hand to hand

ASSOCIATION OF CHILDREN'S MUSEUMS

Sustainability embraces and trumps all other health issues, mostly because the majority of health issues facing children today can be traced back to the degradation of our environment and to our fast-paced, unsustainable lifestyles. While we're treating the illnesses, we should also tackle the root cause. Obesity, asthma, childhood cancers, diabetes, ADD, which are all on the rise, have profound links to the environment. As such, sustainability should be at the very core of our operating practices and our institutional health initiatives.

Courtesy of the Aldo Leopold Foundation Archives

Aldo Leopold at the "Shack" in Baraboo, Wisconsin, circa 1940.

Courtesy of the Springfield Museums, Springfield, MA

Sculpture of the Lorax by Lark Grey Dimond-Cates, stepdaughter of Theodor Geisel, in the Dr. Seuss Memorial Sculpture Garden, Springfield, Massachusetts.

Learning from Leopold and Seuss

Brenda Baker, Guest Editor
Madison Children's Museum

As luck would have it, I reread *The Lorax* and *A Sand County Almanac* in tandem recently, as part of separate community celebrations honoring the authors of two of my favorite books. At first glance, one might think that the Sneetch inventor and zany word maker-upper might have little in common with Aldo Leopold, the revered naturalist, whose keen observations of the natural world make you feel like you're there, mouth agape, touching, smelling and seeing the earth for the first time. While Dr. Seuss is considered by many children to be the most beloved author and illustrator of all time, Leopold, who wrote *A Sand County Almanac* between 1941 and 1947, is considered the father of the United States wilderness system and one of the most influential conservation thinkers of the twentieth century.

In his vivid descriptions of his family's restoration of an old shack and its surrounding land, Leopold, the perennial philosopher, gets at the heart of all things wild with deep respect, love and passion. He calls upon the reader to get to know the land, love the land and ultimately, conserve the land. In *The Lorax,* the greedy Once-ler begins chopping truffula trees faster and faster to make "Thneeds," something, it turns out, no one really needs. Before long, all of the trees and animals are gone, the Thneed factory closes and only one truffula seed remains in the desecrated land. Seuss calls upon the reader to take that seed, plant it with love and nourish it in hope that someday the truffula trees and animals will return. Despite their wildly different styles, I couldn't help but join Dr. Seuss and Aldo Leopold at the hip, imagine them in conversation, and begin seeing their parallel messages of hope, individual responsibility, ethics and preservation of our biotic community as one and the same. It's a message that has urgency and relevance in my own life and work, and I believe, to the children's museum field at large.

When I look around me, I am inspired by many children's museums around the country following in step with Seuss and Leopold, dishing up creative and varied work in the spirit of respecting children of future generations, and in the name of sustainable, "green" or "ecological" design. Sustainability, which can be defined as meeting the needs of the current generation without compromising the needs of future generations, is about taking the long view, seeing the world as interconnected, thinking carefully about the choices we make and their impacts and recognizing that healthy children are the natural outcome of a healthy biotic community. It's a complex subject requiring new awareness of the earth's integrated natural systems, the delicate balance between individual and collective actions and the ways those choices will affect our children and our environment.

In the spirit of this year's InterActivity theme "Growing Healthy Kids, Museums and Communities," the Association of Children's Museums has developed a conference program that explores the critical role that physical and emotional health plays in growing healthy children, healthy museums and healthy communities. This issue of *Hand to Hand* will highlight how sustainability practices are part of a growing movement within our field to address these interrelated health issues through the way we work. Sustainability embraces and trumps all other health issues, mostly because the majority of health issues facing children today can be traced back to the degradation of our environment and to our fast-paced, unsustainable lifestyles. While we're treating the illnesses, we should also tackle the root cause. Obesity, asthma, childhood cancers, diabetes, ADD, which are all on the rise, have profound links to the environment. As such, sustainability should be at the very core of our operating practices and our institutional health initiatives.

What Would Leopold and Seuss Think?

Predicted increases in world population over the next century, along with the attainment of peak oil production and the increasing demands that we're putting on our ecosystem, will provide our children with challenges far beyond the scope of anything we have encountered in human history. Since 2005 ranked as the hottest year on record, there is little debate within the scientific community about the impending impacts of global warming. The number one challenge that will face the children we currently serve as they enter adulthood will be how to reconcile the impact of their daily lives with the limitations of our global ecosystems.

What would Seuss and Leopold make of this predicament? How can one person, one institution, or one field make a difference? Seuss's Lorax would say as he passes off the last truffula seed, "UNLESS someone like you cares a whole awful lot, nothing is going to get better. It's not." And Leopold, nodding in agreement, might say that "it's only individuals, taking responsibility for their part of the larger community, upon which our survival depends." Seuss would blurt out in rhyming verse that we should stop making Thneeds, though it's something we think everyone needs. And Leopold would subtly add that it's only in getting rid of our Thneeds, that we can actually see the beauty of the world around us. They would talk some more and both wind up with the same conclusion: that you can only make ethical decisions in relation to something that you love, see, feel, respect, admire, understand and have faith in (Leopold 1949). If, as a field, we can weave ecological design through everything we do, we can reconnect kids to the earth so that they too have compassion, love and respect, the core ingredients for becoming stewards of the land.

Green Design + Sustainability

IN THIS ISSUE

Brenda Baker, Guest Editor

The Association of Children's Museums (ACM) is a professional service organization that endeavors to expand the capacity and further the vision of children's museums. ACM's mission is to build the capacity of children's museums to serve as town squares where play inspires creativity and lifelong learning. Membership is primarily children's museums, but includes other museums with an interest in both child and family audiences, individuals and corporate members.

Association of Children's Museums
1300 L Street N.W., Suite 975
Washington, D.C. 20005
Phone (202) 898-1080
Fax (202) 898-1086
E-mail: acm@childrensmuseums.org
Web site: www.childrensmuseums.org

Hand to Hand, a news journal for children's museum professionals and others interested in children, families and informal learning, is published on a quarterly basis by the Association of Children's Museums. Unsolicited manuscripts, letters to the editor, artwork and photographs are welcome. *Hand to Hand* is a benefit of membership in the Association of Children's Museums.

Opinions expressed in this journal are those of the authors and do not necessarily reflect the position of ACM.

EDITOR & DESIGNER
Mary Maher
609 East Market Street, Suite 102A
Charlottesville, Virginia 22902
Phone (434) 295-7603
Fax (434) 295-5045
E-mail: MMaher2049@aol.com

Our Greening Field

The leaders in the our field's sustainable design movement are stretching Seuss and Leopold's hopeful vision in inventive and thoughtful ways, taking it upon themselves to make sweeping changes within their organizations, upholding high ethical standards to create healthier futures for children of all species. With a deep respect and love for children at the core of their work, children's museums, along with nature centers, have already taken the lead within the larger museum field, and comprise the large majority of recent and current sustainable design projects (Guarinello 2005).

This issue of *Hand to Hand* highlights aspects of these inspiring green design projects, processes and ideas, and supplements the www.greenexhibits.org Web site and toolkit that was developed last year by Madison Children's Museum as part of its MetLife Foundation and ACM Promising Practice Replication Award for sustainable design. The Web site, an online resource guide for museums interested in starting sustainable design projects, includes a compendium of work by children's museums in the field to date, a host of information about getting started and a comprehensive index of where to find alternative building supplies. The Web site was developed with a sense of community in mind, and we welcome your contributions. If you haven't taken a look yet, the resources and links you find will help you get started on greening your museum, with projects large and small.

While the vast majority of current green projects around the country involve new construction or building renovation, there are many others that focus on green exhibit design and construction, tackling indoor air quality, forging partnerships with green organizations, instituting green incentives for employees, working with the local community to tackle environmental and social problems and creating more green space as part of their mission. Whether it's starting a worm/composting bin in the staff kitchen, switching to no-VOC (volatile organic chemicals) paint, or undertaking a fifty million dollar capital campaign for a green building, it is the intention that matters most. Sustainability isn't about getting it all right. It's about starting—doing something.

Whether it's starting a worm/composting bin in the staff kitchen, switching to no-VOC (volatile organic chemicals) paint, or undertaking a fifty million dollar capital campaign for a green building, it is the intention that matters most. Sustainability isn't about getting it all right. It's about starting—doing something.

Sue Maniske

The children's museums you'll read about in this issue all have one thing in common: they are all taking a strategically "local" approach to ecological design, using local resources, local materials and local knowledge to support their museums and communities. This isn't to say that everything is being built from scratch in museums' basements or that museums should disconnect from larger support systems, but that by working locally, they're shortening supply lines, a key ingredient to being sustainable.

At Madison Children's Museum, we are taking steps in our current building and practices, while we work on our green expansion project. which will open in four years. Aside from continuing and expanding our green design and fabrication practices, we've offered a discussion course for employees and community members called "Healthy Children, Healthy Planet." The museum has also joined Community Car, a member-based car sharing program, so staff members can bike to work and still have access to a vehicle when needed. We've continued updating www.greenexhibits.org, and actively solicited local contractors, arming them with our ecological requirements, so they're ready when we need them. But mostly we're dreaming and scheming about our "new" 1929 Montgomery Ward building and how we can take it further and have more beneficial impact on kids' lives with less impact on the planet.

In the articles included in this issue, you'll learn how a green agenda can be a galvanizing force within an institution, a field and a community. Sharon Klotz, Director of Exhibits at Brooklyn Children's Museum (BCM), takes you on a whirlwind tour of the process and decision making strategies that were employed by BCM as they've undertaken New York City's first green museum. In her article, "Growing Up Green," Sharon highlights green features of Brooklyn's new building and exhibits and examines how the design team gauged and weighed choices about sustainability. Neil Gordon's article "Green Buildings, Green Kids" shows how the Boston Children's Museum is using its green expansion project as a way to do something larger than simply "greening" the institution. By capturing, treating and reusing storm water on the site, BCM's project will simultaneously help keep Fort Point Channel clean, demonstrate stewardship of the environment, educate kids and teachers about Boston harbor, and complement a whole set of community and programmatic goals.

Jane Werner, executive director of the Children's Museum of Pittsburgh, gives you an overview of what it's like to keep the momentum up once the doors to a green building are open, with practical tips regarding ongoing sustainability efforts. Her article discusses cleaning, community programs related to green initiatives, community partnerships and incentives for employees, and it discusses the sometimes difficult trade-offs that need to be made regarding sustainability. Dave Judy of Kohl Children's Museum of Greater Chicago lays bare the challenges of calling attention to green processes in a building where many of the green features are virtually unseen.

In separate Case Studies, we'll see highlights of new sustainable design projects from four children's museums around the country, including Children's Discovery Museum, in Normal, Illinois, which just opened as our country's first LEED certified and silver-rated children's museum. Other impressive new green building case studies include Strong Museum in Rochester, New York; Discovery Center Museum of Rockford, Illinois; and the Shenandoah Valley Discovery Museum in Winchester, Virginia.

As all of these projects will demonstrate, sustainability can be a rallying force within an organization, and working locally will only enhance the community's commitment.

I'm beginning to think that maybe "local" is really the next logical progression, the next mantra for our field. It supports the town square concept, but pushes it further in this age of importation. As the effects of globalization are eventually understood, socially, environmentally and economically, maybe self-reliance, the idea of blooming where you're planted, and working within our bioregions will be the truffula seed that sticks.

Brenda Baker has overseen Madison Children's Museum's exhibit department for the past sixteen years. She's an avid bicycle commuter and athlete, artist, environmentalist and mother of two young boys. When she's not tending to one of those occupations, she pulls weeds in her family's overgrown garden or works on remodeling their 120-year-old house with reclaimed building materials, including a former high school basketball floor in the kitchen.

REFERENCES

Guarinello, Elena. "Why We All Should Care: Building A Case for Sustainable Design in Museums." George Washington University, October 26, 2005.

Leopold, Aldo. *A Sand County Almanac.* New York: Oxford University Press, Inc., 1949.

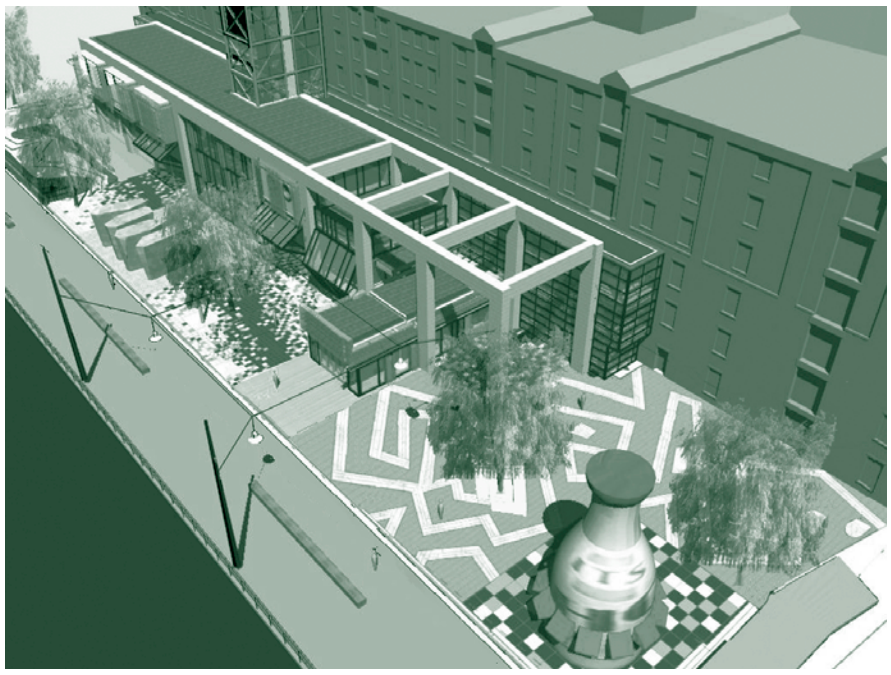
Dr. Seuss. *The Lorax.* New York: Random House, 1971.

greenexhibits.org

All of the articles that appear in this issue of *Hand to Hand* will be available as downloadable pdf's at www.greenexhibits.org after InterActivity.

Green Buildings, Green Kids

Neil Gordon, Boston Children's Museum



View of the of the Boston Children's Museum Expansion, designed by Cambridge Seven Associates, illustrates the new wing and the circulation bridge that connects to the original building. Note the green roofs over the main entry and wing. The outdoor children's maze animates the waterfront plaza.

Kermit was right: It's not easy being green. But at the Boston Children's Museum, as we embark on an exciting expansion, we regard being green as both consistent with our history and an extension of our mission.

The commitment to green buildings is really a commitment to creating the next generation of environmental stewards. The many decisions to "be green" in any construction process inevitably boil down to a museum's level of commitment. For the most part, economic or other criteria do not automatically point in that direction. Commitment from the start, and from the top, is key; decisions will flow from there. Here's a little bit of our story.

Building Children's Wharf

The Boston Children's Museum (BCM) is not only a historical and traditional site for children, families and educators in the Boston community, but it is also a leading resource for Boston educators. In addition, the museum receives local and national attention and respect. In order to sustain itself and meet the needs of visitors and educators, the museum has launched the Campaign for Children's Wharf. In April 2006, the museum begins the construction of a 23,000-square-foot addition, a new outdoor learning area and the renovation of its existing 150,000-square-foot nineteenth century building, formerly a wool warehouse. Planning for this project began in 2000, and its completion will take about sixteen months.

When the museum's board discussed incorporating green principles into the construction of Children's Wharf, various programmatic and financial concerns were raised. After thoughtful consideration the following purpose statements were developed for incorporating green design:

- Our commitment to children through our mission includes respecting the world in which they live with pro-environment objectives;
- Green design should educate children and their adult caregivers about respecting their world using the building and the site as tools;
- The success of green design should be measured in terms of tangible improvements, not necessarily LEED points.

Further, by committing to a green building we would also be able to accomplish the following:

- Communicate BCM's ongoing commitment to sustainability, a point emphasized during fundraising efforts, both present and future;
- Showcase a hands-on green building where green can be seen and touched; and
- Fit within the budget constraints. (The board adopted a fifteen-year payback as the basis for analyzing cost/benefits.)

In planning for sustainable design in the new building, BCM hired Bill Reed of Integrated Design Collaborative, engaged the expertise of local, Cambridge-based Green Roundtable and worked with staff, consultants and board members to develop goals for sustainable design. This team identified the following opportunities, which BCM is incorporating in the new building:

- Alternative heating and cooling options that result in lower energy use and improved efficiency;
- Providing support spaces and equipment to promote alternative transportation options;
- Light schemes that reduce energy use and heat gain;
- Incorporation of sustainable materials in the new addition;
- Landscaping that incorporates efficient horticulture;;
- Storm water treatment and reuse opportunities and reducing potable water use and heat islands; and
- Enhancement to air circulation, filtration and materials choices, as well as maintenance programs that ensure the best possible healthy indoor environment for young learners.

Currently in the construction document phase, BCM remains committed to incorporating those features that will not only help protect our environment and educate the local public, but also act as a model for other Boston area building projects.

Two Green Spin-Offs

The commitment to a green building is consistent with BCM's history. In 1979, the museum moved to the Fort Point Channel from Jamaica Plain with the intent of developing programs and exhibits consistent with the new waterfront home environment. A wide array of exhibits helps visitors explore waterfront habitats and learn about their creatures while programs educate the public about the importance of enjoying—and protecting—the environment.

Two signature initiatives have emerged from our deepening commitment to green: an educational effort to help Boston's kids appreciate and connect with the incredible resource that is Boston Harbor and a project that will have real impact on water quality in Fort Point Channel.

Boston Waterfront Learning Project

Several years ago, prompted by the rapidly increasing privatization of Boston Harbor and the quiet success of the Boston Harbor Clean-up, planning efforts began involving the museum, the Boston Public Schools (BPS) and Save the Harbor/Save the Bay, an environmental advocacy group. These efforts focused on assessing BPS curriculum needs, developing a summer institute and identifying pre-existing resources, experienced teachers and funding sources. In the summer of 2001, the museum presented a summer content institute funded by the Massachusetts Department of Education called "On the Waterfront: Connecting Science, Mathematics, Social Studies and English Language Arts through Studying Boston Harbor." While we explored the waterfront together and taught seventeen teachers from Greater Boston how to involve students in fieldwork experiences, the teachers validated our dream of creating a waterfront learning curriculum and also taught us about some of the practical challenges they faced in implementing fieldwork activities with their classes. We also learned about other organizations eager to collaborate on the project, and assembled several of them to help with the institute, including New England Aquarium and Boston History Collaborative.

The partners ultimately articulated a vision for what became known as Boston Waterfront Learning Project: every child who graduates from Boston Public Schools will have had at least one first-hand learning experience based at a waterfront site and connected to their class curriculum. Additional partners joined in and we won a multi-year grant from the Howard Hughes Medical Institute to collaborate with BPS teachers in developing and piloting interdisciplinary activities centered around fieldwork experiences.

With funding in hand, the Boston Children's Museum's Waterfront Learning Project emerged. It has engaged Boston teachers and multiple environmental organizations in the preparation and piloting of curricula, resources and a Web site to make Boston Harbor a rich resource for STEM (science, technology, engineering, math) learning. Materials, trips and training, which focus on fifteen fieldwork sites in and around Boston Harbor, have been piloted with 119 Boston teachers and their classes. Curriculum is now being finalized based on revisions suggested in field testing. The STEM framework incorporates inquiry-based learning activities within the domains of life sciences, earth science, physical sciences and technology/engineering, which are identified in each trip guide developed by the project.

Water Quality on the Fort Point Channel

The Fort Point Channel on which the BCM is situated is rated among the worst Massachusetts bodies of water for organic and pathogenic pollutants. Even after a significant level of public and private investment in the Channel's sewer separation system, the Channel will continue to be unsafe for secondary contact at least four months of the year due to pollution from stormwater runoff. (Secondary contact involves boating-related activities; primary contact is swimming in the water.) Stormwater runoff, left unchecked, jeopardizes the future of the Channel and diminishes a vital opportunity to reactivate a once thriving neighborhood and connect Boston's citizens and visitors with the Channel. Creating the next stewards of the Harbor and the Channel requires meaningful experiences for children on and around the water. Safe contact with the water is a cornerstone to ensuring that these experiences can be provided.

The development of the Children's Wharf makes the implementation of an effective and comprehensive rainwater reclamation system possible and capable of achieving significant impact on the stormwater issues.

As part of the facility expansion and renovation project, BCM intends to:

- Implement a water reclamation system to harvest rainwater and other non-potable streams from the site;
- Store, treat and use harvested water for the museum's gray water system, landscape irrigation and cooling tower make-up water;
- Reduce stormwater discharge from the BCM site by 88%. Remaining stormwater discharge will be treated. Phosphorus discharge from stormwater runoff will be reduced by 40%;
- Reduce total suspended solids (TSS) discharged from site by 80%;
- Reduce BCM potable water demand by 77%;
- Introduce over 1,000,000 gallons of water for ground water recharge at the site.

BCM will become the first institution along Fort Point Channel to implement such an extensive system as part of its development and in the process will educate 500,000 children, families and educators annually through interactive exhibitions, programs and interpretive signage that demonstrate important principles of clean water, conservation and individual impact on the environment.

"Going green" will give the Boston Children's Museum the opportunity to lead by example, to enhance learning experiences for visitors and students about their environment, and to make a significant improvement in the quality of the water that is one of our greatest local assets. Ours is a short-term construction project, but with long-term implications.

Neil Gordon is the Executive Vice President and Chief Operating Officer for the Boston Children's Museum, where he has served for more than ten years. His responsibilities include planning, program development, exhibits, the visitor experience and education programs, and he is currently overseeing the capital expansion of the museum. Neil's undergraduate degree is in geology and he has a master's degree specializing in energy and environmental policy. On the census form, he checks "green."

New Case Studies greenexhibits.org

With nearly fifty children's museums currently planning new buildings or renovations, a growing number are incorporating principles of green design and sustainable practice into their future, and ten percent are pursuing LEED (Leadership in Energy and Environmental Design) certification. The following museum case studies are a sampling of efforts in various stages of implementation. They will be added to the greenexhibits.org Web site in the near future.

Quincy Pitmon

CHILDREN'S DISCOVERY MUSEUM

Normal, Illinois
www.childrensdiscoverymuseum.net

Architect:	**Russel Francois, Francois and Associates**
Building size:	**34,000 square feet**
Project budget:	**Approximately $5,000,000**
Opening date:	**November 27, 2004**
LEED certification:	**Silver Rating**

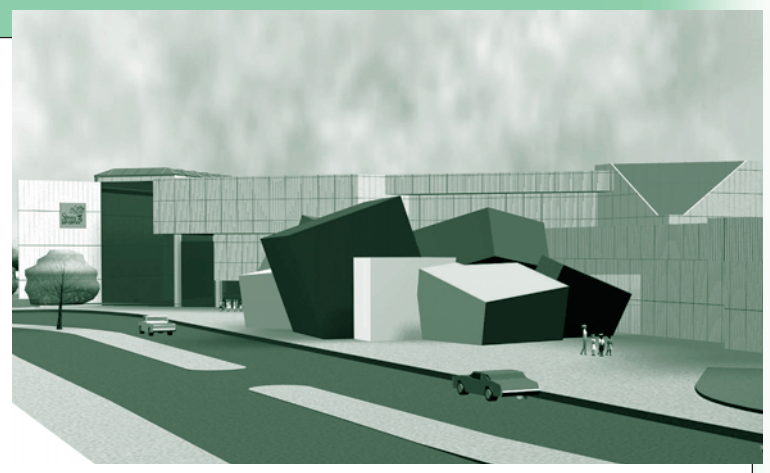
The Town of Normal is committed to maintaining a high quality of life and a healthy environment for all of its residents. As plans for the downtown revitalization project were discussed, the town took a leadership role in utilizing sustainable building concepts. Town leaders believe that using energy efficient, environmentally friendly sustainable design is simply the right approach for constructing public facilities. This leadership role was exemplified in the construction of the new Children's Discovery Museum, now part of Normal's department of Parks and Recreation, as the flagship development for the downtown project.

DISTINGUISHING GREEN FEATURES OF THE PROJECT

- Utilized 31.64% recycled content in building materials.
- Efficient HVAC system.
- Energy Star Roof.
- Diverted 87% of the construction waste from the landfill through recycling and reusing.
- Used 86% locally manufactured materials, eliminating energy usage for long haul transportation
- Various design concepts to promote public/non-auto transportation—location adjacent to rail and bus system, bike racks and staff shower for staff biking to work.
- Healthy indoor environment—operable windows, low-e glass, low VOC paints and glues.

CHALLENGES ENCOUNTERED

Pursuing LEED certification is not an easy road. It requires exceptional coordination and cooperation of the entire construction team. It is imperative to have "buy-in" from the contractor at submittal of the bid. The LEED certification process itself is somewhat cumbersome, and USGBC is extremely busy. Every project has unique aspects, so USGBC's future challenge will be to promote standards that acknowledge exceptions and recognize that there are alternatives to reaching the same end result.



STRONG MUSEUM

Rochester, New York
www.strongmuseum.org

Architect:	**Chaintreuil, Jensen, Stark**
Building Size:	**280,000 square feet (112,000 square-foot expansion)**
Project budget:	**$33 million**
LEED certification:	**Silver (pending)**

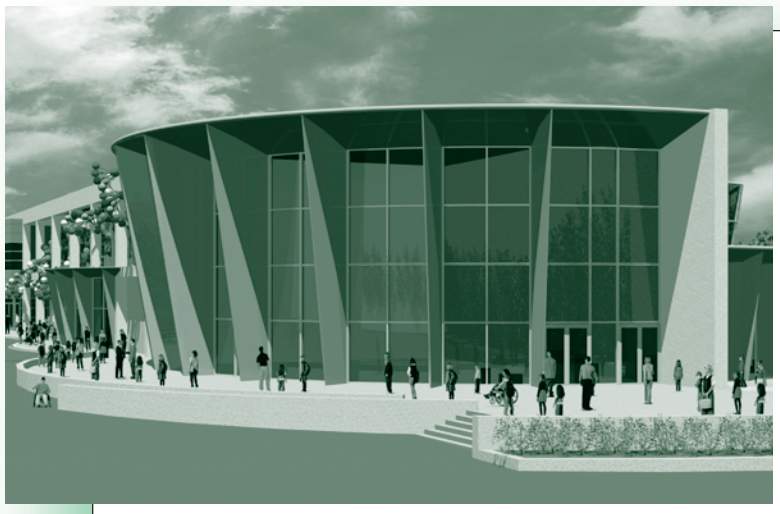
Strong Museum's expansion will nearly double the museum in size, from 168,000 to 280,000 square feet. Part of the new space is a 70,000 square-foot exhibition hall and education wing connected to the existing galleries by an aluminum-sheathed, caterpillar-shaped atrium. The new wing houses a 12,000 square-foot interactive exhibit about children's literature, a new school group entrance and four activity rooms, additional administrative offices and 30,000 square feet of underground collections storage. Another new gallery annex houses a 7,000-square-foot interactive exhibit about the importance of play in human development and learning. The expansion also includes the *Dancing Wings* Butterfly Garden™, the first and only year-round indoor butterfly garden in upstate New York.

This expansion will make Strong Museum the second largest children's museum in the country. Additionally, the Institute of Museum and Library Services, the American Association of Museums and the National Endowment for the Humanities have all cited Strong Museum as a model in the museum field. As such, the museum has approached the expansion project in a responsible, forward-thinking manner with regard to environmental stewardship and conservation.

"Going green" with a project of this size and scope required significant planning. Because neither the architects nor the contractors had much experience with sustainable practices, everyone faced a steep learning curve. Keeping costs in line proved challenging, too. However, by engaging a LEED Accredited Professional as part of the project team, the museum was able to ensure the design integration required by a green building project and to streamline the process toward LEED certification.

GREEN FEATURES OF THE PROJECT

- Secure bicycle storage with shower facilities for regular building occupants.
- Energy Star compliant, reflective roofing to reduce thermal gradient differences between developed and undeveloped areas (heat island effect) to minimize the impact on human and wildlife habitat.
- Exterior and interior lighting to eliminate light trespass from the building and site, thus improving night sky visibility.
- High-efficiency irrigation technology to limit the use of potable water for landscape irrigation.
- Aerators, low flow lavatories and flush valves that use 20% less water.
- Zero use of CFC-based refrigerants in HVAC and refrigeration systems.
- Mechanical systems that reduce energy cost by 20% and achieve a level of energy performance above the New York State Energy Conservation Code.
- Construction Waste Management Plan that diverted 50% of construction, demolition and land clearing debris from landfill disposal.
- Materials and products such as acoustical ceiling tile, steel, insulation, concrete with fly ash additive that contains recycled content as well as materials extracted and manufactured within the region, for example excavating and crushing bedrock on site for re-use.
- Indoor Air Quality Management Plan for the construction and preoccupancy phases to help sustain the comfort and well-being of building occupants.
- Reduction of indoor air contaminants that are odorous, potentially irritating and harmful to building occupants by purchasing adhesives, sealants and paints with low VOC content and carpet systems that exceed the requirements of the Green Label Indoor Air Quality Test Program.
- Green housekeeping/cleaning practices using environmentally preferable (green-certified) cleaning products.
- Ongoing purchase of materials from suppliers within in a 500-mile radius to reduce pollution caused by trucking long distances.
- Maintenance of good air quality through ventilation and filtration, avoidance of wood with formaldehyde resin and no smoking on the premises, indoors or out.
- An exhibit and educational outreach program to instruct children and their families about the sustainable building elements that were applied at the museum.



DISCOVERY CENTER MUSEUM

Rockford, Illinois

www.discoverycentermuseum.org

Architects: Rockford Associates
Building Size: Demolishing 7,500 square feet and replacing with 22,000 square feet
Project Budget: Unknown
Opening Date: To be determined (still in the fundraising and planning phase)
LEED certification: Considering Silver

The existing Discovery Center Museum (DCM) is housed in a former Sears department store along with several other cultural organizations. The building is owned by the Rockford Park District. The other organizations were invited to take part in the expansion, but so far only the museum is moving forward. As part of the expansion, a 5,000-square-foot event space is being demolished and replaced with 22,000 square feet of exhibit, classroom, office, event and public space.

The museum had been thinking green long before expansion was considered, so attempting to be green in the new building is a natural fit. Several years ago DCM received a grant to replace all of the lighting fixtures in the building with low wattage fluorescent tubes and all of the incandescent bulbs were replaced with compact fluorescent bulbs. The museum also has been involved with the NEED project (National Energy Education Development Project) and several of its educators have served as NEED trainers.

CHALLENGES ENCOUNTERED IN THE PLANNING PROCESS

A major rationale for going green is to reduce consumption of energy resources to save money. However, DCM may not realize the cost savings because it does not own the building. Board and staff continue to wrestle with this fact. Also, because the museum is a tenant, all plans must be approved by the Park District and sometimes by the other building tenants. This alone makes the whole process a bit more difficult and at times more costly and time consuming.

DCM received a planning grant from the Illinois Clean Energy Community Foundation, which provided funds to allow the museum to study options that provide the most benefit as well as to assist in determining how to approach LEED certification.

GREEN OPTIONS UNDER CONSIDERATION

- Optimal building/site orientation and building and space planning.
- Solar wall, glazing systems and shading devices.
- Geothermal exchange systems. (This system may be shared with a neighboring museum.)
- Lighting design including natural lighting and lighting controls.
- Wind turbines.
- Photovoltaic panels.

SHENANDOAH VALLEY DISCOVERY MUSEUM

Winchester, Virginia

www.discoverymuseum.net

Architect: Reader/Swartz Architects
Building Size: 29,000 square feet
Project budget: $9 million
Opening date: 2007
LEED certification: Platinum (pending)

The Shenandoah Valley Discovery Museum's (SVDM) new facility will be built on three and one half acres donated by the City of Winchester (Virginia) in Jim Barnett Park. This award-winning building (American Institute of Architects Northern Virginia Chapter's 2005 pre-built award for excellence in design) will comply with the U.S. Green Building Council's (USGBC) platinum standards. Sustainable features include site placement for passive and active solar energy collection and natural ventilation, low-emitting and no-emitting materials, wind electricity generation, geothermal heat pump HVAC systems and air-quality monitoring. Storm water management systems used will include extensive and intensive green roofs, rain barrels and cisterns for storing and recycling rain and a "parking quilt" built of permeable materials and bordered by perennial gardens that retain and cleanse runoff. Wastewater treatment will include a self-contained, membrane filtration process of reverse osmosis and ultraviolet light that will allow us to save highly purified water for irrigation on the property and to discharge clean water into the city's water system.

SVDM's mission is to ignite creativity, spark curiosity and inspire lifelong learning. The building, an exhibit itself, will feature a self-guided, interactive tour that interprets the physics of electricity production and storage, the biology and chemistry of storm and waste water treatment systems and the important balances involved in engineering systems design. SVDM will become a regional center to teach the necessity of local, regional, national and global conservation policies and practices.

In December 2004 the Winchester city council entered into a lease with SVDM that provided the park site on which to build a new museum. Jim Barnett Park is the last remaining publicly owned land within the city limits of Winchester, comparable in scale to Central Park in New York. This decision by the city council was not without controversy. Editorials appeared in local newspaper decrying the decision, but the vast majority of comment was in favor of the move.

In the early planning stages public meetings were held to hear the ideas of local constituents. During this public comment period the notion of "green" building first surfaced. SVDM also began to interview architects, one of whom encouraged the museum to consider the USGBC guidelines for LEED certification. Several factors persuaded the board and staff to make the leap to a "green" philosophy.

1. They felt the full burden of public trust and personal responsibility.
2. They recognized the opportunity to influence public opinion in favor of our project.
3. They realized that the "green" aspects of the project appeal to many potential donors who would not otherwise be interested in a children's museum.

The most significant hurdle in the way of adopting a "green" strategy was the perceived additional cost of the technology. The U.S. Green Building Council ultimately persuaded us that while the front-end costs of building green may be higher, the long-term costs are much lower. In the end, the trust for the care of the property in Jim Barnett Park translated into a policy stating that all available knowledge and technology regarding environmentally sustainable construction will be incorporated in this new building. At the same time, museum planners realized the educational value of environmentally smart development, and decided to make the building an exhibition itself. Therefore, all the "green" technology incorporated in the building will be interpreted for visitors via interactive displays.

Today, the museum is on track for achieving a platinum certification from the USGBC making SVDM one of only four platinum buildings in the east, and one of only eleven in the country.

SUSTAINABLE FEATURES

- Sustainable site planning, including restoration of native habitat through installation of native trees and herbaceous plants; garden composting.
- Water efficiency, including use of water-efficient landscaping, no irrigation; installation of green roof, cistern and infiltration/bioretention cells.
- Energy and atmosphere, including purchase of renewable energy and production of 75% of needed energy with photovoltaic cells and wind turbine.
- Materials and resources, including floor coverings of cork, linoleum, corn-based carpet and bamboo.
- Indoor environmental quality/control, including geothermal heating and cooling, operable windows, day-lighting and view preservation.

Case Study Updates: Maturity, Maintenance and Marketing

After much thoughtful planning and expense, the green museum or green exhibit opens. Then what? Some of the green museums featured on the initial launch of the greenexhibits.org Web site weigh in with the many ways they have chosen to drill deeper into green, sideline practices that cost too much or just don't work and get visitors to notice the sometimes subtle shades of green all around them.

Brooklyn Children's Museum, currently under expansion, is on track to open in 2007 and become the first LEED-certified museum in New York City.

Rafael Vinoly Architects PC

GROWING UP GREEN

Sharon Klotz
Director of Exhibits
Brooklyn Children's Museum

Some legends evolve over generations; this one is only several years old. In the late 1990s, Brooklyn Children's Museum embarked on an expansion project. It was a modest undertaking, fueled by a need for a café space and enhanced visitor amenities. Within a few years, though, the planned scope, supported by master plans and feasibility studies, had evolved to include additional exhibition galleries, offices, a new theater and a revamped lobby. During this period, the City of New York, the project's major funder and partner, was beginning to focus on green design and had, in fact, just launched a new governmental sub-unit specifically focused on sustainability. Against this backdrop of an expanded building project and increasing dialogue about high-performance construction, the Gangsei family of Brooklyn, New York, went on vacation to the shore.

Paul Gangsei, a trustee of Brooklyn Children's Museum and its chairman during the launch of the current expansion project, apparently carried a cell phone with him during one of his walks on the beach during that vacation years ago. With the sun overhead and the waves playing their lulling rhythm, Paul made a phone call one day to the museum's president, Carol Enseki. The conversation, as legend has it, was short. Following up on ongoing collaborative discussions, Paul said: "I think we should do it. Let's build a green building." Carol and others had already begun to rally around that idea, and it wasn't long before a museum well known for its past was about to rewrite its future.

GOING GREEN

The U.S. Green Building Council has articulated a series of design features and operational parameters that contribute points toward official LEED (Leadership in Environmental and Engineering Design) certification. Levels are based on the number of points achieved, with Platinum Certification being the highest. (For a primer on LEED, go to the U.S. Green Building Council Web site, www.usgbc.org.) Brooklyn Children's Museum, for example, is on track to receive Silver Certification upon completion and is slated to be the first LEED-certified museum in New York City, which, incidentally, recently ratified legislation requiring all city-funded projects to incorporate sustainable features. Our expanded building will include:

- Climate control features like groundwater heating and cooling, thermal window glazing and automated HVAC controls;
- Electrical systems that include solar panels as a supplementary power source, automatic light dimmers and low-wattage fixtures;
- Material and fixture choices like renewable bamboo, low-flow faucets, local resources and non-toxic surfaces; and
- Community-focused aspects like secure bicycle racks and showers, on-site recycling and composting and a signage system that links to bus, rail, subway and bike paths.

SHADES OF GREY

Rafael Vinoly, the museum's architect, often has several pairs of glasses around his neck or braced on top of his head at the same time. I always appreciate the unintended but quite apt metaphor of being able to see from many perspectives at once, having many lenses and viewpoints through which to gauge and judge options. Throughout the building design process, the collaborative team, which included representatives from Brooklyn Children's Museum, the City of New York, Vinoly and several specialists, indeed made use of a multitude of viewpoints, especially when weighing choices about sustainability.

An example: "greywater" is the used-but-still-useful water that runs down sink and shower drains. There exist capture systems that channel greywater into gardens for irrigation or other uses. These are relatively easy to install. The catch? The initial capital expense of a greywater system would have taken many years to recoup in savings. The project team decided against greywater capture in our building, letting go of an innovation that would have expanded impact but also letting go of a few LEED points. Ironically, today, the technology is more efficient than it was when we made that choice and the payback period is shorter; we might well have made a different choice were we contemplating the greywater option today.

BE THE CHANGE

In many ways, the LEED-certified expansion follows naturally from the museum's legacy of producing natural science inquiry programs and exhibitions and showcasing natural history collections objects. Brooklyn Children's Museum has always emphasized environmental engagement and stewardship alongside cultural awareness and curiosity. The expanded building itself represents an opportunity to embody the values that underlie the museum's mission and core goals. Through a series of outdoor, full-body, physical science activities—collectively called *Energy Adventure*—visitors to our expanded museum will have the chance to explore materials and make design choices to build a small house, control a solar-powered fountain and play with drag forces inside a small-scale wind tunnel, to highlight just a few of the planned activities. The building, too, will have a layer of interactive interpretation—signage, material highlights and virtual tours—and those elements will help translate and activate the physical environment. In fact, one of the LEED points for the project derives from the layers of communication and education embedded within the building and within the *Energy Adventure* experience.

Visitors will have the chance to do what we did as a project team and what similar teams are doing across the country and around the world: observe, explore, weigh consequences and make choices. Prototyping for *Energy Adventure* activities yielded the following comments and so far suggests this is indeed the case:

> "The temperature goes up when you put the blocks on the house."
> "White keeps the heat from coming in."
> "When you put the squares on, the heat stays in; when you take them away the heat goes out."
> "The sun's power can give this fountain energy."
> "This deals with the sun—when the sun hits this, it makes the water go on."
> "When it faces the sun, those blue things light up, but when it doesn't, they don't."

Our research showed that even the youngest visitors can see and play with causal connections, consequences and choices. Just as we have had to weigh benefits, costs and potential outcomes for the choices embedded in (or excluded from) our sustainable building, our visitors—especially the youngest—will be making the choices and weighing the consequences that will build and shape our collective future. Perhaps we can take a note from one young visitor who, after giving his feedback about the energy interactives, said he wanted to make more energy and then darted away to run up and down the rooftop theater bleachers.

© Albert Vecerka/Esto

GO GREEN AND GET REAL

Jane Werner
Executive Director
Children's Museum of Pittsburgh

It snowed last week. One of the early March snow storms that doesn't amount to much, just a dusting on the ground and sidewalks…a bit icy. The kind of snow that always makes me feel guilty walking into the Children's Museum of Pittsburgh. Last year we used environmentally friendly salt to melt the snow. It cost five times more than rock salt and we went over budget by $3,000. We switched back to regular salt and now we're watching our pachysandra die along the sidewalk. But the parking lot and sidewalks are clear, visitors are safe from falls and we're in budget. As much as we like to be "green" in every aspect of the museum's operation, we're not. We try to make good decisions, do the best we can and try not to feel guilty when our practices aren't 100% environmentally correct.

The Children's Museum of Pittsburgh's expansion, which opened in November 2004, allowed us to make sweeping "green" changes in our building's construction. The museum was recently awarded silver LEED certification. Early on, we made the commitment to environmentally friendly materials and practices which in the end cost about 3-4% over normal construction costs. We used wheat board, low flow toilets, low VOC paint, recycled or natural fiber carpet, renewable energy and perhaps the greatest coup of all, two historic buildings to achieve the rating. We even put a shower and bike racks on site for our (two) employees who commute by bike. In many ways, that's the easy part of the story. Pittsburgh was already known as having the second largest number of LEED certified buildings in the country so philanthropists knew what we were talking about during our capital campaign (see www.pittsburghkids.org for more information).

We had been flirting with the idea of "greening" the museum before our expansion as the result of our assistant marketing director Suzanne McCaffrey's commitment to green practices. Suzanne started simply by finding people to recycle our office paper, printer cartridges, bottles and cans. She headed a staff committee which made it a point to assess where we could make simple changes that would make a difference and then told us about those changes—repeatedly. We brought our old ceramic mugs in from home so everyone could have a cup of coffee without styrofoam. We took the cans and bottles home for the recycling truck since the city did not pick up from office buildings. We formed a partnership with Construction Junction, a nonprofit in Pittsburgh that recycles building materials. (They played an important role when construction on our new facility began.) And we all started to pay attention. Being "green" became an extension of our mission. More importantly, it became part of our culture.

Operating an 80,000-square-foot facility using "green" practices is challenging and rewarding. Our cleaning crew uses environmentally friendly cleaning prod-

Last year we used environmentally friendly salt to melt the snow. It cost five times more than rock salt and we went over budget by $3,000. We switched back to regular salt and now we're watching our pachysandra die along the sidewalk. But the parking lot and sidewalks are clear, visitors are safe from falls and we're in budget. As much as we like to be "green" in every aspect of the museum's operation, we're not. We try to make good decisions, do the best we can and try not to feel guilty when our practices aren't 100% environmentally correct.

ucts. We made it part of their contract with us. Our facilities manager needed the most convincing. We suspect that he orders a few products that do not fit the "green" criteria, but at least we have him thinking about it. We've cut the waste in the café with the introduction of plastic baskets lined with paper for sandwiches and wraps. We still use the clear plastic containers for salads and take-out orders (guilt!) and continue to look for other options. Big, ugly industrial sized recycling containers dot the café and group lunch room. They're hard to miss. In a unique collaboration, the Pennsylvania Resource Council did an audit of our kitchen food waste. They found that we could support an eight-by-twelve-foot earth worm farm in our Backyard exhibit. They're building it and we're installing it with educational information about starting your own worm farm using the organic waste from your kitchen.

We are also turning our attention to conservation. We use compact and regular fluorescent lights where practical and in unique ways. The lighting in the hallways is made up of fluorescent lights placed vertically on the wall. Lights in the bathrooms and hallways have sensors that detect movement. Track lighting is still used in exhibit areas. And in a very practical nod to conservation, we turn the lights off on sunny days when it's not needed.

In the beginning of the year, we instituted a carpooling policy to encourage conservation. Four parking spaces in the back of the building are designated for employees who drive to work together. This is a perk since employee parking is in an off-site garage. We're finding that many are signing up for the program although we have not had every parking space filled to date.

We're experimenting with a roof garden outside of the director's window in our attempt to conserve more energy. Last spring, fifteen three-foot-square plant-filled blocks were placed on a section of flat roof to not only provide beauty to the office but to focus on possibly more conservation of heating and cooling by the reduction of heat islands.

Finally, education plays an important role in our "greening." Working with the Green Building Alliance, Conservation Consultants Inc. and the Pennsylvania Resource Council, we began to offer for-credit classes for teachers and administrators about the impact of green practices. A class titled "Green Building as a Teaching Tool" is in our curriculum with "Puppetry in the Classroom" and "Printmaking 101"… an indication of how much it has become part of our culture.

Throughout the museum you will find signs, recycled pamphlets and café tent cards which talk about the Children's Museum of Pittsburgh's commitment to the environmental practices. Our Web site is also rich in information, especially now about our LEED rating.

This year we will be installing an exhibit in the café demonstrating the output of our solar panels and energy consumption. We also plan on more signs throughout the museum pointing out our many environmental features. We do not plan to do an exhibit about a "healthy environment" but we want to point out to visitors that we are one.

There are times that I think that we haven't done enough. It seems like many small gestures. But then I remember that many small gestures add up. And I don't feel quite so guilty about the salt.

Steinkamp-Ballogg Photography

GREEN UNSEEN
Getting Your Green Status into the Spotlight

Dave Judy, Communications Manager
Kohl Children's Museum of Greater Chicago

As Kohl Children's Museum of Greater Chicago discovered upon opening its new $18.1 million facility in Glenview, Illinois, last October, it took many months of planning and some costly upgrades to pursue Silver LEED (Leadership in Energy and Environmental Design) certification from the U.S. Green Building Council. But many of the museum's efforts are so subtle, invisible or integrated into the museum design that visitors may not even know they're in one of the "greenest," most environmentally-friendly children's museums in the country.

Cue Kermit the Frog many decades ago in his popular little ditty about self-awareness. His point? When you're green, you're different, and people notice. Unfortunately for today's museums, the song still holds true, but with a different twist.

As Kohl Children's Museum of Greater Chicago discovered upon opening its new $18.1 million facility in Glenview, Illinois, last October, it took many months of planning and some costly upgrades to pursue Silver LEED (Leadership in Energy and Environmental Design) certification from the U.S. Green Building Council. But many of the museum's efforts are so subtle, invisible or integrated into the museum design that visitors may not even know they're in one of the "greenest," most environmentally-friendly children's museums in the country.

"We're very proud of being so environmentally friendly," says Sheridan Turner, President & CEO of the museum. "Right from the planning stages, we knew we wanted to be good stewards of the environment. Our children are our future, so if we're providing a place for them to play and learn, we want to make sure that we show them the importance of taking care of the environment. We had to lead by example."

One problem, she admits, is that while the museum did indeed reach its goal of being extremely environmentally friendly, many of the green features are unrecognizable. Clerestory windows along the roofline, for example, let in maximum amounts of natural sunlight, reducing the need for artificial light. Sensors throughout the building monitor carbon dioxide levels to determine the number of people in the building and adjust the HVAC systems accordingly. Even the building's orientation was carefully planned so that it receives the maximum amount of sunlight possible during the short winter days.

All this led to a very green building that unintentionally hid its greenness. "We had to do some immediate education," says Turner. "We had this wonderfully green facility, and if we didn't toot our own horn, nobody would know." Museum officials put together a plan to publicize their green status from many different angles.

SIGNAGE

Throughout the museum, green signs shaped like the universal recycling symbol were posted, highlighting tidbits about the museum that guests would otherwise not notice, such as carpet tiles in the entry that trap dirt and dust, or ozone bromine used rather than chlorine in the "Water Works" exhibit.

Surveys later revealed that visitors remembered more about the museum's greenness from these signs than any other factor. "We integrated these signs into the exhibits so they naturally flow as part of the museum experience," says Mary Trieschmann, Vice President of Programs at Kohl. "They complement the rest of the signage throughout the museum."

BROCHURES

With the assistance of donors such as the Illinois Clean Energy Community Foundation, the museum created a brochure that sits prominently in the admissions area next to membership, events and rental information. A handy guide to many of the most prominent features of the museum, "A Green Building" goes into more depth about not only how the museum pursued LEED certification, but why.

PROGRAMMING

"Everything in the museum is hands-on," says Turner, "so it only made sense for us to create interactive ways to learn about being green." The art studio frequently offers activities where children can make natural or recycled sculptures, and a forty-five-minute program on recycling was created for school field trips.

Holidays such as Earth Day, Arbor Day and World Environment Day provide easy reasons to set up activities like making newspaper hats, picture frames from cardboard and old magazines and even hosting environmental children's concerts. It's also an easy way to get press for the museum.

Programming is expected to increase when the museum opens a two-acre outdoor exhibit space, *Habitat Park*, in late May. This natural play environment, with its reclaimed prairieland, indigenous grass maze and living willow tunnel, is itself probably the most visible sign of the museum's dedication to the environment. Activities like nature scavenger hunts, insect explorations and planting butterfly pot gardens provide natural opportunities to educate the public about Kohl's green status.

A DEDICATED EXHIBIT

To really trumpet its green status, the museum included an entire display pointing out its environmentally friendly features in a temporary exhibit titled *It's Easy Being Green: Building the New Museum.* Informational signs direct visitors to touch and examine elements they'd otherwise not notice, such as glazed windows, wheatboard ceiling tiles, reflective metal roof panels and even vegetation to represent plantings in the parking lot and *Habitat Park* that reduce the heat-island effect.

"Being green is such an important part of who we are now," adds Turner. "It's incorporated into our entire way of doing business, from choosing cleaning materials, to a rigorous recycling plan, to making greenness part of the visitor experience. We hope that by seeing all the steps the museum has taken to protect the earth, even the youngest visitors will be inspired to make conscious choices to be green."

MetLife Foundation

AND

Association of Children's Museums

Promising Practice AWARD

Honoring innovative management and programming practices in the children's museum field, the 2005 Promising Practice Award honored programs and practices that demonstrate how children's museums address issues of diversity and inclusion in their institutions.

HONORABLE MENTIONS 2005

FATHERS AND FAMILIES

Betty Brinn Children's Museum *(Milwaukee)*

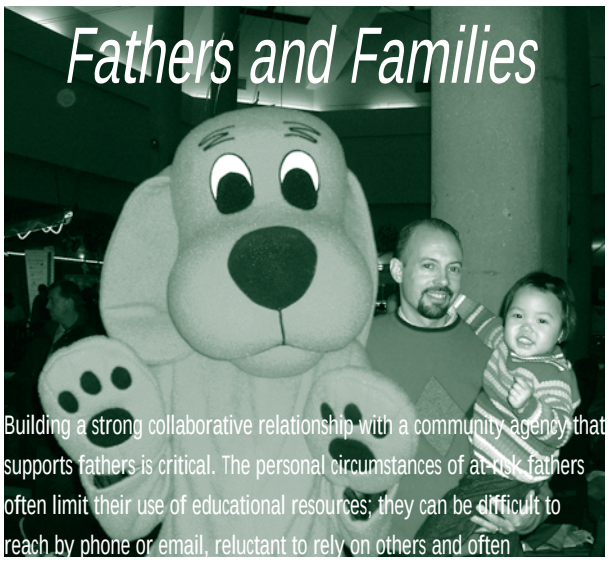
UNIFIED COMMUNITY

Brooklyn Children's Museum

PROJECT ACCELERATE

The Children's Museum of Houston

Fathers and Families



Building a strong collaborative relationship with a community agency that supports fathers is critical. The personal circumstances of at-risk fathers often limit their use of educational resources; they can be difficult to reach by phone or email, reluctant to rely on others and often overwhelmed by socio-economic challenges. Museum staff must work closely with staff from the partnering agency to improve communication and create a welcoming environment for families.

Many children's museums have implemented programs designed to make their facilities more accessible to disadvantaged families. Unfortunately, even the most successful programs often have difficulty engaging fathers. In 2004, Betty Brinn Children's Museum partnered with the Milwaukee Fatherhood Collaborative, a community organization dedicated to promoting and strengthening fatherhood among at-risk men, including teen fathers, divorced fathers and fathers who are incarcerated or who have court-supervised contact with their children. The resulting program, ***Fathers and Families Night,*** provides parenting instruction, transportation assistance and free membership, enabling some of Milwaukee's most vulnerable families to benefit from the museum experience.

In addition to enjoying an opportunity to play with their kids in a fun, safe and educational environment, program participants also learned how to interact effectively with their children in the museum environment; how young children learn through play; how to recognize developmental milestones and respond to common behavioral problems; techniques that support healthy child development at home and other community resources available to support families with young children.

Based on past experience with the Fatherhood Collaborative, the museum projected that about twenty to twenty-five families would attend the event. Instead, the museum welcomed 208 children and 143 adults, with seventy-two families ultimately choosing to enroll in the museum's free membership program. Many fathers who attended the event were seeking to establish or re-establish relationships with their children and appreciated a program that was tailored to meet their needs. Positive feedback also came from attorneys monitoring court-supervised family contact and praised the program—and the museum—as a much-needed, child-appropriate venue where fathers can spend quality time with their children.

Unified Community

West Indian Day Carnival Children's Parade Masquerader, Sesame Flyers Mas Camp, Flatbush, Brooklyn, New York

Children growing up in Brooklyn, as in many towns and cities across the country, are surrounded by a tremendous diversity of cultures. Living in the midst of diversity, however, does not automatically grant access or understanding. Many children have extremely limited opportunities to explore cultures outside their own. Brooklyn Children's Museum's ***Unified Community*** initiative builds greater cultural understanding among children from diverse backgrounds. Through the process of developing and evaluating a series of five cultural exhibits, the museum has created a ***Framework for Cultural Inquiry*** that informs and guides the creation of new exhibits and programs that engage children, ages four to eleven, in learning about their own and other cultures through acquiring and confidently practicing cultural inquiry skills.

Four cultural exhibits, with supporting school, afterschool and family programs, have reached children and families locally and nationally. A fifth, currently in progress, is scheduled to open in 2007 with the museum's capital expansion. Each exhibit presents a very different perspective, but all of them introduce skills critical to cultural inquiry and increase children's awareness and appreciation of cultural diversity in their communities.

- ***Crown Heights: The Inside Scoop*** (1994)—explored cultural conflict and community-building in the museum's neighborhood.
- ***Together in the City*** (1999-present)—a permanent exhibit about cultural identity and the transmission of culture in families and communities.
- ***Global Shoes*** (1999-present)—a national traveling exhibit and curriculum kit that uses shoes as a vehicle for exploring global connections and cultural differences.
- ***Japan & Nature: Spirits of the Seasons*** (2004)—a traveling exhibit that explores how Japanese children learn about and experience nature.
- ***World Brooklyn*** (opens 2007)—a 5,000-square-foot new permanent exhibit that will increase awareness of Brooklyn as home to people of many different cultures and countries.

Project ACCELERATE

Project ACCELERATE makes it possible for afterschool caregivers to facilitate museum-developed programming on location, allowing children enrolled in the PACT Even Start program, located in a rural community more than forty miles south of the museum, to receive the same level of care as children attending the Nehemiah Center, an inner-city community center located just blocks away from the museum.

The ability of programming to produce a long-term impact on low-income audiences is almost inevitably constrained by the choice of location and service approach. Project ACCELERATE, an outreach program of The Children's Museum of Houston, recognizes the differences among people and accommodates geographically dispersed, low-income audiences who are unable to travel to the museum on a regular basis. Project ACCELERATE is performed in collaboration with sixteen community centers and elementary schools to improve the quality of afterschool programming. The central feature of the bilingual (English/Spanish) program is the creation of mentored relationships that equip afterschool caregivers to skillfully facilitate sets of open-ended, hands-on and computer-based activities that engage children in inquiry-based learning.

Every child exhibits a unique mix of learning styles, and learning occurs best when activities are malleable enough to accommodate, for example, not only a child who learns best by creating mental images of a problem/solution scenario based on an awareness of an underlying pattern, but also a child who learns best by manipulating objects in the company of peers. For this reason, Project ACCELERATE is structured around twenty-six sets of activities designed to suit virtually any combination of learning preferences.

The rate at which learning occurs can be boosted dramatically when it takes place within social settings that provide each learner with opportunities to make contributions based on his or her emerging understandings, interests, capabilities and needs. The benefits of this approach are most apparent when children of various ages are allowed to mix as they take part in sessions of Project ACCELERATE, which take on many aspects of an old-fashioned one-room schoolhouse. In this setting fourth and fifth graders who would ordinarily be mortified at the thought of being "caught" interacting with a first grader now proudly serve as monitors and team leaders, welcoming younger children to join the activities, thoughtfully explaining each step and rewarding both persistence and success.

The back page is supported by a grant from MetLife Foundation.

Association of Children's Museums
1300 L Street NW, Suite 975
Washington, D.C. 20005

hand to hand

Nonprofit Org.
U. S. Postage
PAID
Washington, D.C.
Permit No. 6476