



Nature: The Perfect Classroom

The Benefits of Outdoor Learning for Your Children's
Academic and Social-Emotional Growth

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THE
WILLOW
SCHOOL

Learn with Purpose. Lead with Character.

Willow's Outdoor Learning Credentials

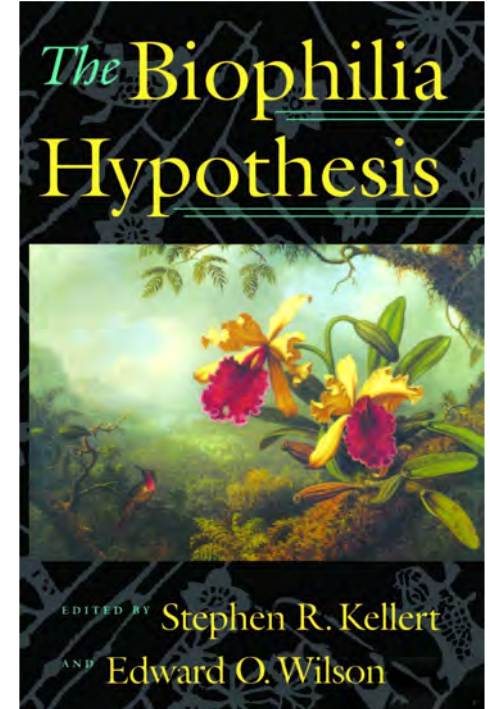
- Learning in nature built into our mission
- 20+ years of experience teaching students in nature, about **ethical relationships** with nature
- Outdoor learning deeply integrated across all academic subjects and with systems thinking and virtues program
- Sustainable campus with all LEED-certified buildings, including a Living Building, that employ **biophilic design**



Biophilia: Our Innate Love of Nature

Two new disciplines, eco-psychology and evolutionary psychology, are now suggesting that humans are genetically programmed by evolution with an affinity for the natural outdoors (Ulrich, 1993)

***Biophilia* is the human need to affiliate with nature and the genetic basis for human's positive responses to nature**







A review of educational and psychological research overwhelmingly demonstrates the importance of outdoor learning for children's cognitive, social emotional, and physical development. (Burriss and Foulks-Boyd, 2005)

How Your Child Benefits from Outdoor Learning

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Academic Benefits of Outdoor Learning

Students who learn outdoors demonstrate:

- Better performance on standardized measures of academic achievement in reading, writing, math, science, and social studies
- Reduced discipline/classroom management problems
- Better grades and ownership in accomplishments
- Increased engagement and enthusiasm for learning



Virtues, Advocacy & Outdoor Learning

When children learn *in and from* nature, they:

- Make connections
- Develop and practice empathy
- See how different parts of an ecosystem directly impact each other, including humankind's role
- Discover their responsibility to care for their world
- Become empowered to effect positive change

Findings indicate when children engage in outdoor activities, there is a stronger knowledge base and empathic regard toward environmental issues. (Kenney, Militana, & Donohue, 2003)



Example: Herman the Worm

Third Grade Science



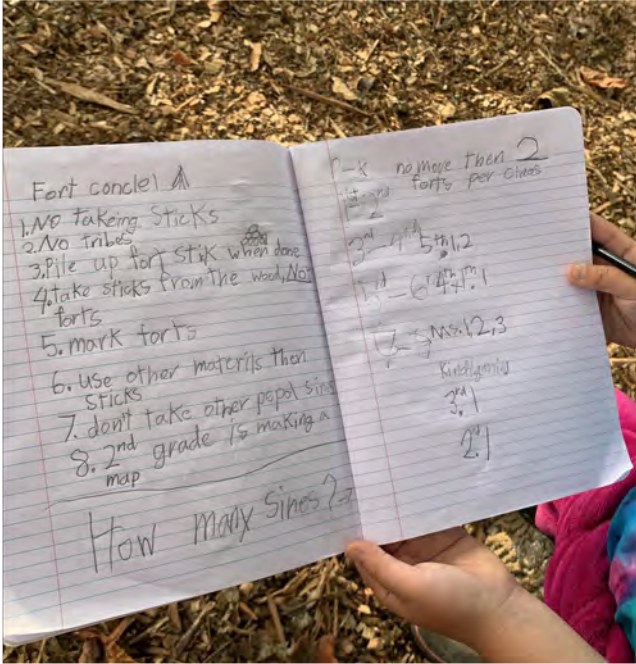
Social Benefits of Outdoor Learning

As children explore the outdoor environment, they:

- Test their abilities
- Become both leaders and followers
- Practice perseverance, self-discipline, responsibility, and self acceptance



Example: Fort Council



Health Benefits of Outdoor Learning

Being outside is good for your health, too, leading to:

- Increased happiness
- Decreased stress and anxiety
- More physical and mental energy
- Improved attention
- Improved immunity

An outdoor learning program can help your child develop healthy habits of getting outdoors more often.



The Outdoor Classroom

What to look for



Flexible Use of Natural Space



A Well-Designed Program

It's not just about opening the door and heading outside; a well-designed outdoor learning program:

- Starts at an early age with hands-on experiences with nature that center on joy
- Uses the environment not just a space for learning, but also a tool/catalyst for project work
- Provides choices in how the students engage, takes advantage of the inherent diversity of nature to tailor lessons to student interests
- Creates opportunities for student-led explorations and collaboration between students



Based in Experiential Learning

Children are naturally wired as experiential learners, learning best when they can:

- Explore to gather their own information
- Take in and process sights, sounds, and sensations as they encounter them
- Follow their natural curiosity
- Observe, experiment, and test out ideas in a hands-on way

A natural learning environment is constantly changing, encouraging children to engage in a continuous cycle of exploration



Time to Play is Prioritized

Cognitive development occurs not only during structured outdoor activities, but during recess as well

- Children need recovery time from highly structured routines (Pellegrini & Bohn, 2005)
- Quality recess times allows children to continue classroom lessons with renewed attention
- Unstructured activity and free choice, especially for younger children, decreases learning interference and cognitive fatigue



Outdoor Learning at Willow

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Virtues & Learning From Nature

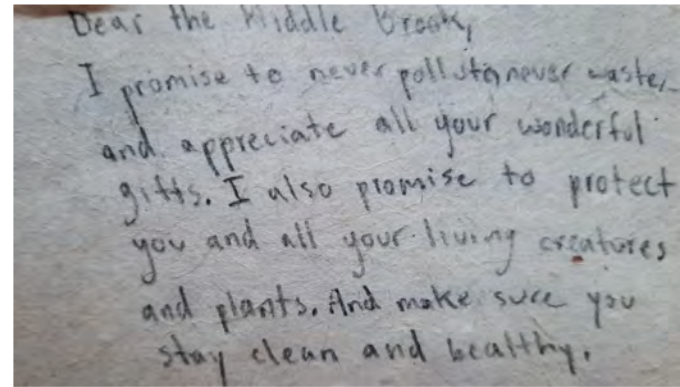
Example: Fifth Graders' Promises to the Stream

Students study the watershed in fifth grade, using the stream that runs through our campus. They not only explore the stream, they learn respect and responsibility for our water.

- Discover who lives in our stream and what that means about the water quality of the stream
- Build homes for the creatures that live there - respect, responsibility, empathy
- Travel down our stream to study erosion
- Make promises to the stream, written on seed paper - responsibility, gratitude, service

Other examples:

- First graders adopt monarch caterpillars
- Kindergarteners learn from teacher trees



Project-Based Outdoor Learning

Example: Collaborative Maple Syruping Project

Students in kindergarten, second grade, and seventh grade work together to tap maple trees in Willow's woods, collect the sap, and boil the sap into syrup.

- Cross-grade collaboration where every student has a role as an expert
 - Kindergarteners - trees, evaporation
 - Second grade - Lenape, history, graphing skills, changing states of matter
 - Seventh grade - phenology study, weather's effect on sap production, predicting skills, leadership
- Integrates science, math, social studies, art
- Traditionally ends with a special Morning Gathering and tasting for the whole school
- Emphasizes joy, wonder, and community-building



Student-Led Experiences

Example: First Graders Discover Blue Jays

Students discovered blue jays in their outdoor classroom and half-eaten acorns. Ms. Zeiner used as an opportunity to have students use their math skills to answer a real question.

- Collected the acorns
- Worked in teams to sort and count by groups of ten
- Subtracted the whole acorns and acorn bottoms

Other examples:

- Kindergarteners discover a garter snake on a hike
- Eighth graders make wildlife signs for trails



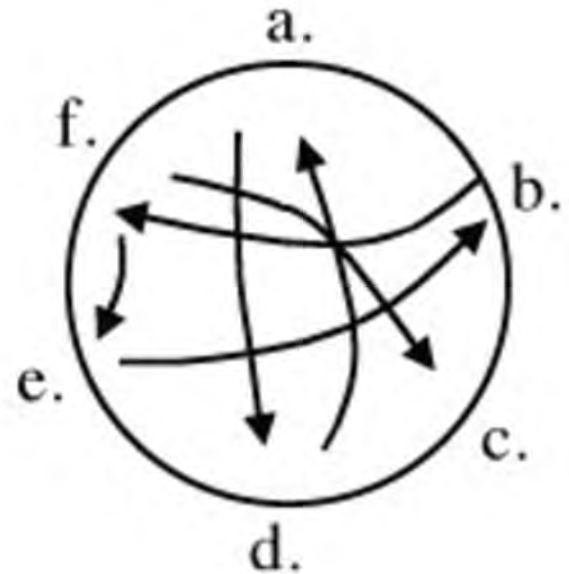
Systems Thinking Outdoors

Example: Second Graders Make Connections

Students learned we live in an interconnected world by looking for relationships and interdependencies in nature. In how many ways is one animal connected to other parts of its environment?

- Chose an animal from our outdoor environment
- Observed to see what elements of the environment the animal depends on and which depend on it
- Drew those elements and the connections between them
- Discovered that, because everything is connected, a change in one part of a system affects every other part in the system

Systems thinking skills: make connections, consider unintended consequences, identify circular nature of complex cause-and-effect relationships, seek to understand big picture



Connection circles

Service Learning Outdoors

Example: Tending the Garden & Harvest Soup



Recess, Twice a Day

For all ages and in any weather!

- Typically, all-school recess
- This year, grade-specific recesses
- Unstructured time for play
- This year, increasing recess breaks during cold weather



Expanded Outdoor Learning

This year, we've used our space creatively to give students more time to learn outside, even in ways they would traditionally do indoors.



New Outdoor Learning eBook

- Benefits of outdoor learning
- Examples of how we integrate nature into our curriculum
- Activities your family can do at home





Questions?

Share your questions in the Chat!

References

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