

## **Supporting Early Childhood Environmental Education through the Natural Start Alliance**

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The Natural Start Alliance is a new initiative of the North American Association for Environmental Education. Natural Start was created to support and expand early childhood environmental education (ECEE) by creating a network of organizations, educators, parents, and others who care about using environmental education to support young children's healthy development. Some of the Natural Start Alliance's specific activities include: promoting professional development opportunities; collecting and interpreting research; curating resources; promoting diversity and inclusion; upholding quality standards; advocating on behalf of children, families, and educators; and promoting ECEE to new audiences. At [naturalstart.org](http://naturalstart.org), anyone can join the Alliance and receive the monthly newsletter, join in online conversations about current issues in ECEE, share resources with the Natural Start community, and network with other members.

Research over the past several decades has made several facts clear:

- Early childhood is a critically important time in human development, when biological paths are set that affect lifelong learning and habits (National Symposium on Early Childhood Science and Policy, 2013);
- Children who are exposed to high-quality early childhood education do better throughout their lives (educationally, economically, and in other dimensions) than children who are not (Campbell et al., 2002);
- Children's health has declined and can be correlated to increases in screen time and other passive activity (Biddle & Asare, 2011; Sisson et al., 2009);

- Natural environments make excellent learning environments for young children (Wilson, 1995), in addition to providing opportunities for physical activity and emotionally restorative play (Faber, Taylor, & Kuo, 2006; Fjørtoft, 2001); and
- Frequent, positive experiences in nature early in life can contribute to the development of environmental literacy (Bögeholz, 2006; Wells & Lekies, 2006).

For all of these reasons, the North American Association for Environmental Education (NAAEE) has received a grant from the George B. Storer Foundation to create an ambitious new program to support early childhood environmental education (ECEE). Called the Natural Start Alliance, the program serves as an alliance of educators, as well as parents and other supporters, with a common interest in promoting nature-based education for young children.

### **Importance of Early Childhood Environmental Education**

Early childhood spans the years from birth to age eight (National Association for the Education of Young Children, 2009). Particularly during the preschool years (roughly ages 3-5, before children enter kindergarten), educators focus on developing, among other things, early skills in literacy, numeracy, science, and other disciplines. Likewise, the environmental education field regards early childhood as a time to begin early development of environmental literacy, and this most typically begins during the preschool years, though important ECEE activities can occur both before and after preschool.

According to the North American Association for Environmental Education's *Early Childhood Environmental Education Programs: Guidelines for Excellence* (2010), environmental education in early childhood involves building knowledge, emotional dispositions, and skills. "The ultimate goal of environmental education," the *Guidelines* explain, "is building an environmentally literate citizenry" (p. 3). Not only does environmental literacy require basic knowledge about the environment, but it also requires "a positive and caring attitude toward the environment" (p. 3). And, because attitudes form early in life, environmental education must begin in early childhood.

While environmental education in K-12 settings can be more structured, in early childhood the emphasis is on "free discovery on each child's own terms." The *Guidelines* continue: "Personal perceptions, attitudes, and connections with nature are the key goals at this stage, and facilitating positive experiences varies from child to child" (p. 3). The *Guidelines* describe activities such as exploring woodlands, following insects, watching plants and animals change through their life cycles, learning how to gently handle plants and animals, and other activities that can help children learn respect for the natural world and other living things. The *Guidelines* conclude that "The task of

environmental education for young children is to forge the bond between children and nature" (p. 4).

Some of the best examples of ECEE in practice can be found at nature preschools. Bailie (2012) defines nature preschools as "a state licensed preschool for three to five year olds, housed and/or operated by a nature center or environmental education center. In this setting, children have the opportunity to visit different habitats on a daily basis. Early childhood educators work with environmental educators to provide a nature-based curriculum." There are currently less than two dozen nature preschools operating in the United States (Bailie, 2012). Forest kindergartens are another model for preschool education that emphasizes immersion in nature. At these schools, students spend all or most of the school day outdoors. Cedarsong Preschool on Washington's Vashon Island is one such school. While the forest kindergarten format is more popular in European countries, there are very few of these programs available in the United States (Bailie, 2012).

A far more common offering of ECEE in preschool settings includes more limited, occasionally inserted activities related to the environment or nature (for example, a school might engage in recycling, conduct an occasional outdoor walk, or celebrate Earth Day). Other programs might take on longer-term nature-based projects, such as planting a garden or regularly using an ECEE curriculum guide. Still others might fully adopt the NAAEE Guidelines for ECEE, or could create a long-term partnership with an environmental education center to offer regular nature experiences.

Preschools, though, are not the only venue for ECEE. Nonformal environmental education centers such as zoos, aquariums, museums, parks, nature centers, and other centers often offer ECEE through stand-alone programs for young children and families. These might include toddler walks at a nature center, "mommy and me" programs at museums, or family interpretive programs at state or national parks. The San Antonio Zoo, for example, is home to the "Tiny Tot Nature Spot," an interactive zone designed specifically for young children and their families to encounter and interact with nature.

And, finally, parents and family members are perhaps some of the most important environmental educators in young children's lives. Parents, ultimately, control the amount and type of nature experiences and ECEE that young children receive. Parents take babies to parks to play and walk in the grass, teach toddlers to touch animals and plants gently, ask children to help sort trash and recycling, remind children to turn off the water when they brush their teeth, and so on. Either deliberately or inadvertently, parents help children form their first bonds with the natural world, develop values of care and respect for other living things, nurture habits of resource conservation, and more.

## Assessing Needs in ECEE

In order to better understand the needs of this broad diversity of early childhood environmental educators, NAAEE conducted an informal needs assessment that included a literature review, survey, and interviews.

### *Literature Review*

The literature review revealed that there are relatively few researchers actively investigating ECEE. In fact, Davis (2009) concluded that the early childhood environmental education literature represents a "research 'hole.'" The limited research available about the quality and extent of ECEE available in American preschools today suggests that regular nature exposure is uneven at best, and is probably rare in many preschools. In a survey of Minnesota childcare teachers (including licensed family childcare providers, Head Start programs, and preschool programs) 92% of teachers reported that they spent the majority of their outdoor playtime in "maintained/developed spaces." "None indicated using unmaintained or natural areas for the majority of their outdoor playtime" (Ernst, 2012). Further, in the same study, a third of the teachers "indicated lack of support for daily outdoor play in natural settings."

Nature and science instruction may also be a low priority among preschool educators. Torquati et al. (2013) surveyed in-service and pre-service preschool teachers and found that both groups rated "nature/science as the least important for young children in terms of experiences and learning outcomes" (p. 721). Language and literacy experiences rated most important.

Ernst (2013) found that key barriers to nature play in preschools include access to natural areas, lack of appropriate clothing for children, and safety or liability concerns. Other researchers have found that socio-economic factors can also play a role in access to natural areas. Strife and Downey (2009) reviewed a large number of studies and concluded that "empirical evidence suggests that youth's experiences in and access to nature and green spaces are likely to vary according to race, ethnicity, and socioeconomic status" (p. 110). Ernst (2012) states that early childhood educators serving children of higher socio-economic status report having greater access to natural areas.

In terms of professional development, Torquati et al. (2013) found that the early childhood educators are more confident in teaching reading, math, and other subjects, and are least confident in conducting nature/science activities.

Torquati and Ernst (2013) surveyed pre-service early childhood educators and found that "knowledge of the benefits of nature experiences, the perceived difficulty in using natural settings, and personal levels of nature relatedness each significantly predicted

[the pre-service early childhood educators'] intention to use natural settings in future teaching" (p. 191). Ernst (2012) also notes that:

"A cluster of obstacles seem to be regarding the "know-how" to incorporate this type of play (how to reduce the time involved in getting children ready for going outside, how to incorporate this type of play when there are also babies/toddlers to care for and additional staff are not available, how to provide this type of play safely, how to incorporate this type of play even in the winter or in the messiness of snow-melt and mud, etc.). Perhaps there is an opportunity for addressing these obstacles through professional development workshops or even more informal avenues, such as sharing ideas or "tricks" that providers have already figured out." (p. 20)

Finally, Ernst (2012) reflects, "Given that lack of time was a frequently-listed obstacle to nature play, it might be considered unlikely that providers have time to walk their children off-site for nature play; thus, it may be appropriate to focus efforts on increasing access (creating access) to natural areas on-site" (p. 20).

### *Survey*

An electronic survey was administered to ECEE professionals to gather their input about their interests and preferences for services from a potential ECEE Alliance. The professionals were identified from a list of participants in three nature preschool conferences held in 2012. (Each of these conferences was held for the first time in 2012, reflecting the growing interest in ECEE.) In all, 57 professionals responded, with the majority representing nature preschools.

Among the ECEE professionals, 98% indicated that an alliance would be valuable to them and the field. ECEE professionals indicated greatest interest in alliance activities around professional development, conferences and other gatherings, technical or financial support for professional development, certification programs, and networking opportunities. The most-preferred area of pre-service education was related to developmentally appropriate practice (which is not surprising, given that many environmental educators do not enter the field through traditional education training). ECEE professionals also indicated support for an internet depository of ECEE resources.

### *Interviews*

Interviews were also conducted to reach a diversity of "front-line" early childhood education professionals who are familiar with ECEE in a variety of settings beyond nature preschools. In all, over 40 semi-structured interviews were completed, with each lasting approximately one hour. The purpose of the interviews was to glean

professionals' preferences and recommendations for how an alliance might support the field of ECEE.

Interview respondents indicated strong support for the development of an ECEE alliance, and most indicated that the field is undergoing tremendous growth. Interview participants particularly encouraged alliance activities supporting ECEE-related research and professional development for early childhood educators (both pre-service and in-service). Interview respondents also indicated support for alliance activities related to providing networking opportunities, curating resources, promoting the ECEE field, convening conferences and workshops, and providing a consultant and/or speaker bureau. Barriers to ECEE mentioned by interview respondents included: cost (for example, one early childhood education center mentioned an interest in installing gardens, but did not have money in the budget to cover the cost), state licensing requirements (for example, many respondents indicated that state licensing agents have wide latitude in their interpretation of licensing requirements, leaving early childhood education centers unsure of which natural elements might be acceptable), perception that nature is not available in urban environments, curricular focus on math and reading skills and little interest in science, and requirements imposed by insurers.

### **Supporting the Field**

In July 2013, NAAEE convened a summit on ECEE at the National Conservation Training Center in Shepherdstown, WV. Over 20 individuals participated, representing non-profit organizations, professional associations, universities, government agencies, foundations, and private enterprises with an interest in and commitment to ECEE. The group reviewed the results of the surveys, interviews, and literature review described above, and helped NAAEE develop an initial plan for launching an alliance to support ECEE in the United States. Specifically, the results of the needs assessment and the input received from experts at the summit pointed to alliance work in the following areas:

- **Professional development**—promoting opportunities for pre-service and in-service education in ECEE for early childhood educators
- **Research**—Promoting new research in ECEE, and disseminating research results in ways that are useful for lay audiences
- **Resources**—Providing teachers, parents, and other key audiences with resources related to ECEE (for example, fact sheets, activity ideas, links to ECEE-related organizations and publications, etc.)
- **Diversity and inclusion**—Ensuring that ECEE opportunities are available to all young children, regardless of socio-economic status, ethnicity, race, or other factors

- **Quality standards**—Promoting the use of NAAEE's ECEE Guidelines for Excellence and otherwise promoting high-quality instruction in ECEE
- **Promotion**—Raising the profile of ECEE and the organizations and agencies that offer ECEE, and helping to generate greater demand for ECEE programs among the general public
- **Advocacy**—Advocating for more and better ECEE opportunities for young children, and mobilizing our networks to support opportunities to expand ECEE in the US

To focus on these priorities, NAAEE has launched The Natural Start Alliance to support and expand ECEE. With its reach and expertise in environmental education, NAAEE is well positioned to support the institutions and educators who are already making a difference in ECEE, a field that has been growing slowly but steadily for decades. But because the number of ECEE providers is small, the Natural Start Alliance will also reach out to early childhood educators, parents of young children, and others who haven't yet been exposed to the value of environmental education, or who want to incorporate ECEE into their teaching, but are facing challenges. While research shows that there are a variety of barriers to ECEE, our experience also shows that there is tremendous opportunity in this sector of environmental education. The Natural Start Alliance aims to help inspire, educate, and connect early childhood educators—whether they are professionals or parents—who want to help young children begin their path toward environmental literacy.

### **Join the Alliance**

Different people and organizations support early childhood environmental education for different reasons: some care about connecting children to nature, others are concerned about creating great educational experiences that foster young children's development, and still others have their eyes on the future and hope to instill habits, skills, and connections today that will lead to a more sustainable world tomorrow. Some people share all of these motivations, and others have different ones. But whatever the motivation, the Natural Start Alliance can provide pathways to inspiration, connection, and learning. To learn more about the Natural Start Alliance, visit [naturalstart.org](http://naturalstart.org).

## References

- Bailie, P.E. (2012). Connecting children to nature: A multiple case study of nature center preschools. Dissertation retrieved from <http://digitalcommons.unl.edu/cgi/viewcontent.cgi?article=1028&context=teachlearnstudent>
- Biddle, S.J.H, & Asare, M. (2011). Physical activity and mental health in children and adolescents: A review of reviews. *British Journal of Sports Medicine, 45*, 886-895.
- Bögeholz, S. (2006). Nature experience and its importance for environmental knowledge, values and action: recent German empirical contributions. *Environmental Education Research, 12*(1), 65-84.
- Campbell F.A., Ramey, C.T., Pungello, E., Sparling, J., and Miller-Johnson, S. (2002). Early Childhood Education: Young Adult Outcomes from the Abecedarian Project. *Applied Developmental Science 6*(1), 42-57.
- Davis, Julie. (2009). Revealing the research 'hole' of early childhood education for sustainability: A preliminary survey of the literature. *Environmental Education Research 15*(2), 227-241.
- Ernst, J. (2012). Early childhood nature play: A needs assessment of Minnesota licensed childcare providers. *Journal of Interpretation Research, 17*(1), 7-24.
- Ernst, J. (2013). Early childhood educators' use of natural outdoor settings as learning environments: An exploratory study of beliefs, practices, and barriers. *Environmental Education Research*, DOI: 10.1080/13504622.2013.833596.
- Faber Taylor, A. & Kuo, F. (2006). Is contact with nature important for healthy child development? State of the evidence. In C. Spencer & M. Blades (Eds.), *Children and Their Environments: Learning, Using and Designing Spaces* (pgs. 124-140). Cambridge, UK: Cambridge University Press.
- Fjørtoft, I. 2001. The natural environment as a playground for children: The impact of outdoor play activities in pre-primary school children. *Early Childhood Education Journal, 29*(2), 111-117.
- National Association for the Education of Young Children. (2009). *Developmentally Appropriate Practice in Early Childhood Programs Serving Children from Birth through Age 8: A Position Statement of the National Association for the Education of Young Children*. Retrieved from



<http://www.naeyc.org/files/naeyc/file/positions/position%20statement%20Web.pdf>

National Symposium on Early Childhood Science and Policy. (no date). "In Brief: The Science of Early Childhood Development." Retrieved from [http://developingchild.harvard.edu/index.php/resources/briefs/inbrief\\_series/inbrief\\_the\\_science\\_of\\_ecd/](http://developingchild.harvard.edu/index.php/resources/briefs/inbrief_series/inbrief_the_science_of_ecd/)

North American Association for Environmental Education. (2010). *Early childhood environmental education programs: Guidelines for excellence*. Washington, DC: NAAEE.

Sisson, S.B., Church, T.S., Martin, C.K., Tudor-Locke, C., Smith, S.R., Bouchard, C., Earnest, C.P., Rankinen, T., Newton, R.L., & Katzmarzyk, P.T. (2009). Profiles of sedentary behavior in children and adolescents: The US National Health and Nutrition Examination Survey, 2001–2006. *International Journal of Pediatric Obesity* 4(4), 353-359.

Strife, S., & Downey, L. (2009). Childhood development and access to nature: A new direction for environmental inequality research. *Organization and Environment* 22(1), 99–122.

Torquati, J. Cutler, K., Gilkerson, D., Sarver, S. (2013). Early childhood educators' perceptions of nature, science, and environmental education. *Early Education and Development* 24(5): 721-743.

Torquati, J., & Ernst, J. (2013). Beyond the walls: Conceptualizing natural environments as "third educators". *Journal of Early Childhood Teacher Education* 34(2), 191-208.

Wells, N. M., & Lekies, K. S. (2006). Nature and the life course: Pathways from childhood nature experiences to adult environmentalism. *Children, Youth, and Environments* 16(1), 1-24.

Wilson, R.A. (1995). Nature and young children: A natural connection. *Young Children* 50(6), 4-11.

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