



Nature-Based Guides to Effective Teaching and Learning

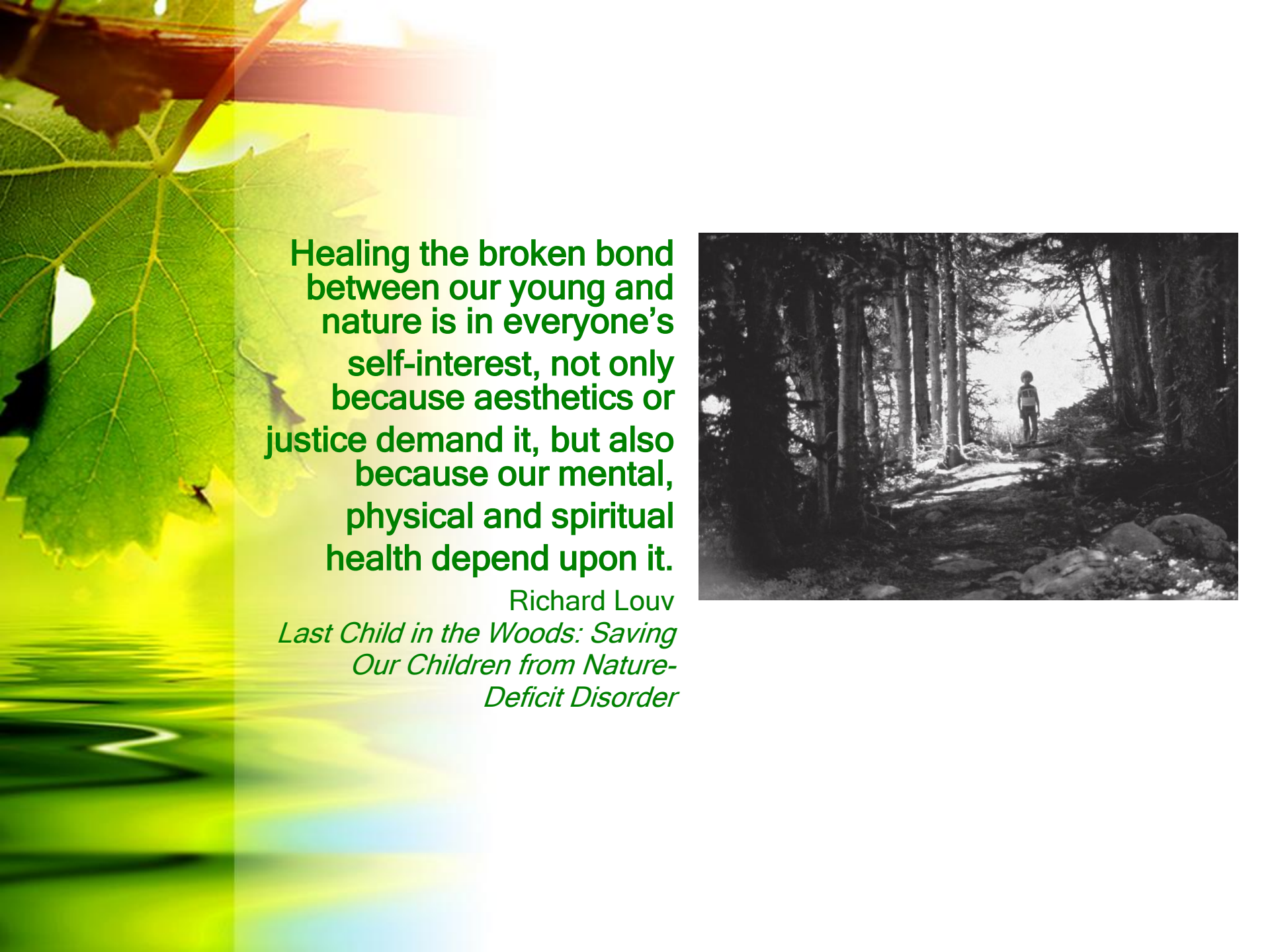
Cheryl Charles, Ph.D.

Research Scholar and Executive Director
Antioch University New England
Nature Based Leadership Institute

Co-Founder, President and CEO Emerita, Children & Nature Network

Why Care?





Healing the broken bond
between our young and
nature is in everyone's
self-interest, not only
because aesthetics or
justice demand it, but also
because our mental,
physical and spiritual
health depend upon it.

Richard Louv

*Last Child in the Woods: Saving
Our Children from Nature-
Deficit Disorder*





What the Evidence Suggests: Risks and Trends

- Many children are spending 40 to 65 hours or more a week connected with electronic media, an increase of more than one hour daily in a five-year period. (Kaiser Family Foundation)
- Use of mobile devices by children under eight years of age doubled from 2011 to 2013, with seven of ten children reporting their use. Four out of ten children younger than two years of age are also using mobile devices, an increase from one in four during the same two-year period. (CommonSense Media)
- 75% of preschool children in the US are in some form of child care, and are only physically active to a degree considered to be vigorous about 2% to 3% of their time in those settings. (Pediatrics)
- Fewer than 1 in 5 children walk or ride a bike to school. (Centers for Disease Control)

A green leaf with a hole is visible on the left side of the slide. In the background, there is a bright light source, possibly the sun, creating a lens flare effect. The overall color scheme is green and yellow.

Risks and Trends, cont.

- There is an upward trend in high blood pressure in children ages eight to 18. (Journal of American Medical Association)
- Myopia or nearsightedness has become increasingly common in young children. (Ophthalmology)
- Worldwide there is a high prevalence of vitamin D deficiency in infants, children and teens, and is associated with chronic diseases. Reduced sun exposure is a risk factor for vitamin D deficiency. (Reviews in Endocrine and Metabolic Disorders)
- Youth spend significantly less time in moderate-to-vigorous physical activity as they move from childhood to the teen years. Only 17% of 15 year olds were found to get an hour a day of MVPA. (Journal of the American Medical Association)

A green leaf with a hole and a reflection in water.

Risks and Trends, cont.

- In countries throughout the world, children's major free-time activity is watching television and little time is spent in free play exploring nature. (Singer *et al.*)
- Children have less time for unstructured, creative play and learning in the outdoors than ever before in human history. (Various researchers)
- This may be the first generation not to live as long as their parents. (US Surgeon Generals)

A large green leaf with a prominent hole in its center is shown in the upper left. Below it, a calm body of water reflects the leaf and the bright light from above, creating a clear mirror image. The background is a soft, out-of-focus landscape with green grass and a bright, hazy sky.

What the Evidence Suggests: The Benefits

- Children are happier, healthier and smarter when they connect with nature.
 - **Happier:** Nature play increases self esteem, improves psychological health, reduces anxiety and stress, and enhances confidence. Children learn self-discipline and are more cooperative.
 - **Healthier:** Nature play improves physical conditioning, reduces obesity and mitigates other health risk factors.
 - **Smarter:** Nature play stimulates creativity, improves problem solving, and enhances executive functioning skills. Children do better in school.

A green leaf with a hole and a reflection in water.

The Benefits, cont.

- Daily exposure to natural settings is associated with children's ability to focus and enhances cognitive abilities. (Wells)
- Children are less stressed, more self-disciplined, and have better social relationships with access to—and even a view of—nature in their daily lives. (Kuo, Kuo and Sullivan)
- Outdoor classrooms and nature-based education is associated with significant student gains in academic achievement. (American Institutes for Research)

A green leaf with a hole and a reflection in water.

The Benefits, cont.

- The greener a child's everyday environment, the more manageable and mitigated are their symptoms of Attention-Deficit Disorder. (Faber Taylor and Kuo)
- Higher levels of total time spent outdoors is associated with lower prevalence of myopia among twelve-year olds. (Opthamology)
- Nearly to a person, those who grow up to be committed to active outdoor lives and conservation of natural resources had meaningful experiences outdoors on a regular basis between the ages of birth and 11 or 12 years of age. (Wells, Chawla)

Awe



Photo by Dr. Joe Baust

Learning



Photo by Dr. Milton McClaren.

Socialization



Photo Nathaniel Brooks for New York Times, Waldorf School, Saratoga Springs, New York

Resilience



Photo by Brett Hochmuth, Eagle Eye Photography

Empathy



Photo by Cheryl Charles.

Sense of Place



Photo by Judith Anderson.

Cooperation



Kindergarten, Germany. Wall Street Journal.

Problem Solving



Photo Courtesy of Peconic Land Trust.

Self Esteem



Photo by Judith Anderson.

Exhilaration



Photo Courtesy of Children in Nature Collaborative, Bay Area

Creativity



Photo Courtesy of Cincinnati Nature Center.

Confidence



Photo by The Nature Conservancy.

Focus



Photo Courtesy of Children in Nature Collaborative, Bay Area

Understanding



Photo Courtesy of Children in Nature Collaborative, Bay Area.

Courage



Photo Courtesy of Brother Yusuf Burgess.

Wonder



Photo by Cheryl Charles.



Nature-Based Guides to Effective Teaching and Learning

- Diversity
- Niche
- Cooperation
- Self Regulation
- Optimization
- Connectedness
- Community

A large green leaf with a prominent hole is shown on the left side of the slide. Below the leaf, its reflection is visible in a body of water, creating a symmetrical effect. The background is a soft, out-of-focus green and yellow, suggesting a natural outdoor setting.

What Teachers and Caregivers Can Do

- Open the door and go outside.
- Integrate the outdoors throughout the day care and school curricula.
- Reinstate recess where it has been eliminated.
- Affirm those teachers and caregivers who have always brought the outdoors indoors, with live plants, natural materials, ecologically-based learning laboratories and opportunities to connect with the outdoors.
- Maintain, expand or add areas of native plantings, schoolyard habitat projects, school gardens and diverse natural areas to the day care or school grounds and nearby neighborhoods.
- Get parents and the community involved—because nature-based learning is good for everyone.

A green leaf with a small hole and a reflection in water.

What Each of Us Can Do

- Take a child outside.
- Encourage nature-based, children-friendly spaces and places throughout our communities.
- Make re-connecting children and nature a priority.
- Educate parents, grandparents and other caregivers about the cognitive, physiological, and emotional benefits to children who play in the out-of-doors on a regular basis.

A green leaf with a hole and a reflection in water.

What Communities Can Do

- Engage the physicians to encourage them to prescribe nature-play, because it is good for children.
- Educate architects, builders, community planners, the clergy and civic leaders about the need for areas of native habitats in planned developments and existing neighborhoods, so children have places to play that foster their imagination.
- Assemble a group of creative and constructive attorneys to help reduce liability fears and constraints.
- Build new partnerships, and support existing efforts, bold, balanced and conserving ways to achieve a sustainable future.
- Engage the whole community in a children and nature initiative, now and for the future.



For Additional Information

Cheryl Charles, Ph.D.

Research Scholar and Executive Director

Nature Based Leadership Institute

Antioch University New England

ccharles@Antioch.edu

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Children & Nature Network

www.childrenandnature.org

Cheryl@childrenandnature.org