


Teaching and Learning about the Natural World

Nancy Rosenow

Learning to Love the Earth ... and Each Other



Five-year-olds Madeline and Jaden crawl among the plants in the garden of their early childhood program's outdoor classroom. "Look," Madeline says, "it's a ladybug. It's a crawling ladybug on a leaf." Jaden, an active, inquisitive child, reaches out to grab the insect. "Be careful," Madeline cautions softly. "Be very, very careful." In response to Madeline's urging, Jaden gently strokes the ladybug's back. "It's beautiful," he whispers.

MADELINE AND JADEN are learning about much more than ladybugs. Together they are learning to be gentle with other living creatures and with each other. As young children discover the wonders of nature through direct hands-on experiences, they develop a reverence for life that cannot be fostered as profoundly in any other way. Reading about insects in books or watching nature videos is never as compelling as seeing a real butterfly emerge from its chrysalis or tasting the first tomato to ripen on a plant you've watered yourself.

Deep bonds can form between children or child and adult when they share experiences with nature. When children have daily opportunities to care for plants and trees, animals and insects, they practice nurturing behaviors that help them interact in kind and gentle ways with people as well. Sadly, though, many young children today do not have such opportunities.

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Children's disconnection from the natural world

Much has been written about children's disconnection from the natural world, not only in the United States but all over the globe. In *The Geography of Childhood: Why Children Need Wild Places*, Nabhan and Trimble suggest that "to counter the historic trend toward the loss of wildness where children play, it is clear that we need to find ways to let children roam beyond the pavement, to gain access to vegetation and earth that allow them to tunnel, climb, or even fall" (1994, 9).

Natural green spaces for children to enjoy are giving way to development at an alarming rate, and media coverage of issues such as child abductions make families more and more fearful of allowing children to explore freely outdoors. Add to that the indoor seductions of TV, video, computer games, and DVDs and it is no wonder that young children are growing up more familiar with wireless BlackBerrys than wild blackberries.

Researchers say the lack of outdoor contact contributes to problems such as childhood obesity, children's dislike and even fear of the outdoors (often made worse by the media), and increased reliance on behavior-regulating medications (Sobel 1996; Kahn & Kellert 2002; Louv 2005). This is especially unfortunate since research shows that children benefit profoundly from regular interactions with nature.

Children need nature

Contact with nature "may be as important to children as good nutrition and adequate sleep" (Gill 2005). Preschool and primary children gain skills in a number of academic areas from regular experiences in an early childhood program's garden (Miller 2007). Studies at the University of Illinois's Human-Environment Research Laboratory show how connections with green outdoor spaces can help relieve the symptoms of attention deficit hyperactivity disorder (ADHD) in children (Taylor, Kuo, & Sullivan 2001). Other compelling arguments for nature experiences abound (Sobel 1996; Kahn & Kellert 2002).

Families and educators read about the importance of children's contact with nature yet often do not know how to respond. The first step may be to simply acknowledge the fact that the world has changed. For many children, chances to explore freely in nature do not "just happen" anymore. We adults need to think carefully about strategies for ensuring that nature-child connections can be made every day.



Creating nature-based outdoor spaces

As young children spend more and more time in early childhood programs, elementary schools, and before- and after-school classes, it is essential to find ways to bring nature to them. We need to think beyond

traditional playgrounds, which are often constructed without grass, flowers, or trees, and envision and create nature-based outdoor classrooms.

Unfortunately, the term *outdoor classroom* is often associated with plots of ground where children go to learn the names of plants and identify trees from their leaf shapes. While there's nothing wrong with this, if that's all that happens outdoors, neither child nor teacher has the

opportunity to experience the profound joys of connecting on an emotional level with nature's bounty.

Educator and author Ruth Wilson believes that the sense of wonder that children develop from personal nature connections can quickly diminish if not nurtured and celebrated. She says, "This seems to be especially true in Western cultures, where for the sake of objective understandings, children are encouraged to focus their learning on cognitive models rather than on firsthand investigations of the natural environment" (Wilson 1997). A growing number of educators are realizing that if the right outdoor space is available to foster a sense of wonder, children can progress in all areas of learning.

The Nature Explore Classroom project

In one growing initiative, the Arbor Day Foundation and the Dimensions Educational Research Foundation have joined with other environmental groups, educators,





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landscape architects, architects, and community planners to develop a network of certified Nature Explore Classrooms throughout the United States. These outdoor spaces, based on field-tested guiding principles for incorporating natural elements, are being developed in schools, public parks, botanical gardens, children's museums, and other such places where traditional playgrounds have been built (Cuppens, Rosenow, & Wike 2007). Projects are under way from California to Missouri to New York.

One such project is a collaboration between the Nebraska Association for the Education of Young Children, the state's Department of Education, the Nebraska Early Childhood Training Center, and the Dimensions and Arbor Day foundations in which more than 25 pilot outdoor classroom sites are being developed throughout the state. Each outdoor classroom is filled with nature-based areas that support hands-on learning through science investigations, music and movement experiences, art expression, and the like. "I have a new and conscious awareness of all things nature related," said Carol Fichter, director of the Early Childhood Training Center. "It's invigorating to consider that we have a huge opportunity to cast our seeds into fertile ground (fertile minds)" (pers. comm., 2007).

In Europe, a Danish landscape architect is doing her part to encourage the construction of children's play spaces that include nature-based challenges and interesting natural features. "I am convinced that standardized play equipment is dangerous," says Helle Nebelong. "When the distance between all the rungs on the climbing net or the ladder is exactly the same, the child has no need to concentrate on where he puts his feet. This lesson cannot be carried over into all the knobbly and asymmetrical forms with which one is confronted throughout life" (Gill 2005).

An international collaborative

One group striving to connect children to nature is the Nature Action Collaborative for Children, an international initiative sponsored by the World Forum Foundation. The collaborative is bringing together people from a variety of professions, including landscape architects such as Nebelong, representatives from environmental groups such as Jane Goodall's Roots and Shoots, health care professionals, and early childhood educators. Membership is free and open to anyone interested in sharing ideas and information about effective ways to connect children with the natural world (visit www.worldforumfoundation.org/wf/nacc/index.php).

Making international connections reminds us that no matter where we live, we all have a chance to enjoy the enduring beauty and goodness of nature. We must work hard to ensure that the next generation has that same opportunity.

Where to begin?

For some educators, creating a new outdoor environment may seem a daunting task. Adding more natural elements to a program's outdoor space does not have to be a complicated project, though. Everyone can add a bit more nature to children's lives in one way or another. Here are a few practical ideas to consider:

Grow flowers or vegetables in wooden planter boxes.

Even if your playground is completely covered with concrete or rubberized surfacing, a planter box gives children a chance to dig in dirt, watch flowering plants grow and bloom, or share a taste of the green pepper they grew themselves. (Families report they are often amazed at what children will eat if they've grown it themselves.)



Think differently about weather. A rainy or snowy day doesn't have to mean staying indoors. Consider keeping some inexpensive slickers and rubber boots on hand so that children can splash in puddles and play in the rain. (A word of caution, however: Never take children outside when lightning is part of a rainstorm.) A snowy day can provide myriad wonders if children are encouraged to create snow sculptures or hunt for tracks left by animals walking through the drifts. Try placing a few nuts in the shell outside, then come back the next day to see what happened. It's exciting for children to find nut shells scattered around, evidence that a squirrel or other animal discovered the winter treat.

Go on I Spy walks in your neighborhood. In this fast-paced society, we often rush children from place to place so quickly that they stop paying attention to the details of the world around them. The next time you take a walk with children, encourage everyone to see how many natural wonders they can find. Examine the spider's web on a downspout or talk about how the dandelion can poke its way through a crack in the sidewalk. Even in cities, nature often finds a way to make its presence known and to survive, a good life lesson for us all.

Create a worm bin. Finding ways to foster children's curiosity about creatures like worms or spiders or bees can help them overcome any fears that may develop without frequent interaction. For example, make a simple worm bin in a metal stock tank (found at farm implement stores), or just use a large galvanized metal bucket. Then allow children to feed, handle, and care for worms until any fears subside and the wonder begins.

Avoid scaring children by discussing frightening environmental issues. Such abstract issues as rainforest destruction or global climate change are hard for children to understand. Hearing about major environmental problems at an early age can send the message that the world is a frightening and dangerous place. Help children learn

to love the earth first by providing positive, meaningful, hands-on experiences, like watering trees or growing flowers. This can help children become the next generation of environmental stewards.

Rediscover your own sense of wonder.

More than 40 years ago, environmentalist Rachel Carson told us, "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" ([1965] 1998, 54-55).

Why not decide today that you'll be that adult?

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