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**


**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.


**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**


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

**PreK-8 Guide Activities:**
Activity 3: Peppermint Beetle  
Activity 5: Poet-Tree  
Activity 25: Birds and Worms  
Activity 46: Schoolyard Safari

**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?


**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.


**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.

**Additional Resources**
- *Childhood Development and Access to Nature: A New Direction for Environmental Inequality Research* (PDF)