



# Teaching and Learning in Nature

*Let's Go Outside!*

The American people, especially children, spend less time playing outdoors than any previous generation. Recent research shows that our nation's children are suffering from too much time inside. Kids today spend an average of 6.5 hours/day with television, computers and video games. In fact, a child is six times more likely to play a video game than to ride a bike.

What does this mean? If children are raised with little or no connection to nature, they may miss out on the many health benefits of playing outdoors. Nature is important to children's development - intellectually, emotionally, socially, spiritually, and physically.

### Why include outdoor learning in the school year?

Studies show that schools that use outdoor classrooms and other forms of experiential education produce significant student gains in social studies, science, language arts and math.

One 2005 study by the California Department of Education found that students in outdoor science programs improved their science testing scores by 27 percent.

Children in outdoor education settings show improvement in self-esteem, problem solving and motivation to learn.

Children in schoolyards with both green areas and manufactured play areas engage in more creative forms of play and play in groups more cooperatively.

Studies at the University of Illinois show that time in natural settings significantly reduces symptoms of attention-deficit (hyperactivity) disorder in children as young as age five.

Research also shows that outdoor experiences help reduce negative stress and protect psychological well being, especially in children undergoing stressful life events.

*“Every child should have mud pies, grasshoppers, water-bugs, tadpoles, frogs, mud-turtles, elderberries, wild strawberries, acorns, chestnuts, trees to climb, brooks to wade in, water-lilies, woodchucks, bats, bees, butterflies, various animals to pet, hay fields, pine cones, rocks to roll, sand, snakes, huckleberries and hornets: and any child who has been deprived of these has been deprived of the best of his education.”*

*—Luther Burbank*

### Who benefits from learning outdoors?

Children develop knowledge and skills as they undertake exciting, real-life projects. By studying science, math and related subjects through outdoor experiences, students can connect to their local environment and become stewards of their community's natural resources.

Teachers can use the broad context of the natural world to enliven teaching and learning that can weave through the curriculum from kindergarten through twelfth grade and beyond. Schools can build cohesion within the school, create opportunities for meaningful community involvement and diversify and beautify the school yard while highlighting its educational mission.

Communities benefit from outdoor community service or service

learning projects, after school programming, school-community resource connections, and schoolyard habitat and garden/naturalist programs. Community involvement engages students in relevant, place-based education.



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### What can it look like?

- Primary grades can learn to count and sort natural objects such as seeds, nuts, and cones. They can match colors and go on nature alphabet hikes.
- Upper elementary students can use the outdoors as prompts for language arts activities, building observation skills, mapping the schoolyard and planning and planting a schoolyard habitat.
- Middle school students can engage in physical education activities such as hiking and biking. They can plan and conduct wildlife monitoring projects, litter clean-ups and invasive plant removal projects.
- High school students can conduct investigations on biotic and abiotic features of a study site, research local wildlife diversity and document habitat conservation issues in their local communities.





### How does learning in nature fit into the school curriculum?

- A wide array of teaching materials are available that meet specific grade levels and learning objectives. Many are correlated with state and national education standards.
- Students improve their skills in writing, art, computer technology and science as they participate in interdisciplinary learning in a broad context.
- Scientific, inquiry based research in a meaningful, real-life context creates hands-on learning with practical application and skill building.
- Students can work with peers, other classes, across grades and schools. They can build character traits of responsibility and team work, and make important decisions that build confidence and resiliency.
- Many effective nature education activities require few special supplies or extra preparation, just a walk outside into nearby nature.

### Are resources available for educators?

Educators play a critical role in inspiring young people to have a positive impact on the natural environment. Many new programs and opportunities are opening promising new doors to outdoor conservation education.

Professional development opportunities



about! State environmental and outdoor education organizations, science and social studies teachers organizations, state fish and wildlife agencies, and local offices of federal land management agencies offer interactive workshops for teachers designed to build familiarity with and confidence in outdoor learning lessons, activities and teaching methods.

### Some helpful websites:

U.S. Fish and Wildlife Service Students and Educators Page  
<http://www.fws.gov/educators/>

U.S. Fish and Wildlife Service Children and Nature Page  
<http://www.fws.gov/children>

Children and Nature Network  
<http://childrenandnature.org/>

Community Service Projects  
<http://www.epa.gov/teachers/community-svc-projects.htm>

adopt Your Watershed  
<http://www.epa.gov/adopt/>

World Water Monitoring Day  
<http://www.worldwatermonitoringday.org/>

Natural Resource Conservation Service/ Backyard Monitoring  
<http://www.nrcs.usda.gov/feature/backyard/>

Center for Global Environmental Education (Hamline University)  
<http://cgee.hamline.edu/watershed/action/projects/>

Educating Young People About Water (University of Wisconsin)  
<http://www.uwex.edu/erc/ey paw/>

North American Association for Environmental Education  
<http://eelink.net/pages/EE-Link+Introduction>

National Environmental Education Foundation  
<http://www.neef.org>

National Public Lands Day  
<http://www.npld.com>

Bureau of Land Management: Learning Landscapes  
<http://www.blm.gov/education/>



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**U.S. Fish & Wildlife Service**  
**800/344 WILD**  
<http://www.fws.gov>  
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