

**Chicago Botanic Garden
Illinois Tool Works
The Learning Campus
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*“The future will belong to the nature-smart—those individuals, families, businesses, and political leaders who develop a deeper understanding of the transformative power of the natural world and who balance the virtual with the real. The more high-tech we become, the more nature we need.” —Richard Louv, *The Nature Principle**

When Richard Louv coined the phrase “nature-deficit disorder” in his 2005 bestselling book *Last Child in the Woods*, he announced a powerful call to action. Fewer and fewer children were enjoying formative, life-shaping experiences in nature. At stake was nothing less than the health and wellness of young people, their school performance and ability to learn, and the long-term outlook of environmental science. A comprehensive body of research developed by the Children & Nature Network (CN&N) in the years following publication of Louv’s book emphasizes the urgent need to increase youth access to hands-on, outdoor learning settings and provide expanded environmental education programming for young learners.

The Chicago Botanic Garden invites the ITW Foundation to join in answering the call with the development of its new Learning Campus that will encompass a diverse ecology of rolling meadows, a native woodland tree canopy, an encircling stream, a new Education Center, the Grunsfeld Children’s Growing Garden, and the Kleinman Family Cove. The Learning Campus will serve two primary purposes. First, it will help restore children’s connection to the natural world through imaginative play and discovery. Second, it will provide the early educational foundation to inspire children’s interest in science and prepare the next generation of environmental stewards, specialists, and scientists. ITW’s commitment to environmental awareness is well matched with the vision for the Chicago Botanic Garden’s Learning Campus, whose components may offer a fitting tribute to former ITW CEO David Speer.



The Learning Campus Vision

The Chicago Botanic Garden’s vision for its Learning Campus is founded on its belief that direct experiences with nature are critical to the intellectual, psychological, social, and physical development of children. Playing and learning outdoors nourish intellectual curiosity and encourage a deeper understanding of the natural world, while promoting children’s physical, mental, and emotional health. Children who experience a connection with nature are more resilient to the stresses of modern life. Exposure to nature fosters social development, helping children to establish more meaningful human relationships. Moreover, a strong environmental education curriculum has been correlated with improved academic achievement overall.

The development of a Learning Campus began in 2006, with the opening of the current Children’s Learning Center, a complex of modular trailers, as the temporary site of youth programming. About 25,000 students and 1,100 teachers from Chicago Public Schools, schools from greater Cook County, and the surrounding area use the Center each year. An additional 84,000 young people participate in

recreational and informal educational programs that are part of events and drop-in visitor programs. From school field trips to teacher workshops and student internships, students and educators encounter fresh ideas, innovative teaching techniques, and meaningful science content aligned with Illinois learning standards. Chicago Botanic Garden programs include Camp CBG—weeklong day camp experiences that provides nature, cooking, art, and gardening activities for children ages two to fifteen—and the Science Career Continuum (Science First, College First, and undergraduate internships) for up to 70 targeted to Chicago Public School youth in middle school through college. The goal of the Science Career Continuum is to attract promising African-American and Hispanic students to careers in science and help prepare them for the expectations of higher education. Now the Garden—nationally recognized as the public garden leader in formal education of school, teacher, and youth audiences—aspires to a new level of educational program development, research, and service through the creation of an ambitious, fully developed Learning Campus.

As a major new destination, the Learning Campus will encompass the recently completed McCormick Foundation Entry Drive and Plaza that ensures child safety, the hands-on activities of the Grunsfeld Children’s Growing Garden, and Kleinman Family Cove’s aquatic education. A new Education Center, designed by Booth Hansen, the prominent architectural firm that won accolades for the Plant Conservation Science Center in 2009, is planned as a beautifully curved structure that is architecturally distinctive, while integrating into the existing look of the Chicago Botanic Garden. With the Garden’s selection of Mikyoung Kim Design as the designer for the anticipated “front yard” of the Learning Campus, the Garden’s vision of an exploratory science learning space for children is one step closer to completion.



Operationally, the new Learning Campus will accommodate after-school, field trip, and summer camp programming and provide a space for teacher professional development classes aimed at integrating plant conservation science across all disciplines. Guided school field trip visitation for grades K – 12 is expected to increase initially by 50 percent, with a significant percentage from Cook County and Chicago Public Schools. The new Education Center will provide a 250 percent expansion of classroom space, including eight classrooms, a light-filled atrium, a kitchen classroom, and an indoor greenhouse. The facility will serve Scout troupes and other non-school youth programs as well. The landscape surrounding the education building will include engaging hands-on natural features described below.

Mikyoung Kim: A Major Commission for the Learning Campus Garden

In his book *Building for Life: Designing and Understanding the Human-Nature Connection*, Stephen Kellert, professor emeritus at the Yale University School of Forestry and Environmental Studies, urges designers, educators, businesses, and political leaders to make changes in modern built environments to provide children with meaningful contact with nature—where children live, play, and learn. “Play

in nature, particularly during the critical period of middle childhood, appears to be an especially important time for developing the capacities for creativity, problem-solving, and emotional and intellectual development,” Kellert states. Mikyoung Kim’s designs for the Learning Campus garden have heeded this admonition and captured the essence of play in nature.

The signature Learning Campus garden creates a vibrant central place for exploration and discovery. Still in process, the design currently includes a canopy walk, an apple orchard, an encircling stream, the Butterflies & Blooms exhibition, and a series of multisensory gardens.

- ***The Orchard*** frames the welcome center and creates an all season interest gateway to the Cove, the main garden, and the tree house and canopy walk. The primary activity of this area occurs in the fall with apple harvesting. The use of apple trees offers an educational opportunity to tie harvesting and horticultural techniques with regional history.



- ***The Encircled Stream*** loops around the floodplain, creating a fluid riverine experience that transforms through the seasons. The design concept of the encircled stream allows children to explore the various phases of water, from light mist and flowing liquid to ice in the winter. Large boulders, earthen mounds and a sensory garden frame this constructed stream and allows for a variety of children’s activities.

- ***The Meadow*** surrounding the water feature is planted with grasses and sedges that are native to the floodplain environment. As a learning laboratory, the meadow provides opportunities to study prairie horticulture in open playspaces, native grasses, and pathways.
- ***The Canopy Walk*** is a main path that ramps up to a tree house. This path frames the woodland area and offers children the opportunity to study the microclimate of the canopy landscape and view the overall landscape vista. Below the tree house, a stepped stone amphitheatre serves as the sourcepoint spring that feeds the encircled stream and creates seating for gathering and performances. The tree house will have detailed impressions and bronze cast insertions of leaves, seeds, and bark for discovery and learning. The upper canopy integrates large reclaimed slabs of black locust, honey locust, and white oak in the floor and column structures.

The Education Center

At the core of the Learning Campus plan is the Education Center. This facility will accommodate education programs and staff in a curving, architecturally distinctive design intended to strengthen children’s connection to the outdoors and expand learning opportunities for adults. The Education Center will include eight classrooms, two of which are designed for early childhood programs. To allow ease of movement during warm weather and provide access to plant forms and bird activity during the cold season, each classroom will open to an outdoor garden.

An 800-square-foot greenhouse is planned as a teaching space for students to explore plant structure and function, and adaptations to climate and cultural uses, including food uses. This space will also

encourage children to learn by exploring and understanding the design and life cycle implications of animal artifacts: empty hornet and wasp nests, bird's nests, bones, egg cases and other natural found objects. This novel Garden facility has been conceived as an environment to help school children, youth, parent-child participants, and school educators make a friendly acquaintance with plants and living creatures, which, like themselves, depend on plants to survive. The greenhouse acknowledges the enduring fascination that children have with animals, and will offer an irresistible gateway to the plant world that will help young and older students understand how animals need plants—and how plants need animals.

The education building will be the center for teaching, educating, and inspiring visitors about human-friendly and earth-friendly design. Designed to achieve the highest rating (platinum) for LEED (Leadership in Energy and Environmental Design), the building will include natural ventilation, solar panels to support energy needs, roof gardens to achieve thermal insulation, and a system to capture rainwater, conserving runoff for gardening uses. Technology will include wireless computer communications, Geographic Information Systems tools, and features such as smart white boards that convert classroom notes and drawings into electronic records.

By providing five additional classrooms and dramatically increasing both the outdoor and indoor space, the new Learning Campus will significantly increase the number and ages of students who can be served by programs year-round.

Guided school field trip visitation for grades K – 12 is expected to increase initially by 50 percent from the current 22,000 to approximately 37,500 students annually, with a significant percentage of these coming from Chicago Public Schools. Early childhood program design and participation will shift



completely, since the specially designed classrooms will allow programs for ages 2 to 5 to be offered throughout the week, and the close proximity of these classrooms to the Children's Growing Garden will be attractive to both parents and early childhood centers. The same holds true for schools serving children with special needs: the physical features of the Center and the proximity of the Growing Garden and Cove have been designed to make the Learning Campus a unique resource for these children and their teachers. Camp CBG summer and school break (winter, spring) enrollment will have the potential to

increase greatly, possibly beyond 2,500 registered campers per summer, while retaining the outstanding quality of this program and the experiences it offers to children.

The Learning Center will also provide attractive program and activity space for adult learners. Wellness and Lifestyle classes like Yoga and Tai Chi can be held during the early morning and late afternoon/early evening hours when school field trip programs are not operating; the full teaching kitchen can accommodate cooking classes in a more hands-on way than the Fruit & Vegetable Garden kitchen; and the general classrooms can be welcoming and accessible venues for a range of weekend and evening classes, now typically held in the Garden's trailer annex structures.

The Partnership

The Chicago Botanic Garden's friendship with ITW extends back almost thirty years and reflects a shared commitment to education and scientific innovation. David Byron Smith, the retired vice

president and treasurer at ITW, served on the Garden's Board of Directors from 1975 to 2009 and is now a life director. Today Sharon Brady, ITW's Senior Vice President of Human Resources, serves on the Garden's Board of Directors, and ITW staff participate in the Garden's Corporate Sustainability Roundtable. The ITW Foundation's generous support of the Blooming Campaign in 2002 allowed for renovations to the Regenstein Center that have led to expanded adult education classes and certificate programs at the forefront of plant conservation science. In 2009, ITW again partnered with Chicago Botanic Garden to create the ITW Plant Systematics Laboratory at the Daniel F. and Ada L. Rice Plant Conservation Science Center. Just as the Plant Science Center is expanding the possibilities of conservation research at the higher education levels, the Learning Campus will accomplish similar goals for the critically important needs of young learners.

The Chicago Botanic Garden invites the ITW Foundation to take the next step in this relationship with consideration of the following ideas that may offer an exceptional opportunity to honor ITW's former CEO, David Speer.

The Learning Campus Garden (\$5 million)

Mikyong Kim's award-winning landscape architecture and urban design firm has been chosen to design the three-acre discovery garden that will serve as a gateway for children and families to connect with nature. Over the past five years, the firm has successfully worked with the Ann and Robert Lurie Chicago Children's Memorial Hospital Crown Sky Garden, the University of Chicago Facilities/Planning, and the University of Chicago Laboratory School. Their work has been featured in *Architectural Record*, *Sculpture*, *Dwell*, *Garden Design*, *Landscape Architecture*, *Surface Magazine*, *Land Forum*, *Architecture Boston*, and *Pages Paysages*. The signature three-acre Learning Campus garden incorporates the successful Butterflies & Blooms exhibition and weaves together native, woodland, and wetland habitats. The new garden's features—such as the tree canopy, the encircling stream, the meadow, and the orchard—represent the future of children's outdoor learning environments.



The Atrium (\$2 million)

With its prominent location as the entrance to the Garden's central learning campus, this glass-covered, light-filled atrium will welcome all visitors to public education programming. The atrium will sit at the southern end of the Education Center and accommodate a guest services desk handling ticketing requests and visitor inquiries for the popular Butterflies & Blooms exhibition as well as reservations for youth after-school programs and field trips. The high-visibility area is expected to draw a large number of families as it opens onto a lovely outdoor viewing deck and apple orchard, sits adjacent to a large multipurpose room intended for adult bee keeping and yoga classes, and will be the hub of youth and family programming activities.

The Kitchen Classroom (\$1 million)

A light-filled, high-concept but durable kitchen classroom is designed as a fully-certified demonstration and teaching space that can handle both children and adult classes with equal ease. The space will accommodate special events and rental by outside users, be certified for preparation

of value-added food products, and forge an indelible connection between cooking, food preparation, locally grown produce, and the connection to the environment. ITW recognition could be further heightened with an in-kind contribution of kitchen equipment.

Conclusion

The Chicago Botanic Garden deeply appreciates its longstanding friendship with ITW. In the past 30 years, this relationship has helped the Garden grow from a neglected swamp to one of the world's great gardens, known for its remarkable beauty and recognized internationally for outstanding education programs. Few botanic gardens anywhere serve learners from pre-K through PhD, as does the Chicago Botanic Garden. ITW has been part of this evolution, and we are profoundly grateful. We hope ITW can consider continuing the journey, as we seek to establish a visionary place of exploration and discovery for today's children and many generations to come, inspiring tomorrow's environmental stewards and conservation scientists to address 21st century challenges.

Thank you for your consideration of this request.

