

# Natural Wonders

A Guide to Early Childhood  
for Environmental Educators



Created by the Minnesota Early Childhood  
Environmental Education Consortium

Marcie Oltman, Editor

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## About this Guide



Environmental education organizations and other informal education venues have recently recognized the need to provide specialized programming for infants, toddlers, preschoolers and their families. Likewise, record numbers of parents, daycare providers and early childhood educators have begun seeking out nature centers, zoos and museums as places to help their not-yet school-aged children learn, grow and develop an appreciation of and love for nature. On the surface, it's a match made in heaven. However, unlike teachers in the formal school system who specialize in certain age groups, informal educators have to be ready and able to provide dynamic, interesting, relevant and appropriate programs for all ages—from preschool to senior citizens—often at a moment's notice.

While this kind of versatility is necessary, it can lead to one-size-fits-all programming that leaves preschoolers behind. But the more we learn about the brain and how experience affects growth and development, the more we see the need to specialize our approach to educating young children. Thanks to educators and researchers like Rousseau, Piaget, Froebel and Montessori, we've known for decades that children are not just smaller versions of adults, nor are preschoolers smaller versions of school-aged children. From years of research and practice, we know that very young children—infants, toddlers and preschoolers—are fundamentally different than older children and need to be taught in fundamentally different ways.

Since the late 1980's, the National Association for the Education of Young Children (NAEYC) has led the way in defining what those ways are. This information has been available to early childhood educators for years, but has not been translated for use in environmental educational settings—until now.

This guide was written especially for naturalists and environmental educators who are interested in learning more about how and why young children think and act and how they can use this information to design developmentally appropriate programs and activities. However, it is not intended to be a recipe book. You won't find a prescribed method for teaching about maple syruping or pond study. Although we do provide guidelines on what makes a program or activity developmentally appropriate, we recognize that everyone's situation is different and allow for as much flexibility as possible.

### How to use this guide

The sections of this guide become progressively more practical and specific—from understanding the basics of how young children think to evaluating the developmental appropriateness of programs and everything in between. Each section contains specific topics that explain in greater detail the elements of child development and what it means to facilitate young children's learning.

At the end of each topic, a chart is provided detailing information and examples of most appropriate, somewhat appropriate or least appropriate practices associated with those topics. We have provided this chart as a gauge educators can use to identify where their teaching methods currently are on the developmentally appropriate continuum and what they can change about their methods to make them more developmentally appropriate. No one is developmentally appropriate 100 percent of the time. But if you challenge yourself to keep progressing along the continuum, you'll find it becomes easier and more rewarding for you and the children.

Practicing developmentally appropriate education is a constant and evolving process. Even veteran early childhood educators must evaluate their practices on a regular basis and adapt them to changing situations and children. The best way to evaluate your programs for developmental appropriateness is by being an active learner yourself—experiment, explore, seek questions and answers, test theories and invent new ways of approaching learning.

And don't forget to have fun!

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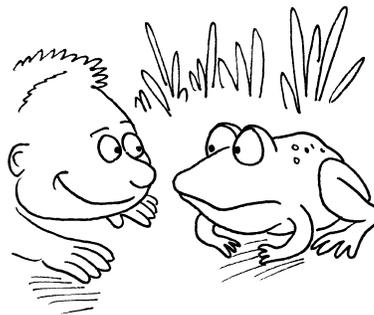
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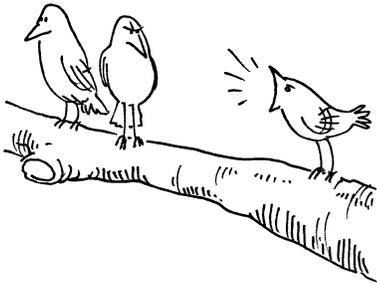
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Marcie has published articles in the monograph *Environmental Education at the Early Childhood Level*, *Cooperative Learning*, and *Legacy* and serves as a consultant on exhibit and building design, early childhood environments and early childhood environmental curricula for clients around the country. She is on the board of the Minnesota Association of Environmental Education and an advisor to the Early Childhood Outdoors Institute in Omaha and the Dodge Nature Preschool in West St. Paul, Minnesota. Marcie has worked at Minnesota Children's Museum since 1994 in exhibit and curriculum development, interpretation and as the coordinator for Project GreenStart, the Museum's environmental education initiative for young children.

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Nikki is the current president of the Minnesota Association for Environmental Education and has served on their board since 1999. She is a city-appointed board member for the Lino Lakes Environmental Advisory Board. She also served as the chairperson for the Environmental Education Consortium from 1995 to 1999, creating partnerships between environmental educators and formal teachers to develop age-appropriate curriculum in environmental education. She is the director of education at the Dodge Nature Center, West St. Paul, Minnesota, developing curriculum and coordinating early childhood, elementary and middle school environmental education programs.

## Introduction

### Reed's Story



Reed, a naturalist at a community nature center planned a presentation on animal homes for a group of three-year-olds and their parents. Reed modified a 60 minute program into a 30 minute one thinking that young children have short attention spans, have trouble staying in one place, like to touch things and have difficulty taking turns. Several activities were to last only a few minutes each. She marked the floor with tape so children would know where to sit, collected real examples of animal homes and eliminated the need for turn-taking by deciding to choose only one child to help her put felt animals in their felt homes. Reed planned to end her program with a hike through the forest in search of real animal homes.

Despite those plans, the program did not go well for Reed, the children or their parents. Distracted by an aquarium and other objects in the room, it took ten minutes to get everyone settled. As soon as she brought out an old hornet's nest, all fifteen children mobbed Reed, eager to get their hands on it. She managed to get everyone back in place by promising to pass the nest around which ended up shredded into pieces. Using only one helper for the felt animal home activity was disastrous as it was accompanied by cries of "I want to do it!" and "When is it my turn?"

The craft activity was no more successful. As Reed carefully explained each step in the craft she noticed that the parents were making the

craft while the children stood idly by. Knowing she was running short on time, she herded everyone to the door for the hike. She hurried along the trail, attempting to point out animal homes along the way. The group quickly became spread out, several children needed to go back to the building to the bathroom and the program fizzled out. Needless to say, Reed decided that preschoolers weren't her cup of tea.

### The best intentions

Reed is not alone in her experience. We've all been there or done something like it. Thinking we are planning with young children's best interests in mind, we inadvertently plan inappropriate programs based on meeting our needs instead of the children's developmental needs. In Reed's case for example, it seems logical to respond to short attention spans by planning short activities. In reality, this doesn't help children extend their attending abilities and may only exacerbate the problem. *Adults tend to react to the nature of young children by placing limits on individual behavior rather than creating supportive situations where they can freely and actively participate.* By doing so, we may be creating negative experiences with nature instead of the intended positive experiences and making more work for ourselves in the process. Reed made her program choices on deficit-based assumptions (what she thought children couldn't do) instead of on how she, the program and the environment could best support the emerging abilities of her young audience.

Following the guidelines offered in this manual will help you plan appropriate, productive and joyful early childhood environmental education programs. Children will have room and time to play, explore, experiment, run, leap, balance and climb; time to nurture friendships and learn about caring and sharing; and a chance to discover for themselves the beauty and wonders of nature.