



HEALTH AND WELLNESS CONNECTING YOUTH TO NATURE

Youth connections to nature are at an all-time low and their health is suffering. Research tells us that time spent outdoors benefits youth—and adults—in many ways. Expanding opportunities for youth to connect with nature and the outdoors will enhance their overall well-being.

Research: Health, Wellness & Getting Kids Outdoors

This body of research represents evidence that spending time outdoors has documented improvements is organized into three content areas: children’s development, test scores, and emotional and mental health.

Improvement Area: Children’s Development

[The Natural Environment as a Playground for Children: The Impact of Outdoor Play Activities in Pre-Primary School Children.](#) Ingunn Fjørtoft, *Early Childhood Education Journal*, Vol. 29, No. 2, 2001.

Major Findings: Forests provide a unique environment for unstructured play that improves motor, coordination and problem-solving skills among school-aged children. Children in studies became strikingly better at mastering rugged ground and the unstructured landscape. Significant effects were found in balance and coordination abilities. In a cross-coordination test, average reps went from 22 reps per 30 seconds to 44 reps per 30 seconds following consistent exposure to outdoor play.

PLT Connections: Highlight the opportunities that PLT’s Early Childhood materials offer to support outdoor and unstructured play.

Early Childhood Guide:

- Outdoor Play Learning Centers, p. 11
- Encouraging Unstructured Outdoor Play Appendix, p. 107

PLT Connections: These findings apply to ALL school aged children, even adolescents. Use the PreK-8 Guide to get students of all age engaged in outdoor activity.

PreK-8 Guide Activities:

- Activity 3: Peppermint Beetle
- Activity 5: Poet-Tree
- Activity 25: Birds and Worms
- Activity 46: Schoolyard Safari

[Coping with ADD: The Surprising to Connection Green Play Settings.](#) Andrea Faber Taylor, Frances Kuo, William Sullivan. *Environment and Behavior*, Vol 33 No. 1 Jan. 2001.

Major Findings: Children who suffer from Attention Deficit Disorder experience less severe symptoms after engaging in activities in a natural setting. By playing in a green area, kids are more likely to feel focused and enjoy the task they are engaging in.

Spending time in the forest promotes both academic growth and physical development in school age children and adolescents. It improves mindfulness and positively addresses ADD symptoms.

Improvement Area: Test Scores

[Benefits of Connecting Children to Nature, Why Naturalize Outdoor Learning Environments,](#) NC State University, College of Design, Nature Learning Initiative. 2012.

Major Findings: Students who participated in outdoor science programs improved their science testing scores by 27%.

PLT Connections: Highlight the Time Consideration & Setting Index in the PreK-8 Guide. Did you know that over half of the activities in this guide (either in whole or in part) get students actively learning outside?

PreK-8 Guide Activities:

- Activity 64: Looking at Leaves
- Activity 64: Bursting Buds
- Activity 66: Germinating Giants
- Activity 67: How Big is Your Tree?
- Activity 68: Name That Tree
- Activity 69: Forest for the Trees
- Activity 70: Soil Stories
- Activity 71: Watch on Wetlands

Improvement Area: Emotional and Mental Health

PLT Connections: Focus on PLT activities that have children encountering new and curious life forms, both large and small.

PreK-8 Guide Activities:

Activity 7: Habitat Pen Pals
Activity 8: The Forest of S.T. Shrew
Activity 9: Planet Diversity
Activity 23: The Fallen Log
Activity 24: Nature's Recyclers
Activity 45: Web of Life
Activity 46: Schoolyard Safari
Activity 47: Are Vacant Lots Vacant?

[Building for Life: Designing and Understanding the Human-Nature Connection.](#) Stephen R. Kellert. *Island Press, Washington.* 2012.

Major Findings: Playing in nature allows children to develop their emotional response to stimuli in a dynamic fashion. For example in nature, young people encounter various creatures that look, move, and feel like themselves. These resemblances prompt children to respond emotionally, most importantly by extending to these creatures presumed capacities to feel and to think, which produces an emotional bond and assumption of reciprocity.

Children can learn through six different modes; evaluative, cognitive, direct, indirect, affective, and vicarious/symbolic. By allowing them to have direct experiences in nature they can engage in all six forms of learning and thus increase their creative capacity in later life.

[Psychosocial Stress-Induced Activation of Salivary Alpha Amylase: An Indicator Of Sympathetic Activity?](#), Rohleder et. al., *Annals of the New York Academy of Sciences.* Vol 1032: 258–263. 2004.

Major Findings: Spending time in forests improve mental health. A walk in the woods at least once a week has been proven to promote a marked improvement in mental health including relief from stress and anxiety, and over time it can decrease signs and symptoms of clinical depression.

[Brief Introduction to the Science of Forest Therapy: A Curated Collection of Journalism and Research.](#)

Major Findings: Exposure to natural environments enhances the ability to cope with and recover from stress, cope with subsequent stress and recover from illness and injury. Review specific findings related to unique populations, including [diverse youth](#) and children with [nature deficit disorder](#).

PLT Connections: Consider PLT lessons that focus on long-term outdoor investigations, which occur over a single semester or even an entire year. These PreK-8 activities have students visiting outdoor study sites multiple times, in multiple seasons, throughout the year.

PreK-8 Guide Activities:

Activity 23: The Fallen Log
Activity 24: Nature's Recyclers
Activity 45: Web of Life
Activity 46: Schoolyard Safari
Activity 78: Signs of Fall

Additional Resources

[Acute Effects of Outdoor Physical Activity on Affect and Psychological Well-being in Depressed Patients](#) Fruhauf et. al. *Elsevier*, 2016.
[Brining Nature to Schools to Promote Children's Physical Activity](#); Sharma-Brymer and Bland. *Sports Med.* 2016 July, 46(7),955-62.
[Childhood Development and Access to Nature: A New Direction for Environmental Inequality Research](#) (PDF)
[Visual Color Perception in Green Exercise: Positive Effects on Mood and Perceived Exertion](#); Akers et. al. *Environ Sci Tech.* 2012 Aug.