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Starting Early: Environmental Education during the Early Childhood Years. ERIC Digest.

When should environmental education begin--in the third grade; first grade; kindergarten? Even earlier. Environmental education based on life experiences should begin during the very earliest years of life. Such experiences play a critical role in shaping life-long attitudes, values, and patterns of behavior toward natural environments (Tilbury, 1994; Wilson, 1994).

Because young children learn about the environment by interacting with it, educators and other adults must attend to the frequency, nature, and quality of child-environment interactions during the early years. Many young children have limited opportunities for such experiences. Studies indicate that the average American spends more than 95% of his or her time indoors (Cohen, 1984), and that by the year 2000, more than 90% of all Americans will live in urban areas (Schicker, 1988). Studies also indicate that children growing up in urban areas tend to develop unfounded fears and feelings of disgust in relation to natural objects (Bixler, Carlisle, Hammitt, & Floyd, 1994).

Yet, it's not just children living in urban areas who should be targeted for environmental education during their preschool years. Many young children, regardless of where they live, spend most of their time in settings and activities that keep them essentially isolated from direct contact with the natural world. Recreation tends to be indoors (e.g., watching TV); transportation tends to be by car or other motor vehicle versus walking; and daycare programs--where many children spend most of their waking hours--tend to be much more oriented toward the classroom than outdoors. The result is that many young children are at risk of never developing positive attitudes and feelings toward the natural environment or achieving a healthy degree of competency on the environmental literacy continuum (as outlined by Disinger & Roth, 1992). Attention to environmental education at the early childhood level is proposed as a partial antidote to this concern.

RATIONALE

The rationale for environmental education during the early childhood years is based on two major premises. The first premise is that children must develop a sense of respect and caring for the natural environment during their first few years of life or be at risk for never developing such attitudes (Stapp, 1978; Tilbury, 1994; Wilson, 1994).

The newly-emerging field of early childhood environmental education reflects an increasing awareness that "environmental experience in the critical phase of the early

learning years can determine subsequent development in environmental education" (Tilbury, 1994, p. 11) and that the preschool years may "prove to be critical for the environmental education of the child" (Tilbury, 1994, p. 11).

The rationale for environmental education at the early childhood level is also based on the premise that positive interactions with the natural environment is an important part of healthy child development (Carson, 1956; Cobb, 1977; Crompton & Sellar, 1981; Miles, 1986/87; Patridge, 1984; Sebba, 1991; Wilson, 1994) and that such interactions enhance learning and quality of life over the span of one's lifetime (Wilson, 1994). Children who are close to nature tend to relate to it as a source of wonder, joy, and awe. Their spirits are nurtured by nature and they discover through it "sources of human sensibility" (Wilson, 1992, p. 348).

Nature-related experiences tend to foster a child's emerging sense of wonder--referred to by Plato as the source of knowledge and by Cobb (1977) as our source of imagination. According to Cobb, it is through wonder that we come to know the world. It's wonder--rather than books, words, or learning all the facts--that provides the direction and impetus for environmental education in early childhood.

GUIDELINES FOR PROGRAM DEVELOPMENT

Environmental education opportunities for preschool children should be offered on an on-going rather than a sporadic basis (Bixler, Carlisle, Hammitt, & Floyd, 1994; Gaylord, 1987). On-going environmental education programs for preschoolers, however, are relatively scarce, and those that do exist tend to serve primarily middle- and upper middle-class white families (Wilson, in press). This is unfortunate since children living in low-income minority neighborhoods are more likely to be affected negatively by environmental assaults (e.g., air pollution, noise, congestion, solid wastes, etc.) (Harding & Holdren, 1993) and less likely to have frequent positive interactions with the natural environment.

Environmental education for the early years should be based on a sense of wonder and the joy of discovery. Consistent with this approach, the following guidelines are proposed as a framework for developing and implementing an environmental education program for preschool children.

1. Begin with simple experiences. Young children learn best through experiences that relate to what is already familiar and comfortable. Thus, the best place to start is in an environment that is similar to what they already know. For example, focus on a single tree in a backyard or playground before venturing into a heavily wooded area.

2. Provide frequent positive experiences outdoors. Because children learn best through direct, concrete experiences, they need to be immersed in the outdoor environment to learn about it. Optimally, the exposure should be provided on an almost daily basis. A one-time trip to a park or nature preserve will have very limited impact on young children. Far better to provide ongoing simple experiences with the grass, trees, and

insects in environments close to home or school than to spend time and energy in making arrangements for field trips to unfamiliar places the children may seldom visit. In addition to investigating the elements of the natural world already present in an outdoor setting, there are also many different ways to transform a typical playground into an environmental yard. Start by adding bird feeders, wind socks, flower and vegetable gardens, tree houses, rock piles, and logs, and then provide children with tools for experimenting and investigating (e.g., magnifying glasses, water hose and bucket, hoes, rakes, etc.).

3. Focus on "experiencing" versus "teaching." Because young children learn through discovery and self-initiated activities, the role of an adult is to be more a facilitator than a teacher. Learning among young children requires active involvement: hands-on manipulation, sensory engagement, and self-initiated explorations. Young children should not be expected to "watch and listen" for any length of time, nor should they be expected to always follow the teacher's lead or agenda. Far better to focus on what children find of interest than to compete for attention through teacher-selected activities and materials.

4. Demonstrate a personal interest in and enjoyment of the natural world. A teacher's expressions of interest in and enjoyment of the natural world are critical to the success of an early childhood environmental education program. It is the teacher's own sense of wonder, more than his or her scientific knowledge, which will ignite and sustain a child's love of nature. Therefore, even teachers with a minimal background in science need not be intimidated by the thought of implementing an environmental education program for young children. Feelings are more important than facts when it comes to introducing young children to the world of nature. No one has stated this more clearly than Rachel Carson (1956) when she wrote, "I sincerely believe that for the child, and for the parent [or teacher] seeking to guide him, it is not half so important to know as to feel" (p. 45).

5. Model caring and respect for the natural environment. Teachers should also model caring and respect for the world of nature. Talking to children about taking care of Earth is far less effective than demonstrating simple ways of expressing care. Care and respect can be modeled through the gentle handling of plants and animals in the classroom, establishing or maintaining outdoor habitats for wildlife, attending to the proper disposal of trash, and recycling or reusing as many materials as possible.

CONCLUSION

Young children tend to develop an emotional attachment to what is familiar and comfortable to them. If they are to develop a sense of connectedness with the natural world, they need frequent positive experiences with the outdoors. Providing opportunities for such experiences and sharing them with young children is the essence of what environmental education is all about. Rachel Carson, in "The Sense of Wonder," was one of the first to articulate the importance and characteristics of environmental education at the early childhood level. In her words (Carson, 1956), "If a child is to keep alive his inborn sense of wonder...he needs the companionship of at least one adult who can share

it, rediscovering with him the joy, excitement, and mystery of the world we live in" (p. 45). Environmental education for the early years focuses primarily on young children exploring and enjoying the world of nature under the guidance and with the companionship of caring adults.

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