

Creating Living Schoolyards in West Central Indiana

By Hands of the Future, Inc

Greening our schoolyards to connect children with nature



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Background

At the recent Children & Nature Conference in Austin Texas, experts from all over the world came together to discuss the growing disconnection of children with nature. A second generation is growing-up with less than 10 percent of their time spent outdoors. Research has documented the resulting physical, emotional, cognitive and behavioral problems.

Conference speakers discussed solutions to this trend and successful ongoing projects that are making a difference. Every speaker emphasized the need to go to the children, especially to reach disadvantaged and those of minority races. The best way to do this is provide opportunities where the children most frequently come together – their schools.

Our Proposal

Most schools have expansive lawns that could be converted in part to nature-rich areas. Experts suggest starting with a small area, maybe 50' x 50' to 100' x 100' in a low traffic, but easily accessible area. The target age to help children bond with nature is between 5 and 12. Our Board of Director is therefore targeting elementary schools.

Children in all grades would benefit, but 5th graders would have the greatest advantage being highly involved. Details of the final program implemented will be formed by input from teachers with projects at their schools, such as Mintonye Elementary. Programs will be tailored to specific schools based on input from teachers at each. Alternatives considered will include a year-long class project, the equivalent of a senior project continued and expanded each year. We would present alternatives for their consideration and work with them to tailor a program meeting their needs and vision. Parents and members of the neighboring community could become partners.

Some options they might choose:

Domestic Nature – grow food for the kids to take home, cafeteria could use

- Vegetable Gardens
- Fruit Gardens
- Herb gardens

Wild Nature – the re-wilding of the schoolyard with native plants

- Natural Site Restoration – attract birds, wildlife and insects
- Butterfly Gardens
- Hummingbird Gardens
- Water/wetland features

They could also choose to implement a combination of any of these. Once the students and staff determined what they wanted to accomplish, they would need to follow these steps:

Research

Planning

Gathering materials

Implementation

Maintenance

We would assist in all these stages including obtaining the materials and funding, lining up parents to assist in the implementation stage and the physical work. This could be done during school, an hour or two every week or biweekly. Teachers and the principal at each school would develop their timetable. Implementation and maintenance typically require afterschool activities.

The children could work together as one team, or the site could be subdivide so that the children in each 5th grade classroom develop designated portions. This could also be done as a competition between classes. We have a gentleman with a forestry background that would be able to take the children's ideas and develop a professional drawing so that everyone involved would have a clear idea of the project.

Connections to Curriculum

These green spaces are already being incorporated into the mandatory state standards at other schools. They could be used for teaching **Math**. An example of this is that the children would need to measure their site and place this on grid paper to plan the layout. Math is involved with all the planning as they consider placement of each item and then transferring that plan into reality during implementation.

Other areas that could be included are:

Language

Reading

Art

Physical Ed

Science

Natural History

All of these things would be involved in each of the stages of development. And once they are established, we are sure the teachers will find ways to include this space in their lessons whenever possible.

Maintaining the Project

There could be a ceremony at the end of the school year as each grade passes the torch of some kind to the next incoming 5th graders. It would be their responsibility to maintain what has been already accomplished and then add their own area. We would continue to work with future 5th grade classes based on the needs of the teachers. Once the children have completed a green space, they could serve as tour guides for teachers and children from other schools considering such projects.

During the summer months when these areas would need the most attention, we would facilitate the formation of nature clubs that met once a week to work on weeding and maintenance. Neighbors, especially Master Gardeners, could also be invited to help. Ideally these green spaces will become natural “parks” for surrounding communities to use year-round, and from which children within walking distance will learn land stewardship.

Additional Items

We also felt there are a couple of items each school should have, regardless of which type of area they chose to create. We would like to put in composting bins near enough to the building that the children could easily get to them year round. The 5th grade classes could take turns collecting lunchroom items to add to the composting bins. They would need to research what items from the lunch room are appropriate and we could provide collection containers they could use to collect these items. Islandwood in Washington State has been doing this for years and they even have the children weigh out how much they collected each day. They would then take it out and dump it in the compost pile. This could then be used to fertilize their greenspace projects once it is fully decomposed. The second item is a greenhouse. It would allow the students to start their plants from seed for their greenspace or raise plants for fundraisers to benefit this project or any other school project. It could be modest in size, such as 8' x 12'.

If the children chose a food garden, this would allow them to take home healthy foods. Surprisingly, children are more likely to eat vegetables if they have grown them. They could supplement the cafeteria with their produce, sell it at the farmers market or just give it to local food banks such as Food Finders. They could even grow pumpkins for all the children. Art could be added. Benches, houses for various wildlife are always nice. The art class could create the stepping stones for the pathways and put their

personal touch on it. Because the children are out of school in the summer and this would be the time of highest maintenance, we thought we could create a school nature club that would meet during the summer to maintain the area.

Measurements of Success

Most funders want to see concrete measurements of success. In order to show that this program is effective, we felt we could produce data in four areas: physical, mental, cognitive and behavioral. And we felt this could be added to the growing amount of research that shows the benefits of nature to children.

Physical – All the children in the 5th grade would have their gender, height and weight recorded at the beginning of the school year and at the end. We would not need names, only the ability to show BMI's and if there is a downward trend associated with the outdoor activities.

Mental – How do the children feel about nature? We would have them write a one page essay about how they feel about nature at the beginning of the school year and again at the end of the year to see if there is a change. We would hope that they develop a more positive relationship with nature.

Cognitive – Schools have been participating in ISTEP for many years. If we could monitor a child's score over time and class averages, that would help to see if there is an improvement. Private information would not be included to protect the privacy of the children.

Behavioral – This would be more subjective and require the teachers to evaluate the overall behavioral changes they have seen in their students. Did they feel this was a positive experience for their children? If they had a difficult child at the beginning of the year, was that reduced by participating in this? A child that was shy or withdrawn, did this seem to help them be more confident? In Junior Nature Club we have witnessed these things first hand and believe the teachers will see it too.

For the schools willing to participate, we will create a packet that lists questions they need to consider for each step of the development, including pictures of possible ideas that they can build upon, choices they could make. We want them to be informed and be thoughtful about this process. It will give them real experience in land stewardship and contributing to their community in a positive way. It would also give them something they can be proud of to pass on to those who come after them.

Thank you for your consideration in this project.

Current Research

Green Schoolyards Are a Win for Kids, Communities and the Environment

Posted: 04/02/2015 6:14 pm EDT by Carla Thompson, Vice President, Program Strategy, W.K. Kellogg Foundation

Imagine if every neighborhood in every city in America had a safe, vibrant and accessible outdoor place that served as a neighborhood hub. A place where kids could play and participate in sports; where neighbors could get together for a shared meal or a musical performance; where teachers could conduct lessons in science, poetry or art under a canopy of trees; where kids could plant a garden, tend crops and harvest a little healthy food for themselves.

Most city neighborhoods already have a local schoolyard, and it's the perfect space to be transformed into an outdoor hub -- serving students during the school day and the entire community when school isn't in session.

Multi-purpose, environmentally beneficial schoolyards like these are called "green schoolyards," and they're becoming a reality in cities across the country.

The green schoolyard movement owes much to chef Alice Waters' [Edible Schoolyard](#) project, which began 20 years ago in Berkeley, California, in response to a neglected schoolyard of crumbling asphalt. In Boston, the [Boston Schoolyard Initiative](#) revitalized 88 schoolyards between 1995 and 2013. And in San Francisco, [Education Outside](#) is creating an extensive network of green schoolyards. Green schoolyards are part of a broad movement to connect kids and families to nature in their everyday lives, lead by a coalition called the [Children & Nature Network](#).

Schools and communities have been overwhelmingly receptive to green schoolyards. The challenge has been securing funding for design and construction, as well as resources for ongoing maintenance. Education Outside continues with a mix of public and private funding, along with help from a spirited corps of young people who serve as dedicated stewards of the schoolyards.

One of the most exciting, recent green schoolyard initiatives is Chicago-based [Space to Grow](#), which held opening ceremonies for its first four green schoolyards last fall. Space to Grow is overseeing the creation of an additional 30 green schoolyards across Chicago in the next five years, a \$51 million investment in underserved urban neighborhoods.

What makes Space to Grow special is an innovative public-private partnership that leverages the strengths of two local, nonprofit organizations -- [Healthy Schools Campaign](#) (HSC) and [Openlands](#) -- and three public agencies -- Chicago Public Schools, City of Chicago Department of Water Management and Metropolitan Water Reclamation District of Greater Chicago.

Space to Grow receives funding from the W.K. Kellogg Foundation and other private sources, as well as public education dollars, but the key to its success is public water district funding, which has been directed toward the green schoolyards because they address stormwater control.

To be selected for a Space to Grow schoolyard, a school has to be located in one of Chicago's many flood-prone areas. Each Space to Grow schoolyard replaces asphalt paving with water-permeable groundcovers and play surfaces, as well as landscape features that absorb rainwater, reducing runoff that causes local flooding and flushes street pollutants into the Chicago and Calumet rivers and Lake Michigan.

Though it benefits from federal, state and city funding, Space to Grow isn't a government project but a local initiative that engages the entire school community -- including neighborhood residents -- to help plan and create a schoolyard that serves many needs.

The first of the Space to Grow [opening ceremonies](#), at Morrill Math & Science Elementary School, offered ample evidence of a shared community effort: hundreds of volunteers showed up early to complete the landscape planting; neighbors mingled with teachers and city alders; kids struck up soccer and basketball games even before the ribbon was cut.

"It's a big win for the kids and for the city," said Rochelle Davis, HSC president and CEO, who was on hand for the festivities along with other Space to Grow partners.

Space to Grow has not gone unnoticed. Last month, Davis was in Washington, D.C., to accept one of three Champions Awards from the National Physical Activity Plan Alliance. Next month, Space to Grow will receive the Illinois Association of Floodplain and Stormwater Management's Sustainability Award. They have also been nominated for an Emerald Award from the U.S. Green Building Council's Illinois Chapter.

With initiatives like Space to Grow to serve as models, we should envision greening every schoolyard in the country. And the real winners, of course, will be the kids.

APPENDIX – SELECTED RESEARCH FINDINGS

[TRENDS THAT GIVE US HOPE: The Power and Potential of Green Schoolyards](#)

About the Author

Environmental planner Sharon Gamson Danks is author of "Asphalt to Ecosystems: Design Ideas for Schoolyard Transformation." She is also co-founder of the International School Grounds Alliance and CEO of Green Schoolyards America based in Berkeley, California. Her work transforms school grounds into vibrant public spaces that reflect and enhance local ecology, nurture children as they learn and play, and engage the community.

By [Sharon Gamson Danks](#) on February 7th, 2014

Public school districts are one of the largest landowners in almost every city and town across the United States and around the world. In the United States alone, over 132,000 [\[i\]](#) schools in more than 13,000 school districts serve more than 50 million pre-kindergarten to 12th grade students each year. [\[ii\]](#)



Choices made by school districts about how they manage their landscapes profoundly impact their city and generations of local residents whose perspectives are shaped through daily, outdoor experiences at school.

A movement to green school grounds and connect students to nature is gaining momentum in the United States and around the globe, weaving the ideas of urban sustainability and ecological design together with academic achievement, public health, children's wellbeing, sense of place, and community engagement.

Green schoolyards bring nature back to cities and suburbs by transforming barren asphalt and ordinary grass into vibrant environments for learning and play, set within the context of the rich, local ecosystems that nurture wildlife and the natural processes that underlie and sustain our urban infrastructure. Green schoolyards foster children’s social, physical, and intellectual growth and health by providing settings for curiosity, collaboration, imagination, exploration, adventure, and wonder.



If, as a society, we can turn our attention and resources toward creating school district-wide, ecological systems-based improvements to school grounds, we will make significant progress in addressing complex inter-related problems. Large scale schoolyard greening efforts, if implemented across our cities, have the potential to provide:

ACCESS TO NATURE

- Daily Nature Access – If green schoolyards can be built at every school, they will provide *every child in every city* with high quality access to nearby nature on a daily basis—democratizing nature access across socio-economic , racial and cultural lines.



- Balance – Hands-on, daily access to nature on school grounds helps to balance real-world, sensory experiences with our increasingly digital world.
- Sense of Place – Green schoolyards, built with local, natural materials and native plants, are each unique, reflecting the geography, ecology, and culture of their

community and building a sense of place for children and adults who spend time in them.

ECOLOGICAL INFRASTRUCTURE REPAIR

- Water – School grounds designed to manage stormwater can be beautiful and educational while containing and conserving rainwater and purifying urban runoff.



- Habitat – Schoolyard landscapes planted with native vegetation can complement local habitat conservation plans and add many additional acres to support wildlife.
- Climate – Trees and shrubs can be placed to provide shade for children and school buildings, reducing sun exposure, urban heat island effects, and interior cooling costs for school buildings.
- Energy – School grounds can host renewable energy demonstration systems that power decorative fountains—or the school—teaching children and their communities about clean energy.
- Materials – Landscape features designed using sustainable, natural and recycled building materials demonstrate green building practices and reduce a school district's impact on landfills and other urban infrastructure.



IMPROVED TEACHING AND LEARNING ENVIRONMENTS

- Educational Attainment – Studies show that many children learn better with hands-on experiences in the types of outdoor settings green schoolyards afford.[\[iii\]](#)
- Improved Teacher Satisfaction – Outdoor teaching environments are also appreciated by teachers who benefit from abundant teaching resources, conveniently located near their classrooms, and the variety and diversity of experiences found in outside.



- Reduced Bullying – Green schoolyards promote imaginative play and provide variety and diversity in children’s social and play environments, reducing boredom, shifting social leadership structures, and leading to fewer disciplinary problems such as playground bullying.[\[iv\]](#)

HEALTH AND WELLBEING

- Obesity Prevention – Green schoolyard environments that provide opportunities for exploration and imagination offer child-driven, play-based solutions to the obesity epidemic.
- Healthier Lifestyles – Green schoolyards promote healthier lifestyles through increased physical activity and nutrition-oriented gardening and cooking programs. They are also settings for learning new skills that foster lifelong health, from balance to water safety and tool use.



- Improved Wellbeing – Green spaces of all types have therapeutic properties that lower our blood pressure, help us relax and provide other benefits that improve wellbeing of children, teachers, school administrators and visitors.

COMMUNITY ENGAGEMENT

- Empowerment – Green schoolyards are places where children of all ages can gain experience repairing their own local ecosystems and make a difference in our world. They are places where collaborative environmental action leads to clear, positive results that counter Ecophobia and build our confidence in the power of working together—sending messages of optimism and hope to children and adults alike.



- Stewardship – By transforming the idea of schoolyard “maintenance” into the broader concept of “stewardship”, school communities can become partners with their school districts and collaborate to reduce management costs while fostering increased parent involvement and community building.

Green schoolyards are a central piece of a wider vision to restore our relationship with the natural world. The time is right to invest much more significantly in our school grounds across the country. The green schoolyard movement has the power to bring nature to every child, every day while improving our local ecosystems, learning environments, and health.

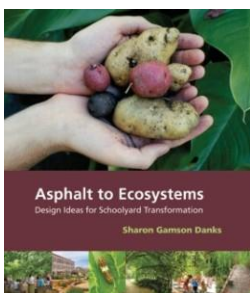


School grounds can foster active and imaginative play onsite using natural materials and vegetation and by installing thoughtfully designed play structures that offer open-ended play opportunities and frameworks for child-driven games.

Small scale green schoolyard projects now exist around the U.S., showing incredible promise but generally lacking the larger scale investments that can help them to reach their full potential.

This is a call to scale up our green schoolyard work from coast to coast, and empower school districts to lead this paradigm shift with increased support from their communities, public institutions, local utilities, healthcare institutions and other like-minded organizations and partners.

Combining our resources in one place—school grounds—will multiply benefits for our cities and our children in the years to come. Is it hard? Yes, but we know where to start and together we can change our course.



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