

ERIC Identifier: ED448013

Publication Date: 2000-12-00

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Source: ERIC Clearinghouse on Rural Education and Small Schools
Charleston WV.

Outdoor Experiences for Young Children. ERIC Digest.

Much professional thought and long-standing tradition emphasize the value of outdoor experiences for young children (e.g. Bredekamp & Copple, 1997; Moore & Wong, 1997; Cobb, 1977/1993, Wilson, 1996a; Rivkin, 1995). Despite the conventional wisdom, however, many children today spend very little time outdoors. This Digest considers the rationale for outdoor experience among young children and the reasons for its decline in popularity. It also presents arguments for enhancing school and center playspaces and provides guidelines for developmentally appropriate outdoor design.

THE VALUE OF OUTDOOR EXPERIENCES

Most children appear to benefit from being outdoors. They like to see what is going on (traffic, construction, water flowing, clouds moving, animals), go someplace, meet and greet other people and animals, experience the infinite and diverse sensory qualities of the world (the smells, the feels, the sounds), and experiment with the "big behaviors," such as shouting, running, climbing, and jumping (which are seldom accommodated well indoors). Not only is being outdoors pleasant, its richness and novelty stimulate brain development and function. Cognition is rooted in perception (e.g., Gleitman & Liberman, 1995)-- the outdoors is a prime source of perceptions.

Young children especially need the broad experiential base provided by being outdoors. The knowledge they gain there is foundational to literacy and science learning (Dewey, 1938/1963). Generations of kindergarteners have been taken on farm visits so they could read, write, draw, converse, and know about pumpkins, cows, and cornstalks. Furthermore, unlike some childhood pleasures, that of being outdoors seems lasting--any casual survey of adults will find a high quotient of happy outdoor memories, some of which have been formative (Cobb, 1977/1994; Chawla, 1994, Sebba, 1991, Wilson, 1996a). Another lasting benefit is that children can learn to care for the environment, if provided with numerous positive outdoor experiences under the tutelage of suitable role models (Carson, 1956/1998; Wilson, 1996b).

ENDANGERED ACTIVITY?

Despite the benefits of outdoor experiences, and in contrast to earlier agrarian, pre-automotive times, children now spend most of their time inside buildings or vehicles. As most adult activities are indoors, so now are most children's, perhaps in large part from the need for supervision. Children five and under seldom experience unsupervised outdoor play; now, even the 5-10's tend to be supervised.

Adult fears regarding traffic, firearms, kidnapping, injury, ultraviolet rays, insect-borne diseases, and pollution of various sorts lead them to keep children indoors. Additionally, especially in many urban areas, few places remain for children to play. Before cars took over, streets were places that connected dwellings and shops, providing a common space for activities, including children's play. Public playgrounds, even though meant for children, are frequently poorly designed, maintained, or supervised (National Program for Playground Safety, 2000). School playgrounds are typically limited to combinations of asphalt, turf, and some large-motor structures.

The attractions of staying inside when not in school--amusement, comfort, and homework--are strong. For instance, 98% of U.S. homes have television, 42% have computers (National Science Foundation, 2000), and over 70% have air conditioning (U.S. Census Bureau, 1996, p. 17). During the school day, the demands of academic learning increasingly encroaches on outdoor time. Many schools have eliminated recess above the primary level.

ENHANCING SCHOOL AND CENTER PLAYSPACES

Recognizing the benefits of outdoor experiences and acknowledging that they can strengthen academic learning, national movements in Europe and Canada, as well as some local U.S. efforts, have recently focused on improving school grounds (Rivkin, 1997). Titman's (1994) seminal research has helped fuel these efforts because it indicates that poorly designed and maintained school yards actually lower children's self-esteem. Thus, as children spend increasing amounts of time in institutions--year-round schools and child care centers--the urgency to provide decent play spaces should logically intensify. School ground improvers emphasize several benefits.

First, the curriculum of the school can be enhanced by a good outdoor environment. Individual schools and school districts can align their curriculum and physical environments. Recent national research indicates that when the outdoor environment is used to integrate a school's curriculum, achievement is higher (Lieberman, 1999).

Second, environmental degradation such as erosion and run-off can be eased with planting and storm-water pond projects, which also teach children the

value of stewardship and activism. Young children can participate in such projects, particularly with older children as partners, creating service-learning opportunities for both.

Third, habitats for small creatures such as birds and insects restore to children a chance to acquire firsthand, multi-sensory knowledge of the natural world, now too often unavailable to them. Butterfly and other gardens are increasingly popular school yard additions. The National Gardening Association and the National Wildlife Federation, among others, offer many resources to support school gardens and habitats.

Fourth, safer school yards are more likely to be used by teachers and children. Well-designed structures with resilient surfacing under them are critical to safety (Consumer Product Safety Commission, 1997); other considerations are supervision and maintenance. Increasingly, too, there is evidence that richly provisioned school yards reduce aggressive play (Moore & Wong, 1997; Humphries & Rivkin, 1998). Finally, a good school ground and the process of improving and maintaining it can be the center of a community, helping to restore for children the links between school and home.

DEVELOPMENTALLY APPROPRIATE OUTDOOR ENVIRONMENTS

Design of outdoor play areas begins with the young child's needs and directions of growth. A developmentally appropriate space is a major element of the curriculum--where there is sand, there can be exploration of sand. Designs for infants, toddlers, preschoolers, and primary children differ. The design guide for federal agency child care centers offers a good overview (U.S. General Services Administration Public Building Services, 1998), as does Frost (1992) and Greenman (1988). "Play for All Guidelines" (Moore, Goltsman, & Iacofano, 1992) contains many suggestions for Universal Design, a developing concept that helps meet the Americans with Disabilities Act requirement for non-discriminating public facilities.

Infants need modulated sensory stimulation and increasing physical opportunities. This includes interesting things to look at from a horizontal as well as vertical position, protection from excess wind and sun, pleasant colors and sounds, places to crawl and things to pull up on as they develop these skills, and the ability to watch but not be knocked over by older children. Elements to consider include waving grasses and leaves, mobiles stirred by the breeze, high vines that attract birds and butterflies, and soft wind chimes. Porches with translucent roofs, smooth floors for creeping, and vertical railings (spaced to avoid entrapment) for pulling up on, provide an outdoor experience without rain or excess sun. Ramps instead of stairs allow for safe creeping, as well as gravity experiments ("How did that ball get down there?" "Will it do it again?").

Toddlers require places and spaces for acting out prepositions--over, under, on top of, inside, outside, behind, in front of, up, and down--because their physical development is paramount and fuels their cognitive development. In addition to safe, appropriately sized playground structures, toddlers like low hills to clamber up and down. A slide imbedded in the hill provides another way down. A large sand area, arranged to be covered when not in use, is a place for socializing. Experiencing water is vital--water table, hose, sprinkler. Trees that change colors or offer pinecones, shade, and possibly fruit are enjoyable for adults as well as children. Behind a low fence, gardens give color and fragrance but minimize contact with bees and wasps. Poured rubber walkways provide even, soft areas for practicing walking and then running, as well as for push-toys and wheeled toys. As with infants, porches extend the use of the outdoors and serve as a transitional zone between the classroom and the yard.

Preschoolers continue rapid physical development, and with increasing social and language skills, require a yard with many opportunities. Running, climbing, hopping, jumping, sliding, dancing, and spinning require large-motor structures, trikes, wagons, wheelbarrows, hills, and paths. Sociodramatic and individual imaginative play is fundamental to preschoolers' development, and such play is supported by playhouses equipped to become homes, convenience stores, forts, or restaurants as youngsters' interests require. Outdoor storage holds play props and art supplies, encouraging teachers to make art available where messes don't matter much and creation is inspired--"Can you paint the wind?" Sand and water play are also required for preschoolers' knowledge of the physical world, an entry point into play with others, and for creative expression. Gardening, especially in trike-resistant raised beds, teaches preschoolers about growing and caring for plants. Preschoolers are intrigued by the insects gardens attract, including butterflies. Outdoor storage for tools and hoses helps here; children play at gardening, teachers do the gritty maintenance work.

Primary children need much of what preschoolers need but also require places to sit, read, talk, draw, and do homework. Provision for group activities such as a basketball hoop, ground graphics such as hundred-squares and hopscotch, and an amphitheater are desirable. Materials for projects--wood, paint, cardboard, clay, tools--allow initiative and industry. In some centers, primary children enjoy being with the younger children, developing skills as mentors and play leaders. Children also benefit physically from freely playing in wooded areas (Fjortoft, in press).

A CRITICAL PERIOD FOR YOUNG CHILDREN

Although we evolved largely in the outdoors, of late children have been increasingly indoors. Respecting our history, and knowing the benefits of outdoor experiences, educators may wish to provide young children both richer environments and extended time in them.

Playspaces for children of all ages need to be more than playgrounds. They should be "habitats"--places where children can live.

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