

TEACHERS'  
INNOVATIONS IN  
K-8 SCIENCE,  
MATH, AND  
TECHNOLOGY

# Connect™

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### THIS ISSUE'S FOCUS

## Learning Outdoors



## Go Outside!



The outdoor world presents infinite and indispensable learning opportunities. In this issue we learn about the strong case for taking students outside and doing our part to reunite children with nature.

Today's children have less unsupervised and unscheduled time than in prior generations. How does this affect their understanding of systems like weather, or ideas that all life is interrelated, or their connection to a sense of place? Will this have profound impacts on the decisions and priorities that students will make in future years?

Teachers in both public and independent schools tell stories in these pages that offer examples of addressing curricula while in the great outdoors. Here are ideas for fostering curiosity, fondness, and appreciation for the world outside and our place in it. With our help, perhaps more students can embrace their role as stewards to sustain the world and its resources.

Although these sound like lofty ideals, they are not so difficult to achieve—it all starts by simply going outside!

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# The Ecology of Hope

RECONNECTING CHILDREN AND NATURE

by Cheryl Charles

Ecology is a term my grandfather, Perl Charles, taught me. He was born in 1899, the oldest of four children of Bula and Tom Charles, who settled in New Mexico in 1907. Grandad was a lifelong conservationist, as were many in the family. He was also a teacher and storyteller. Humorous and wise, he epitomized common sense. He taught me that all parts of any environment, living and non-living, exist in relationship to one another. The most inspiring and effective teachers are those who labor with love and respect to create an ecology of hope every day in the lives of their students—in both formal and informal settings.

For many reasons, I believe that we need to demonstrate the positive power of the ecology of hope. This is especially important for those who touch the lives of children and teens throughout their schooling years. We can make conscious choices and cultivate a sense of efficacy in ourselves and others. The belief that we can make a positive difference is at the heart of hope. We can make life better for children, and ourselves, by opening the door to the first classroom: the natural world, from backyards to neighborhoods, schoolyards, and public places.

We can inspire in children a belief that the world can be a better place, that the present can be nourishing, and the future a time of fulfillment. We can go a long way toward achieving that goal by reconnecting children and nature—beginning where children spend most of their daylight hours during many weeks—in their schools.

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## Beyond the cocoon

Let's start with the current baseline. Most children and youth today have limited direct experience with the outdoors. If they are outdoors, the experience is more likely to be in organized sports and on

playground equipment, often on asphalt playgrounds. There are exceptions, but, on the whole, the defining experiences of today's youth and children are indoors, at home or in school, or in a car. Shuttled from school to church to soccer to dance class to day camp, most of our children are—with all good intentions—being given a virtual, vicarious, electronic, passive, and cocooned experience of childhood. Or, they are left alone, under what author Richard Louv calls “virtual house arrest”—left on their own for hours and hours at a time, hooked into what I call the electronic umbilica of today's contemporary lifestyles.

I am not at all anti-technology. However, the current lifestyles and learning environments for most children and youth today are out of balance, with a disproportionate amount of time spent out of sunlight and facing electronic screenlights from computers, televisions, cell phones, and more.

Richard Louv wrote a best-selling book, published initially in 2005 and re-released in an updated edition in 2008. Its popularity is good news for all of us who care about children's health and well-being. The book title is *Last Child in the Woods: Saving Our Children from Nature Deficit Disorder*. In 2006, I joined Richard Louv and others to co-found the Children & Nature Network, <http://www.cnaturenet.org>, a non-profit organization with the mission of building a movement to reconnect children and nature. Schools—students, teachers, and the families and communities they serve—are important parts of that mission.

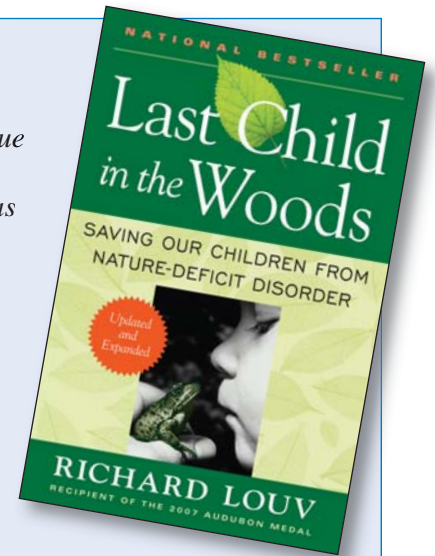


*Adults can make a difference in the lives of children by opening the door to the first classroom: nature.*

## A Resource to Reconnect Children and Nature

Richard Louv's recent work has been part of our inspiration for publishing an issue of **Connect** on learning outdoors. He is the author of many books dealing with childhood, culture, and the outdoors. Several articles in this issue cite this book as being an important resource.

***Last Child in the Woods: Saving Our Children from Nature Deficit Disorder*** is the oft-cited work which examines our children's play and attitudes toward nature, as well as the attitudes and ideas of adults who raise and teach children. Combining extensive research, his own insights, and quotes from many experts, Louv writes a highly readable book with a mountain of information. In addition to outlining problems and tension in the relationship between child and nature, he offers valuable suggestions for remedying that disconnection. This provides great background and inspiration to get your kids outside! It is published by Algonquin Press, <http://www.algonquin.com>.



A host of lifestyle changes in U.S. society in the past twenty to thirty years has contributed to a sedentary society of youth, who, according to a study conducted by the Kaiser Family Foundation (2005, 2006), are spending as much as sixty hours a week involved with electronic media. One of the major contributing factors is that adults fear for their children's safety. A study in 2004 found that 82% of mothers with children between the ages of three and twelve cited crime and safety concerns as two of the primary reasons they do not allow their children to play outdoors (Clements, 2004).

Parents are busy, often worried, and frequently burdened with a host of pressing responsibilities. Teachers are pressured to be accountable for record-keeping and test scores that, unfortunately, often get in the way of students' optimal learning.

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### Learning in context

The evidence indicates that one of the best antidotes to stressful lifestyles is spending time in natural settings outdoors. Further, students will be happier, healthier, smarter, more cooperative, better problem solvers, and more creative if they have frequent opportunities for learning in the outdoors as an integral part of their everyday lives. It is time for schools—their teachers and

their students—to truly open the windows and doors to get outside for many breaths of fresh air.

Children need leisurely, unscripted, and exploratory hours to find the wonders in their own backyards and neighborhoods, from discovering the beauty of the stars in the night sky to watching lizards on a warm summer's day. Instead, committed to hectic schedules, children are left with little time for unstructured play in the outdoors.

As important as play in natural settings is—and it is dramatically missing from the lives of children—so too are opportunities for direct learning outdoors as a fundamental part of the school curriculum. The best way to make learning meaningful is to do so in context—in children's whole lives and in their nearby surroundings. They learn, they gain confidence, and they develop a sense of place—all of which combine to create self-confident, competent, capable, and caring adults.

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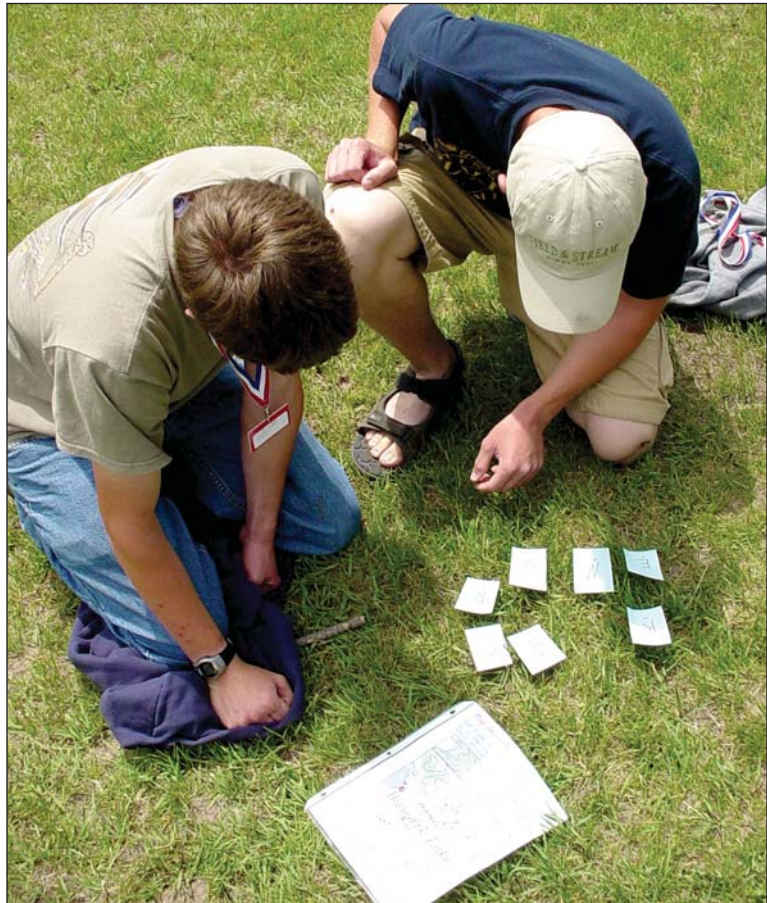
### From deficit to benefit

Outcomes of children's disconnect from nature include: diminished health; obesity; reduced cognitive, creative and problem-solving capacities; lower school achievement; lower self esteem; less self discipline; and, evidence suggests, attention deficit hyperactivity disorder

(ADHD). In schools where children learn outdoors as part of the curricula, all those deficits are addressed.

The benefits are also great when children simply have the opportunity for free play in nature-based settings on school grounds. Students are more self-disciplined, have higher self esteem, are more creative, and better problem solvers. The evidence indicates that they score better on a range of standardized tests in all major subject and skill areas. Combining naturalized school grounds and play areas with a nature-based curriculum, the benefits are likely to grow even more significantly. It would also seem highly probable that doing so would make a major contribution to reducing and reversing the trend toward nature-deficit disorder in today's children and youth.

Children's cognitive flexibility and creativity are enhanced if they have the experience of problem-solving in natural settings versus highly controlled, adult-dominated, managed settings, like concrete playgrounds and manicured playing fields with little ecological diversity. Beyond cognition, there are mental health benefits. There is now a substantial body of work that indi-



*Children's cognitive flexibility and creativity are enhanced if they have the experience of problem-solving in natural settings. These boys are working on an orienteering challenge.*

#### ACTIONS WE EACH CAN TAKE OUTSIDE OF SCHOOLS

- Take a child outside.
- Encourage nature-based, child-friendly spaces and places throughout our communities.
- Make reconnecting children and nature a priority.
- Educate parents, grandparents, and other caregivers about the cognitive, physiological, and emotional benefits to children who play in the out-of-doors on a regular basis.
- Encourage physicians to prescribe nature-play, because it is good for children.
- Educate architects, builders, community planners, and civic leaders about the need for areas of native habitats in planned developments and existing neighborhoods, so children have places to play that foster their imagination.
- Build new partnerships, and support existing efforts, to bring the resources of the private sector together with public agencies in bold, balanced, and conserving ways to achieve a sustainable future.

#### ACTIONS WE EACH CAN TAKE INSIDE OF SCHOOLS

- Reinstate recess where it has been eliminated.
- Integrate outdoor experiences throughout the school curricula.
- Affirm those teachers who have always brought the outdoors indoors, with live plants, natural materials, ecologically-based learning laboratories, and opportunities to connect with the outdoors.
- Maintain, expand, or add areas of native plantings, schoolyard habitat projects, school gardens, and diverse natural areas to the school grounds and nearby neighborhoods.
- Get parents and the community involved—because nature-based learning is good for everyone.

cates that the simple act of going outdoors reduces people's stress, anxiety, depression, and attention-deficit disorders. With people of all ages, the results are dramatic. Their peacefulness and general wellbeing are enhanced to the degree that they spend time outdoors on a regular basis.

So there are immediate physical payoffs for those of us who get outside, but there are obviously more. If we are outdoors often enough to watch and experience the seasonal changes, we learn about "place." We learn about the natural cycles and changes within an ecological context. To the extent that any of us does that on a regular basis, we will be more inclined to have a complex and informed understanding of that natural system, and potentially other natural systems. We will be far more likely to care about the health of living systems over time, more likely to make informed decisions, and more likely to effect responsible actions.

## Our living legacy

Together we can heal the separation between children and nature, beginning in our schools. We can reinstate joy, wonder,

and a sense of purpose. We can re-establish a healthy, natural balance between technology and natural systems. We can build a movement that succeeds in reconnecting children and nature—and in that process inspire a new generation to believe in a better future. We can be a generation that leaves a legacy of leadership, learning, and an ecology of hope. ✍

*Cheryl Charles, Ph.D., is an educator, author, innovator, and organizational executive living in New Mexico. She is a co-founder of the Children & Nature Network, <http://www.cnaturenet.org>. She was the founding National Director of Project Learning Tree and Project WILD, and has received numerous awards for her leadership.*

## Resources

- Charles, Cheryl and Bob Samples. *Coming Home: Community, Creativity and Consciousness*. Fawnskin, CA: Personhood Press, 2004.
- Kellert, Stephen R. *Building for Life: Designing and Understanding the Human-Nature Connection*. Washington, DC: Island Press, 2005.
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- Louv, Richard. *Last Child in the Woods: Saving Our Children from Nature Deficit Disorder*. Chapel Hill, NC: Algonquin Books, 2005. Revised edition, 2008.

*The Children & Nature Network (C&NN) is a non-profit organization co-founded by Richard Louv, Cheryl Charles, and others. Its purpose is to build a movement to reconnect children and nature. News, articles, resources, annotated bibliographies of research, and support for grassroots leadership can be found here.*

The screenshot shows the homepage of the Children & Nature Network. At the top, there is a navigation bar with links for Home, News, Leadership, Advisors, Speakers, Sponsors, Research, Reports, About Us, the Book, and Movement Map. The main content area is divided into several sections. On the left, there is a featured article titled "A Texas-Sized Effort to Promote Outdoor Play" with a thumbnail image of a child looking through binoculars. The article text describes the March issue of Texas Parks & Wildlife magazine. To the right of this article is a "Recent News" section with several headlines, including "A Reminder of Summer Camp's Value" and "Novel Ideas for Funding Nature Education". Further right is a "Search News" section with a search bar and a "GO" button. Below the search bar is a "Newsletter Archive" section listing various issues and their topics. At the bottom right, there is a "We're mapping the Children & Nature movement" section with a map of the United States and a "Find a Region Near You" link. The overall design is clean and professional, with a focus on providing news and resources related to children and nature.