



Wonder

NEWSLETTER OF THE NATURE ACTION COLLABORATIVE FOR CHILDREN

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The real benefits of nature play every day

by Deanna M. Erickson and Julie Athman Ernst

When watching a child bury her nose in a flower, find a bizarre alien-like insect, or splash in a creek, most of us who care for small children can see value in the wholesome goodness of fresh air and a little time to run around outside. Even the most urban child care facility typically has a small patch of outdoor play space. As children stretch and explore the outdoors, they experience a certain kind of joy that many adults remember feeling as children, as did their parents before them. A sunny afternoon playing outside is an American tradition, happily experienced and fondly remembered.

But the effort of preparing small children for outdoor play – the jackets, the shoes, the bathroom breaks — or the risk of a fall, or a sting, or of getting dirty can feel overwhelming, especially when children are of varied ages or when a child care facility is short-handed. Providers in intensively urban areas or low-income neighborhoods face additional challenges like limited access to natural spaces, children who might not be comfortable in the outdoors, or who lack appropriate clothing. They may find themselves asking if the benefits nature offers to children in their care really outweigh the time and effort they must invest, not to mention the occasional scratched knee and tears.

Fortunately, as the importance of play in natural areas receives more and more

media attention, evidence is mounting that such play offers tremendous benefits to the development of the whole child. From motor skills to social skills, researchers in early childhood and nature play are discovering just how important this tradition really is.

What is nature play?

Nature play is not just outdoor play. Child-initiated and child-directed, it happens in a natural space, like a patch of woods, an overgrown field, or the unmaintained edges around your yard or neighborhood. While children might spend time on a playground, this type of play is unlikely to put them into direct contact with nature and offers a different set of benefits. Nature play is children playing *with* nature and it has many benefits.

Benefit 1: Nature makes kids healthier

Imagine a child playing in a small patch of woods, where the trees might be hiding places, the foundation of a fort, or branches to jump and swing. The tall grass in the understory might be a bed, a hiding spot, or an imaginary farmer's field. Now compare the imaginative possibilities a child has in this patch of woods to the possibilities provided by a slide or a swing. Both offer a chance for

physical activity, but the woods offer more *options*. Researchers refer to this as the 'affordance' of nature, and it is affordance that offers so many benefits to physical and motor skill development in small children.

The possibilities provided by nature affect the way children play, which affects the way their bodies develop. Researchers have found that trees, shrubs, and broken ground on preschool grounds trigger an increased level of physical activity in 4- to 6-year olds (Boldemann et al., in Cardon et al., 2008). These higher levels of activity in early childhood may then reduce the incidence of obesity in early adolescence (Moore et al., 2003).

In Sweden, a group of children in a nature preschool played in nearby woods for two hours each day. After a year, their motor skills were compared with children in a traditional program who used a playground. Even though the children in the nature preschool lagged behind their traditional preschool peers at the beginning of the year, they outperformed them on a series of motor-skills tests after a year of nature play (Fjortoft, 2001). Children who spend time outdoors even tend to have better distance vision, according to studies in the journal *Optometry and Vision Science* (McBrian, Morgan, & Mutti, 2008). The benefits nature provides to a child's

physical development are tangible and significant.

Benefit 2:

Nature makes kids smarter

Play alone is stimulating to the mind; but just as the variety provided by nature stimulates and develops a child's body, it offers an added boost to the development of the brain. When engaged in dynamic and varied outdoor play, a child encounters opportunities for decision making that stimulate problem solving and creative thinking, opportunities that aren't as easily found in the more static indoor environment (Burdette & Whitaker, 2005).

Recent research has focused on the effects of nature on 'attentional functioning,' or the ability of a child to pay attention. Children are often required to focus on a single task for a period of time, which requires the use of 'directed attention' or focus. In nature, however, they are free to let their attention wander, which may give the parts of the brain responsible for focus a chance to rest and recover. It comes as no surprise then that parents who were surveyed regarding the behavior of their children with Attention Deficit Hyperactivity Disorder (ADHD) reported that their kids were calmer after time spent playing in natural areas (Taylor, Kuo, & Sullivan, 2001). A 1997 study also reported that children in a more natural day care center had greater 'attentional capacity' than did those in day care centers where children spent less time outdoors (Grahn et al., 1997, in Wells, 2000). This may also explain why schoolteachers give student behavior higher ratings when students have at least one 15-minute recess each day (Romina, Silver, & Stein, 2009).

Nature may even provide children with a buffer from stress. When researchers followed children through a move to a new residence, they found that those who went from a less natural area to a

house in a more natural setting were better able to deal with life stress. As an added bonus, they tended to have higher levels of cognitive functioning than children who had less nature nearby (Wells & Evans, 2003).

Benefit 3:

Nature makes kids feel better

Many adults feel more relaxed after a hike in the woods or time spent at a favorite natural retreat. The same is true for children. In an article in the *Archives of Pediatrics & Adolescent Medicine*, medical researchers Burdette and Whitaker (2005) say, "Free play has the potential to improve many aspects of emotional wellbeing, such as minimizing anxiety, depression, aggression, and sleep problems."

Nature also gives children reprieve from the sometimes daunting adult world. One study (Korpela et al., 2002) found that children as young as eight often went to a favorite outdoor place after an emotionally upsetting event, or for general relaxation and restoration. This may explain why another study found that children with more nature near their homes had lower levels of anxiety and depression and higher levels of self-worth than their peers (Wells & Evans, in Louv, 2005).

Time spent in nature can also strengthen social bonds between children. The unstructured time inherent in play allows for the social interactions that are important building blocks of emotional intelligence. When that play takes place in nature, children have increased opportunities for negotiating, sharing, problem solving, and working together (Drew, 2007). Nature works as a facilitator for important childhood social interactions.

Benefit 4:

Nature play is good for the earth

A general consensus exists in the scientific community that we will face tremen-

dous environmental challenges in the years ahead. To overcome those challenges, we will need people who not only understand the earth, but also care about it. Research shows that nature play is crucial for developing just this sort of person. By spending time in direct contact with the environment, children have the positive experiences that may precondition them to caring about the natural world later in life (Ewert, Place, & Sibthorp, 2005).

Researcher Louise Chawla has spent over a decade searching for commonalities in the childhood influences of adults who demonstrate a concern for the environment in their day-to-day lives. She discovered that the most significant influences are extended time spent outdoors in natural areas and the shared enthusiasm of an adult, like a family member or teacher. In one study (Chawla & Cushing, 2007), a majority of respondents also identified activities such as free play, hiking, camping, fishing, and berry picking as significant formative experiences.

Even the National Science Foundation has come out in favor of nature play in early childhood, as a means to increase later interest in and understanding of science. Since knowledge about any given topic accumulates over time, these early explorations of the environment become a foundation for later understanding of natural science, which may build better environmental decision makers for the future (Staempfli, 2008).

Realizing the benefits

To assess the state of nature play in child care centers, we conducted a survey of child care providers across the state of Minnesota, along with members of the Environmental Education graduate program at the University of Minnesota, Duluth.

- It turns out that most child care professionals, at least in Minnesota, value children's time spent outdoors, but that time looks different depending on where the program is located, whom they serve, and the training and attitudes of the provider.
- Everyone who responded to the survey included outdoor child-directed play in their program on a daily basis, though most was on playground equipment rather than in a natural space.
- A third of the respondents did not support play in natural settings like the woods or overgrown field, the type of play that provides the benefits discussed here.
- Those caring for children of a lower socioeconomic status perceived that they had less access to these natural areas.
- When asked what might aid them in including more nature play, the providers said that brochures to help educate parents about the benefits of nature play (copy and distribute this newsletter!) would be the most useful, followed by information that would help them create a natural area at their site.

Perhaps the largest finding from the research, overall, is that more child-directed play in natural areas is needed for young children. Very few of the respondents reported that children in their care were receiving the recommended hour of daily outdoor play, and the vast majority of outdoor play was happening on playground equipment that, while beneficial, does not offer the variety — nor the magic! — of the natural world.

It is hoped that as more providers learn of the overwhelmingly positive benefits nature provides to all aspects of a child's development, that more children will have the opportunity to splash in puddles, hide in tall grass, grow up healthy and strong, and ultimately, care about the earth.

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Deanna Erickson is currently a MEd. in Environmental Education candidate at the University of Minnesota Duluth, where her research investigates the effects of outdoor education professional development on teacher job satisfaction. With 13 years of experience in environmental, outdoor, and place-based education, she is particularly interested in administrative leadership and professional development for teachers and outdoor education professionals. She is continually seeking to answer the question "How do we best connect people with the natural world?"

Dr. Julie Ernst is an Associate Professor of Environmental Education at the University of Minnesota Duluth. She instructs a variety of undergraduate and graduate courses in environmental education, research, evaluation, and statistics. She is actively pursuing a research line relating to environment-based education and environmental service learning programs, as well as research relating to children's connections to nature.



Getting our hands dirty and leaving something behind

by Nature Action Collaborative for Children (NACC) International Leaders

One of the projects that NACC Leaders supported at the recent World Forum in Honolulu, Hawaii, with the great help of Kevin Carnes and his staff at Lakeshore Learning Materials, was a chance to participate in an outdoor work day at the Manoa Children's Center. Following are some reactions from work day participants:

"When the opportunity arose to become involved in an outdoor classroom transformation at the University of Hawaii's Manoa Children's Center as part of the World Forum on Early Care and Education this past May, we jumped at the chance. With the support of the NACC Leadership team and over 40 early childhood professionals from all over the world, it was wonderful to see people working side by side pulling weeds, digging holes, clearing brush, planting seedlings, and just basically having some good clean outdoor fun while getting really dirty.

"The staff and parents at the Manoa Children's Center couldn't have been more inviting and wonderful to work

with, and at the end of the morning, they provided a wonderful potluck lunch as only the Hawaiians can. All in all, it was a very memorable day, and we hope that we have sent a few more outdoor classroom converts out into the world."

— Kevin Carnes, United States

"Whenever I go to the World Forum, my network of incredible people increases, and as a result I feel like we are bringing the world's children closer together. That certainly happened as we all got our hands dirty together at Manoa Center."

— Wil Maheia, Belize

"Some years ago, when the NACC leadership team was just forming, we decided that if we were going to meet up in various parts of the world, then we should leave something behind for each community we encountered. Thus the "Action" in Nature Action Collaborative for Children would be fulfilled during our meeting times together. Our group enjoys the camaraderie, dirt and mess, physical work, and most of all the idea of leaving concrete (or rather natural) evidence of that which we

value in a playscape for children."

— Toni Christie, New Zealand

"The energy of the place and staff was palpable, and the children were part of the work day, also! And what fun it was to plant species like tree ferns that I will never get to have at home."

— Jim Wike, United States

We believe the photographs only show a bit of the great spirit and the "can-do" attitude that happened at Manoa Center. Work days such as these remind us of what can happen when people all over the world get behind a common goal.



AFRICA

Irma Allen, Mbabane, Swaziland
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Wonder Vitals

Wonder, the newsletter of the NACC, welcomes submissions from all NACC members. Please join us at:
www.worldforumfoundation.org/nature.

The NACC Leadership Team is a core group of early childhood educators, designers, and landscape architects who came together in 2006 with a dream to change the world for young children. They represent six continents across the globe, and serve as key contact points for others around the world who have a desire to improve the lives of young children.

The Leadership Team meets periodically to discuss strategies for increasing NACC's outreach and membership, and to find new ways for all of us to work together to further our common mission.