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ABSTRACT
          The 12 articles in this monograph discuss the value
of informal learning for children, and suggest how basic skills can
be reinforced at school, home, and within community groups and
institutions. Promising programs, practices, and activities for
children are highlighted. Topics addressed include: (1) a rationale
for a rededication to a holistic approach to learning for students,
the value of informal learning, and criteria for determining the
quality of nonschool settings; (2) the role of the public library in
the educational process, services and materials available, and
current innovative programs; (3) museum programs offering young
patrons opportunities to participate in multisensory exhibits; (4)
educational opportunities available through zoological parks
(including a list of zoological parks in the United States and
bibliography of books about zoos and zoo animals); (5) use of social
contexts of school and work to extend children's learning,
developmentally appropriate activities for stimulating children's
interest in work, and the development of cooperative learning
opportunities by schools and businesses; (6) the educational and
developmental roles of community service organizations; (7) use of an
oral history project to strengthen students' basic skills; (8)
activities for students in rural and small towns that reinforce basic
skills and nurture a sense of community pride; (9) youth
participation programs enabling young adolescents to assume roles of
responsible adults; (10) everyday experiences and inexpensive items
that can be used to reinforce skills and convey to children a sense
of love and well-being; (11) the development of concepts of time in
family settings; and (12) the emergence of microcomputers as learning
devices in home, museum, library, and other settings. (RH)

Learning Opportunities Beyond the School

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Learning
Opportunities
Beyond
the School

Barbara Hatcher,
Editor

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Introduction

Educators and social scientists recognize that learning takes place in multiple and interactive settings. The fact that much of this learning occurs beyond school walls points to the need for a holistic approach to education. This monograph advocates such an approach. It supports the view that a synergistic result is achieved when educators, parents and community residents work together to provide children with a comprehensive approach to learning and growing.

Learning Opportunities Beyond the School discusses the value of informal learning for children and suggests how basic skills can be reinforced in the school, in the home and within community groups and institutions. Promising programs, practices and activities for children are highlighted. Finally, this monograph is designed to increase the reader's awareness of the creative learning options schools, communities and families can provide to nurture fundamental knowledge, skills and values.

Alice Galper ably discusses the rationale for a rededication to a holistic approach to learning for students. She highlights the value of informal learning and details criteria for determining the quality of non-school settings for both children and professionals.

Ann Weeks suggests there is always something happening at the library for youngsters and their families. She discusses the role of the public library in the educational process, describes the range of services and materials available in most libraries, and shares innovative programs currently sponsored by libraries throughout the United States.

Mary Judd and **James Kracht** have discovered that children can have the world at their fingertips at the local museum. The authors reveal how museum programs demystify the adult world by offering young patrons opportunities to participate in multisensory exhibits. Included in the article are suggestions for parents and educators of ways to make the most of a museum visit.

Tom Turner says that going to the zoo is not the same as it used to be. He describes some of the educational opportunities available through zoological parks and suggests delightful activities children of all ages can enjoy as they learn about zoos. In addition, he provides a select list of the finest zoological parks in the U.S. and a helpful bibliography of books about animals.

Kevin Swick discusses how the social contexts of school and work can be used to extend children's learning. He provides developmentally appropriate activities parents and teachers can use to stimulate children's interest in the world of work. He offers prudent suggestions to develop cooperative learning opportunities between the school and business groups for the benefit of children.

Alicia Pagano shares how community service organizations such as the Girl Scouts of the U.S.A., Boys Clubs of America and Camp Fire, Inc., play a vital role in the education and development of youth. She highlights the best of these programs and illustrates how they supplement and complement children's academic training.

Mary Olson describes oral history, or the popularly recognized "Foxfire" concept, as an ideal way to strengthen students' basic skills while they acquire new knowledge. She describes an oral history project from inception to final product and notes the community resources that enable students to learn from and enjoy this community-based learning strategy.

Cynthia Sunal and **Perry Phillips** believe children in rural and small towns have access to the world's culture through the residents and resources of their community. They suggest "adopt-a-school programs," "heritage trunks," "community days" and other activities to reinforce basic skills and nurture a sense of community pride.

Joan Schine provides a convincing rationale that youth participation programs enable young adolescents to move closer to responsible roles as future citizens and workers. At the same time, she illustrates how youth can provide valuable services to their communities as they refine their basic skills.

Tim Nicosia reminds us that parents can provide learning with a personal touch by planning informal experiences for children in their own backyards. He suggests that everyday experiences and inexpensive items can be useful in reinforcing skills and conveying to children a sense of love and well-being.

Carol Seefeldt says the family is a rich resource for learning. She shares how concepts of the past, the present and the future are developed in family settings. With lively vignettes, she provides parents and teachers with strategies to build a lasting heritage for the young.

Steven Silvern reveals that more and more microcomputers are serving as learning devices in home, museum, library and other settings. He provides a glimpse into the future use of microcomputers and recommends they be viewed as tools or toys that make possible things that were formerly impossible.

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Opportunities for Learning in Informal Settings

Alice R. Galper

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There is increasing recognition among educators and human development professionals that child development and learning take place in multiple and interactive settings, most of which exist beyond school walls and have little to do with the traditional curriculum and structure of formal education. The notion that the total environment influences a child's development and that all of the separate influences upon a child's life are interdependent is not new. In the educational literature of the late 1960s and early 1970s, critics of American educational practices called attention to the experience-based philosophy of the British Infant School (*Silberman*, 1970). Some writers strongly advocated community schools to meet the needs of poor and minority children (*Dennison*, 1969). *New Views of School and Community* (*Rash and Markun*, 1973) presented a philosophy of total community involvement in child learning and highlighted innovative programs that recognized the benefits of a holistic approach to education. Yet, recent theory in human development and demographic features of American society have refocused thinking on the identification of informal and non-school settings as contexts for learning and the analysis of the cooperative interaction among those parts of society having the most influence on the child's life.

This article will examine the rationale for a rededication to a holistic approach to learning that involves a planned cooperative approach among family, school, and the formal and informal learning environments existing in the community. An overview of current practices and programs will be presented. The value of informal learning experiences will be highlighted. Finally, emphasis will be placed on the need to conceptualize and evaluate non-school settings to understand the values and social skills they convey to children.

Many non-school settings are relatively new. The hospital Child Life Program, the after-school program and museums that focus solely on the child's unique mode of learning are examples of the creation of learning environments in response to recent theories and needs. The value of business, industry and governmental efforts has been documented (*Swick*, 1982; *Johnson*, 1985). A recent publication by the influential Committee for Economic Development (1985) presents a strong case for private sector investment "in our children." Other programs have existed for decades, but may need to be re-evaluated for their availability and the experiences they provide children.

Rationale

What provides the rationale for a holistic approach to learning that recognizes the value and vital importance of informal learning opportunities beyond the school? First, society needs these settings badly as a support system for home and school. For the first time in America's history, most children now have mothers who work outside the home whether by choice or necessity. The growth of single-parent families and the fact that increasing numbers of children are growing up in empty houses while their parents work cause concern for what children are experiencing and learning when not with their primary caregivers. Community settings may well be the answer. Over a decade ago, Kenneth Keniston (1981) wrote:

> I think it is now indispensable for us to see that millions of American children who suffer unmet needs for care and opportunity should not be blamed, nor should their parents, for crippling situations that are in fact brought by us all within this system. No doubt individualism can and should continue to be a cherished value of this society. But it is time for us to behave not like a collection of competing individuals but like a family of related people. It is time for old-style individualism to give way to some old-style sense of community. (p. 45)

Second, although the "old-style sense of community" may no longer be possible, new views of the role and potential of community settings are emerging. Two of the most promising new perspectives for viewing research and practice in human development as they relate to multiple and interactive settings come from the theoretical framework proposed by Bronfenbrenner in *The Ecology of Human Development* (1979) and from the new emphasis on the conceptualization and design of learning environments (*Sleeman and Rockwell*, 1981).

As defined by Bronfenbrenner (1979):

> The ecology of human development involves the scientific study of the progressive, mutual accommodation between an active, growing human being and the changing properties of the immediate settings in which the developing person lives, as this process is affected by relations between these settings, and by the larger contexts in which the settings are embedded. (p. 21)

A setting is a place where people can readily engage in face-to-face interaction, such as the day care center, the playground or the internship program for young adolescents. According to Bronfenbrenner, however, the environment that is relevant to human development is not limited to the single immediate settings that have been emphasized to the greatest extent in the literature. home and school. In fact, it includes immediate settings, interaction between immediate settings, and larger settings including the institutional patterns of a culture that influence the ways in which institutions are organized and, therefore, the ways in which human development occurs. For example, the value that a particular culture places on the neighborhood or the parent's workplace will influence how families and children perceive or experience their lives, and how families and children are treated in specific situations.

Bronfenbrenner's complex framework will eventually provide valuable research tools for assessing the impact of interactive learning environments on child growth

Voluntary agencies and youth-serving organizations such as Camp Fire provide helpful developmental and educational experiences for young children.

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and development. For the purposes of this discussion, two hypotheses proposed in the book seem particularly relevant.

1. The direction and degree of psychological growth are governed by the extent to which opportunities to enter settings conducive to development in various domains are open or closed to the developing person (p. 288).
2. The developmental potential of a setting is increased as a function of the number of supportive links existing between that setting and other settings (p. 215).

These hypotheses will be applied in the later section on components of effective learning environments.

Finally, the value if not the necessity of a holistic approach to learning for students should be established. Unfortunately, in designing or creating learning settings, there has not been a systematic acceptance of the premise that an instructional institution influences and is influenced by everything within and outside it (*Rowe*, 1981). In discussing a new breed of learning consultants, Jones (1981) states:

When a school is nonreflective of the people within it, it is probably nonreflective of the community in which it is situated. The school becomes an isolated spot in the city map, neither affecting the community nor being affected by its surroundings. This isolation underscores the feeling that school activities are separate from real life. In the future it seems mandatory that this psychological distance be eliminated by creating learning "centers" rather than "schools," which serve many other social purposes such as civic functions, health care, and recreational and cultural activities. (p. 47)

Bronfenbrenner (1979) suggests a "curriculum for caring" in which children are engaged in caring for old people, younger children, the sick and the lonely (p. 53). These activities would be carefully planned, supervised and carried on in the outside community. It would be desirable to locate caring institutions adjacent to or even within the school.

Identification of Informal Settings

At a recent meeting, a human development professional commented that every setting in which children spend a significant body of time (including the doctor's waiting room, the shopping mall and the supermarket) should be viewed as an opportunity for learning. Her concern is with the quality of experiences children are currently receiving in such settings.

For the past several years, the author of this article has been teaching a course entitled, "Creating Learning Environments in Developmental Settings." This advanced-level education course for college students is designed to complement an internship program for the student who is interested in careers in non-school settings. These internships include many of the settings to be discussed in greater detail in this monograph. Examples of some of the most valuable placements in terms of benefit to children and students are: children's museums, zoos, infant centers, parent-child centers, centers for battered women and their children, infant stimulation programs, settings for exceptional children of various ages, community

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centers and school-based after-school recreation and tutorial programs, day care networks, multicultural programs for children and families requiring the ability to function in more than one language, hospital pediatric centers, and open and nontraditional school programs emphasizing youth participation in the community.

All of the above have tremendous potential as learning environments. Well-planned and supportive non-school settings not only enhance the quality of life for children, but may be basic to healthy personality development. As Erikson emphasizes, the young adolescent needs opportunities to connect roles and skills cultivated in school with the real world of work and personal life (Erikson, 1963). Foshay (1973) has suggested that the efforts of the Soviet Union and China to forge links between community and school provide a viable model. And finally, Garbarino (1985) believes that "the way in which a community deals with its adolescents (the opportunities and risks it offers, the attitudes it displays towards its young people, and the general context for development it provides for its members) is a major factor in their development" (p. 429).

Components of Effective Programs

The common denominators in most non-school settings are that they are underfunded, overutilized, dependent on the good will of volunteers, and they have considerable degree of staff "burnout." In considering the value of learning in informal settings, the community and society at large must address these problems.

Given that an informal setting is open and available, how is it possible to determine the value of the experiences it provides? Are youngsters developing a sense of respect for the dignity of elderly persons through their experiences at a nursing home or are they developing fear of the elderly and the aging process? Are Scouts learning the value of competition when the program attempts to facilitate cooperation? Are cooperative efforts in learning burdened with unclear purposes, roles and expectations? Since these and other questions arise, there is a need to analyze informal learning environments. The following criteria can be used to determine the quality of non-school settings for children and interns:

- *Are the cognitive and psychomotor aspects of the setting congruent with the theoretical approach or approaches to learning?* Are they appropriate for the age and special needs of the children served? For example, if the setting has defined itself as Piagetian-based, are interactive play experiences emphasized? Are provisions made for non-native speakers and for handicapped children?

- *Is there evidence of spatial planning?* Have the effects of space on learning been considered? Space is often a problem for informal settings. Programs may exist in discarded or borrowed areas that were never intended to meet the needs of the program. Yet, much can be done to ensure that non-school settings are in safe, flexible, noise-controlled and inviting environments that support the program goals.

- *Is there evidence of planning for personnel?* Has consideration been given to orientation, training, rewards, challenge, support, sharing and feedback? Professionals, paraprofessionals and volunteers need opportunities to participate in decision-making. Roles must be adequately and clearly defined.

- *Are inviting materials and activities available to meet the goals and objectives of the program?* Is there evidence of prudent planning? Clearly, the informal setting provides the opportunities to capitalize on incidental learning, community activities and events, and the resources of individuals in the community. Non-school settings are not bound by rigid curricular sequences that must be completed within a specified time frame. Conversely, the program must have overriding goals and learning opportunities that are well-conceptualized, planned and evaluated for their impact on children. In discussing the success of youth involvement programs, Hecin and Eisikovits (1982) found that positive outcomes were contingent upon well-planned and organized experiences.

- *Is there evidence of flexible use of children's time?* Children need time to interact with each other and the elements of the environment at an individual pace. Many children in after-school programs need the rest, solitude and peaceful moments that a good home would provide.

- *Are there supportive links between the non-school setting and other environments which encourage goal consensus?* It is not impossible to establish and maintain communication networks. Formal and informal information exchange among the parents, the school and the after-school program facilitates a child's development and the ease with which the child moves from setting to setting. What Bronfenbrenner (1979) calls "intersetting knowledge" can take a variety of forms, from oral or written information to visits from setting to setting.

- *Is there evidence of consistent evaluation and observation?* Ongoing observation and evaluation of informal settings by all participants are necessary to demonstrate the value of the experiences and to improve the quality of the setting. Evaluation procedures need not be elaborate and technical. Yet, all professionals need to know that what they are doing enhances the quality of life in their settings. When student interns analyzed their learning environments, they found many weaknesses, inconsistencies and poor practices. They were able to provide reasoned (and often obvious) suggestions for improvement.

Conclusion

The rationale exists for a rededication to a holistic approach to learning. Children will learn beyond the school, even in the absence of efforts to identify and capitalize upon informal learning opportunities. If we are remiss in our duties, children will not experience directly the activities that give meaning, richness and value to life.

Instead, they will use devices for vicarious experience which include the ever-expanding world of television and video. Values and social skills will be modeled by television and film personalities, or acquired away from the context of family, community and culture. The difficult task of educators and human development professionals is to design opportunities for children to plan, work, value and feel valued in cooperative and supportive non-school settings.

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There's Always Something Happening at the Library!

Ann Carlson Weeks

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Poetry concerts, storyhours for toddlers and computer access for 4-year-olds are but a few of the innovative programs and services now offered at many libraries. Too often thought of as simply a static storehouse for books, today's public library is a center for independent learning for individuals of all ages, from toddlers to senior citizens.

Although it would be impossible to describe or even categorize the wide variety of programs currently available, this article will briefly discuss the role of the public library in the educational process, describe the range of services and materials available in many public libraries today, and highlight a number of innovative programs currently sponsored by libraries throughout the U. S. Public libraries are among the most autonomous institutions. Each library determines its own priorities, programming, staffing patterns, budgeting process and collection development policy. As a result, the programs and services described in this article may not be found in all libraries; however, to quote a recent National Library Week slogan, "There's Always Something Happening at the Library!"

The Importance of Children's Services in Public Libraries

In most communities, the goal of public library service to children is to stimulate and fulfill the recreational and educational needs of individuals from birth through early adolescence through the provision of quality materials and services. In some areas because of budget cutbacks or unusual organizational patterns, the public library must also serve as the school library and provide materials to support the educational curriculum. In most areas, however, the school library and public library serve complementary roles in providing a wide variety of materials and services to meet the in- and out-of-school information needs of young children and students. Although the public library collection is not specifically geared toward school subjects, it can offer a wide range of materials at all levels of difficulty to support curriculum topics. Equally important are the materials made available to meet the out-of-school and/or recreational reading and learning needs of children and early adolescents.

Children's librarians work directly with children and the adults who work with children, including teachers, scout leaders, nursery school staff and, most often, parents. They also provide information and guidance to individuals interested in children's materials and those who need a simplified treatment of a particular subject.

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Public libraries use the "Book/Film" connection to encourage children to read and improve their critical film-viewing skills.

Many libraries offer services beyond the library building through cooperative programs with other institutions such as schools, day care centers and recreational facilities. Children's librarians present programs, coordinate cosponsored projects, and provide materials in these settings to individuals who may not be able to physically visit the library. In New York State, school, public, academic and special libraries are linked through a computerized network that enables users to request and receive materials not available in the library they customarily use. Children may then take advantage of the total range of materials available through all types of libraries in the area. Reciprocally, a college student needing a simplified discussion of a particular subject may also access the materials in the collection of an elementary school library.

Children's services are a significant part of the continuum of lifetime learning available through the public library. Many educational theorists believe that lifetime learning patterns and habits are set at an early age; therefore, it is vital

that young children, even infants, be helped to establish and enjoy regular library use.

Services and Programs for the Youngest Patrons

Since the early 1920s, one of the most common programming events in public libraries has been preschool storyhours. Children, ages 3-5, were typically brought to the library one morning a week by their mothers for a 45-minute program. The mothers generally used the time for browsing or their own quiet reading.

Within the last 10 years, preschool storyhours have changed dramatically. The emphasis placed upon early development of language skills has resulted in a significant demand for storyhours for younger children. Programs designed for children from 18 months to 3 years often have long waiting lists of prospective participants. Parents frequently play an active role in these programs for young children. In the Wayne County (New York) Library System, the series is advertised as programs for "Moms & Tots" (with special "Pops & Tots" programs offered around Father's Day). Stories, songs, finger-plays and other activities are planned for parent and child to share during the session. The parent is then encouraged to repeat the songs and finger-plays throughout the week to reinforce the learning experience. In some library systems, parents are invited to an orientation session scheduled before the first session with toddlers. They are briefed on the services offered by the library, the importance of reading to young children, how to select appropriate materials and how to share stories with toddlers. The parents are then encouraged to register their children for future sessions.

The Orlando (Florida) Public Library takes library service to babies and their parents very seriously. "Catch 'em in the Cradle" is a booklet prepared by the library and distributed to expectant parents in prenatal classes and to new mothers in maternity wards. The booklet includes tips on stimulating language development, finger-plays, directions for making simple puppets, short bibliographies of books for babies and books for parents, and a description of library services. A "Catch 'em in the Cradle" workshop for new parents, held in the library, expands upon the information provided in the pamphlet and includes a broad discussion of books, Mother Goose collections, simple picture storybooks, and samples of recordings and posters appropriate for young children. The children's librarians explain library services and stress the availability of telephone reference services. Each parent is encouraged to check out materials before leaving the library.

As more children are growing up in homes with single parents or two working parents, storyhours for both toddler and preschool audiences have changed. Bedtime and Saturday morning storyhours are gaining in popularity. For the bedtime session, parents bring children dressed in pajamas. Books for sharing at home are chosen before the storyhour begins. As the storytime progresses, the mood becomes increasingly calm and relaxed. Lullabies and "sleepy-time" stories frequently end the session.

Many libraries are now expanding their services to day care centers and family day care homes. In some communities, children in day care centers are bused to the library for weekly or monthly storyhours. In other communities, the librarian makes regular day care visits to present storyhours and to talk about books. In some areas, libraries offer workshops to day care personnel on using library materials with children. These sessions are often followed by the delivery of resource kits to

the centers for use by the children and day care staff.

Programs for parents, either held in conjunction with storyhours or independently scheduled, are now popular in many libraries. In a suburban Chicago library system, monthly evening meetings featuring a pediatrician, a psychologist, a nutritionist and an early childhood specialist were presented to standing-room-only crowds. Librarians in the system prepared supplemental bibliographies of parenting materials to support the lectures.

Programs for School-Age Children

Cooperative programs sponsored by school and public libraries are increasing in number and sophistication. In the Marshall-Trails (Missouri) Regional Library, a reading motivation program for middle school students planned by the school and public libraries used the "Book/Film" connection. The program centered on the problems inherent in producing a film based upon a book or short story. Students read the book or story, viewed the film and then engaged in extensive discussions. Through this program, students read materials they may not have been exposed to and improved their critical film-viewing skills.

Storytelling sessions have always been an important component of library programming for children. Programs for all ages from preschool through junior high are consistently well attended. In most areas, the children's librarian or a community volunteer presents the stories. In some libraries, however, workshops in storytelling techniques are offered for older children. In Eugene, Oregon, 6th- through 8th-grade students make up the "Troupe of Tellers" who attend a series of storytelling classes and then perform for more than 2,000 children throughout the school year.

During the fall of 1985, a rather unusual series of storytelling programs was presented in 10 western cities from Seattle to San Diego to Salt Lake City. Public libraries working in cooperation with a consumer products company presented a series of storytelling concerts for children and families in each of the 10 cities. The concerts featured a guest storyteller and outstanding local tellers. Families were invited to the library to enjoy an hour of folktales and other stories. The firm also financially supported the preparation of a brochure on the importance of family storytelling and sharing stories and books together.

In White Plains, New York, storytelling has taken to the airwaves. The educational access channel on the local cable television system broadcasts regularly scheduled storytelling programs coordinated through the public library.

The educational cable network is also used by libraries in Spokane, Washington, and Arlington Heights, Illinois, to broadcast book review programs by children for children. "Twenty Minutes" is the book review program written, directed and produced by students in Spokane. "Readers' View" in Arlington Heights provides a forum for older children to discuss and promote favorite books.

Summer reading programs are offered in most public library systems throughout the U. S. In 1985, the Akron-Summit County (Ohio) Public Library System used the theme "Reading Is Cool" for its summer reading program and featured penguins as mascots. The program coincided with the arrival of 117 penguins at the Sea World marine life park in Aurora, Ohio. Books with "cool villains," those in which the main characters "lose their cool," those in which the main characters "keep their cool," and "chilling tales" were featured. Other activities included "Cool as a Cu-

cumber" contests and a "Top Hat and Tails" closing party.

In North Carolina, a statewide summer reading program entitled "From Hatteras to Cherokee" focused on songs, stories and games from North Carolina folklore. For each book read during the summer, the children added "Tar Heel footprints" to a map of the state of North Carolina. Children who read the prescribed number of books received a certificate and discount coupons for a "From Hatteras to Cherokee" week at a North Carolina amusement park.

In a similar program in Chicago, summer readers signed a personal contract with their children's librarian designating a specific number of books to be read during the school vacation. Children who met their reading goals received free tickets to Chicago Cubs baseball games. Nearly 40,000 tickets were distributed throughout the summer.

Library Programs for Families

The "Farmington Turn-Off" was a highly successful program cosponsored by the Farmington (Connecticut) School Board and the Farmington Public Library. Following a discussion by the Farmington Library Council about the disturbing effect of television on children's learning, the Council decided to ask the townspeople to go without television for an entire month. In preparation for the "No-TV" project, teachers and librarians led discussions on the pros and cons of television-viewing. Almost one-third of the children and adults in the village signed pledge cards agreeing not to watch television, or to severely limit their viewing, for the month of January. Special programs and reading lists were prepared by the children's librarians to fill the void left by the absence of television. Families who "turned off" during January were asked to complete questionnaires about the experience. Participants indicated that family members spent more time together reading, playing games and talking during the "No-TV" month.

A series of programs designed for families and presented by the Barrington (Illinois) Public Library was entitled "Summer Saturdays." The six Saturday morning sessions featured a juggling institute, a program on wildlife rehabilitation, a presentation on sharks by the local aquarium and other programs of interest to all ages. After the presentation by the main speaker, family members were encouraged to select additional materials on the program's theme to share together at home.

Poetry was the focus of a series of activities sponsored by the Milwaukee Public Library with support from the Wisconsin Arts Board and the National Endowment for the Arts. Poetry-writing workshops for children directed by local poets were held for a two-week period in 30 Milwaukee area libraries. The libraries also held a "Color a Poem" session during which children created murals based upon visual images of their poems. Following these workshops, a community poetry concert was presented featuring poems by local children and award-winning writers, enhanced by mime, music, drama and dance performed by Milwaukee arts groups. The murals created in the "Color a Poem" sessions were displayed and booklets were distributed featuring all the poems written by children in the library workshops.

Computers in Libraries

Many public as well as school libraries now offer access to microcomputers. The microcomputer is often housed in the children's department and patrons of all ages may register to use the computer and the software. In Sonoma County, California, it

is reported that preschool children are among the most avid users. Software programs that feature letter and number games, simple logic challenges and matching activities are the most popular with the preschool age group. Older children enjoy programs that allow the user to write a story, create a picture, compose a melody or solve a mystery. Many computer programs used by children in public libraries are educational games that require some knowledge or logic to play, but are presented in interesting, entertaining and usually colorful ways. The software generally requires more thought than an arcade game and is more fun to use than a math drill.

In many libraries, no restrictions are placed on computer access simply because of age. All users are expected to possess a library card, pass a simple use test, sign a responsibility statement and stay within established time-use limits. With increasing frequency, computer access for children as well as adults is simply another service provided by the public library.

Conclusion

The public library today offers a wide variety of out-of-school learning opportunities. Programs on topics as diverse as juggling and penguins or nutrition and Mother Goose books are available to patrons of all ages. Many librarians have an information telephone number for up-to-the-minute details on current programs. Other systems publish a weekly calendar of events in the local newspaper. Still others distribute a weekly or monthly information newsletter.

Most children's librarians welcome program suggestions from patrons. Many work closely with teachers and school librarians to coordinate public library programs with those presented in the schools. In most communities, the children's librarian serves as a valuable resource person for scout leaders, church school teachers and other community workers. The public library is an evolving institution committed to providing educational and recreational information, materials, programs and services to individuals of all ages. All you need to do is ask!

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The World at Their Fingertips: Children in Museums

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Picture yourself floundering in a sea of 80,000 plastic balls. Or, imagine yourself cloaked in pioneer garb, frying up a "mess o' " corn dodgers, black-eyed peas and salt pork over an open hearth in a smoky, dimly lit log cabin. Or, how about spending three days at a California gold rush camp, panning for yellow flakes that caused the '49er fever?

Granted, such experiences are not of the everyday variety, but they are being experienced daily by children throughout the United States. Not the result of vicarious encounters on television, these experiences are the living, breathing and hands-on results when curious children participate in museum experiences designed especially for them.

CHILDREN'S MUSEUMS: EARLY BEGINNINGS

The first children's museum enthralled Brooklyn children nearly a century ago (1899). Although similar institutions soon followed in Boston (1913), Detroit (1917), Indianapolis (1925) and Hartford (1927), it wasn't until the 1960s and 1970s that the children's museum burgeoned throughout the U.S. Today, nearly 150 children's museums exist in the country. Not only have children's museums multiplied in recent years, but the larger, more traditional museums of art and natural history have taken serious notice of such success and have begun dedicating special exhibits and programs to the child. Although not specifically referred to as children's museums, many nature centers are in fact just that. Such natural science centers regularly offer programs and exhibits especially designed for young visitors. The same is true for some of the living history museums.

Children's museums come in all shapes and sizes, with budgets ranging from barely $10,000 per year to well over $1 million. Although most museums are of a permanent nature, some operate entirely out of a mobile unit, traveling from school to school. Areas of emphasis include fine arts, natural history, cultural history, general science and many combinations thereof. As variable as children's museums appear, most have very similar purposes. In general, they seek to demystify the adult world, to help children acquire or shape special skills, attitudes and knowledge concerning the world around them. Children's museums strive to meet these goals by immersing young patrons in a unique, leisure/learning environment filled with multisensory, participatory exhibits. Here, the child assumes the role of keeper of the keys, master of the locks. The child is in complete control; his or her actions alone

are responsible for any c.... int reactions The philosophy of children's museums may be summed up by the old Chinese proverb, "I hear and I forget. I see and I remember. I do and I understand."

PLAY: THE BASIS FOR CHILDREN'S EXHIBITS AND PROGRAMS

Watching a child at play, one quickly notices total and active involvement. Play is a natural activity for children in nearly every culture. Most. if not all, early childhood programs and exhibits in museums and nature centers place major emphasis on active play. The underlying belief is that "optimal learning in young children occurs when they play" (*Pitcher et al.*, 1979). Educational leaders like Jerome Bruner have documented the importance of play in the early years (*Bruner*, 1973; *Bruner, Jolly and Sylva*, 1976). Increasingly, more experimental evidence of the importance of play is being discovered (e.g., *Zubrowski*, 1984).

Another principle influencing museum programs and e hibits is the importance of enactive representations for young people. The sequencing of steps leading to symbolic respresentations of knowledge are built through "hands-o.." experiences with concrete objects. As Gage and Berliner (1979) state:

In some ways, the subsequent kinds of understanding based on words anu symbols require the earlier kinds of understanding based on both direct and internal manipulation of objects. Children who have not acquired a "feel" for the laws of the lever through playing with seesaws will have difficulties in acquiring such an understanding in their high school physics class. Children who have not played with beads, rods, and lumps of clay may have difficulties in understanding addition, subtraction, multiplication and division. (p. 156)

In addition, Piaget's and Bruner's theories of cognitive development emphasize that children's rich, experiential learning should be rooted in active and personal discovery of the world about them.

The play arena or playscape is a creative manifestation of these ideas. Playscapes are available at the Boston and Indianapolis Children's Museums. Similar play arenas include Pittsburgh's Play Path, Los Angeles' Soft Space, Rhode Island's Giant's Playroom, and Maine's Infant and Toddler Room. Essentially, these exhibits are indoor playgrounds with carpeted stairs, ramps, peepholes and slides designed specifically for the growth and development, as well as the safety, of young children. These play arenas function as special units where young patrons are free to engage in active, unrestrained play in both individual and social settings. Playscapes offer the opportunity for children to experience their own potential and test their abilities. They also provide a social setting in which cooperation, sharing and conflict resolution can occur—all important aspects of social learning in young children.

In conjunction with play arenas, many museums offer other opportunities for discovery learning. Some museums have water or sand tables. Others, for example, have exhibits in which marbles of various sizes can be rolled through an assortment of pipes. The objective in all these activity stations is to encourage children to discover simple physical principles and properties of the natural world. The marbles and pipes display enables children to note the effects of velocity, gravity and motion on objects.

MUSEUM PROGRAMS FOR CHILDREN

Beyond customary school tours, children's museums and nature centers are blossoming with innovative programs and special events for young patrons. After-school programs, parent and children weekend programs, special seasonal or holiday events, and summer activities including week-long day or overnight camps are typical of the creative vistas museums offer children and their families.

Museum Outreach Programs

Outreach programs are widespread and popular. In these teaching experiences, museum educators and naturalists select artifacts and interesting memorabilia to share in neighborhood schools. These roving educators might bring an authentic Mexican stone metate for grinding corn, a wooden pioneer butter churn, a butterfly collection, taxidermied mammals and birds, or living animals such as orphaned raccoons and rehabilitating hawks or owls. Many children's museums also rent exhibit kits to teachers, parents, children or special organizations. With these kits, a teacher can create a mini-museum—including artifacts, crafts, posters and reading materials—in a corner of the classroom.

Programs for the Very Young: Infants and Toddlers

Museums and child-oriented nature centers are designing special programs and exhibits for the young. Some museums offer programs for children as young as 6 months of age. Parents are considered an integral part of the program. The play arena is an example. Here, through observation and active sharing with other parents, families have the opportunity to learn about the development of children's abilities and alternative methods of parenting. Special exhibits discussing common child-rearing problems such as temper tantrums are displayed for parents in the play arena area. Frequently, these play arenas have a resource room where adults may examine publications, kits, activities and materials that discuss parenting, child development and psychology.

At the Portland (Oregon) Children's Museum, infants between 6 and 12 months of age have a chance to participate in programs entitled, "Infant Play" and "Baby and Me." The Living Arts and Science Center of Lexington, Kentucky, offers similar programs for infants between the ages of 8 and 12 months. These programs permit parents to develop resource networks with others. Both the Portland Children's Museum and the Living Arts and Science Center in Kentucky offer progressively more challenging programs for older infants and toddlers. Emphasis remains on sensory and play experiences, but more organized forms of play such as games, singing and art are introduced. Parents are responsible for assisting their children with materials as well as for helping them interact with others.

Kidspace in Pasadena, California, is another museum program designed for young children and their parents. Kidspace offers a special workshop for parents and other adults entitled, "Toys That Enhance Learning." This program helps adults make wise decisions in toy selection. Experts in child development offer advice and hands-on demonstrations during the workshops. The Boston Children's Museum offers a seminar entitled, "Creative Experiences for Young Children." During the seminar, recipes, activities, games and new ideas to stimulate children's thinking are shared with teachers and adults.

Preschoolers can splash about at the water table, one of the hands-on areas for young children in the playscape gallery at The Children's Museum of Indianapolis.

Programs for Kindergarten and Elementary School Children

Museum programs for kindergarten and elementary school children capitalize on pupils' natural curiosity about the world around them. Most nature centers across the U.S. offer natural science programs on such topics as insects, pond life, seasonal changes in animal and plant life, and wildlife rehabilitation. The Exploratorium in San Francisco focuses its attention on developing children's curiosity and interest in the physical sciences.

The Health Adventure of Asheville, North Carolina, is a unique facility. This museum has programs about nutrition, dental care, bones, internal anatomy, safety and the environment. All programs are designed to involve, entertain and inform. Through a variety of media—from puppets to larger-than-life plastic models—children learn how to stay healthy.

A special program at Health Adventure focuses on the issue of sexual and p , si-cal abuse. "Funny Tummy Feelings" is designed to aid children in defending them-selves against abuse by teaching them a variety of survival skills including their right to say "No." Children at Health Adventure also have an opportunity to tour hospital facilities, including the emergency room, x-ray department, physical therapy and pediatric units. By viewing the hospital in a non-crisis situation, children learn that it can be a less frightening place. Twice each month, Health Adventure offers a program for parents and their children entitled, "My Mom's Having a Baby." Children and museum personnel discuss what is happening to Mom. They also make a gift for their future brother or sister. Another part of the program is a tour of the local hospital maternity ward and nursery.

Several children's museums (Children's Museums of Houston, Muncie, Omaha, Portland, Rhode Island and Maine, as well as Kidspace in Pasadena, California) encourage children to explore adult occupations through role-play. In special ex-hibits, children can pretend to be a banker, teacher, salesperson, doctor or nurse. In miniature supermarkets with child-sized shelves and carts, children can shop for groceries from a selection of lifelike produce, meat and canned goods. Or they can assume the role of check-out person, bagger or stock person.

While one child may choose to be a dentist, another may prefer to be a news an-chorperson for KKID-TV. Those eager for adventure can don a firefighter outfit, slide down the firehouse pole, drive the fire engine and extinguish an imaginary blaze. Young ballerinas may wear a tutu and twirl to The Nutcracker Suite.

The Children's Museums of Denver, Boston and Rhode Island offer children the opportunity to experience a physical disability. Exhibits emphasize the abilities as well as the limitations of the disabled. Children may try on a prosthetic arm, maneuver in a wheelchair around obstacles, travel blindfolded through a maze us-ing a cane, learn to use sign language or act in a puppet show about emotional prob-lems.

Equally interesting, the Children's Museum of Omaha offers a multimedia exhib-it about the life of children in Third World countries. Young patrons may partici-pate in "Walk a Mile in My Shoes." In this simulation, children engage in two chores most commonly performed by children of developing countries. gathering firewood and fetching water.

Museums can help children understand and appreciate the past. The Children's Museums of Boston, Los Angeles and Rhode Island offer replicas of "Grandmother's House." These exhibits contain a Victorian parlor, kitchen and attic. Children can open "Grandma's Trunk" and try on her old-fashioned gown and bonnet, or wear Grandpa's top hat and spats. Activities also include baking "from scratch"; laun-dering clothes with a scrubboard, washtub and clothes wringer, making turn-of-the-century parlor games or listening to old-time radio programs.

Living history museums such as Old Sturbridge Village (Sturbridge, Massachu-setts), Colonial Williamsburg (Williamsburg, Virginia), the Living History Farm (Des Moines, Iowa) or the Jordan-Bachman Pioneer Farm (Austin, Texas), while not strictly considered children's museums, offer numerous programs for the young. At these sites, children may learn to build a fire in the hearth of a log cabin, grind corn into meal for cracklin' cornbread, milk a cow and then churn the cream into but-ter, build a cedar rail fence, groom a horse, collect eggs from the hen house and plant a pioneer garden.

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Children's museums, nature centers and general museums offer myriad delightful programs and exhibits for children; however, the following suggestions for planning will maximize the benefits of the visit.

MAKING THE MOST OF A MUSEUM VISIT

Tips for Teachers and Other Group Leaders
1. Become acquainted with the museum, its programs, exhibits, printed materials and program director. If possible, plan a personal pre-trip visit to the facility. Note the arrangement of the facilities to identify good gathering places for your group, restrooms, snack and lunch sites, and safety considerations.
2. Develop a theme or topic for your trip; i.e., focus your visit rather than surveying everything in the museum. Ask for helpful teacher's guides and materials. The guides often provide useful background information and pre- and post-visit activities.
3. Contact the museum to schedule the visit. You may wish to arrange for a pre-visit orientation of the museum. Museum personnel will visit your group and provide children with a sampling of activities they will experience at the museum. This is also a good time to stress appropriate museum behavior.
4. Plan for adequate supervision of children by adults. Have name tags for each child, and develop a plan for children if they are separated from the group.
5. Allow the children to set the pace at the museum. Plan follow-up activities to extend museum learning. See Finkelstein, Stearns and Hatcher (1985) for suggestions.

Tips for Parents
Encourage your child to remember and discuss museum experiences. Find opportunities to extend learning. For example, if your child is interested in the arts and crafts activities at the museum, supply newsprint, poster paints and brushes. Keep in mind that you are the perfect person to extend your child's learning in non-school settings.

Tips for Museum Directors
No matter how instructionally effective exhibits and programs may be, they will remain largely underutilized by teachers if the activities are not coordinated with existing required school curricula. Therefore, it is vital for museums to become familiar with state and local curriculum guidelines and requirements.

The Institute of Texan Cultures of San Antonio, for example, has organized many of its programs to meet the new Texas state curriculum requirements. This will ensure greater use of the museum by children and their teachers.

BUILDING BRIDGES

A successful museum program depends upon building bridges among parents, children, teachers and museum personnel. As Galper suggests (see pp. 5-11), what is needed is a holistic approach to learning that involves cooperative planning

among families, schools, and the formal and informal learning environments that exist in the community.

Teachers and parents, for example, need to serve on museum boards to assist in exhibit and program development. Likewise, school boards should include museum exhibit and program directors as consultants to their curriculum committees. Museum staff may wish to initiate a needs assessment to determine the program needs of parents, teachers and children of the community. Also, museum staff may offer community education programs or teacher inservice workshops on ways to effectively use the museum to extend basic learning. Finally, the media should be used to develop communication between the museum and the community. This may be in the form of public service announcements on radio and television, regular columns in the local newspaper, or a joint museum-school newsletter highlighting activities of the museum and ways for parents and teachers to extend their children's learning beyond the classroom.

The Children's Museum of Hartford is a fine example of a school-museum partnership. The local school district's participation rate is 100 percent (*Finch and Bilodeau*, 1985). Part of the museum's budget is appropriated to cover the cost of transportation of the Hartford school children to the museum.

Have you had any fantasies lately? If they included floundering in a sea of 80,000 plastic balls, why not give the Children's Museum of Denver a try? Want to cook up some mouth-watering "vittles"? There's always the Pioneer Farm of Austin, Texas. Had a hankering to go panning for gold? The Oakland Museum is looking for you. In fact, an entire world of wonderful and exciting fantasies is waiting for you . . . and your children. It is just around the corner at your local museum.

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Going to the Zoo
"It's Not Like It Used To Be!"

Thomas N. Turner

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Zoos once seemed to be only places for family summer outings. Zoo visits coupled with a picnic and perhaps amusement park rides were relaxing, fun-filled excursions. Children and parents peered at animals on display and, if they were lucky, they saw these amiable creatures playfully enjoying the crowd and one another.

Today zoo facilities are better and bigger. Animals receive quality care, and they are healthier. Also, the people who work in zoos perceive the zoo not only as a place for enjoyment, but a place for learning.

Most zoo and animal parks have carefully designed "habitats." These may include indigenous vegetation, secluded hiding places and special controlled lighting that simulates the animals' natural environment. The tropical rain forest at the San Diego Zoo is a fine example of this concept. Amusingly, today it is often the curious visitors who are enclosed in cages for their own protection rather than zoo inhabitants. Oh yes, animals—particularly those who seem by nature to be performers and who relate well to people—still perform and people still look; but today children and parents may now touch and feed the animals in many of these inviting settings.

The purpose of this article is threefold: to identify and describe the educational opportunities available through zoological parks, to suggest ways in which experiences can be structured to reinforce basic skills and concepts through zoo visits, and to help educators and parents identify exemplary zoo facilities and programs in their area.

EDUCATIONAL OPPORTUNITIES AT ZOOLOGICAL PARKS

Zoo facilities vary. For example, the San Antonio Zoological Gardens and Aquarium and the Los Angeles Zoo house a broad spectrum of animals. Also, there are specialized facilities that provide one-of-a-kind environments. The marine parks and aquariums such as Sea World of Florida and the John Shedd Aquarium of Chicago are representative of such specialized environments. Still other facilities may be confined to creatures indigenous to a particular locale, like the collection at the Arizona-Sonora Desert Museum.

The number and size of education programs offered through any zoo is, of course, limited by the resources and facilities of that particular park. Most zoos, however, offer programs throughout the year. In large cities such as Los Angeles and Chicago, a "zoomobile" takes live animals to community centers and schools. The ani-

The San Antonio Zoo's "Animal Close-ups" program enables children to learn about the world's unusual animals.

mals are accompanied by a docent or guide, who provides students with timely information about the animals' habits and nature. Also, docents in many communities provide pre-visit zoo orientation programs. The pre-visit program is designed to prepare students for a successful zoo trip (*Moscu and Murphy*, 1980).

Zoological parks also conduct on-site seminars, workshops and summer camps. These programs use a variety of instructional approaches including puppet shows, films, slides, crafts, games and songs. These programs not only deal with animals in the zoo, but they focus on respecting and caring about the animal world in general. An example of this philosophy is San Francisco's "Bug Club" which helps children find, observe and appreciate the insect world.

Another illustration of the broad spectrum of zoo efforts is the San Diego Zoo's "Zoo Creepers." This program features tactile experiences with reptiles, certainly a step beyond most petting zoos. There are programs in zoos across the United States which teach children about survival techniques of animals. Other programs stress survival and safety lessons for children as they come into contact with animals. In

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addition, zoos such as North Carolina's Zoological Park at Asheboro offer special workshops and material for teachers (*Moscu and Murphy*, 1980). These are only a few of the creative outreach programs zoological parks provide children, their families and teachers.

ZOO STUDY IN THE CLASSROOM

Educators and parents can capitalize on children's keen interest in animals to extend basic skills and concepts. The following activities are designed both to reinforce reading, written and oral language, and mapping skills and to support social studies, science, art and math concepts.

Activity I. Three-Dimensional Walking Maps of the Zoo

Young children will enjoy this activity. Use a map of the nearest zoo as a model. The classroom or gym floor may serve as the place for the "walking map." Children and parents should be involved in map construction. Any number of touches can be added—shoebox cages, desk and table-top "environments," toy animals, animal pictures, dioramas, animal pens and signs. After the walking map is completed, students may practice guided tours of their zoo in preparation for a visit. This may also be a follow-up experience if pupils have toured the facility. This activity strengthens pupils' spatial understanding and provides opportunities to practice new vocabulary such as "habitat" and "endangered."

Activity II. Line Maps and "Ideal" Zoo Maps

These are projects for older children. By creating their own zoo maps, children will begin to think about how zoos are planned and arranged. What determines where sites, animals and facilities are located? Who decides and changes placement? How much space do animals need? What changes are contemplated? A discussion of these questions with zoo officials would be stimulating to children and an excellent activity to precede map construction. Students may then map the local zoo or create their own "ideal" zoo, taking into account the considerations shared by zoo personnel. If possible, obtain aerial photographs of the zoo. These are helpful to provide students with an overview of the park's design. If these are not available, the activity can be completed at the site or from memory.

As an on-site activity, have children begin their zoo tour with a world map. Encourage pupils to list each animal and note the geographic areas in which the animal is found. Elements such as animal adaptation, protective coloring and other physical features that enable the animal to survive in particular climates and environments can be identified. This provides children with clues to understand the people of a locale and how both individuals and animals have adapted to their surroundings.

Activity III. Creative Writing About the Zoo

A visit to the zoo will stimulate creative writing opportunities for children of all ages. Writing topics might include: The Most Interesting (best, funniest, happiest, most unusual, strongest) Animals in the Zoo; The Kind of Zoo I Would Like; What It Would Be Like To Work in a Zoo; If Animals Could Talk. Older children may write scripts or narration for silent videotapes and slide shows about zoo

experiences. Younger pupils may write language experience stories and charts as well as individual booklets about their visit.

Additional study skills for older pupils can be reinforced through written and oral reports on topics such as the history of a zoo, how to care for a particular animal and how new animals are found and obtained for the zoo. Information can be found in newspaper articles, zoo magazines and books, trade books about animals (such as those listed at the end of this article) and local histories and discussions with zoo curators.

Activity IV. The Animal Mock Trial

For older pupils, this activity promotes study and research skills and lends itself to dramatic enactment. The class must select an animal from among predators and creatures considered as "pests," or as dangerous or destructive. Children must read extensively about the animal, determining its strengths and liabilities. Select children to serve as defense attorneys and character witnesses for the creature as they demonstrate that the animal is falsely accused or justified in its action. Conversely, identify prosecuting attorneys and witnesses to focus on the destructive qualities of the animal. Class jurors must weigh the evidence and render a verdict on the case.

Activity V. Action for an Endangered Species

Children's natural fascination with animals can make zoos and their inhabitants an excellent resource for long-term projects. For example, children can become involved in the environmental protection and preservation of an endangered species. Pupils can discuss ways in which a species may be threatened with extinction and how to remove the dangers. Animals are endangered by humans who hunt and trap them for sport or profit (e.g., American bison, whale), attempt to intentionally destroy them (e.g., wolf, mountain lion, jaguar), and ravage or change their natural habitat and environment (e.g., African elephant). Children will enjoy projects illustrating the plight of these animals, such as making animal dioramas, environmental murals and animal posters, collages and mobiles. Younger children will benefit from animal pantomimes and puppet shows. Children can use these strategies to make the public aware of the preservation needs of a particular animal.

Activity VI. "Adopt an Animal"

Many zoos have programs in which individuals and groups can "adopt" an animal. This involves paying for its upkeep. In undertaking this project, children will reinforce math skills as they investigate the cost of feeding different animals. Students can then determine fund-raising activities to pay for the sponsorship. This activity provides children with a sense of community spirit and pride as they cooperate in activities to raise funds for their "adopted" zoo friend. Usually a plaque recognizing animal sponsors is placed in the zoo. When children visit, this will provide them with a sense of personal accomplishment and civic responsibility.

The following activities will provide older pupils with opportunities to locate and identify specific information about animals and sharpen their observational and critical thinking skills. The information may be obtained while students are touring the zoo or in follow-up activities when they return to the classroom.

Activity VII. Zoo Scavenger Hunt

Find a creature in the zoo for each of the following items. There may be more than one correct answer.

Name and Location of the Zoo _____

_____ An animal that catches its prey by stealth.
_____ An animal that uses its tail for balance.
_____ A creature that has food imported from another country.
_____ A bird with a forked tail.
_____ An animal that can rotate its head 180 degrees.
_____ An animal that sleeps in the daytime.
_____ An animal that uses camouflage to catch its prey.
_____ An animal that is an endangered species.
_____ An animal with feet suited to digging.
_____ An animal that mates only once in its lifetime.

Activity VIII. Zoo Library Hunt

Use the reference books in the library to find answers to the following questions:

_____ When and where was the first zoological park in the United States?
_____ Name an animal that has not been successfully bred in captivity.
_____ Identify an animal that was once in danger of being extinct.

Find the origin of the following animal names:

_____ hippopotamus   _____ wolverine

_____ rhinoceros   _____ bison

_____ capuchin monkey   _____ alligator

_____ bald eagle   _____ dromedary

Find an animal whose diet would be good for human beings and tell why.

Activity IX. Animal Gram

Have children make an "animal gram" (p. 30). The name or an illustration of an animal is placed in a small circle. As students see other animals that are similar, they add a circle naming the animal.

Finally, teachers will want to discuss the following topics after a zoo visit:

•In general, what did you discover and observe about animals?
•What information did you learn about our zoo that makes it special?
•Did you have a unique or unusual experience with an animal?
•Can you identify fiction and nonfiction books to read and study about animals, zoos and related topics?
•Did the trip stimulate new information you would like to know about animals?

FLYING ANIMALS

LARGE PREDATOR BIRDS

Golden Eagles

Vampire Bats

Hawks

Owls

Other Birds

Zebra — Bald Eagle — Condor

Fox

Skunk

Lion

Wolf

SIMILARLY COLORED ANIMALS

OTHER HUNTING PREDATORS
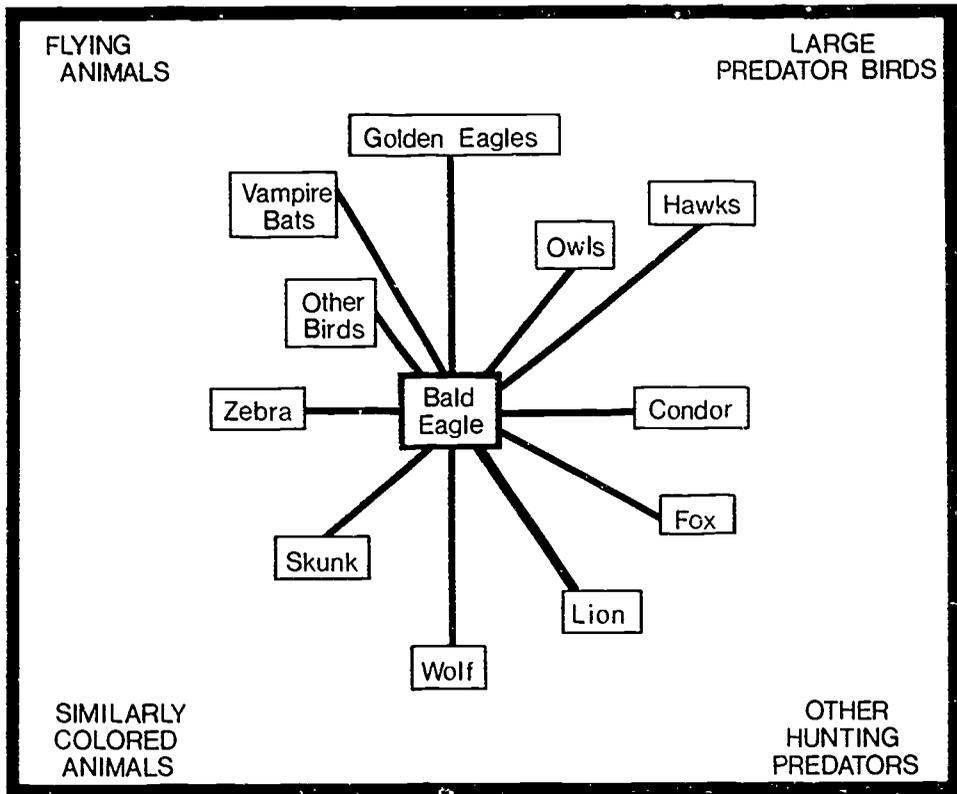
Animal Gram

- Can you identify zoo-sponsored programs and projects in which you would like to become involved?
- What additional investigation would you like to make about zoos and their inhabitants?

Remember, a zoo follow-up is particularly effective if it is immediate, specific and personalized.

Conclusion

Zoos have always been places where individuals could understand and observe animals from their own locale and other areas of the world. They have served as laboratories to study animals and their environments. They have preserved species whose numbers were decreasing or in danger of extinction. Now, best of all, they are even more inviting and interesting because they offer specially designed programs for children, their families and teachers. No, zoos are "not like they used to be"— they are better!

Exemplary Zoological Parks and Aquariums

The American Association of Zoological Parks and Aquariums is an accreditation agency with the purpose of improving zoological parks and the educational opportunities they provide. The agency also gathers and disseminates information and ideas about education programs and other efforts of zoos across the U.S. Teachers and parents will be interested to know that the following institutions in the U.S. and Canada meet the high standards of AAZPA accreditation (Boyd, 1985).

ALABAMA
Birmingham Zoo
ARIZONA
Arizona-Sonora Desert Museum, Tucson
Gene Reid Zoological Park, Tucson
Phoenix Zoo
CALIFORNIA
Living Desert Reserve, Palm Desert
Los Angeles Zoo
Marine World Africa USA, Redwood City
Roeding Park Zoo, Fresno
Sacramento Zoo
San Diego Wild Animal Park
San Diego Zoo
San Francisco Zoological Gardens
Santa Barbara Zoological Gardens
Sea World of San Diego
COLORADO
Cheyenne Mountain Zoological Park,
   Colorado Springs
Denver Zoological Gardens
DISTRICT OF COLUMBIA
National Zoological Park
FLORIDA
Sea World, Orlando
Discovery Island, Buena Vista
HAWAII
Waikiki Aquarium
ILLINOIS
Glen Oak Zoo, Peoria
Lincoln Park Zoological Gardens, Chicago
Miller Park Zoo, Bloomington
John G. Shedd Aquarium, Chicago
INDIANA
Fort Wayne Children's Zoo
Indianapolis Zoo
KANSAS
Sedwick County Zoo, Wichita
Topeka Zoological Park
KENTUCKY
Louisville Zoological Garden
LOUISIANA
Greater Baton Rouge Zoo
Audubon Park and Zoological Garden,
   New Orleans
MARYLAND
Baltimore Zoo
Salisbury Zoological Park
MASSACHUSETTS
New England Aquarium, Boston
MICHIGAN
Binder Park Zoo, Battle Creek
John Ball Zoological Gardens, Grand Rapids

MINNESOTA
Minnesota Zoological Garden, Apple Valley
MISSOURI
St. Louis Zoological Park
NEBRASKA
Henry Dooley Zoo, Omaha
NEW MEXICO
Rio Grande Zoological Park, Albuquerque
NEW YORK
New York Zoological Park, New York City
Buffalo Zoological Gardens
Seneca Park Zoo, Rochester
OHIO
Cincinnati Zoo
Cleveland MetroParks Zoo
Columbus Zoological Gardens
Kings Island Wild Animal Habitat
Sea World, Aurora
Toledo Zoological Gardens
OKLAHOMA
Oklahoma City Zoo
Tulsa Zoological Park
OREGON
Washington Park Zoo, Portland
PENNSYLVANIA
Philadelphia Zoological Garden
Zooamerica at Hershey Park, Hershey
SOUTH CAROLINA
Brookgreen Gardens, Murrells Inlet
Riverbanks Zoological Park, Columbia
TENNESSEE
Knoxville Zoological Park
Memphis Zoological Gardens and Aquarium
TEXAS
El Paso Zoological Park
Ellen Trout Zoo, Lufkin
Fort Worth Zoological Park
Gladys Porter Zoo, Brownsville
San Antonio Zoological Gardens and Aquarium
UTAH
Hogle Zoological Gardens, Salt Lake City
WASHINGTON
Point Defiance Zoo and Aquarium, Tacoma
Seattle Aquarium
Woodland Park Zoological Gardens, Seattle
WISCONSIN
Henry Vilas Park Zoo, Madison
Milwaukee County Zoological Gardens
CANADA
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Vancouver Public Aquarium, British
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The School-Workplace Interface

Extending Basic Learning Through an Ecological Approach

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Children recognize and seek a comprehensive approach to learning and development. Recent studies of brain functioning, for example, confirm the need for individuals to use their entire human system in the acquisition and refinement of ideas and concepts (*Hart*, 1983). Piaget also suggests that individuals use their experiences to construct images in order to manipulate the environment (*Piaget*, 1950).

Initially, children rely on their home learning arrangement for stimulation and access to various learning activities. Building on their home learning success, children seek wider circles to investigate. The successful participation of children in both home and da͏ ͏are settings can influence their desire and confidence to use other learning con͏ ͏ in a productive manner (*Watson, Brown and Swick*, 1983). That is what this article is about—examining how the social contexts of school and work can be used to extend children's basic learning.

The Natural Alliance: School and Work

An ecological view of learning suggests that children are acquiring ideas from all facets of their environment; therefore, what occurs in their environment influences how children function (*Bronfenbrenner*, 1979). For example, the child's concept of work, its function, and the acquisition of needed work skills are acquired through many experiences. The child's first encounter with the concept of work is through various adult role models. How parents "represent" their work experiences can enable children to organize a valid understanding of it (*Kamerman and Hayes*, 1982).

While the home/family ecology is rarely seen as a place of work, it is one of the most important and functional workplaces the child encounters. Parents informally introduce children to many work tasks: food preparation, care of human needs and maintenance of equipment. In addition, work-related skills such as the management of time, the art of cooperation and compromise, and the solving of the critical relationship between work and family involvement are demonstrated. In many cases, parents extend this process by including children in activities like shopping, working in the yard, visiting workplaces and exploring local points of interest. These extending experiences not only stimulate the child's imagination, but also provide the child with a broader understanding of work and of how individuals use

their time, talents and skills to accomplish important vocational tasks. In essence, children acquire an understanding of work by seeing it demonstrated. They role-play various work tasks, and they ask questions about different jobs they have observed (*Kamerman and Hayes*, 1982).

The school and business/industry community have a common goal: to increase children's competence to acquire and use skills to influence their world in a productive manner. While this process begins in the early years, it is clear that it must be supported across the life span and throughout the many social interactions individuals encounter. The beginning place, however, is the home.

The School-Workplace Interface: The Early Childhood Years

It is during the early years that children's interest in their environment is at a maximum. In seeking to understand this environment, children need to actively see, touch, smell and hear their world. Quality early childhood programs respond to this active way of learning by providing a curriculum that is rich in experience and is a blend of the talents of children and adults (*Swick, Brown and Robinson,* 1983). As Goodlad suggests, schools that isolate themselves from their natural surroundings are inadequate places for children and teachers (*Goodlad*, 1983).

The following are examples of effective school-workplace experiences that support children's interest in the community.

1. A visit to a veterinary clinic can introduce children to the concepts of basic animal health care, preventive approaches to animal illnesses, signs of illness, precautions to take in relating to animals and the responsibilities involved in caring for animals. This experience not only contributes to the child's cognitive learning, but also introduces the child to a specific form of community responsibility and caring (*Reed*, 1980).
2. Community theatrical centers provide a natural setting to expand the child's concept of art, theater and music. For example, the Taft Museum of the Arts in Cincinnati, Ohio, offers educational activities for children and also sponsors a visiting "Artist-in-the-Schools Program" (*Silver*, 1978). Through these art awareness experiences, children's ideas of art are broadened and their concepts of play/work are strengthened.
3. Parents can assist the child's exploration of the world of work. One way to initiate this process is to request that parents develop pictorial books about their work and involve their children in this project. Parents may begin this activity by taking their children to the work site and discussing work tasks. Results of these parent-child projects can be shared in the classroom (*Swick*, 1984).

The integration of these family-community experiences into the curriculum can enhance the child's development. Additional activities can include role-playing, language stories, science experiments and artistic representation of observed events. To the untrained observer, all this energy to extend the child's learning may seem exaggerated. This form of intense involvement in the ecology is necessary, however, if children are to comprehend what they have observed. These reinforcing activities make the family-community events a part of the child's experiential world. As Hymes notes, children who are isolated, hurried into "empty" child care cen-

A visit to a veterinary clinic can introduce children to the concept of basic animal health care.

Photo by Jim Pape

ters or processed through sterile, one-dimensional programs will lack the foundation for understanding their world to the fullest (*Hymes*, 1981).

The School-Workplace Interface: Middle and Later Childhood

As children organize a broad understanding of the environment, they seek to examine in detail specific features of their community. Developmentally, children in middle and later childhood seek a synthesis of the abstract and concrete dimensions. Thus they have a need to experience ideas in many different modes and in a variety of settings. Children at this time also seek opportunities to develop their talents (*Erikson*, 1982). Community resources can be used to stimulate these interests.

For example, schools may develop cooperative arts programs with local fine arts groups. Through community resource sharing, many children can explore their musical, dramatic or artistic interests in a way that might not be possible otherwise. While schools can introduce all children to the value of the aesthetic world, community involvement is essential to nurture children's specific interests and talents (*Danzberger and Usden*, 1984). Extended-day school programs are examples of this practice. One such effort is underway in Raleigh, North Carolina, where children have access to many after-school music and art experiences (*Mayesky*, 1979).

Local and global workplace resources can also be used to extend academic learning. Through the use of social and ecological studies, children can both act on and learn from their surroundings. These studies permit students to study literally hundreds of human problems via local agencies and media sources. For example, conceptual issues related to environmental studies can be placed in a reality context by engaging children in learning how local community agencies and industries respond to such problems as pollution, crime, job-related stress and the changing job market (*Swick*, 1981).

The use of resource teachers from business and industry is an excellent way to form a school-work partnership. For example, the New York City Board of Education and the New York University School of Medicine have developed a cooperative

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program in which children can experience science at the medical center. Conversely, the faculty of the center serve as resource teachers in the schools (*Swick*, 1982). Computer firms and other high-technology industries have provided similar services to elementary and middle school programs. In Boston, for example, the "Adopt -a-School Program" plays a vital role in bridging the gap between school and work. In this program, an individual school is "adopted" by a local business and receives valuable intense support in accomplishing school objectives (*Tango*, 1985). This may take the form of employee-provided instructors, computers, video cassettes and video disks. For high school students, the "Adopt-a-School Program" provides apprenticeship programs in banking and electronics and part-time after-school and summer job programs.

A benchmark of excellence for today's schools is the recognition of the interaction of learning arrangements that enable children to acquire a sense of connectedness between school and work and the essential skills pupils must have to be part of this process (*Havighurst*, 1977). The integration of the world of work into curriculum planning is critical if children are to develop a realistic understanding of life. Lessons that require children to extend their learning beyond school will carry more influence than sponsoring isolated or meaningless trips to popular sites in the community. As Pagano suggests, children need to become critical users of their environment. This must be a priority in education (*Pagano*, 1982).

To meet this challenge, middle school teachers may have students examine a career by participating in a "shadow program." A part of the study includes an on-site visit to a local business, industry or service company. Students interview individuals in their favorite vocation about job-related tasks and observe the selected career role model for necessary job skills and competencies. Students then share their understandings of prerequisite career skills needed for the position and are able to provide a job description upon returning to the classroom. This experience is sponsored by local service groups such as the Chamber of Commerce, Lion's Club and Optimists. Through an integration of this school-work experience, students acquire a solid base for further career exploration.

The School-Workplace Interface: Adolescence and Young Adulthood

In the adolescent and young adult, the challenge and stress of developing a meaningful context in which learning and work can be linked are intense (*Coleman*, 1979). This is an entrance stage of life. The adolescent has a need to see the self as emerging to be a part of the community. In order for this to happen, schools and community workplaces must join forces to establish a system that supports the young person's full development (*Havighurst*, 1977). The use of both existing vocational education practices and new internship programs as well as innovative industry-sponsored work/skills projects enables young people to become capable members of the community.

The use of "match projects" is an effective means of fostering career development in adolescents. The "match projects" are now being used in many vocational education programs as a result of federally sponsored career exploration projects (*Taggart and Brack*, 1979). In this approach, students skilled in specific content areas are matched with careers emphasizing these skills. Students who exhibit success in science, for example, are matched with career areas such as medicine, research, technology and communications. Students with word processing skills are provided

opportunities to investigate careers in office management and related information-systems industries. Similarly, pupils with an interest in life science are matched with careers in environmental studies. In this way, students can experience the natural relationship between learning and the world of work (*Skobjak*, 1979).

In job placement programs, students experience firsthand the daily demands of work. These experiences are valuable not only for the work experience they provide, but also for the contact students receive with effective adult role models. By learning and working within the community, students encounter positive adults who model the personal skills essential for effective citizenship and productive work (*Coleman*, 1979).

In addition, there are other cooperative learning opportunities between school and business groups. Harbaugh (1985) suggests schools and communities can:

1. Share trained personnel. For example, technology firms can share personnel with high schools for instructional use in science, mathematics, computers and information systems management. In "partnership" projects, many schools share teachers with industry, especially during summer periods.
2. Share equipment and facilities. This may be accomplished through cooperative buying and leasing of equipment. Students need the latest technology in the form of computers, scientific equipment and vocational tools in order to be skilled and productive citizens.
3. Share "brain power." Individuals with expertise can serve as consultants, as resource teachers, and as members of boards and school advisory panels. Young people need to see adults in teaming situations.

Adults as Influencers of the Child's Ecology: Linking School and Work

Adults shape the ecology in which children and young people develop. Decisions regarding the nature of schooling, workplace participation, societal priorities and the substance of adult-child interactions are made by adults. Bronfenbrenner suggests that societal systems that aim to actualize the human potential of children and young people must orchestrate the environment to provide many and varied interchanges among children and adults. Human systems that place a priority on the involvement of adults and children in learning about the environment, and how they influence it for the better, are certain to have harmonious influence on society as a whole (*Bronfenbrenner*, 1979). In the final analysis, school, work and play are all parts of the humanization process that we depend upon for becoming influential members of the human system. Thus it is imperative that all facets of the learning system become a part of the child's basic education (*Eisner*, 1978).

Guidelines for Planning School-Workplace Experiences

Educational planners will want to remember the following principles when designing programs to maximize the school-workplace experience for students. Basic learning can only be extended if we recognize that:

1. Learning is a process that requires the use of the total human sensory system and the total human ecology. The recognition that children aim by experiencing ideas in a multi-sensory manner and by interacting with events

and concepts in different settings is essential in the design of viable school-community programs.

2. Learning is a process in which inquiry is enhanced through the cooperative sharing of talents, ideas, skills and resources between the school and community. The development of work skills is best achieved when school and workplace share their resources and talents.

3. Finally, learning is a continuous process that occurs throughout life and across the social-economic spectrum. Specialized skills are acquired in schools and workplaces. These skills will always be in need of continual refinement.

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Community Service Groups Enhance Learning

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Recently I spoke at my high school's annual alumnae meeting in Unadilla, New York. I was glad for this opportunity to say "Thank you" to the community in which I had resided from 1st grade through high school graduation. Thanks were due the teachers for working with me and my classmates on theater productions, musical events, fund-raising activities, community service projects and just plain homework; the community service organizations for offering programs of nonformal learning and recreation; the business owners for contributing to the annual Halloween party and various community cultural events; and the churches for providing summer programs and other supportive services. Thanks were also due my friends' parents for many snacks, dinners and "overnights" at their homes and my own parents and family for continuous love and support.

In so many ways, the people of Unadilla were helpful as I grew up in this small town. Was I too nostalgic on this occasion, reminiscing about a past that doesn't exist in today's world? I don't think so. My feelings were well grounded in current writings of child psychologists and learning theorists on the needs of all children as they learn and grow.

According to Urie Bronfenbrenner (1981), children need enduring relationships with caring adults who spend time doing meaningful things with them. Burton White (1982) says children need people who speak with them; they need praise for small everyday events and opportunities to explore their environment. Jean Piaget contends that children need time to act upon their physical world and to interact in their social world.

Today there is increasing recognition that all of the separate influences upon a child's life are interdependent. Because the total environment influences a child's development, there must be planned cooperative interaction among those parts of society having great influence on a child's life—the family, the school and the community.

Some of the most important influences in the lives of children are the experiences they gain by sharing and learning together with peers and adults in the informal environments of community service groups. Community service groups can form a strong link between formal education and learning in the home, and thereby assist in promoting a developmental approach to education today.

Community Service Groups

Community service groups include youth-serving agencies, nonprofit organizations, museums, theater groups and church-related organizations. Well-known groups include Girl Scouts, Boy Scouts, Girls Clubs, Boys Clubs, YMCA, YWCA, Red Cross, Big Brothers/Big Sisters and Camp Fire, Inc. These organizations provide programs at the national level that are adapted to meet specific local community needs. In addition, new grassroots community service groups like "Playing To Win" and the Jackson Heights Community Development Corporation have emerged. Designed at the local level, they meet specific current neighborhood and community needs in areas like East Harlem.

These groups provide an important link between family care and formal education. They encourage family participation in planning and operation. Often they supply materials and training to help parents become more effective teachers of their own children. Many work with school systems to offer supplementary programming or alternative school curricula.

Community service programs have many advantages. Because attendance and curriculum content are not required by law, nonformal programs have the potential to provide a learning environment quite different from that of formal education. Young people join voluntarily and their intrinsic motivation to learn can be very high. They may eagerly learn content in the nonformal environment that seemed difficult or uninteresting in the formal school setting.

Nonformal programs offer greater flexibility in sequence and scope than most approved curriculum, thus appealing to the current interests of children. Often the learners have an opportunity for active involvement in the learning process through responsibilities for planning the activities and evaluating the results. Activities have immediate as well as long-range interest and the program can readily address the emotional, intellectual and physical needs in a holistic manner. In addition, supportive community volunteers and consultants provide positive role models and supplement the role of parents in the learning process.

Learning Skills for Daily Living

Skills for daily living and the decisions that young children are required to make have increased in complexity. Today self-sufficiency is required in an environment that is unpredictable and potentially hostile At the same time, the supportive structures for learning these skills are being taxed. Statistics indicate that more children must take care of themselves before and after school as mothers enter the workforce. The number of families with a single head of household is growing. Children are assuming responsibilities for their own well-being and that of other members of their family. Once these responsibilities were sustained by adults in the extended family or by small cohesive communities in which everyone knew and assisted one another.

The "I Can Do It" program of Camp Fire, Inc., and the "Prepare for Today" program of Boy Scouts of America are examples of two community service programs that develop skills for daily living. "Prepare for Today" enables young children to care for themselves when they are alone, to help their families deal with problems, to take action before a problem becomes an emergency and to care for younger brothers and sisters. In booklet form, the program is designed for community, church or education groups, and activities must be completed with an adult.

For example, children develop a list of emergency phone numbers. They learn how to behave when a stranger comes to the door and they are alone. They learn how to plan, select and prepare a healthful meal for themselves and their families. They learn about electric wiring, water pipes, locks, windows and stoves in their homes so that they can act wisely in an emergency. They learn about their neighborhoods, their individual locations, services and dangers. They practice basic skills in entertaining and caring for a younger child when adults are not present.

The Camp Fire "I Can Do It" program is a series of short courses designed to teach children self-help skills. Each course has a strong parental component. Recently, when a parent fell down a flight of stairs and was unable to move, one child who had completed "I Can Do It" contacted emergency help and comforted the parent until help arrived. The child credited the Camp Fire program with teaching her how to handle the emergency.

Another effective community service program is Big Brothers/Big Sisters of America. This organization provides an opportunity for one-to-one sharing between an adult and a child. In this program, the direction for learning depends upon the needs of the child and the activities that the adult and child agree to share, but the purpose is to provide the child with a mature and caring role model.

Planning for a Healthy Life

As a society we are more concerned with our physical and mental health than at any other time in history. Threats of nuclear destruction, coupled with environmental hazards from pollution and stressful work and school environments, cause great concern. Traditionally, health courses have been taught in school; but many community service groups are providing health education in relaxed social environments, working closely with parents and teachers to offer information and guidance that correspond with family beliefs and attitudes.

Programs in health awareness and health care through exercise, good diet, and preventive health and medical care are offered by many youth-serving organizations. For example, "The Body Works," a Boys Clubs of America program, is designed to help children understand their health care needs and to prevent health problems. Girls Clubs offer health education programs and most provide sex education. The Girl Scouts of the U.S.A. offers programs relating to both physical and mental well-being. In addition, the Boy Scouts of America's "Youth's Frontier: Making Ethical Decisions" is designed to help young people with their moral and ethical development. It sets a framework in which health-related ethical questions can be addressed.

Finally, the Red Cross offers "Basic Aid Training" (BAT), an introduction to emergency procedures for 4th- and 5th-grade students. The Blood Education Series has four booklets to help children learn about the function of blood in the body. In all these health programs, parents are encouraged to work with their children and to adapt the materials to meet family needs, especially in the areas of human sexuality.

Planning a Career

Learning about oneself and what one wants to do in life is an important aspect of growing up. Many youth-serving organizations have programs that help young peo-

ple prepare for future careers. Although their approaches to career development are varied, most include components of self-understanding and opportunities to broaden knowledge about careers with an emphasis on what it means to be a part of the world of work. Also, some service groups provide work experience. For example, "Careers To Explore" is the Girl Scout program for preadolescents ages 7-12; "From Dreams to Reality" is designed for girls 13-18 years old. "Choices: Career Aspirations" is the Girls Club program. Both Girls Clubs and Girl Scouts encourage girls to expand their career choices to areas that were once male-dominated.

In Boy Scouts, adolescents select an area of interest and meet regularly at the workplace with professionals. They learn the academic and skill-related requirements of the career, and they develop a personal relationship with an effective career model.

Boys Clubs of America offers programs to develop positive attitudes toward careers and the world of work. The programs emphasize skills for obtaining and keeping a job. Short-term employment opportunities at the club are provided. Also, the Boys Clubs cooperate with community businesses to provide additional community work experiences. Similarly, the Chambers of Commerce and Jaycees sponsor career development and work-related programs.

Learning To Live Together in a Global World

In a world that is increasingly interdependent, it is vital to understand and appreciate people whose cultures and languages are different from one's own. As a result, young people need to learn how to address world issues in positive, effective ways. Community service groups and organizations are contributing to global understanding and peaceful coexistence. For example, the Camp Fire Peace Program is designed for elementary and junior high students. Young children explore peacemaking at a personal level, expanding it to their families and communities. Teens study war and nuclear issues. While Camp Fire does not support a single solution to nuclear threat, it encourages young people and adults to become informed citizens and to act on their beliefs.

Two Girl Scout projects help girls broaden their global perspectives. In the "Global Awareness Project," girls are encouraged to think globally and to act locally; i.e., to take action on global issues that affect their own community by participating in activities focusing on health care, hunger awareness, literacy, cultural heritage and conservation of natural resources. A second project focuses on promoting pluralism through multicultural activities that enable girls to understand and appreciate the diverse cultures of their community.

Through international exchange projects, Girl Guides and Girl Scouts from different countries come to America under the auspices of the Girl Scouts of the U.S.A. These visitors share their culture and traditions. At age 14 U.S. Girl Scouts are eligible to participate in scout projects in 108 countries. Upon their return from abroad, these scouts share their international experiences with the community through presentations, small group meetings and personal interviews.

Youth for Understanding and the American Field Service provide additional opportunities for American high school students to live and study abroad. International service groups like Rotary provide similar programs. These exchanges are designed to strengthen global understanding and to help students appreciate diverse lifestyles.

*The Girls Clubs of America sponsors
Operation SMART (Science, Math and
Relevant Technology) to interest
girls in the use of math,
science and computers.*

Courtesy of Girls Clubs of America

Learning To Learn

Community programs not only teach skills for living, they also reinforce and supplement academic training. Two examples are "Playing To Win, Inc.," and the Jackson Heights Community Development Corporation. Founded by Antonia Stone, "Playing To Win" is located in the basement of the Washington House public project in East Harlem. It is dedicated exclusively to promoting computer use for education of minorities. Because academics are presented in game format, students play against the machine, and they are not embarrassed by competition from other classmates or humiliated by incorrect answers. This program originally began with young people considered "incorrigible" by the public school system It has expanded to serve students in after-school programs, day care centers, Jobs for Youth, and housebound women in the community. It is a model for other communities in linking the educational needs of the community to the public school system

The Jackson Heights Community Development Corporation operates two free youth programs. At I.S. 145, an after-school program for neighborhood youths age 7-14 features tutorial/remedial help in math and reading, beginning computer training and recreation. At I.S. 227, a beginning computer literacy course is open to youths ages 11-21.

Boys Clubs of America encourages academic education through the innovative "Power Points" program. Every Tuesday and Thursday from 3:30 to 5:00 p.m., members of the Valparaiso Unit of the Porter County Boys Club in Indiana score big points—not the kind that win games, but the kind that build better futures. Members learn and practice basic education skills. The motivation behind "Power

Points" is the power sheets that members eagerly complete. Power sheets reinforce basic age-appropriate skills in reading, spelling, arithmetic and social studies. Teachers serve as consultants in the design of the activities. For each correct answer, members earn and accumulate power points and then cash them in for prizes. For example, 500 points earn a free admission to a Power Points pizza party, 1,000 points earn a club T-shirt, and 2,000 points entitle recipients to a special trophy presented at the annual recognition banquet.

Operation SMART (Science, Math and Relevant Technology) is an after-school project of the Girls Clubs of America. The purpose is to interest girls in math and science and computer use. For example, girls in Syracuse, New York, made their own radios. In Pinellas County, Florida, Girls Club members constructed and launched a small parachute, and they built a human skeleton with straws and thread. A Homework Hotline is part of the comprehensive tutoring program of the Girls Club of San Diego, California. When girls cannot come to the club, they can call the Homework Hotline for assistance with academic problems.

Summary

Community service organizations play an important role in contributing to the education and development of children. Although their programs are broad in scope, informal in nature and voluntary in participation, they include vital skills in daily living, career development and health information, as well as computer education and supplemental academic programming. Best of all, these groups provide children with a network of support among parents, teachers and community residents, and they encourage a developmental approach to learning.

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Oral History

Leading the Way to Community-Based Learning

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Local communities are rich with opportunities to extend learning beyond the school. Using community resources, students can listen to the personal experiences and memories of older citizens, study public and private records or visit historic sites. Nevertheless, while the community is an arena to enhance and expand student learning, it unfortunately remains largely untapped by educators.

A classroom oral history project is one way to take students beyond the classroom to learn about and from the community. Oral history projects create an added dimension to school curriculum and provide students with practical, real-life experiences. Student learning that cannot be achieved within school walls occurs.

The purpose of this article, therefore, is first to define oral history as a workable method for basic learning outside the classroom. A second purpose is to discuss how a classroom oral history project strengthens students' basic skills while they acquire new knowledge. A third purpose is to describe an oral history project from inception to final product and to note community resources that enable students to achieve oral history goals.

What Is Oral History?

Oral history is an established research procedure used by practicing historians to gather and preserve memories and knowledge of living people about the past (*Sitton, Mehaffy and Davis*, 1983). Oral histories allow individuals to experience an affective dimension of history, to understand vicariously what life was like in the past by interviewing long-time residents of the community. Textbooks, on the other hand, provide the sequencing of dates, names, relationships and causes of past events.

A classroom oral history project is chatacterized by two key elements. First, oral history is an *active* approach to the study of the past. Students are working historians engaged in live research. Second, an oral history project requires students to pursue information *outside* the school setting. In other words, the activities needed to complete a classroom project send students into their home communities to personally research topics.

Oral history projects motivate students to study their family, ethnic and community heritages. At the same time, students gain respect and appreciation for the people with whom they live. Projects also teach, develop and reinforce academic and interpersonal skills. In the process, students develop something of real value: an understanding of self and a renewed sense of community allegiance.

Ultimately, most oral history projects produce a historiography that preserves the knowledge and heritage of the local community. Historiographies become biographies, explanatory compositions, political narratives or directions to complete a task. The format for these final products varies. Some student projects culminate in radio broadcasts; others develop a collection of taped interviews for local libraries. A newspaper series, a magazine and a video program are additional alternatives. Most classroom projects, however, produce a student-designed magazine based on findings from taped interviews with local residents.

The most famous classroom oral history publication, *Foxfire*, records the folklife and culture of Appalachian Georgia (*Wigginton*, 1975). The *Foxfire* project began in 1967 when Eliot Wigginton started an oral history project to preserve the area's heritage. Wigginton's high school English and journalism classes design, write, publish and market the *Foxfire* magazines. Today there are over 200 similar student-designed projects in the United States and other countries.

How Are Basic Skills Strengthened Through Oral History Projects?

The current emphasis on basic skills poses no conflict for teachers who decide to conduct an oral history project. On the contrary, these projects provide a curricular framework for language art skills, math skills and historical understandings (*Hatcher and Olson*, 1983).

Students expand and strengthen their reading and research abilities as they gather background information needed to conduct a successful project. They must read extensively, locate specific information, take notes and research topics from reference materials and community sources. For example, students sharpen reading and research skills by investigating old letters, souvenirs and scrapbooks. In addition, they examine school yearbooks, almanacs, old newspapers, courthouse documents, historical society archives and church records.

Oral communication and interpersonal skills are also an integral part of an oral history project. As students use both the community and school as a classroom, they interact, compromise, cooperate and deal with a wide range of people. In fact, the interview itself is a complicated interactive process that requires both speaking and listening skills. Students must identify citizens to be interviewed, make arrangements for the interviews and follow up promising leads that surface during the interviews. Oral communication skills are further strengthened as students work with others. For instance, students negotiate prices, learn photographic strategies and create layouts for a printer. These activities sharpen students' speaking and listening abilities.

Written language skills that include spelling, grammar and composition are also

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refined. Producing a journal like *Foxfire* gives students a real audience and, there-fore, an urgent reason to use language skillfully to communicate their findings. For example, students work through the writing process, drafting, revising, restructur-ing and editing as they prepare transcribed interviews for print. Compositions must be coherently organized and cohesively written. Correct spelling and grammatical precision become paramount as the final editing occurs. Writing skills are honed for a real audience.

In an oral history project, math and computation abilities are inherent in the publication process. Students measure precisely to paste up camera-ready dummy sheets. They keep a ledger of monies to reflect credits and debits. They determine a budget for their activities. For example, they must estimate travel expenses, cost of film, processing and printing expenses. These are real-life math applications in the form of measuring, estimating and balancing accounts. Younger students will need greater teacher assistance with these activities, but they should be encouraged to assume as much responsibility as possible for their projects.

What Happens in a Classroom Oral History Project?

Students and teachers must first determine an era, event or topic on which to focus. Fortunately, local communities have a wealth of stimuli to prompt student interest. For example, students may examine historical markers, plaques or cornerstones. Pupils may investigate eras in the town's history or significant per-sons in the town's development. Museum displays offer further topics to be studied. Local newspapers, particularly in smaller communities, have columns entitled "Twenty-five Years Ago" or "Fifty Years Ago" that suggest subjects students may investigate.

After the topic is selected, students research the subject. Textbooks and reference books are in-school sources, but the community offers old diaries, ledgers, letters and other memorabilia from which students gain a broader perspective on the subject Pupils need to research the topic *before* interviewing local citizens. The research enables students to ask pertinent and productive questions. For example, students might investigate how early German settlers adapted recipes from Europe to the flora and fauna available in the Texas hill country. To ask useful questions, one would need to know som thing about traditional German food as well as South Texas plants and animals.

Next, students identify local citizens who have information about the era, event or topic of study. An interivew appointment is secured. Then the students' task is to compose interview questions that will encourage the interviewees to talk freely. Broad, open-ended questions are best. For example, "What favorite memories do you have of your classmates and school?" or "Tell me how the families in your town celebrated special holidays when you were growing up." After the interview, students must validate what they have learned with additional resources and other interviews.

If publishing an oral history magazine is a project goal, students must transcribe the interview tape. This process is time-consuming but more manageable if two stu-dents work together. Parent volunteers can assist younger pupils. The transcription is similar to the first draft of an essay—it will need extensive editing, revising and polishing. Students will rearrange, restructure and discard content until the compo-sition is ready for final proofing.

The actual printing of the magazine offers many opportunities for students to gain

an understanding of the printing process. Many printers will work directly with students and teach them the steps to prepare camera-ready copy. Pupils can learn to lay out the journal by preparing dummy sheets exactly as they will be photographed. For projects on a limited budget, a mimeographed magazine produced through the school office is an alternative. Photocopying is another inexpensive possibility.

Marketing the magazine is the final step in an oral history project. Students arrange for sales by soliciting subscriptions or selling the publications door to door. Most communities are very supportive of student projects and are eager to purchase a tangible record of some facet of their local history and culture.

Conclusion

By participating in a classroom oral history project, students learn about the people and events that shaped their community. They preserve the unique and valuable folklife of the locale. The oral history process provides a source of new knowledge and skills, of excitement and wonder, and of deep appreciation for the worth and wellspring of community life (Olson and Hatcher, 1982).

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Learning in Communities with Limited Resources

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Small towns with populations under 2,500 and rural areas often have a sense of isolation. Teachers generally have few museums, concert halls and noteworthy cultural facilities nearby which can serve as resources for field trips and classroom activities. The sense of isolation and the resultant perception of few resources, however, cannot be justified. The resources are there, but they are not so obvious as those of the large city. A museum built of marble and concrete and filling two city blocks is impossible to miss, but a heritage trunk filled with antique clothes for children to try on is easy to overlook. Both the museum and the trunk hold great potential for extending learning beyond school walls and for bringing the community into children's school day.

The level of effort and imagination required to remove the cultural confines of a small town or rural area is great, but so are the rewards. In fact, the teacher's efforts to involve the community in children's schooling often results in warm, widespread support (and at least one photograph and accompanying article in the local newspaper). These efforts also lighten the sense of isolation as the far-ranging interests of community residents are included in the school's curriculum.

PEOPLE AS RESOURCES TO EXTEND LEARNING

People are the principal resources of the rural and small-town school. Teachers need to identify the wealth of experience represented by community residents, and capitalize on this for the benefit of their students. Small towns and rural communities should be thought of as part of a larger community, the county. The county extension agency, the road commission, the sheriff's department, the department of wildlife and fisheries, the library, as well as local businesses, are among the county resources available to assist educators.

McCain and Nelson (1981) developed an inventory of over 100 kinds of readily available community resources for rural areas and small towns. The inventory identifies resource people and organizations that educators often overlook, for example, county surveyors, soil conservation managers, local historical society personnel, antique collectors, school board members, justices of the peace, legal counsel for industries, union representatives, tribal leaders and political party personnel. These individuals can serve as classroom guest speakers or as the focus of field trips. They may also have personal interests that would be valuable to supplement

the classroom curriculum. Interesting hobbies, talents and memories of community residents can be discovered by the children and teachers once contact is established. For example, in an informal discussion with the game warden, students may learn that she is the great granddaughter of early pioneers in the area, and that she possesses photographs of early homesteads and actual cooking utensils used by her great grandmother. As resources from the community are integrated into the school's curriculum, the occupational, personal and recreational interests of community residents can be shared. This experience stimulates children's understanding of ways individuals contribute their personal and professional interests to serve others.

MODEL PROGRAMS TO EXTEND LEARNING IN SMALL COMMUNITIES

Businesses can initiate programs that provide valuable learning opportunities for children. For example, Taggert (1983) describes the school adoption program initiated by Zions First National Bank in Utah. The bank "adopted" a rural school with a population of 11 children. It supported a Christmas program by paying for materials to make ornaments and for a tree-lighting party for the townspeople. Correspondence and telephone calls established a friendship between bank employees and the school children. Later in the year, the bank sponsored a trip to Salt Lake City for the students.

Although it is difficult for rural schools to make contact with businesses located in distant cities, this can be arranged through the effort of several schools in a county, through individuals who have personal contacts with businesses in larger cities or the State Department of Education.

Local businesses can also adopt a school. For example, a local restaurant, farm cooperative or manufacturing plant may arrange for children to trick-or-treat on Halloween at the sponsor's business. The company may endorse a valentine-making event or sponsor a paper airplane flying contest. Construction supplies may be donated by the business, and employees asked to judge entries or help with delivery of completed products for display at a nursing home, local grocery store or library. The sponsorship of students' artistic and written works is another possibility. Suggestions for events and activities should initially come from the school but as the school/business relationship develops, the sponsoring firm should become the principal initiator.

Capitalizing on the vocational interests and talents of individuals in the community and initiating local school adoption programs are two means of providing valuable learning experiences for students. Teachers can also extend the basic learning of pupils through other activities that originate in the classroom but quickly move beyond the confines of the school.

COMMUNITY PLACES, OBJECTS AND ACTIVITIES
TO EXTEND LEARNING

Historical Sites

Teachers can use historical sites within the local community as resources to extend children's learning. For example, pupils can identify and study the following sites: public buildings, businesses, old homes, battlefields, Indian mounds, abandoned schoolhouses, old depots, ferries, or places where famous individuals stayed or events occurred. The site need not be extremely old, but it should have historical, artistic or cultural value. For example, children will find a gas station or grocery

store *circa* the late 1940s interesting because the structure contains clues about what life was like when their grandparents were young adults.

Once these resources have been identified, field trips can be arranged so that students may examine, photograph and sketch the building or site (*Weible*, 1984). A map of the site can be drawn. Children can write articles for the local newspaper and church bulletins requesting information about the place. This experience provides opportunities to strengthen children's writing skills as well as additional research materials and photographs about the site. As a final product of the research, a school or public library resource file can be developed from the children's photographs, drawings and writings. These materials can then be shared with other children as they learn about their community.

If several sites have been investigated by the children, students can make a "historical site" map. The map and a brief description can be distributed to interested individuals in the community under the sponsorship of the Chamber of Commerce or local civic clubs. This experience provides students with a sense of contributing something of worth to their community. It also nurtures a sense of pride in the unique features of their community.

Heritage Trunks

In the past, heritage trunks have been developed by museums and state and local departments of education to extend children's learning. The West Virginia State Department of Education has conveniently placed heritage trunks in regional education service centers throughout the state for classroom use. Old trunks are filled with antique clothing for children to try on and use in role-playing. Old letters, a dulcimer and traditional song are among other items included in the trunks.

Museums also lend heritage trunks. The Institute of Texan Cultures in San Antonio offers a pioneer trunk containing a washboard, quilt, pioneer bonnet and dress, coffee pot, lye soap and other artifacts representative of early Texan frontier life. The museum has heritage trunks about Indian and cowboy life, ethnic holidays, medicine in early Texas, etc. Teachers in rural settings will want to discover if similar resources are available in their locale to extend student learning. Other sources of heritage trunks include State Humanities Councils and local historical societies.

With teacher guidance, children can develop their own heritage trunks. This is an exciting project. The students can determine the period of interest and collect artifacts representative of the social milieu and times. Periods to examine can be a. specific as the 1920s or the 1940s. Children can be encouraged to advertise for heritage items through the local newspaper and radio st... on. Common household utensils can be considered as well as old postcards, Valentine's Day cards, newspapers and magazines, photographs, records, clothing, toys, etc. Tape recorded interviews with local residents can be a part of the trunk's contents. The tape recordings can describe childhood memories of activities on Thanksgiving or other special days, the end of World War II or other historically significant events, the construction of an important building, and additional subjects of interest to children.

Today Trunks

The "today trunk" is an interesting version of the heritage trunk. This activity focuses on the current popular culture. Children can include favorite recordings, comic books, posters, toys and clothing items that are now in fashion. These objects

Antique clothing from heritage trunks can be useful to help children understand lifestyles of the past.

can be gathered from home and the community at large. High school students, the arbiters of popular culture, can be of assistance in the activity. This project provides opportunities for students to contrast the lifestyles and influences of today with those of the past. Pupils can begin to recognize the impact of technology on their way of living.

Heritage Slide Set

Slide sets can extend basic learning. Many items are easily damaged or too valuable to be placed in heritage or today trunks. These items, however, can be photographed and shared in a slide/tape show. A written script, a list of related resource people and a bibliography of references can accompany the slide set. For

example, Sunal (1982) designed a heritage slide/tape show for children which highlights the artistry of Appalachian families. This set includes examples of handmade baskets, quilts, pottery and brickwork. The slide set makes it possible to share these beautiful resources with students.

Although teachers can make heritage slide sets for classroom use, a student-designed and completed project has greater educational value. Students have opportunities to exercise skills in researching, writing, photographing, organizing and sharing their findings. There are many topics from which children may choose: Early Life in Our Community, Household Items and Toys of Long Ago, Restored Structures and Their History, or Special Residents and Their Contributions to My Town. Multiple copies of the final slide/tape set can be made and placed in the school or public library for others to enjoy.

Community Profile

The creation of a community profile is another way to extend children's learning. Weible (1984, p. 14) suggests that a community profile should be a compilation of accurate, interesting and informational material portraying people, places and events that have shaped the identity and personality of an area. The profile can have a chronological format or it can focus on case studies that highlight life stories, major events or fondly remembered experiences of community residents.

The first step in this process is to have students determine important events and individuals who have influenced the community. Important events might include the advent of the railroad in the community, the discovery of oil or coal or another economic resource, and the incorporation of the town. Important individuals might include founders, the first mayor, business and community leaders, even infamous residents who added to the character of the town. The profile can include both current and deceased residents. Research for this activity can be based on personal interviews and information obtained from old newspapers and town records. The community profile can be shared in a series of student-written articles for the newspaper or in the form of a scrapbook collection for the library. Children find this a fascinating experience that encourages them to develop a historical appreciation of the events and people who shaped their community.

Community Days

Community days in rural areas serve as a culminating activity to community-related studies. They can also be held at regular intervals to take advantage of seasonal activities, both traditional and modern. This culminating activity refines student learning by requiring pupils to synthesize the information they have discussed about their community in order to share it with residents. An Autumn Community Day, for example, can feature traditional activities such as bobbing for apples, gathering pumpkins and squash from the fields, making caramel corn, and listening to traditional ghost stories told by community residents. The ghost stories can be taped by students and included in a heritage trunk or sold as a student money-making project during Autumn Days. Modern events, such as the autumn seafood and oystering festivals along Maryland's Chesapeake Bay, might be the focus of the Community Day. Students can prepare a booklet detailing the history of oystering in the area or compile a collection of favorite oyster recipes to share with Community Day participants.

RESOURCES FOR RURAL TEACHERS

Loustaunau (1975) suggests the foremost problem of rural and small schools is providing an adequate curriculum for children. She suggests several schools cooperate through sharing services. One way to share services is through cooperative development of a community resources handbook. The handbook can be developed by the local school system or by the State Department of Education. Two examples of state handbooks are the Nebraska Department of Education's *School and Community Involvement* (Conway, 1981) and the West Virginia Department of Education's *Handbook of Appalachian Materials* (Anderson, Phillips and Plumley, 1972). Athough quite different in conception and content, both handbooks serve as excellent models for identifying resources in rural settings.

Conclusion

Rural and small-town children have access to the world's culture through the residents and resources of their community. Teachers and administrators can bring the community into the classroom to extend basic learning. Conversely, children can move from the classroom into the community for this purpose. In the process, students will discover that individuals of all ages have knowledge and wisdom to share. They will come to appreciate the continuity of life from one generation to the next. Students will have opportunities to observe firsthand the impact of technology on lifestyles, past and present. Finally, they will develop a sense of community and an appreciation of their heritage.

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Learning Through Serving

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One experience I'll never forget was on Valentine's Day. I went to work and the teacher, Elizabeth, was talking about love. And then one little girl came up to me and said, "I love you," and hugged me. Then of course all the kids did it too. I'll never forget that day because on that day those kids told me, through those three words, that I was doing a good job. (Veronica, Grade 8, 1985)

All of us—whether preschool child, college student, parent or worker—need to know and have others affirm that we are indeed "doing a good job." Perhaps there is no time when that assurance is more sorely needed than in early adolescence. Too often it appears that the plaudits and recognition go to the athlete or the academically successful. Yet, relatively few youngsters in the vulnerable middle-school years will excel in these areas. "Despite motivation and persistence, only a small number can compose sonatas, discover new particles, or predict next year's gross national product," Jerome Kagan reminds us. He suggests that to recognize and reward ". s of honesty, cooperation, and nurturance" is not only desirable but will promote learning and individual development (*Kagan*, 1981, p. 163). Programs of youth participation in the community are based on this premise.

What Veronica, a "Child Care Helper" in a New York inner-city school, experienced on Valentine's Day was more than the glow of being appreciated. She learned that an investment of self and effort brings enduring rewards. Veronica is far from unique. In rural communities and urban areas, in suburbs and small towns, young people emerging from childhood are exploring their world and their values, sharing their skills and enthusiasm, caring and contributing through youth participation programs in their community. The "Early Adolescent Helper Program," sponsor of the "Child Care Helper Program" in Veronica's school, is based at the Center for Advanced Study in Education, a division of the Graduate School and University Center at the City University of New York. Since 1982, more than 300 New York City youngsters ages 11 to 14 have participated in this innovative program.

DEVELOPMENTAL NEEDS OF ADOLESCENTS

Until recently, society has overlooked the needs of early adolescents—the 10- to 14-year-olds. Yet, these youngsters are at a critical period in their development. Changing and growing more rapidly than at any time since the first two years of

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life, volatile and unsure of themselves, they are at the same time striving with new energy and purpose to define who they are. The characteristics of this age group create unique needs, different from those of the childhood from which they are emerging and from those of later adolescence. Early adolescents need:

- To test and discover new skills.
- To develop a sense of competence, an antidote to the self-doubt of this period.
- To be free to take part in the world of adults, to move away from the isolation of childish roles.
- To know that they can speak and be heard, that they can make a difference.
- To test a developing morality and value structure in authentic situations.
- To participate in projects with tangible or visible outcomes.
- To share in making decisions within appropriate parameters.
- To experience support and sensitive guidance from adults who appreciate their problems and their promise. (*Schine, Harrington and Shoup*, 1981, pp. 4-5)

While these developmental needs have become pressing, communities have been faced with new and urgent needs for services and for new ways of counteracting depersonalization and alienation. Happily for young people and their communities, we have come to recognize the congruence of these needs. Young adolescents welcome the opportunity to take on adult roles, to make a real contribution. Communities in turn welcome their energy, their curiosity and their capacity for real accomplishment—a capacity too often unrecognized. Serving in day care centers, communicating with a depressed patient in a convalescent home, designing a nature trail in the park, guiding strangers in a new neighborhood and participating in literally hundreds of other projects, adolescents are discovering and practicing skills they did not realize they possessed.

We are told that the 1960s gave us the activist generation and the 1970s the "Me" generation. Now, in the 1980s, we are led to believe that teens and young adults are the new materialists, living for the moment, acquisitive and self-absorbed. But when New York City's Louis Armstrong Middle School offered its 8th-grade students a course in parenting under the "Helper Program," the course was so popular a waiting list resulted. The program required weekly classes in child development and volunteer work at a day care center twice each week. This is an excellent example of youth giving of their time and self to assist others. When graduating 9th-graders at another inner-city junior high discovered that the "Helper Program" would not be offered at their senior high school, they lobbied for a community service course.

The early adolescent's desire to participate in community life comes from a curiosity about the world, from a need to test the environment and self and from a growing need to "make a difference." When communities provide opportunities for youth to serve, to forge new relationships with adults as fellow workers, adolescents will grow and channel their astounding energy. Idealism and altruism are still alive in the world of the young, in spite of media reports to the contrary. As George Gallup, Jr., notes, "The youth population has been misnamed the self-centered generation. There's a strong desire to serve others. The problem we face in America today is not lack of willingness to serve or to help others, but to find the appropriate outlet for this" (*Boyer*, 1983, p. 203).

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APPROPRIATE EXPERIENCES FOR YOUNG
ADOLESCENTS IN THE COMMUNITY

What, then, are appropriate outlets for young adolescents? Without minimizing their strengths, we need to remember not to expect the consistency of attention or effort that comes in later adolescence. Roles and tasks that have visible outcomes, that are limited in scope but challenging and that involve cooperative effort are best suited for this age. "During the pivotal years of early adolescence, learners are eager to test new ideas, skills and talents. At the same time, they want security, understanding and encouragement . . . [These needs] require opportunities for exploration of subjects, abilities, and interests" (*The RISE Report*, 1975, p. 3).

Child Care Opportunities

Working with young children is an excellent service-learning experience for youth 10 to 14 years old. Not far removed from early childhood themselves, these

Young males in the "Helper" program provide valuable role models for preschoolers in after-school child care centers.

youngsters seem to develop a special relationship with 3- and 4-year-olds. The "Early Adolescent Helper Program," sponsor of the "Child Care Helper Project," recognized the affinity early adolescents and small children seem to have for each other. Project evaluation reports of the first three years indicate that the "Helpers" start with a somewhat romantic view of early childhood, stating that they chose to participate because they "like children," or "little kids are cute." At the conclusion of the program, they have a more realistic view of the role of the caregiver and insights into the meaning of discipline. They confessed that they developed an increased understanding of their own teachers and parents. One "Helper" reported, "I used to hit my little brothers. But then I thought, if I could keep my hands at my sides at the Center, I could do it at home, too." Evaluations also show that the "Helpers" derive satisfaction and a sense of achievement from their work. "I feel good about myself because I know I can care for others."

Tutoring Opportunities

Although working with young children seems to be a "natural" for many early adolescents, others readily relate to school-age youngsters. The "Youth Tutoring Youth Program" provides opportunities for learning far beyond school-related subjects. "Youth Tutoring Youth" was formalized in the late 1960s by the National Commission on Resources for Youth under the aegis of the Neighborhood Youth Corps. Since that time, peer and cross-age tutoring have become increasingly popular in schools, settlement houses, churches and after-school child care centers. Most of these young tutors serve as volunteers and learn as they teach In Indianapolis, when a junior high tutor saw her advisee's math grade improve by 12 points, she was every bit as excited as the successful student.

The advent of computers has created additional opportunities for youth to serve as teachers. For example, 14 East Harlem youngsters ages 11 to 14 served as "Helpers" in the day-camp program of the neighborhood settlement house in the summer of 1985. These young adolescents received training in helping skills and in the use of computer games to improve reading and math performance before serving as aides to campers.

Opportunities To Assist the Elderly

In Richmond, Binghamton and Arlington, Ohio, young volunteers regularly visit retirement homes and a convalescent hospital. For some of the elderly, these 12- and 13-year-olds are their only visitors. They may help with light chores or simply visit. In other settings, these volunteers collect oral histories from retirement home residents. In reaching out, the young learn not only about senior citizens but about themselves. "I used to be afraid of getting old. I thought old people were grumpy and just watched television all day or played bingo . . . I've learned a lot about history, and I'm not afraid to get old anymore" (Synergist, 1981, p. 24).

Oral history is an effective strategy for many reasons. For example, an 8th-grade participant in the "Partners Program" wrote, "I had a chance to hear firsthand about the past from someone who experienced it." Above all, it links individuals to each other in new ways . . . . "They'll find something in the person's childhood in common with theirs. They can learn to get along with parents and grandparents better. Elders will also learn that kids are different today than they were when

they were young. [But] you'll learn if you look deep enough that teens of then and teens of now are really the same inside" (Deyanira, age 13).

GROUP PARTICIPATION PROGRAMS
FOR YOUNG ADOLESCENTS

Not every young person is ready for the demands of a one-to-one helping role. Some youth will gain confidence and skills and develop a sense of responsibility through group projects. These projects include neighborhood improvement activities, conservation experiences, and collecting and disseminating information about issues of concern to youth and their communities. For example, in New York, San Francisco and Chicago, youngsters in the middle grades gather news of interest to their peers and create weekly broadcasts for local cable television. In North Carolina, working in teams of six, junior-high students create a variety of programs such as youth dances, work projects and "rap" groups. The purpose of these activities is to reduce racial tension and to develop an appreciation and understanding of others. Across the country in Portland, Oregon, "Junior Crime Fighters" trained by public safety personnel teach elementary children about safety and crime prevention.

In Boston, Sioux Falls and Berkeley, "Junior Curators" prepare exhibits in local museums. Some young adolescents serve as museum guides or docents for visiting school and scout groups. In one program, the curators are selected from academically talented students in the schools. But in another program, troubled youngsters referred by the juvenile court or a family service agency are engaged in these activities; they have won the respect of the training and supervising staff.

Whether tutoring, cleaning a polluted stream, working with city officials to equip and staff a playground, or participating in any number of other innovative programs and projects, young people in youth participation programs move closer to responsible roles as citizens and workers.

IMPORTANT CONSIDERATIONS FOR PLANNERS AND
PRACTITIONERS OF YOUTH PARTICIPATION PROGRAMS

No program of youth participation in the community is guaranteed success. There are three critical elements for planners and practitioners to consider in planning projects with and for young adolescents. First, as John Mitchell says, "Work merely for the sake of work is not what youth participation is about. Youth involvement projects which are trivial, boring or non-significant in their societal contribution are not worth the adult energy required to run them" (*Schine, Harrington and Shoup*, 1981, p. v). So, the project must have real meaning and intrinsic worth. Second, training and ongoing reflection for adolescents in the program are essential. Although tradition holds that "we learn from experience," this is not inevitable (*Conrad*, 1982, p. 6). It is necessary for the experience to be internalized, examined and seen in relation to other experiences before it becomes meaningful. Finally, in order for programs to be successful, young adolescents need adult leaders who are understanding, flexible, resilient and patient. They need individuals who understand and enjoy this volatile, confusing, irritating, loving and constantly surprising age group. A sense of humor is perhaps the *sine qua non* of the adult facilitator's role. "The cardinal rule for early adolescent participation," states Mitchell, "goes like

this: projects are successful in direct proportion to the talent and enthusiasm of the adults who supervise them" (Schine, Harrington and Shoup, 1981, p. v.).

Nevertheless, while the ultimate success or failure of a youth participation program may be unpredictable, some statements can be made with assurance. A community's needs are virtually boundless. The ability of young adolescents to meet those needs has been largely ignored or underestimated. And when a "match" is made between the community's needs and the young adolescent's need to participate, develop skills and act responsibly, everyone benefits.

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Opportunities for Learning in Your Own Backyard

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Parents can influence the intellectual and personal development of their children. Ira Gordon believes this awareness can lead to anxiety on the part of parents or it can be seen as a marvelous opportunity to play a vital and positive role in helping children grow (*Gordon, Guinagh and Jester*, 1972). Gordon notes that most parents want their children "... to be able to make their way in the world, to be able to deal effectively with people, with jobs, with social situations and to be able to handle and use their own feelings well" (*Gordon*, 1972, p. 2). Burton White suggests the basic knowledge, skills and values children need to meet these challenges initially come from their first teachers, their parents (*White*, 1979). As White dramatically states, "We believe the informal education that families provide for their children makes more of an impact on a child's total educational development than the formal education system" (*White*, 1979, p. 4).

Benefits of Parent Involvement in Learning

Research shows that a child's total development depends partly on the diversity of stimulation a parent provides. Grasselli and Hegner (1981) believe that the object of parenting should be to fully cultivate a child's potential besides providing loving care. The one-to-one relationship of parenting in an informal setting offers children the personal touch needed for adequate growth.

Cahoon and others list three major reasons why it is important for parents to become actively involved with their children's learning. First, effective early efforts to teach young children in the home will increase their readiness to learn in a more formal school environment. Second, parents who teach their children have the opportunity to introduce them to many interesting and stimulating activities. Third, parents who take the time to become closely involved in their children's learning begin to build long-lasting, loving, supporting and understanding relationships (*Cahoon, Price and Scoresby*, 1979).

Additionally, children's self-esteem is enhanced when parents spend quality time with them. Burtt (1984) reports that this factor is of major importance in helping individuals reach their potential. Every time a parent focuses loving attention on a child and shows interest in the child, the parent is positively shaping the child's personality (*Grasselli and Hegner*, 1981). The parent's actions communicate, "I value you. You are worthy of my time, love and attention."

Research has shown a direct and positive correlation between children's academ-

ic success and the quality of informal teaching and learning that take place in the home. For example, in an 18-month study of the home environment of 2nd-, 4th- and 6th-grade students, Chall and Snow (1982) found that word-recognition and vocabulary were influenced by the home that provided adult time with children rather than time with television. Harris (1978) discovered that parents can improve children's reading and writing skills by encouraging conversation at home; listening to children without interrupting; encouraging play with puppets, play stores and telephones; talking about books; asking questions about the topic and participating in family storytelling. Finally, research has repeatedly illustrated that a child's literacy begins in the home. Readiness for and achievement in formal reading and writing instruction are based on a child's experiences with print before reaching the classroom (*Chall and Snow*, 1982; *Burmeister*, 1983). These studies all highlight the importance of informal home learning.

Conditions for Learning at Home

The atmosphere and conditions under which home teaching and learning occur are important. Both parents and children should be relaxed and free from pressures. Activities should be selected that are developmentally appropriate and interesting. Under no circumstances should the activity be a punishment.

As Braga and Braga (1974) suggest, children learn by direct experience and practice, by touching, tasting, listening, smelling and seeing for themselves. Activities should be experienced firsthand. The emphasis of the activity should be on the process, not the final product. Children need to experiment with the properties of materials. Creating something of lasting value is less important than discovering what can and cannot be accomplished with the materials. Expensive and elaborate materials are neither necessary nor desirable, but safe items are a consideration. Especially with young children, parents will want to be sure items are not dangerous (i.e., sharp, toxic or glass).

The degree of success in each activity will be directly proportional to the parent's attitude and planning. Parents should be creative. Families know the interests of their children and their styles of learning better than anyone else. Sharing the activity with children brings the greatest rewards; when appropriate, parents should "play" alongside youngsters. Finally, the public library has excellent activity books to assist families. Teachers and other adults can also serve as resources.

Selecting Learning Activities

Learning activities for the child may be as simple as accompanying a parent on daily errands to the office, shopping center, barbershop, grocery store, post office, service station, bank or pharmacy. The greatest value will be gained when the parent has preplanned each excursion. Thought should be given to the words, concepts and relationships that may be discovered and the questions that may be asked. The child should be encouraged to verbalize what he or she is experiencing. Learning is facilitated when verbalization is internalized. Excursions should be planned with plenty of time, so that interaction can be favorable. Parents will want to remember to be patient and flexible, have reasonable expectations and reflect positive feelings.

Household chores can also serve as opportunities for learning. Even before chil-

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dren can effectively help, they can pretend to dust, mop, wipe the counter, sweep the porch and mow the lawn. Children delight in imitating adults. These activities provide rich opportunities for such role-playing.

Suggested Activities in Your Own Backyard

The following activities are provided as suggestions that parents may modify. Age levels have not been designated since parents can usually decide if the activity would be of interest to their children. A selected bibliography of books that offer additional ideas is provided at the end of this article.

Activity	FAMILY AWARENESS: WHO AM I?
Objectives	To enhance each child's self-esteem
	To enable each child to understand and appreciate his or her special place in the family
	To provide each child with an understanding of his or her personal history and family heritage
Materials	Camera and film
	Folder for pictures or album
	Labeling materials
	Family pictures, records, mementos
Procedures	Collect pictures of the family and label each photograph with names and ages. Note the location of the photograph and date of the picture. Also note interesting information about the photo; for example, "This was our first camping trip," "Thanksgiving at Grandma's farmhouse."
	As each newborn is added to the family, begin a special place in the family album for the child. When the child is older, encourage the child to select pictures for the album which he or she believes are important.
Extending Activities	Compile a record of the height, eye color, hair color and other physical characteristics of family members. Have the child compare and make generalizations about similarities in the family.
	Use history books and state and local archives to identify historical information about family members or about the places family members lived. These activities will personalize the past for children and provide a permanent record of their relationship in the family.
Activity	MAP-MAKING AND READING
Objectives	To draw a simple map
	To read a map and use it as a tool to locate items and places
Materials	Paper, pencils, ruler
	Colored pencils, markers or crayons
	Floor plans of your home (optional)
	Map of your city, state, county

Procedures	Have the child draw a map (floor plan) of his or her room. Place furniture, windows and doors in the appropriate place. Then hide a "treasure" in the room. Use the child's map to mark clues to assist in finding the "treasure. '

As the child becomes skilled in the use of the room map, expand the activity to include a map of the entire house. Continue with the same kind of activity. This experience can be continued in the yard, and then the neighborhood. |
| *Extending Activities* | Have a scavenger hunt in which several children can locate a hidden "treasure" by reading the map and following clues. Older children may use city maps to identify homes of friends, the school or a favorite place to go. Another mapping experience might be to plan the route for the family vacation and h lp with navigation on the trip. |
| *Activity* | SPIDER WEBS |
| *Objectives* | To observe spider behavior and web construction
To compare factual and fictional information about spiders and their webs |
| *Materials* | Nonpoisonous spider and web
Food (insects for the spider) and water
1/2 gallon milk carton
Clear plastic wrap, masking tape, magnifying glass |
| *Procedures* | Find a spider. Look in the garage, storage room, basement, flower garden or window. Watch the spider in its natural habitat. Count the legs. Observe the spider spinning the web, wrapping food, laying eggs. Use a magnifying glass to observe the spider and its web. Observe the spider at the same time of the day for several days. Then observe the spider at different times such as early morning, mid-day and late in the evening. Note any changes in the spider or the web.

If a cage for the spider is desired, use a half-gallon milk carton. Cut out a window on one side. Place the spider, food and water into the milk carton. Cover the window with plastic wrap and secure it with tape. Watch the spider spins its web. |
| *Extending Activities* | Read about spiders in factual books such as *Spiders* by Lillian Bason (Washington, DC: National Geographic Society, 1974). Then read fictional books about spiders such as *Charlotte's Web* by E.B. White (New York: Harper and Row Junior Books, 1952).
Compare the books for fictional and factual information about spiders. Collect, study and compare other insects that you might find in the backyard. Begin a bug collection in a plastic bottle or mount a collection on a corkboard. |

Activity	NOTING CHANGES IN THE ENVIRONMENT
Objectives	To observe changes in the environment To develop and expand vocabulary to describe observed changes To manipulate the environment to create changes
Materials	Select materials in a natural state that will illustrate change.
Procedures	Go for a walk and observe and collect objects from the environment (the backyard or neighborhood) that illustrate change. Some examples might include:

- flowers turning to seeds or buds opening into flowers
- trees losing leaves as new buds appear
- insects shedding skins as new ones grow
- caterpillars changing into butterflies; tadpoles turning into frogs
- wood and leaves decaying and turning into compost and soil

Some materials will change quickly; others will need to be observed for an extended period. A box or small table may be suitable for display and observation.

Children should be encouraged to discuss the changes with the parent. This should be the perfect time to introduce new words; for example, "cocoon."

Older children may enjoy keeping a written record of the changes.

Extending Activities	Provide opportunities for children to manipulate materials to make changes. Examples of experiences to include:

- grinding wheat or corn into meal
- melting ice or making Kool-Aid into popsicles
- baking yeast bread
- growing sugar crystals
- planting grass seeds on an old rock filled with dirt
- making jello
- adding food coloring to water or other substances such as sugar, salt, etc.
- cooking an egg or making pancakes

Depending on the maturity of the child, some of the above activities will require greater parental assistance and supervision. Parents will want to help children note changes in form, color, texture and even taste when appropriate.

Activity	HIDEOUTS AND CLUBHOUSES
Objectives	To stimulate creative and imaginative play To encourage children to dramatize familiar stories or themes and create new ones To support independence, decision-making and planning
Materials	Old sheet Picnic or card table, or large cardboard box

Materials	Any other materials that can be used to build a special place
Procedures	Find a location in the yard or on the porch for hideout construction. Select a large cardboard television box or appliance box. Cut a door and window. If a card table serves as the frame for the hideout, drape with an old sheet and cut windows and a door.
	Provide props to use for creative play such as caps, helmets, canteens, pots, pans, dishes, dress-up clothes and other dramatic play items.
	Select play themes from recent trips with parents to the grocery store, barbershop, laundry, restaurant, camp out.
Extending Activities	Older children and their friends may wish to construct a permanent hideout such as a treehouse. With parental guidance and help, they should be able to do most of the construction and planning.

"Water painting" in the backyard provides hours of enjoyment for children.

Photo by Dianne Pape

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More Just-for-Fun Activities

These additional activities provide opportunities to expand children's vocabulary; to promote fantasy play, role-playing and inquiry; to discover the characteristics and properties of things; to promote independent actions, decision-making and planning skills; and to encourage positive social behaviors.

WATER PLAY: Any container will do—a bathtub, kitchen sink, bucket, baby bathtub or wading pool. Add items for pouring, mixing, measuring, stirring and funneling the water. Play clothes and swim suits are advisable. Children may select items to determine which ones float or sink.

BACKYARD BUBBLES: Mix one tablespoon of dishwashing liquid with 1/2 cup of water to make bubble solution. Pour into dishpan, washtub, etc. Use straws, bubble pipes, plastic holder tops from 6-pack drink cans to make bubbles. Food coloring may be added.

WATER PAINTING: Provide a container of water and a paint brush. Let the child paint the sidewalk, fence or other outside objects. Then let the child watch his or her art work disappear

POLISHING PENNIES: Children will need baking soda, a small container of water, an old toothbrush and lots of pennies for polishing. More mature children may enjoy polishing brass or other items such as old shoes.

DRESSING UP: Provide children with grownup clothing for pretend and fantasy play. Items to include: high heels, dresses, wigs, scarves, jewelry, hats of all kinds, boots, shirts, belts and a mirror for viewing. Older children will enjoy planning a style show or imitating their favorite celebrity.

PLANNING A TEA PARTY: Allow children to help prepare the food. For example, non-cooking items like crackers and juice or non-bake cookies and snacks are possibilities for younger children. The tea party can include more elaborate recipes for older children. Ask for children's cookbooks at the library. Encourage children to decorate and set the table. Make it a special occasion.

DOING A GOOD DEED: Help children surprise someone in the family or neighborhood with a "helping hand." This might include setting the table, carrying out the trash for a sick friend, delivering the paper to the porch, feeding the neighbor's pet, watering the plants while someone is on vacation, baking and delivering a special treat, etc. It is never too early to nurture caring skills.

PERSONALIZED STATIONERY AND LETTER-WRITING. Encourage children to design their own stationery by providing stickers old wrapping paper and greeting cards. Include paper, glue, scissors and marking pens to assist in construction. Grandparents and friends would welcome newsy notes. Take children to the post office to select stamps and mail their letters.

INDOOR PICNIC ON A RAINY DAY OR OUTDOOR PICNIC ON A SUNNY DAY: Children should have the opportunity to help with meal-planning, table-setting and clean-up. If it's windy, take along a kite!

Conclusion

Anthropologist Ashley Montague (1975) suggests that the most important job in the world is the making of another human being, who is given roots and wings. "Roots" and "wings" come from nurturing parents who guide their children through many meaningful activities. We believe that parents in a one-to-one relationship in informal learning experiences can offer children the personal touch needed to nourish their "roots" and "wings."

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The Family as a Resource for Learning

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Regardless of how large the family is, who the members are, whether they are new to the country or not, a child's family is a rich resource for learning. It is through the family that children develop an understanding of the past, present and future and of the continuity of human life. The family teaches children how to live life fully with integrity, how to value the worth and dignity of all life and finally, how to leave this life without regret.

The Past

"Tell me again about the olden days, when you were little." Who hasn't heard this request of a child in search of not only a good story and a lap to sit on, but much more? There is a comforting sense of permanence, of the security of family, that takes place when people recall the past to one another. Craving for the remembering and togetherness of family, eager for all they can learn about the past, children are able to put themselves into the context of time and place by collecting oral histories.

"A long time ago, when I was just a child in Czechoslovakia, my mother always bought the live carp days before Charitable Eve. That's what you call Christmas Eve. How I loved to watch that carp splash in the tub the days before Christmas Eve, and how good it tasted with dark prune, raisin and ginger snap gravy!"

The simplest, easiest and probably most appealing form of oral history is the biography (*Davis, Back and MacLean,* 1977). It is best to start with the children themselves, who make tapes or booklets recording the important dates and events of their own lives. They can then move on to taking the oral histories of their siblings, parents, grandparents, aunts, uncles and great grandparents or others in the neighborhood and community. Before beginning, children should think about the questions they will ask. An interview outline, with questions and spaces for responses, can be developed. Tape recorders can be used to record the responses.

Family members may recall important dates and places in their lives—when they were born and where, when and where they began and finished school, where they lived and were married. They may also recall what they remember of childhood—their favorite games, stories and foods, or their happiest and saddest events. Questions about the important historical events and lifestyles of the period will put the oral histories of the family within the context of all history.

Another type of oral history focuses on themes. Each member of the family is asked the same questions about some theme or topic. "What did you think of the

Vietnam War? Where were you?" "What did you do on the country's 200th birthday?" "Should everyone vote? Why and why not?" Such topical questions can be used to collect rich oral histories. Asking the same questions of each person—the young and old, the newcomers to the family and the matriarchs and patriarchs—enables children to see the individuality and variability of family members, yet identify the commonalities that connect them all.

Oral interviews, whether biographical or thematic, should elicit feelings as well as facts. "How did you feel about . . . ?" "What did you think about . . . ?" "Have you ever felt that way again?" These are affective questions to include. As children plan to conduct their interviews, remind them to ask about items from the past. Memorabilia serve to elicit feelings. The menorah that Great, Great Grandmother carried with her as she emigrated from Russia, a piece of old quilt, a locket or the family Bible are all useful to bring forth feelings and information about the past and the reasons behind the facts and feelings.

Baby pictures, Grandma and Grandpa's wedding pictures, the worn photo of a great uncle in uniform are also useful for reminiscing and storytelling. "Whereas family stories are one way in which families 'image' themselves verbally, family photographs represent the way this is done visually; the home photographer becomes the counterpart of the family storyteller" (*Kotkin*, 1983, p. 5).

The excitement and appeal of children taking oral histories of their families do not overshadow the great amount of learning that occurs. Yes, traditions are kept alive. But as children discover the dates of their parents' wedding, their birth, when their great grandparents were forced to march from their home in the Wallowa Valley of Oregon through Montana and then back north to Canada, historical and mathematical concepts as well as other academic skills are reinforced.

Both teachers and parents can help children locate places of importance on the map and trace the family's history on a globe. One might determine how old a great uncle was when he left China for California and find out how people traveled then and how long it took to make the journey as compared with today's way of traveling.

After the oral histories are collected, they should be transcribed. All of the skills involved in writing—translating oral words, thoughts and ideas to paper—are then brought into play. Children will want to write thank-you notes to those who participated and perhaps create and then duplicate a family book to forward to family members.

Oral histories help families keep the remembrances of a distant past and homeland alive. But not every child has a family with an identifiable distant past. With today's mobility and blended families, it may not be possible for every child to ask a family member to tell about the "olden" days.

Taking oral histories, however, is a living, ongoing process, a part of everyone's life regardless of family composition and history. "Do you remember last year at the beach when Millie put the crab in your bucket? How we all laughed!" Or, "This year for New Year's we're going to my mother's house, with my stepfather and his daughter Lisa. Do you remember last year when they all came to our house and we sang songs together and Lisa's car wouldn't start when she left?"

As children recall their immediate past, as they keep diaries of their own lives and those around them, they are beginning the tradition of oral histories that will serve as a heritage for future generations.

"Tell me again about the olden days, when you were little."

The Present

There is a resurgence of ethnic pride and interest in the past (*Grambs*, 1983; *Bureau of Census*, 1983). Nevertheless, the family is a resource for children's learning about their present as well as past. All family members—whether young or old, with a long history in the country or roots in a distant land—have opinions, feelings and ideas about current life and events.

This is especially true of the old, who bring the experience of years with them and can share with the young a unique perspective of the present. Just because Grandma can recall the long trip from Alabama to Chicago, when it wasn't always possible to stop and sleep in a hotel or even purchase gas at many stations, does not mean she has no knowledge or opinions about current events.

Parents can structure time together for young and old to watch, listen and then discuss the evening news. They can read newspapers together, borrow current news and photo/story magazines from the library, and discuss interesting items as a family. Wildlife magazines, or those from museums or associations such as the National Geographic Society, can stimulate family discussion of current events and enhance children's learning and understanding of the world in which they live.

Just saving time for young and old family members to be together can contribute to children's learning. "Since persons of all ages possess certain perspectives . . . it stands to reason that experiences shared by persons in different stages of life should add richness for all. Persons from different generations, therefore, need time to work together, reflect together, laugh together, cry together, plan together, care together—indeed, just to be together" (*Berman*, 1979, p. 171).

Nor is the present without tradition. With today's fast-paced, ever-changing lifestyles, adults must find new ways of giving children a sense of heritage. The feelings of love and care and the comforting sense of permanence that go with tradition must also be nurtured. The blended family, the single-parent family, the family moving every other year, all create new traditions. It may be something as simple as having hot chocolate and cinnamon toast by candlelight the first night it snows each year. Or a Red Banner Day, hanging up a large sheet of newsprint with the word CONGRATULATIONS printed in red whenever a family member celebrates an important achievement.

One family takes photos for special occasions but with a twist. A photo album from an earlier celebration is shared; then the family lines up for the camera in the same poses they assumed for the earlier event. Traditions like this ensure happy memories in the future and draw the family closer together (*Gordon*, 1985).

Families that move frequently can adopt one of the traditions of an area. The making and lighting of *Luminarias* in the Southwest can be as effective and uplifting in the East, even if they are used to celebrate birthdays, wedding anniversaries or Christmas. Or, eating black-eyed peas to bring luck in the New Year can be a cherished tradition.

These customs serve to illustrate the continuity of life. Regardless of where you live, how and with whom, certain things remain the same—not just the lighting of the *Luminarias*, but the love and care between family members that transcend time and place.

New heritages are also created by today's families for children who lost their past in a war-torn country or who come to another land to find refuge from persecution. Children who are new immigrants to a land and children of cross-cultural

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adoption can be kept in touch with their heritage while taking part in the creation of new traditions.

It is often the smells, tastes and sensory perceptions that children remember. These must be kept alive for children along with the sounds of their music and their language. Learning a few simple words of the language, learning to make and serve a particular food, and using a certain fragrance, incense or perfume, all help children retain the feelings and emotions of a past they may not be able to recall. One family found prints and paintings of their newly adopted child's homeland for her room. A few art objects, storybooks, dolls and toys gave the child a measure of stability in the midst of great change.

The Future

The family is the definitive resource as children learn to love, to care, to live and to die. Children who experience the love and nurture of caring, sensitive family members grow into caring, loving people.

By age 3 or so, children have a basic sense of who they are, whether they are basically good or bad, and whether or not they can trust the world in which they live (Erikson, 1963). Early in life, children are able to identify their gender, race and ethnic group and begin to value the equality of all persons. All of this is learned in the family.

It is also the task of the family to teach right and wrong. Children who are permitted to make choices grow into adults who are able to make wise decisions. "Learning from choosing: to achieve a reliable sense of right and wrong, children must make choices; it is the task of parents to make this possible" (Riley, 1984, p. 5).

And it is the family that teaches children to care for and share with others. In one home, for example, pencils and paper circles are brought to the Thanksgiving dinner table. Each member makes a wish for the world. The parents know the wishes will not cure world hunger or bring peace to a troubled nation, but this is one way of helping children to think of others (Lieberman, 1984). Other families show children how to care and share by contributing food or blankets to the homeless, visiting elders in a nursing home or inviting people who are alone to share a family celebration.

Finally, it is the family that teaches how to gain a perspective on time and come to grips with mortality. An elderly man, knowing his death was imminent, started a book of quotes, ideas and collections he had found helpful during his lifetime. He did not have the time to finish this gift to his family and friends. Nevertheless, the book served to console his family and friends upon his death. One woman, encouraged by a notebook given to her by a grandchild, wrote short stories of her life. These interesting accounts included spending her first night away from home in the woods as a girl scout, and having to take four brothers as chaperones on her dates. When read after her death, these short vignettes provided a sense of joy in the fullness of her life, along with sadness over her parting.

Both of these elders left a lasting heritage for the young in the family. Both illustrated how to live life fully, how to enjoy the cycles of life and how to die with dignity.

The task of the family is formidable. In a continually changing world, a world full of inequalities and wars, families need help and support. Schools offer real

support by valuing all children and protecting their heritage. Schools offer non-English-speaking children instruction in their own language along with instruction in English, and they demonstrate appreciation of the family's cultural artifacts—the folklore, food and festivals—without divisiveness or stereotyping. Not only schools, but every institution of society must offer parents real support if children are to learn the richness of the past, how to live in the present and how to prepare for the future.

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Family Folklore Interviewing Guide and Questionnaire. An 8-page booklet illustrating how to record family stories and traditions. Consumer Information Center (188N), Department RW, Pueblo, CO 81009. $1.75. Ages 8 and over.

How To Tape Instant Oral Biographies. Step-by-step directions on how to record, videotape and film people telling their life stories Includes over 100 questions to be asked. Guarionex Press, 201 W. 77th St. New York, NY 10024. $5.95.   Teenagers.

Family Folklore Project. Smithsonian Institution's *Family Folklore*, 1976, by Amy J. Kotkin. Smithsonian Institution, Washington, DC. All ages.

Oral History: From Tape to Type. By Cullom Davis, Kathryn Back and Kay MacLean. A 141-page book describing the process of oral histories. American Library Association, 50 E. Huron St., Chicago, IL 60611.

Oral History Association. An international society of organizations and individuals interested in advancing the practice and use of oral history. North Texas State University, PO Box 13734, N.T. Station, Denton, TX 76203.

Learning Options with Microcomputers

Now and in the Future

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Educators have had a primary concern regarding the use of microcomputers in schools. While those involved in formal education have been debating the value of computers, how to use computers and what should be taught with computers, microcomputers have been proliferating in settings beyond school walls. We find microcomputers being used as learning devices in home, museum, library and other settings. Outside of formal constraints, microcomputers are easily used as a tool or as an invitation to explore and learn.

The ease with which microcomputers have been adopted may be related to the toy status of the microcomputer. The little machines (even when off) seem to be saying "Touch me!" There is an open invitation to press a key on the keyboard to see if something will happen. The invitation is there because we *know* that there is a possibility something different will happen. This is the attraction that microcomputers share with well-designed toys. We can expect to find pleasant action when we do something with the toy. The remainder of this article will deal with the use of microcomputers in the informal learning settings of homes, as well as museums, libraries, zoos, parks and fairs.

Family Settings

While the early microcomputer products (*circa* 1981-82) may have been purchased for a great variety of reasons (e.g., family business, convenience, high-tech home management), it seems fairly clear that the current home computer market is designed for education and entertainment. This is most obvious in the unscrupulous advertisement that suggests that without a home computer your child will flunk out of college or fail to secure a position in management. Parents enroll children in my computer classes because they want their children to be ahead of their peers in using computers. I am frequently asked if the children will "learn skills to help them become computer programmers."

Fortunately, there is more to computer use than learning to program. It takes recognition on the part of parents, however, to see that the family can use the computer for education purposes without ever learning to program. With proper software, the computer can be a useful tool and an educational toy.

Computer as Tool

Most families I know purchase a word processing program along with their computers. The idea is that the computer can efficiently replace the family typewriter. With word processing, children can easily correct errors. Parents also believe word processing will enable children to write and edit with ease. In addition to word processing, software is now available that will check spelling. It is hoped that software will be developed for the smaller machines (64 to 128 thousand bytes of memory) that will also evaluate the text to help family authors create error-free manuscripts. The educational *plus* in word processing/text editing software is that it carries the potential for writers to become more aware of their writing and, therefore, to become better writers.

Other tool/utility software is available, but the application may not be as practical as word processing. Many families own data spreadsheets and file management software. Data spreadsheets (for example, Visicalc or Lotus 1-2-3) are computerized tables that allow the user to define the shape and components of the table. Once a table is defined, data may be entered into the table and also manipulated through computerized functions. For example, a family may use a spreadsheet to manage income and expenditures. Children may also use spreadsheets for planning expenditures. The child could use the spreadsheet either to keep track of actual money use or to plan hypothetical situations.

File management software (for example, PFS or General Manager) is essentially a card-filing system that is stored on the computer. It is primarily useful for sorting through information to find a particular "card" or set of cards containing desired information. Adults may use file management as an address book, recipe file, or for Christmas card management. Children may also use it as an address book. They may use it to keep inventory of personal belongings, listings of television programming, or to keep track of a hobby (e.g., a record or stamp collection).

These computer tools are extremely flexible and provide the user with a great deal of latitude. However, they also require the user to examine personal needs prior to constructing the spreadsheet or data file. The preplanning and "what if" possibilities may be quite useful in helping children confront metacognitive problems dealing with knowing what one needs to know. On the other hand, children tend to be intuitive and impulsive rather than rational and reflective. The reflection required by spreadsheets and filing systems may frustrate many children. I suggest using these tools as a parent-child team whenever an occasion arises where there is a need for planning and speculation. For example, when a child approaches a parent concerning a larger allowance the spreadsheet may be useful in determining the size of the "new" allowance. Alternatively, the file management system may be used with a parent to determine whom to invite to a birthday party.

In any case, parents should seek opportunities to work with their children using these tools, rather than only making the tools available. Initially, children may play with the tools to see what they will do. This experimenting would be similar to a child hammering nails into scrap wood simply to be using the hammer. The
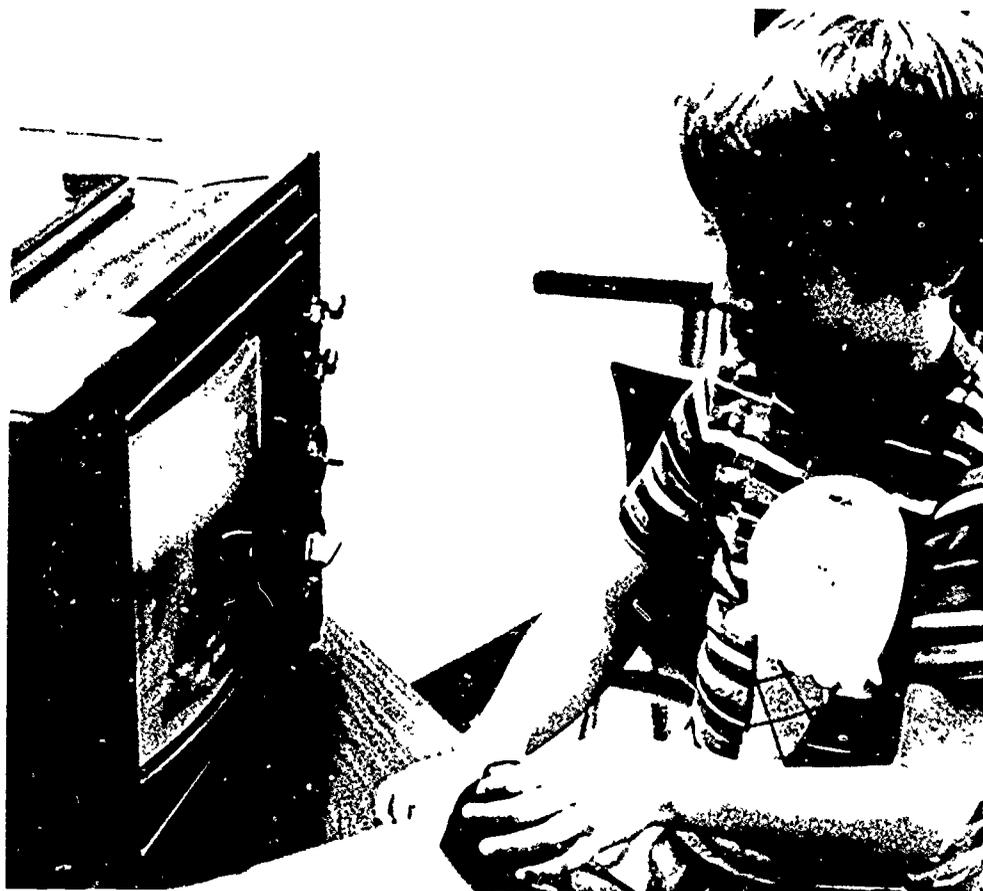
Initially, a child may play with the computer to see what it can do.

next step may consist of parent and child working through simple problems so that the child can get a grasp of practical applications of the software. For example, the software may help reduce television-viewing and increase other activities. Rather than argumentatively accusing a child of watching too much TV, a parent might suggest that together they examine how much television everyone in the family watches. Perhaps the notion of having everyone share the TV equally might be useful. The parent-child team can start by writing the names of favorite (or frequently watched) shows on separate slips of paper. Each slip could also contain the time the program is aired, length of the program and family members who watch the show. The child could be asked to group the programs. At this point, the parent would suggest a file management system would be useful because several different program groupings could be examined. The parent and child would work together to create a file template of how the data would look on the computer. All of this preplanning should be conducted by the parent asking the child questions. Even though the parent may have a precise idea of how to solve the computer problem, the child should be intimately involved in the problem-solving process.

At this point, entering the data is a matter of "typing" the information on the

computer keyboard. Parent and child can take turns keyboarding, with the child doing small amounts of keyboarding in order to become comfortable without becoming frustrated. Now the computer filing system can be used to generate groups of programs. The parent-child team might ask which programs each individual family member watches, and which programs are watched by the entire family. Other questions might be asked regarding the kinds of programs or when the programs are on television.

The information obtained from the filing system may be used to create a spreadsheet that could help project the number of hours spent watching television per day and per week, as a family or individually. The information is useful to help parents and children develop rules about television-viewing and also helps children "walk through" the intellectual/metacognitive processes necessary for computer use. It is important to note that children will not automatically use computers just because their parents do. Children must be helped by parents to discover a need for this versatile tool.

Computers as Educational Toys

The notion that entertaining computer games can also be educational has been eloquently explored by Malone (1981a, 1981b, 1983). Computer games have the same qualities that make educational toys fun. they are challenging, they stimulate curiosity and they allow people to engage in fantasy. Additionally, computer games may be appealing visually, aurally and kinesthetically. Once again, computer games seem to have the best potential when they are used as a family activity (*Mitchell*, 1983). Adventure games such as "Adventure," "In Search of the Most Amazing Thing," "Winnie the Pooh in the Hundred Acre Wood" and "Wizardry" offer challenge and entertainment for 8-year-olds as well as adults. They help users build problem-solving strategies, map skills, intuition and patience. Pattern games such as "Pac Man" or "Donkey Kong" build concepts of pattern generation and rule generalization (*Silvern*, 1986). Sunburst Software and the Learning Company provide an excellent line of software designed to build problem-solving skills in language, math and social studies. These software programs are excellent for home use because the home does not have the learning pressure that exists in schools.

Computer as Communication Device

A feature of the computer that s clearly future oriented is a device that allows families to use distant computers by connecting the home computer to a telephone line. The device is called a modem. Currently, there are three ways of using modems. The family may subscribe to a database service, for example, "The Source" or "Dialogue." These services provide a variety of options in categories such as business, education and travel. The service allows for computerized shopping, banking, travel arrangement, game-playing, and drill or practice "education" programs.

A second option for modem use is a user-supported bulletin board, for example, "The Bread Board System." These systems are locally operated and are supported by user contributions and local sponsors. They essentially provide opportunities for families to communicate easily with other computer users in the area. The bulletin boards may provide a useful support group for the "computerized family." Finally, modems allow a family to communicate directly with other computer families.

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Currently, none of these options seem particularly fertile for out-of-school learning. The availability of options is too static to achieve the potential for computerized communication. There is, however, a possibility of modem use that may bring people together as a society (*Papert*, 1980). In order for this to occur, at least two things must happen. First, families must visualize themselves as a useful resource to others. Second, long-distance communication lines between bulletin board systems must be as inexpensive as an airmail stamp.

As an example of the person-to-person utility of modems, families could use computer communication to gain understanding of people from another culture/society. While working in a reservation school, I had access to "pen pal" letters sent to the children from an Anglo classroom in another state. The letters asked questions like, "Do you know what football is?" "Do you eat hamburgers?" Recently, I was asked to explain Chanukah to a Christian Sunday School class (5th and 6th grade). The children wondered how it was possible to be born in the U.S. and not have the same religion. Computer communication will not eliminate the thinking that led to the situations described. But, it will provide an opportunity for families to ask questions of each other, to receive detailed responses—including pictures to further clarify communication—and to ask follow-up questions. Mail does not facilitate such communications as, "I don't understand," "What do you mean?" or "Do you mean that . . . ?"

While telephones have similar verbal capabilities as computers, telephones lack features that make computers particularly suited for gaining information. These features are: a centralized network in which families can register for computer visits; storage of what was said in print and magnetic form, transmission of drawings and transmission of large amounts of data quickly. Certainly this kind of sharing between families is much more meaningful and richer than what is currently available in standard resources.

Much of this article has been devoted to the computer in the family setting. I have done this because the family is the primary informal education agency. There are, however, computer opportunities in other informal settings.

Other Informal Learning Settings

While the family is the most important informal learning setting, other settings can make excellent use of the microcomputer. These settings may include museums, libraries, zoos, theme parks and fairs. For example, Epcot Center's Land of Imagination provides excellent potential for computer use through an elementary drawing system that is controlled by a light pen and an abbreviated touch-pad keyboard. The communication centers at Epcot use computers to quiz users, however, they are less effective. The U.S Pavilion at the World's Fair in Knoxville used a touch screen and a robot to provide visitors with information. These are examples of microcomputers used in informal settings.

Computers in these informal environments have a powerful potential since the environment has greater resources for computer equipment and programming than families. Informal environments, however, must be imaginative in order to get the *most* informal learning advantage. Many museums started computer programs to teach children and adults about computers. Essentially, they were fulfilling a need not met by schools. Informal settings, however, are desirable because they can take one beyond what is current. These settings—rather than simply informing—have

the ability to stretch the imagination. Living history exhibits such as Williams-burg or Vick burg National Historical Park transport one to a different time. Computers in informal environments may transport in similar ways. But, in order to do so, the computer must be seen not as a transmitter of information or as a quiz machine, but as an element that will help individuals to think in a particular way. For example, what about a machine that produces different images or sounds depending on how and where it is touched? Could individuals become instant composers writing music, poetry or stories that are printed with their names on them? Might one be able to find an animal in the wild, searching for its hiding place and looking for its track? Could one decide on the items needed for an exploration of the Northwest Passage? Could one design a robot that would make a job easier? Or, could an individual give the robot instructions that would make it useful, as opposed to a nice toy that runs into walls and says, "Excuse me, madam"?

The key to using microcomputers in informal settings, actually all settings, is to see the machine as a tool or toy that makes possible things that were formerly impossible. Computer consumers need to forget about programming and to focus on the specific needs of the user. If the microcomputer is designed to help the user accomplish a specific task in a way that matches the user's capabilit, en the extent of usage appears to be limitless. Finally, the machine must be viewed as a toy in its *best* sense; namely, something that is non-threatening, enjoyable, entertaining, and that provides information or a service we find useful.

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