

Designing Garden Programs for All

There's no doubt about it: gardens engage and inspire youth, allowing educators to reach students in fun, effective ways. There's something contagious about the feel of dirt under your fingernails and the excitement generated by watching a living thing sprout, grow, and bloom under your care. A special feature of a garden as an educational tool is the flexibility it offers to develop and implement activities and programs for learners of all ages and abilities.

"The garden provides opportunities to reach students using all Multiple Intelligence learning styles [kinesthetic, naturalist, interpersonal, intrapersonal, musical, linguistic, logical, and spatial]," says educator Carrie Banks. Carrie directs the Brooklyn Public Libraries' Child's Place for Children with Special Needs, which has offered an inclusive garden program component since 1999. Carrie has witnessed the power of the garden to reach a diverse youth audience, both with and without disabilities.

"Our garden program began when a library educator noticed an alley with some dirt at one of the libraries and suggested a couple of sessions to clean it up and plant in it. That was the spark that got things moving," Carrie explains. A decade later, the garden has become an integral part of the afterschool programming.

Gardens Can Serve All Special Needs Students

The main goal of the Child's Place is to "make sure kids with special needs have the same opportunities as their typically developing peers, because so often special needs kids are turned away from out-of-school activities." The program is open to children of all ages, with and without disabilities, including those with developmental delays, cerebral palsy, Attention Deficit Disorder (ADD), Attention Deficit Hyperactivity Disorder (ADHD), multiple disabilities, mental illness, on the autism spectrum, and who are deaf or blind. The garden component has provided a number of unique benefits to help in achieving success.

"It's not always easy to spark conversation between kids who don't know each other, but the activity of gardening naturally inspires kids to talk to each other in an unforced way," says Carrie. "One day we were working on a garden-related collage project. The leader was helping a young girl with cerebral palsy who had difficulty with motor skills place her pieces. Another child offered a suggestion for the collage, and within 10 minutes the two children were working together without the aid of the leader.

"Additionally," Carrie continues, "because we work with urban youth, everyone is new to gardening so no one has an advantage. This is worth a lot. With some other activities, especially those on academic calendars, kids without disabilities may have more experience. But these are city kids, and no one knows anything about growing plants."

Designing Inclusive and Accessible Programs

Designing an accessible container garden and adapting tools for the children were an important part of the program's creation. Carrie believes that educational programs that encourage equal participation by all children "are key to making inclusion work. If children who are blind or have poor gross motor skills shows up unexpectedly, it is important that you not need to scramble to adapt the program to their needs. Those children should fit seamlessly into the existing activities. When this happens, they know they are truly welcome."

Carrie shares the following tips for designing flexible, accessible garden programs:

- Work as a group or in pairs to promote cooperation and teamwork.
- Do not operate on a strict schedule and avoid time pressures. If you can't finish everything in the allotted time, let the kids take projects home.
- Recruit plenty of volunteers. Staff and volunteers should be available to work one-on-one with children to assist with comprehension or focus issues.

- Use the Pictorial Exchange Communication System (PECS) to provide structure to the program. This is helpful for everyone. At the Child's Place, Meyer Johnson symbols are incorporated into each activity to aid communication. The picture cards facilitate communication for children who do not speak or sign by allowing them to point to the symbols on the cards to express themselves. The people with whom they are communicating likewise point to the appropriate cards as they speak.
- If you use interpreters, book them well in advance to assure availability. Before the session starts, discuss any jargon or proper nouns in your material with the interpreter. Adjust your reading rhythm so that you never run ahead of the interpreter. We've found it useful to interpret both what adult leaders say to children and what children say to each other. In this way, for example, the interpreter can facilitate communication between a child who speaks Cantonese, one who speaks English, and one who is deaf. Communication is the basic building block of inclusion.
- Post an outline of the day's events and make it visible from the beginning of the program. We highlight any words and themes that are frequently repeated.
- Safety is paramount. Make sure all the tools and plants you use are child safe and use only natural pest control methods. We conduct all outdoor gardening in enclosed spaces and closely supervise the children. They wear hats for sun protection and we provide latex-free garden gloves.

Gardening's Benefits for Children with Autism

Children with autism bloom in programs that couple inviting garden spaces with appropriately designed horticultural therapy activities. "Many children with autism are calmer and not as anxiety-ridden in the garden space," shares Gwenn Fried, Manager of Rusk Horticultural Therapy Services at NYU Langone Medical Center in New York, NY. "Children come into the garden and explore the space on their own terms; the green nature envelops them like a blanket and keeps them comfortable."

- Gardens engage the senses without being over stimulating. Children can explore different colors, textures, smells, and sounds in a calming, natural setting.
- Gardening provides opportunities for children to hone gross and fine motor skills.
- Gardening allows for repetitive activities, yet still offers some challenge by providing constant change. You can establish a comforting routine (gather needed tools, check on the plants, pull a few weeds, water, etc.), but there will be subtle changes to engage the curiosity of the child with each visit such as ripening tomatoes, new insects to observe, flower buds opening, and leaves changing colors.
- Gardening is an activity that can be shared. There are many opportunities for positive social interaction and teamwork.

Two Models of Autism Outreach Programs

Gwenn's team of horticultural therapists offer two models of outreach programs to local schools who serve children with autism:

Gradual Curriculum Enhancement – Therapists bring plants to local classrooms or schools bring their students to the hospital's gardens for weekly sessions. Each lesson is tailored to enhance the classroom's curriculum, and therapists work to find the best way to communicate with each child participating. "All children can learn," shares Gwenn. "Therapists just need to find the right door to communicate with them, and especially with children with severe autism, the door may be less obvious. Usually a child will take interest in some part of the activity and then the therapist can identify that as the door."

Prevocational Programs – The NYU Medical Center team also works with older students aged 17 to 21 on job and life skills. The older students visit the garden a couple of times a week to learn about plants and practice teamwork. Gwenn notes that one of the most remarkable things about this program is "watching kids who you would not consider leaders take on leadership roles." The program helps build confidence, pride, and a sense of responsibility.

When asked why she thought horticultural therapy was such a useful tool for working with children with autism, Gwenn responded, “Nature is non-judgmental, alive and real. They can touch and feel, plant a seed and watch it grow.” Here are a few specific strategies Gwenn’s team of therapists employ that contribute to their program’s success:

- Students explore and participate on their own terms. Many of the youth are tactilely defensive, so they are never forced to complete any activity. Curiosity and engagement in the lessons will encourage most students to take down their own barriers.
- Repetitive activities are utilized. Students move through the same steps over and over again to increase comfort level and experience success. Potting up transplants using different types of plants is a frequent activity.
- Students are slowly encouraged to interact with each other. For example, when the program begins, each student will have their own bowl of soil for planting, but by the end, they will be sharing bowls of soil. Also, activities that involve passing things from student to student are planned.
- Positive reinforcement is used to guide behavior. In each session, therapists plan a reward. The reward is never mentioned during the session, so it is not dangled in front of them like a carrot or threatened to be taken away, but the students learn that at the end of the session, if they have exhibited good behavior, they get praise and the opportunity to do something extra like spend free time in the garden or take a plant to home.

Participating in inclusive garden programs benefits all children involved. In addition to plantings, you sow seeds of understanding and acceptance that will last them a lifetime.