



How cities use parks to...

Help Children Learn

Executive Summary

Childhood is a holistic process, different for each individual child. Many children do not learn effectively exclusively within a classroom. They need alternative, hands-on learning environments to match their varied learning styles.

Test-driven education mandates often do not emphasize children's emotional and social needs and opportunities for creativity. This limits the development of unique talents and the fulfillment of individual lives, and deprives society of practical, problem-solving intelligence.

City parks, greenways, and naturalized school grounds can be a crucial antidote to these unhealthy trends. They can motivate young people to learn through the natural environment (which includes learning about the natural environment), bringing environmental education into the mainstream of state-mandated instructional programs. The informal learning, non-formal programs, and formal instruction associated with parks can reinforce each other, enhancing academic achievement.

Key Point #1

City parks offer children the daily benefits of direct experience with nature—the motivation to explore, discover, and learn about their world and to engage in health-promoting, physical activity.

Key Point #2

City parks offer children a sense of place, self-identity, and belonging as an antidote to social alienation, vandalism, and violence.

Key Point #3

City parks engage children in informal, experiential learning through play and shared experiences with peers, laying the foundation for effective formal education.

Key Point #4

City parks provide a valuable resource for closing the educational achievement gap in communities.

Key Point #5

City parks offer a vehicle for children's participation in community development, citizenship, and democratic processes.

KEY POINT #1:

City parks offer children the daily benefits of direct experience with nature—the motivation to explore, discover, and learn about their world and to engage in health-promoting, physical activity.

Like newborn animals, children are genetically predisposed to move, to explore the space around them, and to discover its contents. All parks offer physical activity and free-range learning. The richer the park environment, the richer the learning will be.

Parks are inherently attractive to children because they permit escape from the tight strictures of daily life. Located in urban neighborhoods, parks can offer every child the possibility of healthy physical activity—if networks of child-friendly, safe, accessible pathways connect homes with parks. Parks generously support the multitudinous repertoire of chase and rough-and-tumble games transmitted across the generations through childhood culture regardless of social class, ethnic background, or geography. Without opportunities to flourish, these traditions will die.

Childhood in the U.S. is in crisis. The latest Centers for Disease Control and Prevention (CDC) survey estimates that 15 percent of children 6 to 19 years old are overweight or obese. Among 2 to 5 year olds, 1 in 10 is overweight or obese.¹ Surprisingly, even in light of these frightening statistics, school districts across the country have been curtailing recess—or eliminating it altogether (www.ipausa.org).

Many children do not learn effectively exclusively within the four walls of classrooms. Additional, hands-on learning environments are required to match varied learning styles. This is particularly true of children with ADHD (attention deficit hyperactivity disorder) behaviors. An estimated 8 percent of children 3 to 17 years old have ADHD and other learning disabilities—and the numbers are still rising (probably because of improved diagnosis). Recent scientific research is beginning to demonstrate an intriguing health-promoting impact of everyday green space on child development—in particular on ADHD-like behavior.²

For the first time in history, childhood is torn between the tight space of television, couch, and computer screens, and the free-range spaces of the neighborhood: streets, school grounds, parks, greenways—and vacant lots (if they have not been "in-filled"). These spaces must be designed to be so attractive that they will help win the tug-of-war between sedentary indoor life and an active life outdoors.

KEY POINT #2:

City parks offer children a sense of place, self-identity, and belonging as an antidote to social alienation, vandalism, and violence.

To sustain multiple visits, city parks must be memorable, combining strong visual identity with striking, harmonious experiences. Recent research strongly suggests an association between experience of "nearby nature" (such as in a city park), and reduced rates of aggression for low income, inner-city populations.³

Chase Palm Park is the latest addition to **Santa Barbara's** park system. Adjacent to the beach, easily accessible to all residents, the park design contains artifacts and themes that create a physical identity based on the history of the site and its Pacific Ocean location.⁴ A full-size pod of whales spouting water appear to swim across a sea of grass. Children play with sand and water in a giant Nautilus shell created by a local artist.

Nonstandard play equipment commemorates an ancient shipwreck off the coast, its ship-like forms swarming with children. Colorful, adobe-like playhouses take the form of the City of Santa Barbara in miniature, set against a mural backdrop of the Santa Ynez Mountains. Sea caves, a lighthouse with kaleidoscope, fishing pier, and docks complete a permanent stage set for playing and learning.

Chase Palm Park is a fun place for all family members, who leave with lasting memories etched by the locally grounded design elements. These types of experiences live on in conversations at home, curricular activities at school, and during summer camp visits to the park. Its unique identity encourages repeat visits and deeper levels of learning, as children get older. Eventually, they will share memories with their own children.

KEY POINT #3:

City parks engage children in informal, experiential learning through play and shared experiences with peers, laying the foundation for effective formal education.

Children are motivated to learn when they can make their own discoveries outdoors. Computers can never substitute for hands-on, multi-sensory experiences that first fire up the mental circuits in young, inquiring minds. School parks are the most obvious places to stimulate these learning processes, but they must provide more than just additional sports facilities that serve a small minority of children.

Beginning in the 1970s progressive schools began to reconstruct and restore their school grounds as rich play and learning environments serving both school and neighborhood. The movement continues to this day in progressive school systems. In downtown **Berkeley, California**, Washington Elementary School teachers, parents, children, and local residents partnered with several local organizations, including the UC Berkeley campus, to create the Environmental Yard. An acre-and-a-half of featureless asphalt was replaced with a series of mini-ecosystems (wetland, stream, riparian woodland, redwood grove, meadow, and chaparral) reflecting the rich diversity of the San Francisco Bay region. Climbing structures and community gathering areas were also added. After school and during weekends it became a play space for all ages. During the summer, Berkeley Parks and Recreation play leaders and Project PLAE (Playing and Learning in Adaptable Environments) organized an array of arts and environment programs serving families citywide.⁵

The Yard model continues to be replicated in various forms in East Bay school systems (including Berkeley). The Martin Luther King Junior High School Edible Schoolyard is a well-known Berkeley example that links learning about health, nutrition, and food preparation directly to the hands-on gardening experiences.⁶

The model was recently replicated in **Cleveland, Ohio**, where the nonprofit organization ParkWorks partnered with the city schools, Cleveland Botanic Garden, and Kent State University's Urban Design Center to convert the 2 1/2-acre, barren asphalt yard of Orchard Elementary School into Orchard School Community Park, serving school and neighborhood. Children, teachers, parents, and neighbors all participated in the design.⁷ Cleveland schools and the city jointly funded the project (www.parkworks.org).

KEY POINT #4:

City parks provide a valuable resource for closing the educational achievement gap in communities.

Closing the Achievement Gap, a landmark study published in 1998, surveyed 40 K-12 schools in 13 states across the nation, all of whom used offsite open spaces to extend learning options for students.⁸ The results convincingly demonstrate the positive impact of hands-on learning opportunities, as measured by the standardized achievement scores of socially disadvantaged students.

Recognizing the value of urban open space as a motivator of children's learning through hands-on fieldwork, Partners for Environmental Justice (PEJ), in **Raleigh, North Carolina**, developed a master plan for the Walnut Creek Urban Wetland Educational Park. The magnificent 70-acre wetland/floodplain site bordering Walnut Creek is located adjacent to an African-American neighborhood in a previously politically underrepresented area of town. PEJ is based at an Episcopal church next to the site and partnered with nearby middle schools, the North Carolina Museum of Natural Sciences, and NC State University's College of Design to create a master plan. Many other community and educational interests were involved in a series of participatory design workshops to develop the design program and educational brief for the park, which was endorsed by the Raleigh Parks, Recreation and Greenways Advisory Board. The city has already connected the park to the Raleigh greenway system and has allocated funding for the design of an education center located on dry land in one corner of the site. Carnage Middle School, across the street from the park, Ligon Middle School in the neighborhood, and Centennial Middle School on the Centennial Campus of NC State University (eventually to be connected to the park by a greenway) are all using the park as an educational resource.⁹

KEY POINT #5:

City parks offer a vehicle for children's participation in community development, citizenship, and democratic processes.

If children participate in the design of spaces in their neighborhood, they will value and respect them more fully. The international *Convention on the Rights of the Child* supports this democratic right of young people to be engaged, to be part of the process. (www.unicef.org/crc/crc.htm)

The Town of **Cary, North Carolina**, Parks, Recreation and Cultural Resources Advisory Board initiated the Kids Together Park because they felt the town should provide its citizens with a fully accessible, universally designed family recreation facility.¹⁰ The park was designed through a series of workshops with the participation of children, parents, and local stakeholders. Siblings represented children with developmental disabilities. A strong demand was made to retain natural features of the original site and to add many other natural elements to the design. The participatory process was so successful that a nonprofit organization was set up,

headed by two of the children who did much of the fundraising—and learned much in the process. They decided on the name "Kids Together" as an expression of the mission of the park as a place for all children, regardless of ability. Later in the process, a nonprofit, Cary Visual Art (CVA), participated in the addition of several playful "art benches" and a large sculpted play dragon named Katal (Kids Are Together at Last). Currently, CVA is producing a Kids Together Explorers educational kit, linking art, nature, and learning.

Kids Together Park has become a meeting ground for families, many of them intergenerational, extended, or visiting from out of town (a good criterion for a successful urban park). Multi-ethnic mixes of parents, who work mostly in the high tech, international industries of the Research Triangle Park, get together, swap parenting tips while their children play, and become included in the community.

Notes and Resources

1 Ogden, C., K. Flegal, M. Carroll, and C. Johnson, 2002. "Prevalence and Trends in Overweight Among US Children and Adolescents, 1999-2000." *Journal of the American Medical Association*, 288(14), 1728-1732.

2 Faber Taylor, A., F. Kuo, and W. Sullivan, 2001. "Coping with ADD: The Surprising Connection to Green Play Settings." *Environment & Behavior* Vol. 33(1): 54-77. Sage Publications, Inc.

3 See the following articles: Faber Taylor, A., F. Kuo, and W. Sullivan, 2002. "Views of Nature and Self-Discipline: Evidence from Inner City Children." *Journal of Environmental Psychology*, 22, 49-63. F. Kuo, and W. Sullivan, 2001. "Aggression and Violence in the Inner City." *Environment & Behavior*, 33(4), 543-571. N. Wells, 2000. "At Home with Nature: Effects of Greenness on Children's Cognitive Functioning." *Environment & Behavior*, 32(6), 775-795. A. Faber Taylor, A. Wiley, F. Kuo, and W. Sullivan, 1998. "Growing Up in the Inner City: Green Spaces as Places to Grow." *Environment & Behavior*, 30(1), 3-27.

4 Park designers were MIG, Inc., Berkeley, California, (www.migcom.com), with George Gervin Associates and local artists.

5 A full account of the Environmental Yard, how it was created, and its impact on the children, school, and neighborhood, is published as: R. Moore, and H. Wong, 1997. *Natural Learning: The Life History of an Environmental Schoolyard*. Berkeley, Calif.: MIG Communications.

6 See *The Edible Schoolyard*. 1999. Berkeley, Calif.: Learning for the Real World (Center for Ecoliteracy).

7 Orchard School Community Park was designed by McKnight and Associates, Landscape Architects, Cleveland, with the Natural Learning Initiative, NC State University (www.naturalearning.org) as facilitation and design consultants.

8 Lieberman, G. and L. Hoody, 1998. *Closing the Achievement Gap: Using the Environment as an Integrating Context for Learning*. San Diego, Calif.: State Education and Environment Roundtable.

9 The design program/master plan document for the Urban Wetland Educational Park can be downloaded from www.naturalearning.org.

10 Kids Together Park opened in June 2001, designed by Robin Moore (consultant); Little and Little, Landscape Architects, Raleigh, North Carolina; and Cline Design Associates, Architects.

Robin Moore, the author of this briefing paper, holds degrees in architecture (London) and urban planning (MIT). He is Professor of Landscape Architecture, and director of the Natural Learning Initiative (www.naturalearning.org), NC State University, Raleigh. His research and design activity is focused on childhood environments and ranges from play gardens to urban parks, neighborhoods, and cities. He is a principal in the design and planning firm of Moore Iacofano Goltsman (MIG), Berkeley, California. Contact information: robin_moore@ncsu.edu; 919-515-8344.

City Parks Forum Briefing Papers

This is one in a continuing series of briefing papers on how cities can use parks to address urban challenges. We hope the information here helps you to create great urban parks in your city.

Please visit our website at www.planning.org/cpf to learn more about The City Parks Forum.



Copyright © 2003 by American Planning Association
122 S. Michigan Ave, Suite 1600, Chicago, IL 60603;
www.planning.org.

Photo courtesy of Robin Moore.