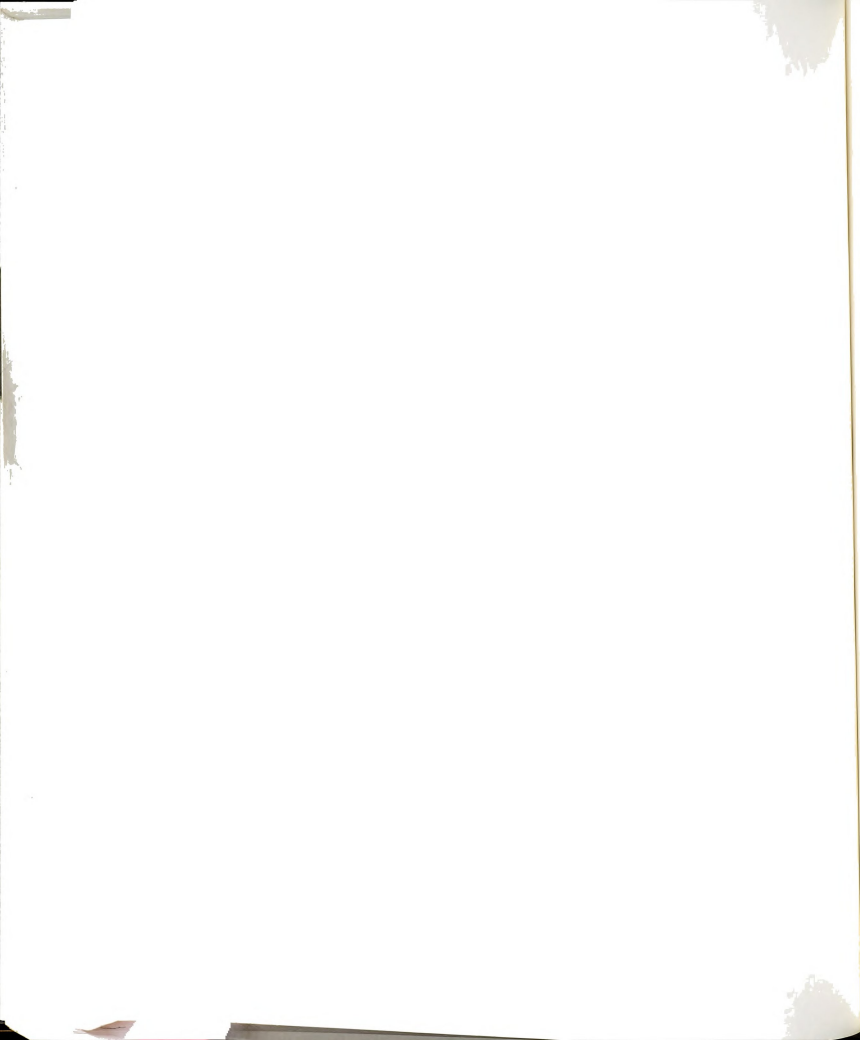
APPENDICES



APPENDIX A

SURVEY

OUTDOOR EDUCATION INFORMATION SHEET



APPENDIX A

SURVEY

OUTDOOR EDUCATION INFORMATION SHEET

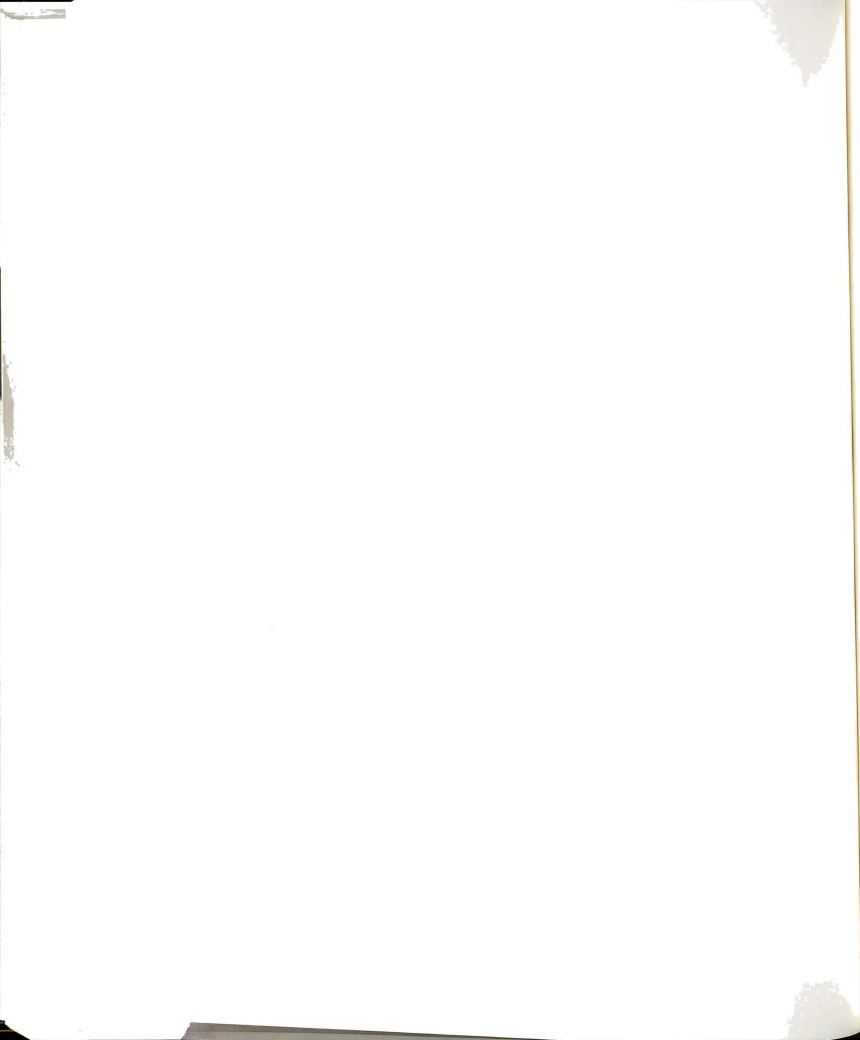
This study involves the selection and categorizing of several types of resources for use in an Outdoor Education Resource Center. This Center is designed for an on-campus situation or a central location with an intermediate school district--not necessarily for a field-laboratory. The major functions of such an Outdoor Education Resource Center would be collecting and categorizing written materials for reference, developing informal materials for outdoor use, and loan/renting equipment for outdoor activities. Expected outgrowths of such a Center would be in-service type of classes, continuing consultant service, and a meeting place for outdoor educators. Your assistance in determining the need and value of such resources will be greatly appreciated.

RETURN FORMS TO: MARGE BACLAWSKI, 4597 CHIPPEWA DRIVE,
OKEMOS, MICHIGAN 48864

Please provide the following information: Your age group:

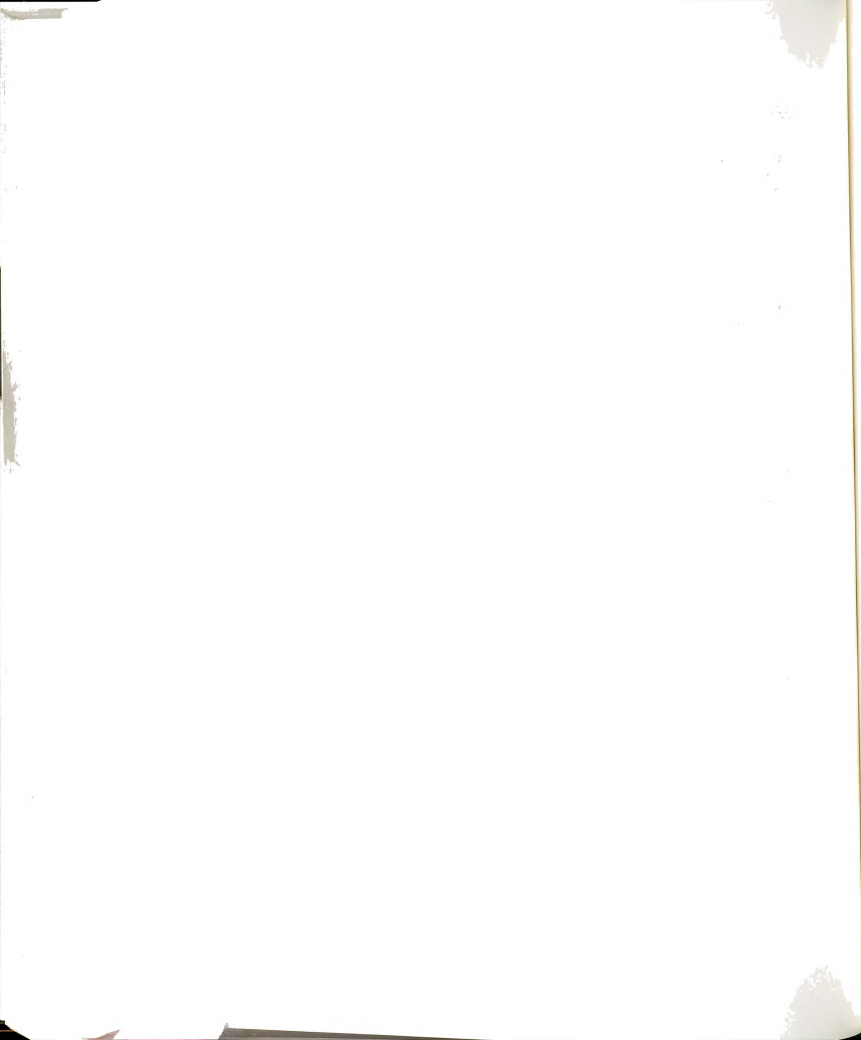
Name: _____	Under 20 _____
Address: _____	21 to 30 _____
_____	31 to 40 _____
_____	41 to 50 _____
Telephone: _____	Over 51 _____

Your position and the age, grade level, and subject matter area in which you work are important in how you determine the need and value of resource materials and resource consultants. Check the appropriate places in the following columns and answer accordingly.



<u>Your Position</u>	<u>Level with Whom You work</u>
Faculty (MSU) _____	Coordinator (all levels) _____
Grad. Student in Outdoor _____	Elementary (K thru 6) _____
Education (MSU) _____	Middle Schl. (within _____
School Administrator _____	5 thru 8) _____
(Mich) _____	Secondary Schl. (7 _____
Teacher in the Field with _____	thru 12) _____
outdoor experience (Mich) _____	College Students _____
Resident Camp Staff (Mich) _____	Adults outside of _____
Agency Staff (Mich) as _____	college _____
4-H, DNR, SCS, or _____	Community (all ages) _____
other _____	Special Education _____
(circle one or write in) _____	Student Teachers _____
Resource Center Staff _____	check here _____
(Mich) _____	Other _____
Student Teacher in _____	
Outdoor & Environ- _____	
mental Education _____	
Other _____	

Select from the following categories of resource materials and resource consultants according to your opinion of their need and value in an Outdoor Education Resource Center which serves adults who work with students of all ages in a variety of activities related to outdoor and environmental programs.

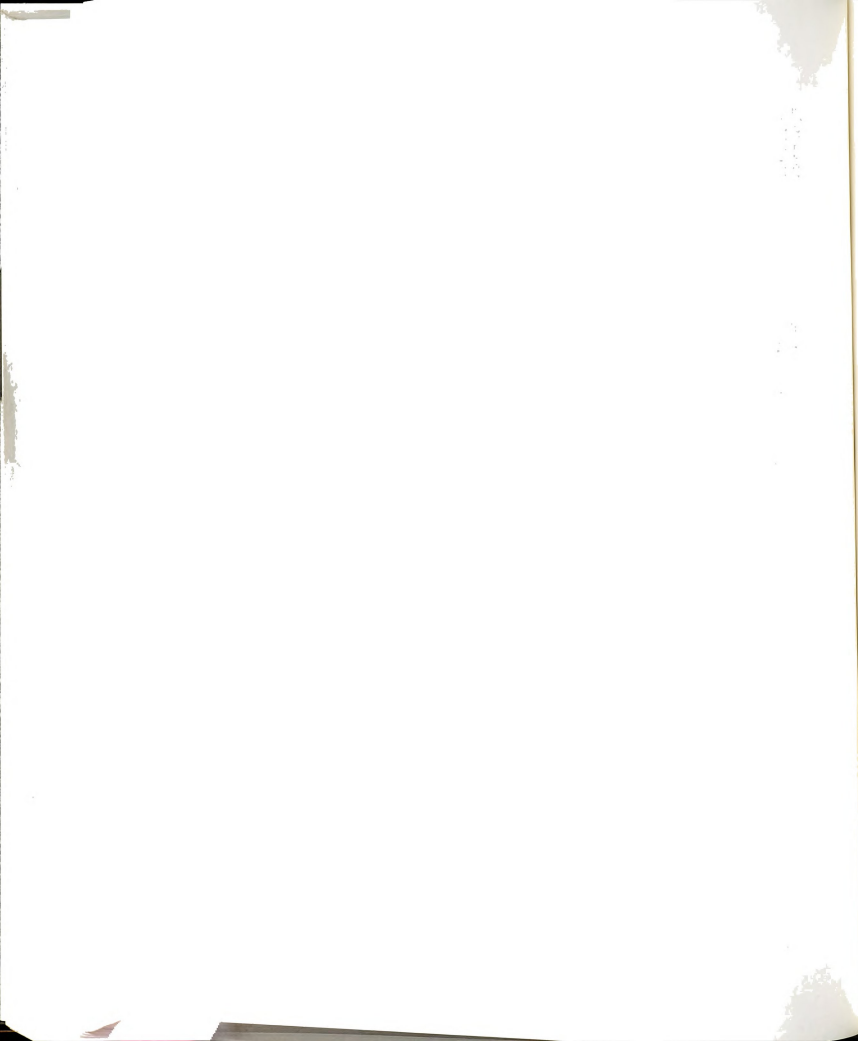


SAMPLE ANSWER: (circle one)

	(non-essential)	(highly specialized)	(important or nice to have)	(absolutely essential)
1. Textbooks (all levels)	1	2	3	4

CATEGORY I - LIBRARY RESOURCES

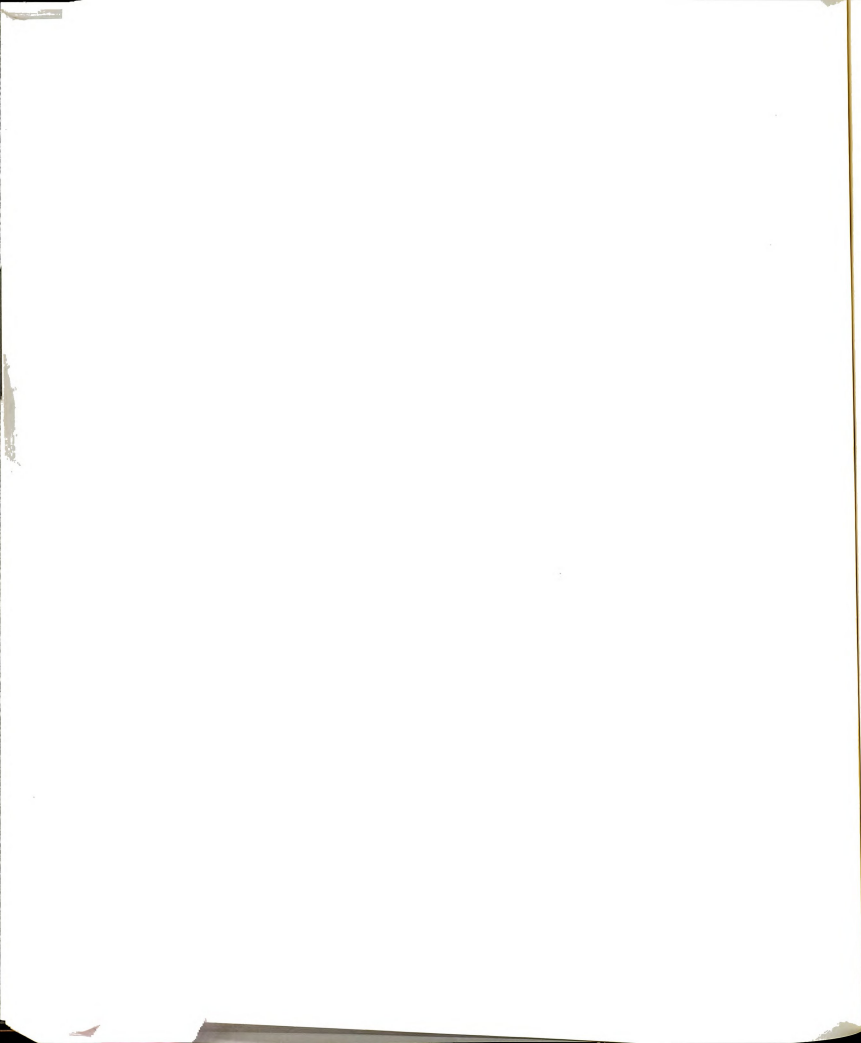
	(non-essential)	(highly specialized)	(important or nice to have)	(absolutely essential)
1. Textbooks (all levels)	1	2	3	4
2. Technical manuals	1	2	3	4
3. Encyclopedias (general and outdoor specialized)	1	2	3	4
4. Nonfiction outdoor books	1	2	3	4
5. Fiction--outdoor books	1	2	3	4
6. Children's outdoor books	1	2	3	4
7. Charts of all types (weather, animal, plant, soil, etc.)	1	2	3	4
8. Maps of all types (Geol., Survey, state, local, world, special)	1	2	3	4
9. Misc. vertical file (clippings, handouts, pictures, ideas)	1	2	3	4
10. Agency outdoor publications (free and low-cost)	1	2	3	4
11. Special book collection (for reference, special interest)	1	2	3	4
12. Bibliography files of outdoor materials)	1	2	3	4
13. Curriculum guides & activities sheets	1	2	3	4
14. Michigan Outdoor Educ./Program guides (as Haslett materials)	1	2	3	4



	(non-essential)	(highly specialized)	(important or nice to have)	(absolutely essential)
15. Collection of national outdoor program and program material	1	2	3	4
16. Children's periodicals (outdoor-oriented, as <u>Ranger Rick</u>)	1	2	3	4
17. Environmental periodicals (as <u>National Wildlife, Audubon</u>)	1	2	3	4
18. Recreation periodicals (as <u>Backpacker, Sports Afield, etc.</u>)	1	2	3	4
19. Science periodicals (as <u>Scientific American</u>)	1	2	3	4
20. Arts and crafts periodicals	1	2	3	4
21. Garden, horticulture, farm periodicals	1	2	3	4
22. Collection of international outdoor programs and program materials	1	2	3	4
23. Commercial kits	1	2	3	4
24. Other	1	2	3	4

CATEGORY II - AUDIOVISUAL EQUIPMENT

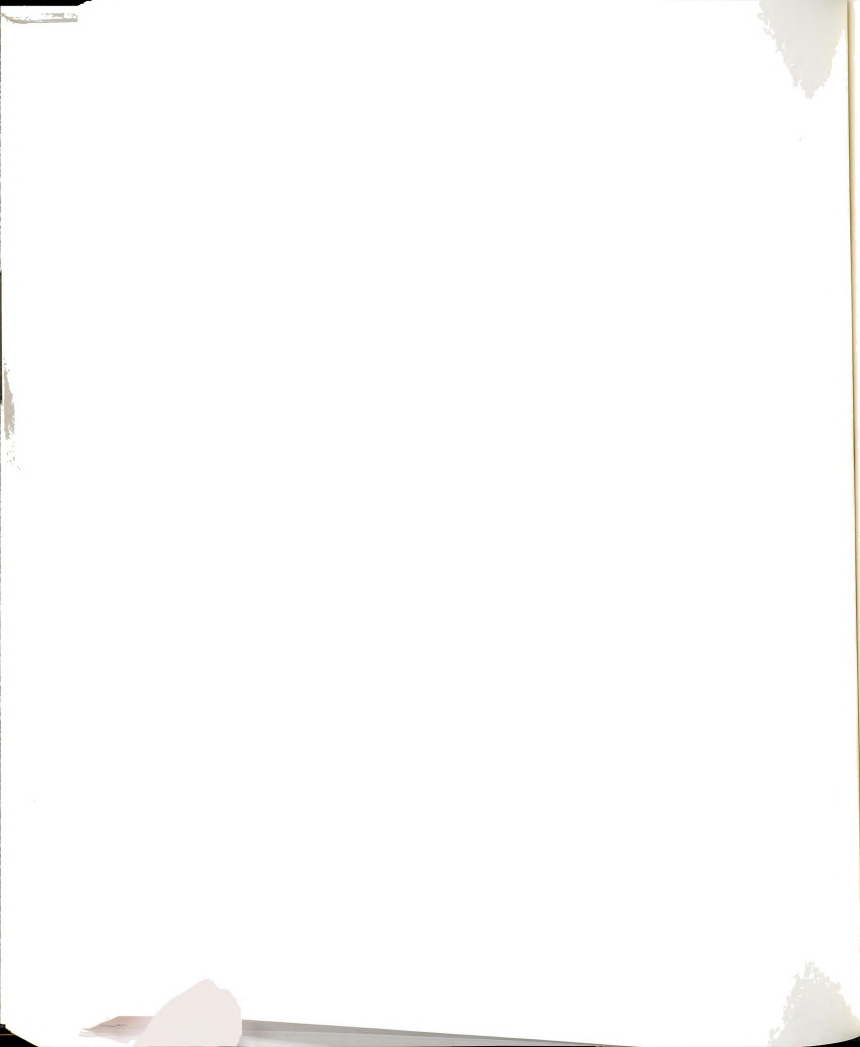
	(non-essential)	(highly specialized)	(important or nice to have)	(absolutely essential)
1. Slice camera	1	2	3	4
2. Movie camera	1	2	3	4
3. Dark room and equipment	1	2	3	4
4. Tape recorders	1	2	3	4



	(non-essential)	(highly specialized)	(important or nice to have)	(absolutely essential)
5. Projectors (all types)	1	2	3	4
6. Duplicating machines	1	2	3	4
7. Laminating machines	1	2	3	4
8. Overhead projector	1	2	3	4
9. Opaque projector	1	2	3	4
10. Graphics laboratory materials	1	2	3	4
11. Library of tapes and slides	1	2	3	4
12. File of films on outdoor topics (available free or low-cost)	1	2	3	4
13. Other _____	1	2	3	4

CATEGORY III - ADVENTURE PROGRAM EQUIPMENT

	(non-essential)	(highly specialized)	(important or nice to have)	(absolutely essential)
1. Archery equipment	1	2	3	4
2. Backpacking equipment	1	2	3	4
3. Camping equipment (except cooking equipment)	1	2	3	4
4. Camp cooking equipment (also usable for school cookouts)	1	2	3	4
5. Casting and angling equipment	1	2	3	4
6. Shooting sports (airgun, small rifle, shotgun)	1	2	3	4
7. Orienteering equipment	1	2	3	4
8. Skiing equipment	1	2	3	4
9. Snowshoes	1	2	3	4
10. Canoes and other small crafts	1	2	3	4



	(non-essential)	(highly specialized)	(important or nice to have)	(absolutely essential)
11. Ice fishing equipment	1	2	3	4
12. Rapelling	1	2	3	4
13. Survival equipment, edible wild foods materials	1	2	3	4
14. Other	1	2	3	4

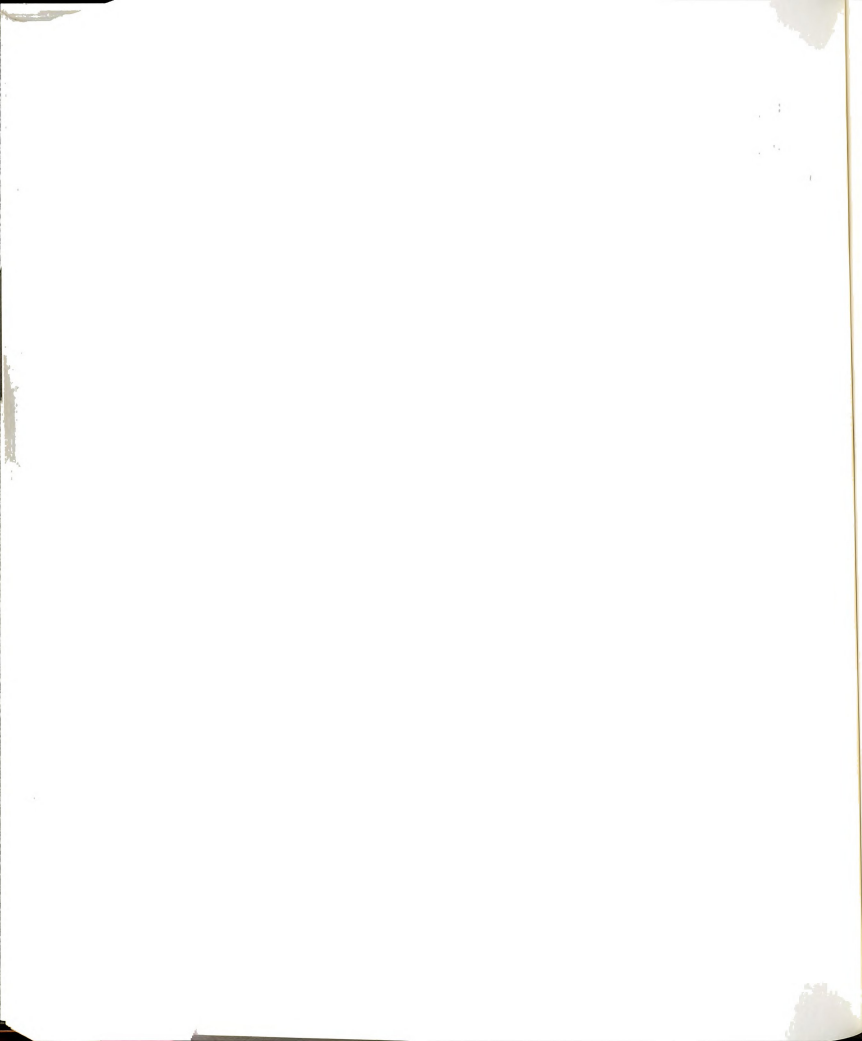
CATEGORY IV - CRAFTS, HANDICRAFTS, AND HOBBIES EQUIPMENT

1. General supplies for crafts of all kinds	1	2	3	4
2. Lapidary equipment and supplies	1	2	3	4
3. Woodcarving tools and supplies	1	2	3	4
4. Basketry supplies	1	2	3	4
5. Weaving supplies	1	2	3	4
6. Ceramic supplies and equipment	1	2	3	4
7. Shellcraft supplies	1	2	3	4
8. Natural crafts supplies	1	2	3	4
9. Collecting needs (display boxes, mounting materials, etc.)	1	2	3	4
10. Other	1	2	3	4

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CATEGORY V - SPECIALIZED STUDY EQUIPMENT

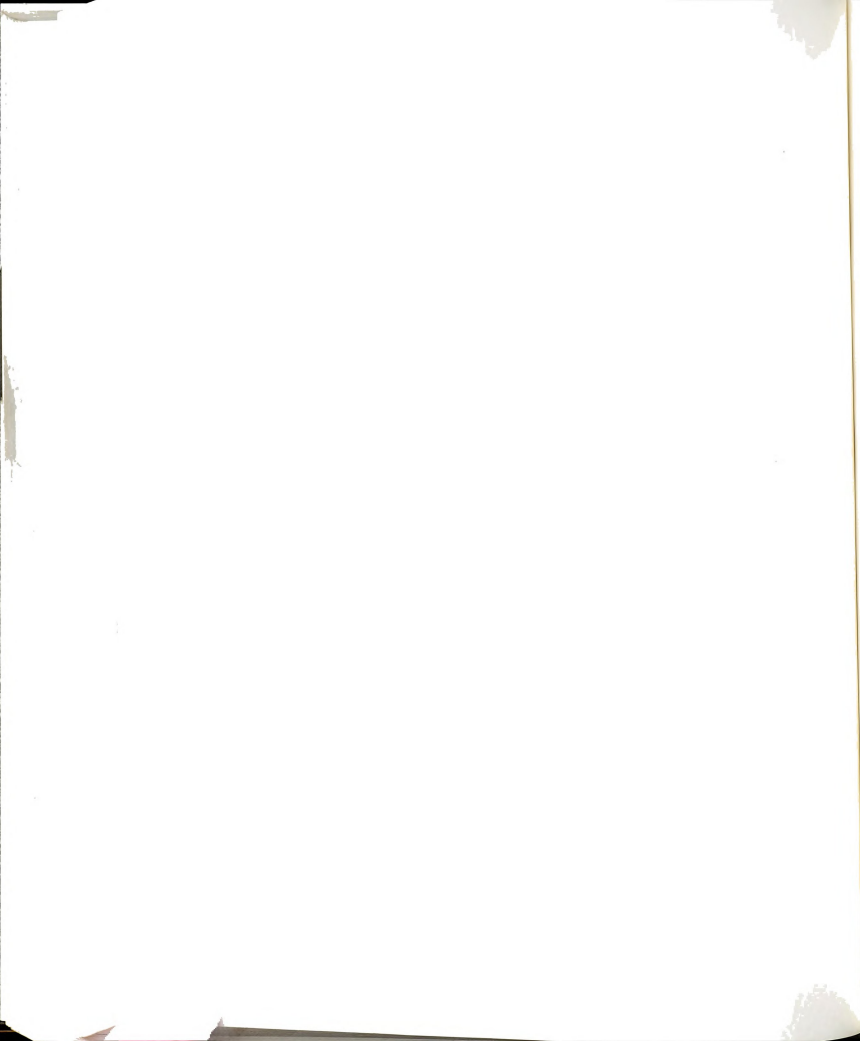
1. Microscopes	1	2	3	4
2. Magnifying glasses	1	2	3	4
3. Dissecting kits	1	2	3	4
4. Thermometers (various kinds)	1	2	3	4
5. Aquatic equipment	1	2	3	4



	(non-essential)	(highly specialized)	(important or nice to have)	(absolutely essential)
6. Soil Test kits	1			
7. Binoculars	1	2	3	4
8. Basic garden tools	1	2	3	4
9. Basic woodworking tools	1	2	3	4
10. Containers (pans, cans, tubes, bottles)	1	2	3	4
11. Misc. supplies (wire, wood, screen, plastic, paper, etc.)	1			
12. Increment borers	1	2	3	4
13. Weather study equipment	1	2	3	4
14. Terrestrial study equipment	1	2	3	4
15. Greenhouse	1	2	3	4
16. Other	1	2	3	4

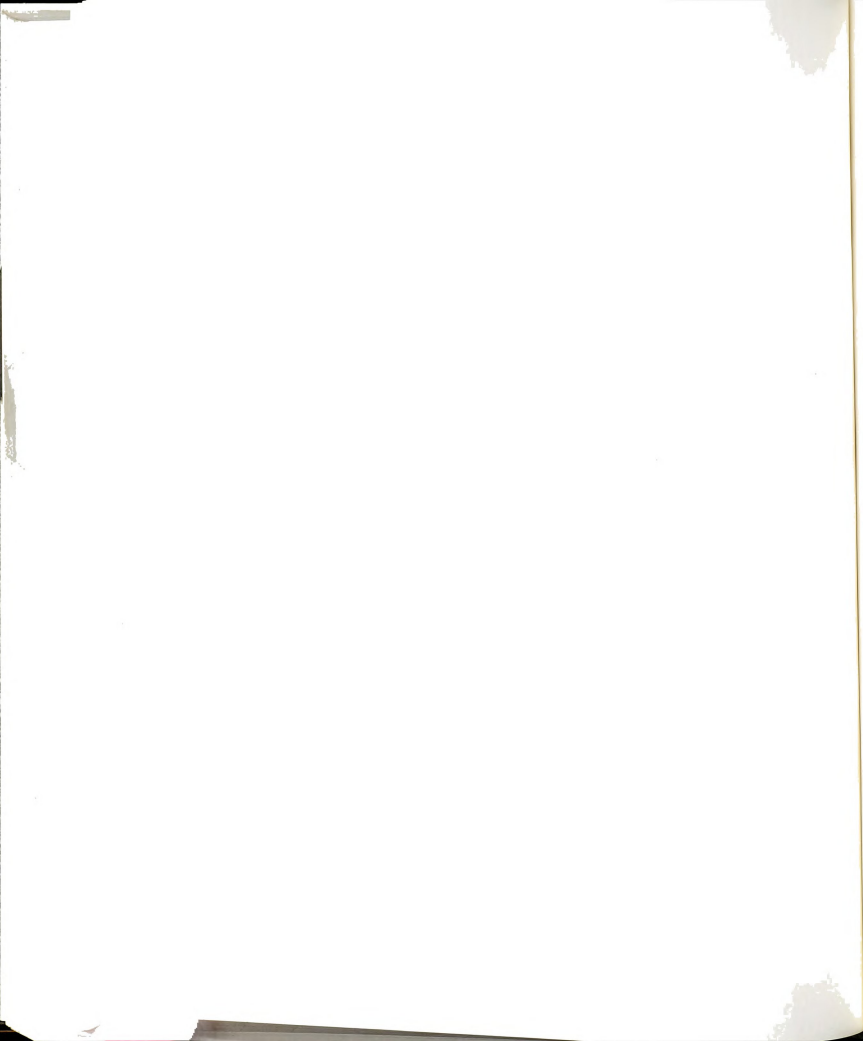
CATEGORY VI - HUMAN RESOURCES

1. Center Curriculum Coordinator (outdoor generalist)	1	2	3	4
2. Audiovisual specialist	1	2	3	4
3. Librarian	1	2	3	4
4. Arts and Crafts specialist	1	2	3	4
5. Curriculum specialist	1	2	3	4
6. Community resources consultant	1			
7. Outdoor recreation specialist	1	2	3	4
8. Naturalist	1	2	3	4
9. Maintenance custodian	1	2	3	4
10. Other	1	2	3	4



APPENDIX B

THE NEED FOR TEACHING TECHNIQUES ADAPTABLE
FOR DIFFERENT LOCATIONAL SETTINGS



APPENDIX B

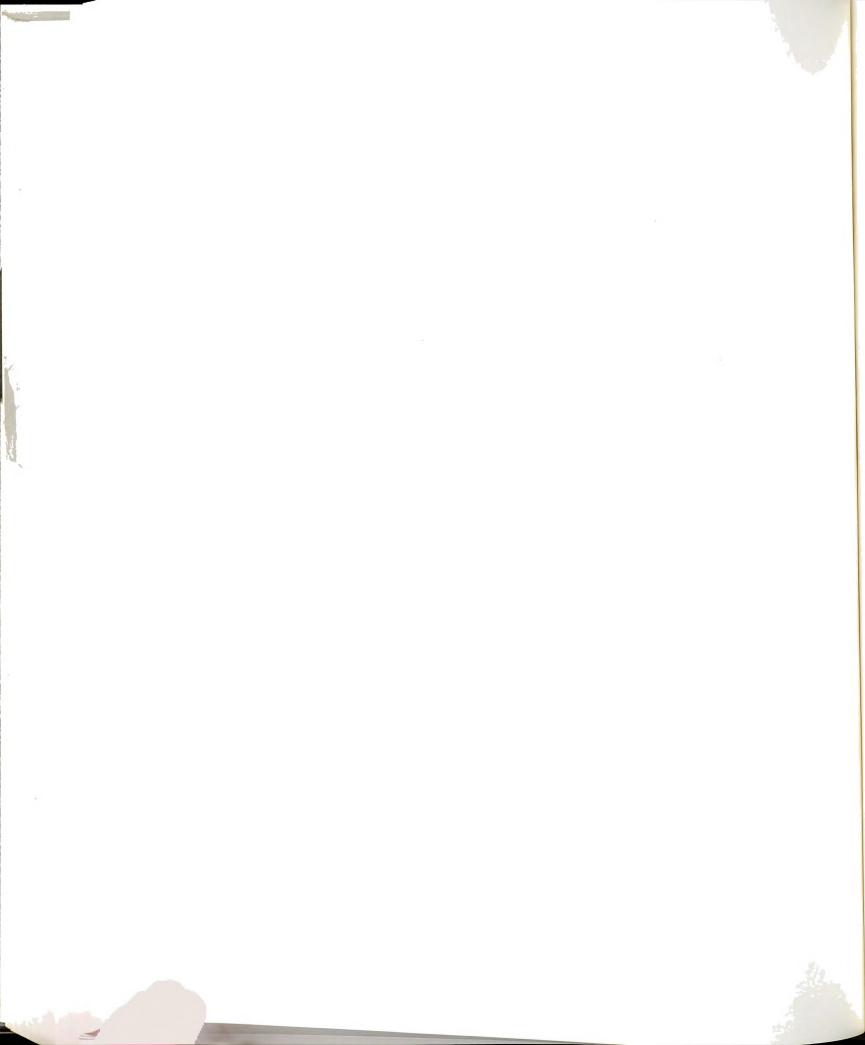
THE NEED FOR TEACHING TECHNIQUES ADAPTABLE FOR DIFFERENT LOCATIONAL SETTINGS

Teachers wishing to initiate an Outdoor Education program should be cognizant of certain techniques for outdoor activities which will insure the success of each outdoor experience. No set of rules will apply to every situation, but the following techniques for planning activities on the school site, community sites, resident outdoor schools, and adventure program sites will be helpful.

School Site

The school site is probably the most commonly used site for Outdoor Education in the public schools. Teaching Outdoor Education on the school site requires a transition from indoor to outdoor learning situations. It will involve:

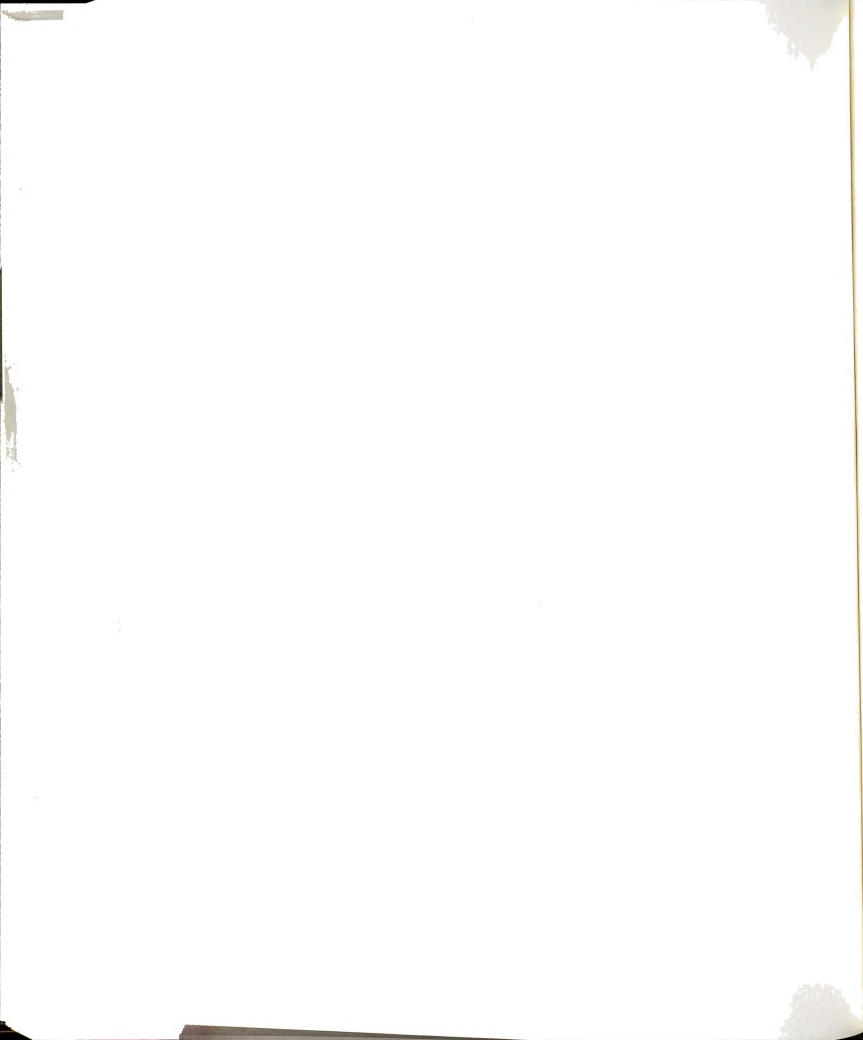
- as much planning and organization as in the classroom
- planning with students and agreeing on the necessary guidelines for behavior (rules and regulations)



- planning for year-round outdoor activities to meet objectives
- planning pre-activity preparation and post-activity follow-up studies which include evaluations with students
- finding professional development assistance if needed
- acquiring the necessary school and parental permissions
- finding consultants and chaperons if needed
- identifying physical and man-made features of the site which offer opportunities for outdoor study
- adapting Outdoor Education to whatever is available on the site and adjacent areas
- learning to use new equipment and materials
- accepting the idea of a less formal structure and a more flexible approach in both teaching and class management
- borrowing, renting, or buying additional equipment and materials to insure that everyone in the class is involved
- allowing time for clean-up and storage of equipment and materials

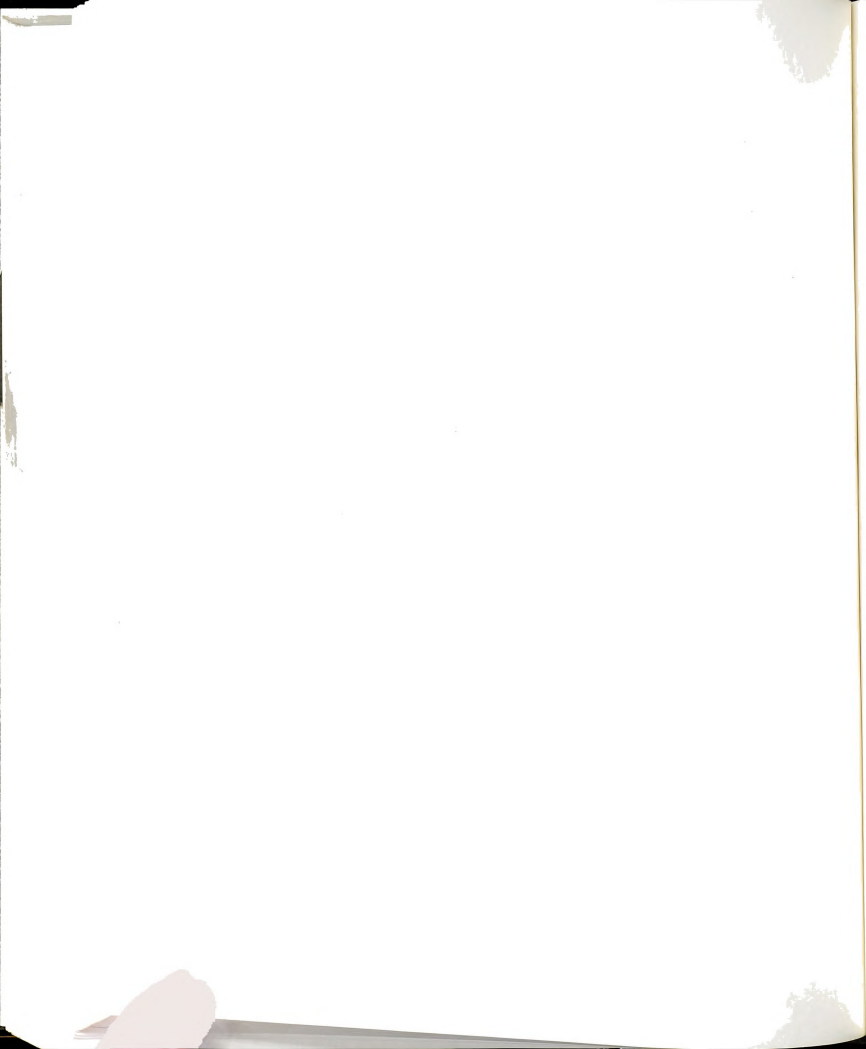
Community Sites

The following needs for teachers using community sites, which have even more variety than school sites in



the numbers of resource areas, resource people, and resource agencies, were identified. Community activities include many potential opportunities for active service which involve academic and social learning situations beyond the actual outdoor experience. Utilization of community sites for Outdoor Education requires an extension and further refinement of skills acquired for the school site which include:

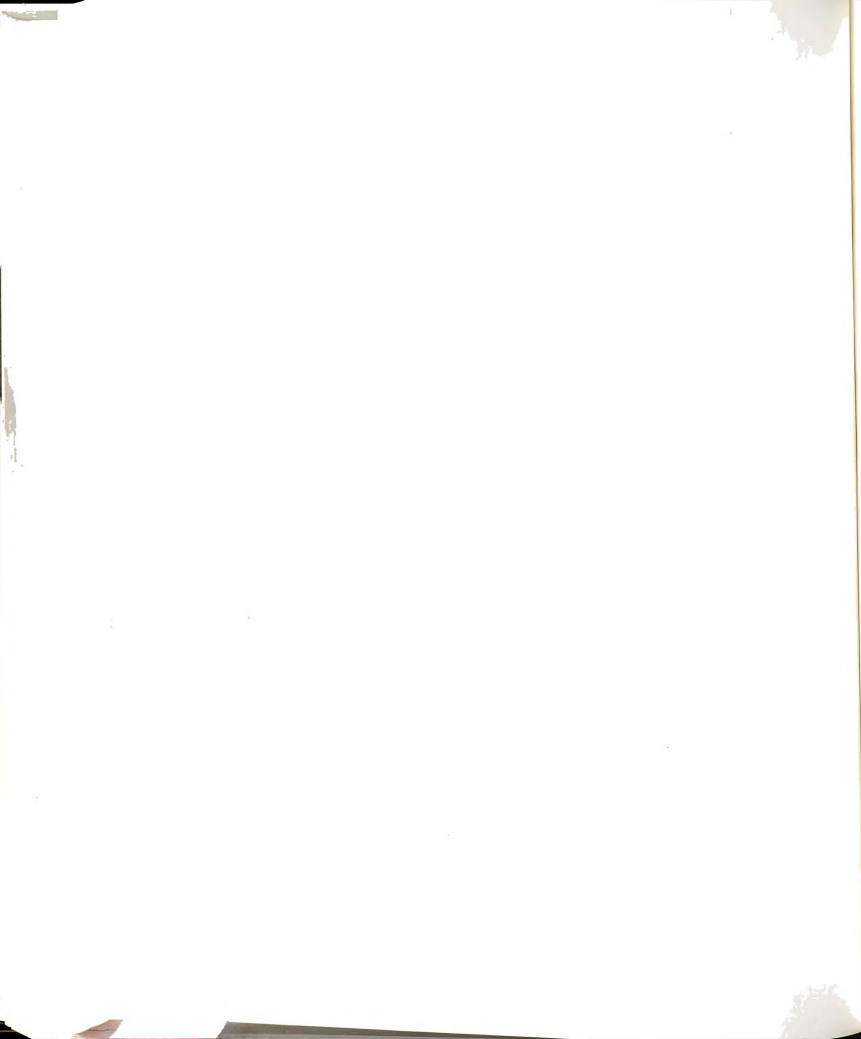
- identifying potential Outdoor Education opportunities in the community and the resource consultants available
- exploring the idea of community service or work-study projects for older students
- being cognizant that outdoor learning activities will also involve social relationships, community responsibilities, pride in self and school and that outdoor activities are only the vehicle for providing such experiences
- arranging for the necessary permissions, reservations, fees, buses, and guidelines for each community activity
- planning so as to use the capabilities of the community and educational agencies in a manner that can extend, complement, and supplement current classroom activities



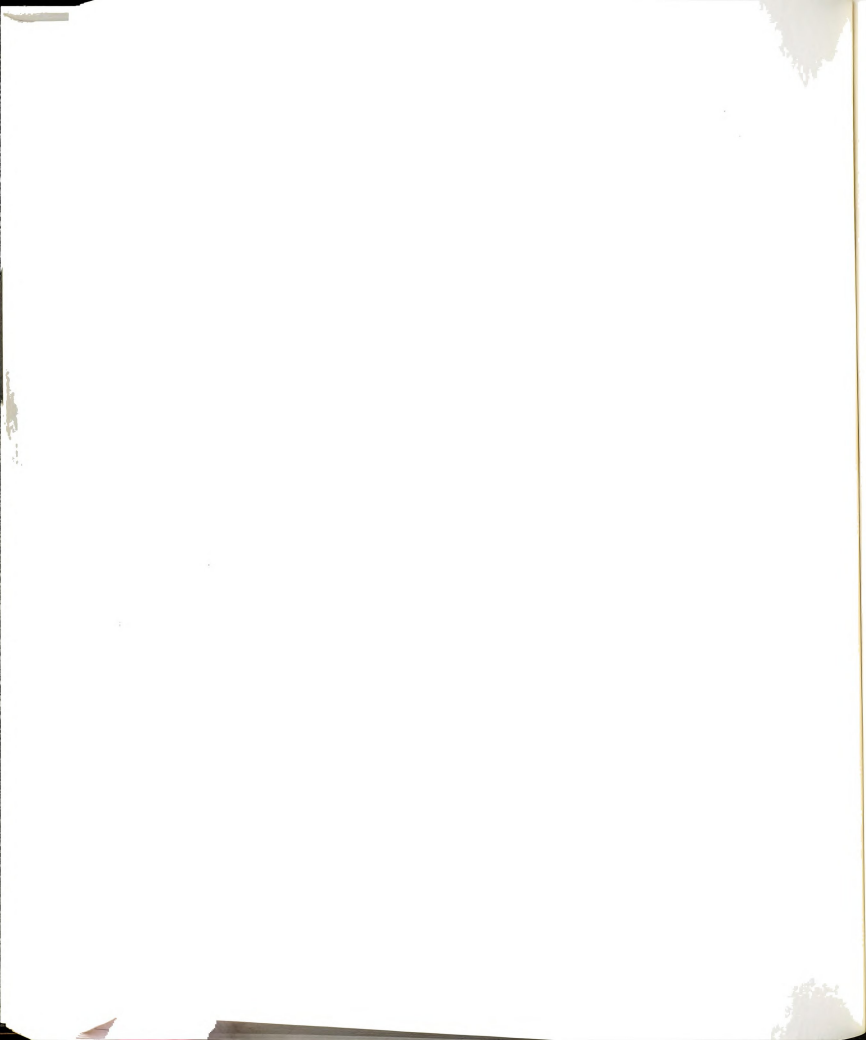
- developing a plan with other agencies which point out existing environmental problems and potential solutions and also pointing out community outdoor assets which require care and development
- planning with students for any opportunities for direct experiences which involve working with non-school personnel, use of unfamiliar tools and specialized equipment, and possibly machinery
- maintaining a balance between outdoor activities and academic achievement and showing how the two are interrelated and valuable to the student
- planning with other teachers to establish special outdoor interest activities and projects for older students that may involve only a portion of a class
- acquiring print materials from other agencies to enrich pre-activity and post-activity studies

Resident Outdoor Schools

The resident outdoor school or school camp, an important part of many public school Outdoor Education programs, offers many challenges to the teacher. Therefore, the list of program needs and teaching skills necessary for the resident outdoor school includes most of those mentioned previously and adds the following more specialized techniques:



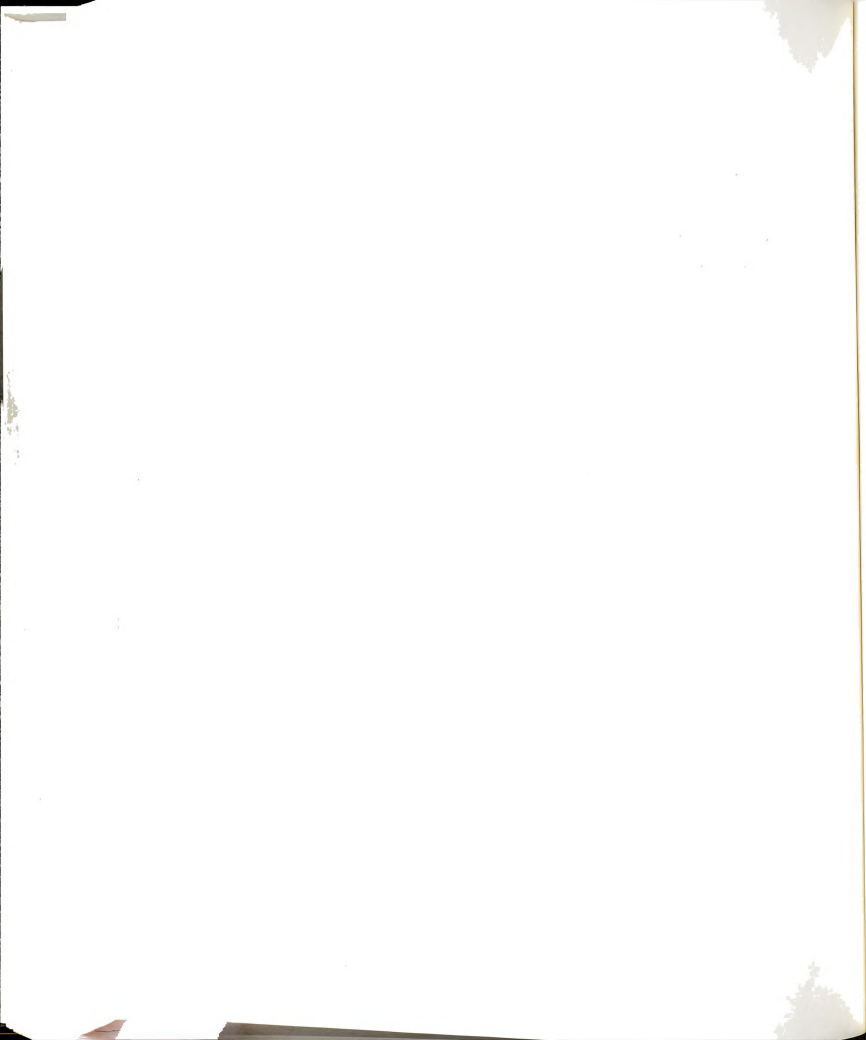
- joining other teachers in a visit to the outdoor school for in-service on-the-site training and orientation
- working with resident school staff and visiting agency consultants on how to make the resident experience an enrichment of classroom learnings
- adapting the learning situation to a totally different type of physical setting with new equipment, new outdoor environmental landscapes, and possibly additional safety features to be considered
- planning for additional recreational activities possible at the resident outdoor school (as canoeing, camping, shooting)
- planning for an experience with students which involves a twenty-four-hour-a-day responsibility
- planning for travel by bus, meals, health and safety, students being away from home for the first time, numerous social situations of living and working together, and supervising high school counselors who assist in the experience
- preparing materials for on-site teaching and acquiring films for reinforcing outdoor experiences or for inclement weather and evenings
- planning for pre-camp and post-camp activities and studies which reinforce the learning situation and regular classroom subject matter



Adventure Programs

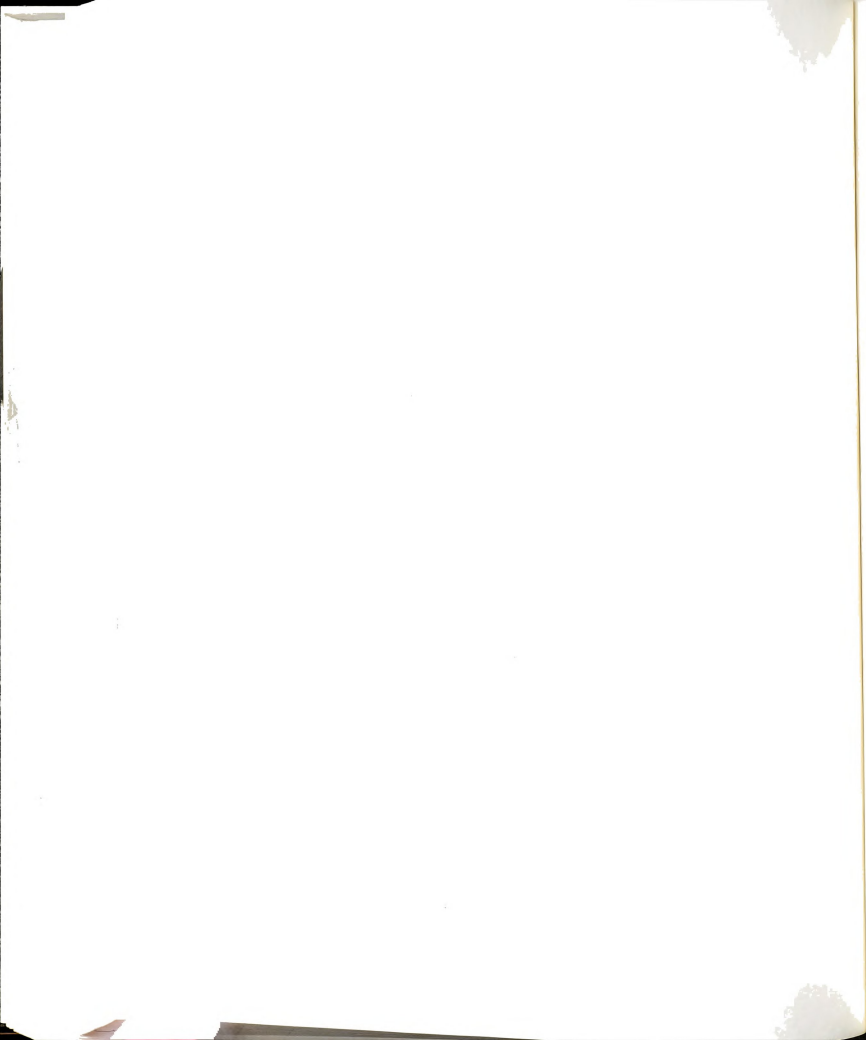
Adventure programs represent the high point or culminating experience of many Outdoor Education programs. Because of their specialized nature, adventure programs often require extensive training and preparation for both students and teachers. This preparation must include not only living skills, environmental awareness, physical stamina, knowledge of equipment, but also small group interaction skills. Adequate preparation for one form of adventure program does not denote adequate preparation for another. The following characteristics of adventure programs require:

- wanting to participate with students in a vigorous, specialized activity spanning several weeks or months
- selling the idea of such a program to school administration and parents
- working out logistics, establishing rapport with the students, developing physical skills along with the students, and designing realistic objectives to be met
- facing the questions of financial aid and liability
- planning the physical, mental, and technical preparation needed for the specific adventure program
- planning with students and school administration on types and costs of equipment, both personal and

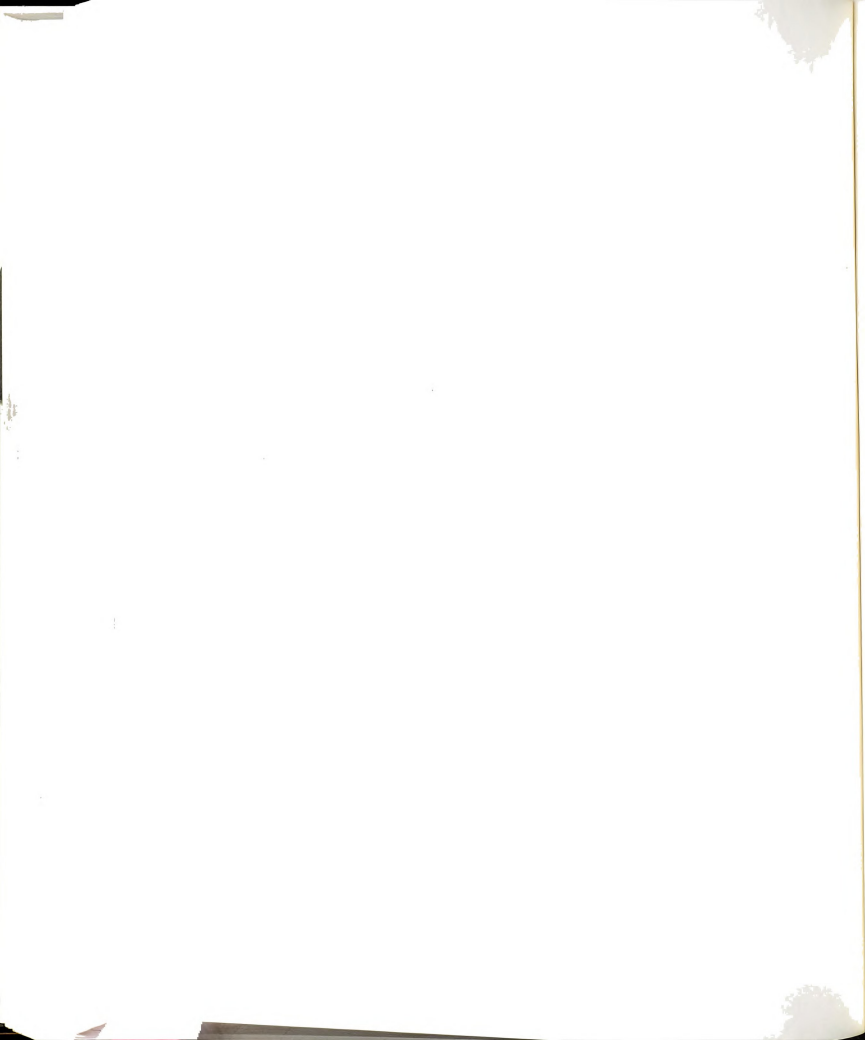


- group, and costs of travel, food, and often a specialist who knows the program
- restricting most adventure programs to secondary school students
 - focusing less on cognitive learning and more on affective behavior and personal development of each member of the group
 - developing a one-to-one relationship with each participant
 - often remaining an interested, but objective observer of group activities, and learning when to "back off" and let students do it themselves, even if mistakes are made
 - assuming a role in preparation and evaluation as that of guide, advisor, and facilitator, but not that of being a judge
 - being prepared by finding the proper training for oneself, locating a trained consultant, understanding the purposes of adventure programming, and being able to communicate those purposes to others

Adventure programs are so highly specialized that teachers require specific training for each type of program, its equipment and resource materials, and thoughtful assistance in developing, implementing, and evaluating adventure programs as a means of curriculum enrichment.



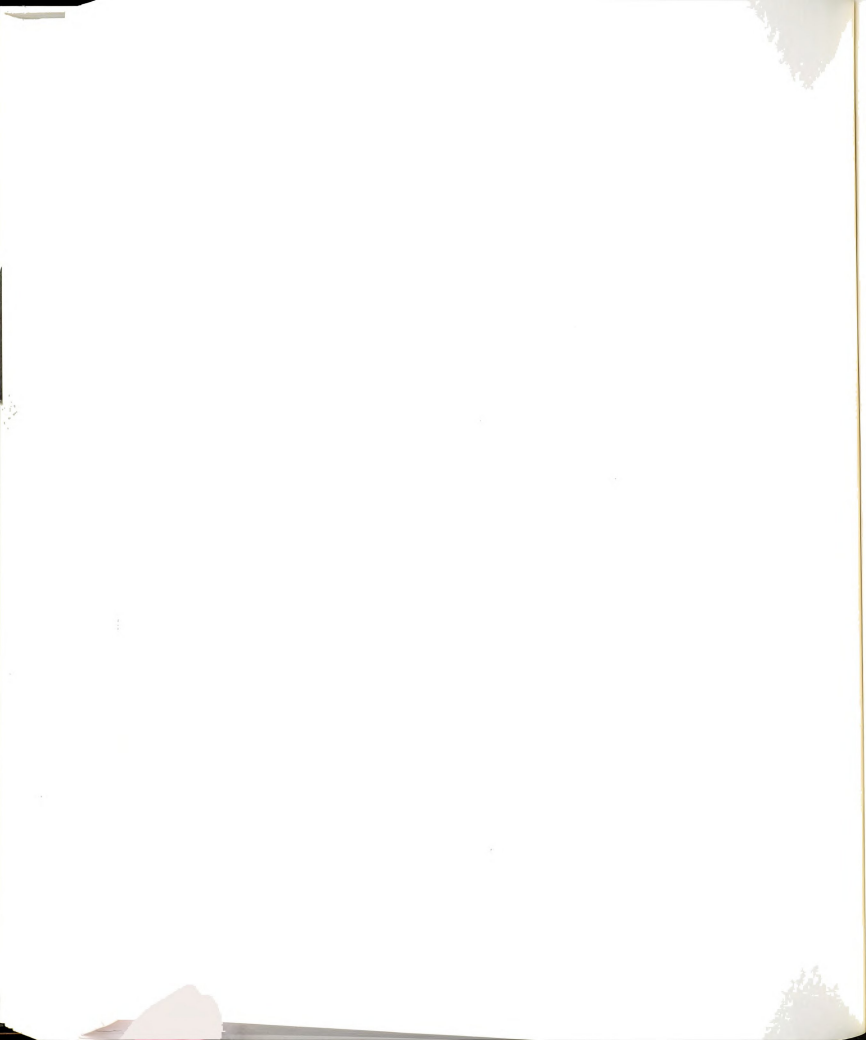
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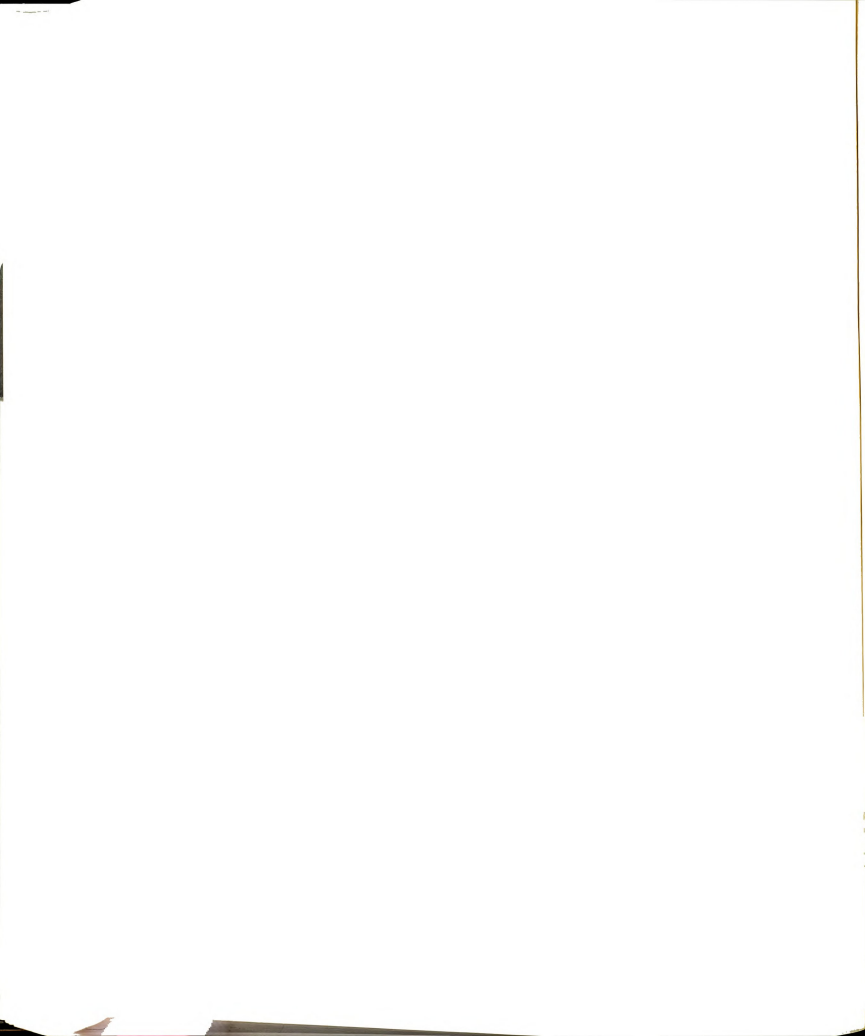
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