

# How Do Nature-Based Learning Opportunities Benefit Children?





# active kids learn better

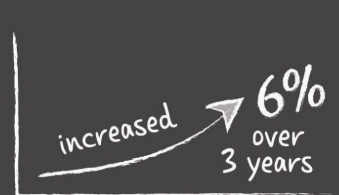
physical activity at school is a win-win for students and teachers



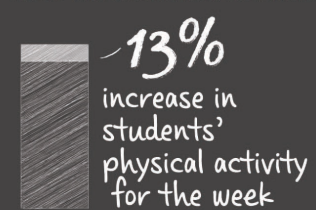
GRADES:



STANDARDIZED TEST SCORES:



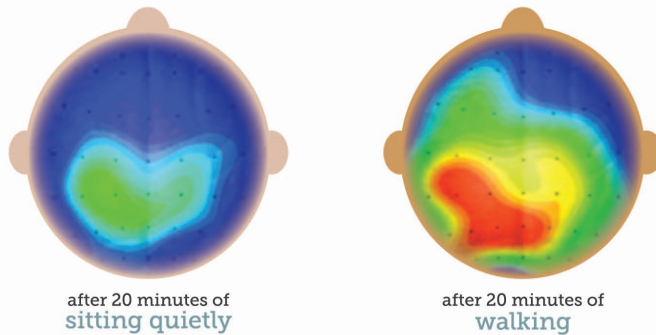
JUST ONE PHYSICALLY ACTIVE LESSON CREATES:



21% decrease in teachers' time managing behavior

## physically active kids have more active brains

BRAIN SCANS OF STUDENTS TAKING A TEST:



Red areas are very active; blue areas are least active.

MORE RESULTS:

after 20 minutes of physical activity:

students tested better in reading, spelling & math and were more likely to read above their grade level

after being in a physically active afterschool program for 9 months:

memory tasks improved 16%

SOURCES: Donnelly J.E. and Lambourne K. (2011). Classroom-based physical activity, cognition, and academic achievement. *Prev Med*, 52(Suppl 1):S36-S42. Hillman C.H. et al. (2009). The effect of acute treadmill walking on cognitive control and academic achievement in preadolescent children. *Neuroscience*, 159(3):1044-1054. Kamijo K. et al. (2011). The effects of an afterschool physical activity program on working memory in preadolescent children. *Dev Sci*, 14(5):1046-1058. Kibbe D.L. et al. (2011). Ten years of TAKE 10!: integrating physical activity with academic concepts in elementary school classrooms. *Prev Med*, 52(Suppl 1):S43-S50. Nelson M.C. and Gordon-Larson P. (2006). Physical activity and sedentary behavior patterns are associated with selected adolescent health risk behaviors. *Pediatrics*, 117(4): 1281-1290.

Learn more about why active kids learn better and how schools can help at [activelivingresearch.org/activeeducationbrief](http://activelivingresearch.org/activeeducationbrief).





# Natural Settings Support Kindergarten Curriculum





# Natural Loose Parts Serve as Manipulatives





# Sensory Exploration Enhances STEAM Learning





# Nature is Healing



TIME IN NATURE HELPS CHILDREN AND FAMILIES COPE WITH ADVERSITY AND ACHIEVE RESILIENCE, RECOVERY AND REGULATION

PRODUCED IN  
PARTNERSHIP WITH:

Children's Nature Network

casey family programs

## Nature as a Pathway for Healing from Adverse Childhood Experiences (ACEs)

### ACEs ENCOUNTERED by children and families, include:

- Poverty
- Neglect
- Violence
- Abuse
- Mental health issues
- Substance use

### Children who experience ACEs MAY STRUGGLE WITH:

- Chronic health problems
- Mental health issues
- Substance use
- Poor nutrition and health
- Academic difficulty and truancy
- Disconnection from the natural world

### RESEARCH INDICATES that nature-based interventions can play a vital role in improving:

- Children's physical health, mental health and well-being
- Social emotional skills
- Family bonds and communication
- Sense of belonging
- Connection to the natural world

### INCORPORATE NATURE into therapeutic, family and educational settings:

- Nature therapy
- Forest bathing
- Outdoor Meditation
- Nature play
- Environmental education
- Gardening
- Care of animals
- Outdoor leisure activities
- Cultural use of plants
- Nature-focused arts and crafts

### HEALTHY OUTCOMES for children and families:

- Permanency & stability
- Safety in the outdoors
- Healing for families and youth
- Self-regulation
- Family connection
- Cultural connection
- Community health
- Connection to nature





LEARN MORE ABOUT NATURE'S ROLE IN PROMOTING RESILIENCE, REGULATION AND RECOVERY FOR CHILDREN.

PRODUCED IN  
PARTNERSHIP WITH:

Children & Nature Network

casey family programs

## Benefits of Nature-Based Interventions for Children Encountering Adverse Childhood Experiences

A survey of child and family service providers named five key outcomes as focus areas for intervention: healing, permanency, family connection, safety and self regulation.

Time in nature supports and enhances these outcomes, especially for children coping with or recovering from adverse childhood experiences.



Connection to nature supports mental health, well-being, resilience, restoration, enhanced mood and can reduce stress, contributing to **healing** for families and youth coping with adversity and trauma.

Experiences in nature help children become more mindful, manage behaviors and reactions, cope with new environments, control impulses and focus attention, contributing to better **self-regulation**.

Nature enhances family connections, communication and parental mental health, contributing to **safety** in the home. Quality outdoor spaces enhance community togetherness and reduce crime, contributing to **safety** in the community.

Family activities in nature improve communication and develop lasting **family connections** and relationships that can help keep children safe in their homes.

Time in nature nurtures a sense of self identity, belonging with others and connection to place, contributing to a sense of stability and **permanency**.





**ECHO**  
EARLY CHILDHOOD HEALTH OUTDOORS

# Early Childhood Health Outdoors

*We envision a future where every young child experiences nature daily for the health of our kids, communities, and planet.*

