



A Place to Encounter Natural and Social Diversity

On an early spring morning, the hum of the classroom is broken by the familiar rumblings of a tractor. Children's heads turn, and they quickly gather at the windows. "It's Farmer John!" they sing in chorus as he comes into view. "Can we go outside and watch?"

John Nimmo and Beth Hallett

ENVIRONMENTALISTS TALK ABOUT THE NATURAL WORLD and dream of spaces that belong to nature and should be entered, like hiking in the woods, on nature's terms. Another natural space, the garden, is a familiar place tamed by humans to serve social purposes such as growing food. But it has the potential to bring young children into meaningful contact with the diversity of nature and society.

In this article we explore the important role of the garden in children's learning. As a teacher educator/center director (John) and a preschool teacher (Beth), we share images

that frame our adventures in the garden with children and draw from our broader goals for children—about who they are and how they learn about their world. Through these stories we explore the garden as a place for many possibilities: play and inquiry, safe risk taking, the building of relationships, and deeper understandings of diversity. The reciprocal learning observed in children's interactions with nature and people convinces us of its importance in sustaining society's commitment to the early years.

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The start: Growing a Green Generation

Our adventures with gardening began eight years ago when early childhood educators at the University of New Hampshire's laboratory school, the Child Study and Development Center, came together with horticulturists at this rural New England university to collaborate in the process of inquiring about the world of plants. What eventually became known as the Growing a Green Generation project engaged infants through kindergartners in opportunities to learn about the joys of gardening as well as about people who are passionate about the natural world.

The project created and piloted a vibrant curriculum of activities (<http://horticulture.unh.edu/ggg.html>) along with an annual conference to entice early educators into the joys



of gardening with children. The deeper learning, however, came through the center staff's observations of the children and their reflections about the cross-disciplinary collaborations.

Images of the garden

On a mid-summer afternoon, the legs of a 2-year-old are barely visible in the tall cornstalks. She sits on a chair propped between rows, while nearby her dad picks corn to take home for dinner. On another day, a group of preschoolers prepares an imaginary meal at a play kitchen near the tomato vines. Meanwhile, toddlers meander through the vine-covered tipis, stopping to touch a giant squash.

Whether in a rural or urban setting, the surprises of the plant world can provoke a child's curiosity and desire to investigate.

A place for play and inquiry

Childhood memories of contact with nature involve a deep sensory imprint of texture, smell, color, sound, and taste (Louv 2005). These spaces in nature imply a sense of freedom and serenity in which the natural elements (which include the weather) present both complexity and the unexpected.

We view the garden as a play environment in which children can create new worlds that use the sensory elements of the natural environment to shape drama and fantasy. It is a place to simply be. The lab school garden is easily accessible in the short distance from the classroom decks and is surrounded by the farms and woods of the university. It invites children to wander freely.

Whether in a rural or urban setting, the surprises of the plant world can provoke a child's curiosity and desire to investigate. With this in mind, we intentionally include amidst the more familiar crops plants that might particularly intrigue children, such as purple beans that children cook and watch as they change color to green or a flower pod, like touch-me-nots, which explodes when you touch it.

A place to take safe risks

One dimension of planning environments for young children is to consider the continuum between risk and safety. The importance of children's physical and emotional safety is understandable, but we see teachers in the early childhood field increasingly moving toward a disposition of only considering safety in making decisions about curriculum, materials, field trips, and, of course, the outdoors. New, Mardell, and Robinson examine the limited possibilities for risk taking by children in child care and conclude, "We argue in favor of being less fearful and more open to an early childhood curriculum characterized by purposeful and collaborative risk-taking" (2005, 16).

Our garden at the center provides many opportunities for safe risk taking that can engage young children's curiosity, such as happening upon a small snake. We remember vividly the preschooler who declared, "I can pick up snakes!" as he confidently showed the garden "resident" to his peers. Of course we understand the need to negotiate this enthusiasm with due respect for wild creatures and the real dangers they can present.

Gardens by their very nature involve mud—a phenomenon that simultaneously inspires delight in young children



and a wonderfully interesting reaction from adults. Mud inspires children to wonder about the transformation of passive dirt into an almost sinister substance. It resists muscles when a child is in the thick of it and speaks to the child's need to explore nature. Sometimes we let the children take off their shoes and enjoy, while at other times we simply steer them clear of the mess to respect families' reasonable needs regarding clothing.

Risk taking isn't only about children, but also about us as teachers. Could we see children as capable of using (adult-size) gardening materials and tools and also being responsible for some of the real work involved, like weeding, planting, or mulching?



A place to develop diverse relationships

The garden allows children another kind of risk taking, as we have witnessed, in the building of authentic relationships that are integral to the gardening experience. After voting to construct trellises for the beans, the 5-year-olds and their teacher gathered tools, strings, and sticks from the woods. As the older children collaborated on the first structure, some 3-year-olds from another classroom came out to watch. Before long they asked if they could help. The 5-year-olds responded, saying: "We'll show them how!" The teacher simply observed as the older children took the risk and built 7-foot structures without adult assistance. In so doing, they shared their knowledge, negotiated roles, and encouraged the younger children.

Such opportunities to negotiate social relationships abound in the down-to-earth work of gardening. We observe too that the garden provides occasions for easier inclusion of children who find the typical classroom challenging, as happens in the following story.

A place that lifts teacher expectations

In the garden, children can stretch their abilities as they build garden structures, such as a trellis made from branches. In raising their expectations of children, teachers learn to trust children with gardening jobs, understanding and accepting that they can't do the job the same way or as long as adults can. Children may step on or break plants, and these are occasions for learning about the work of keeping a garden healthy.

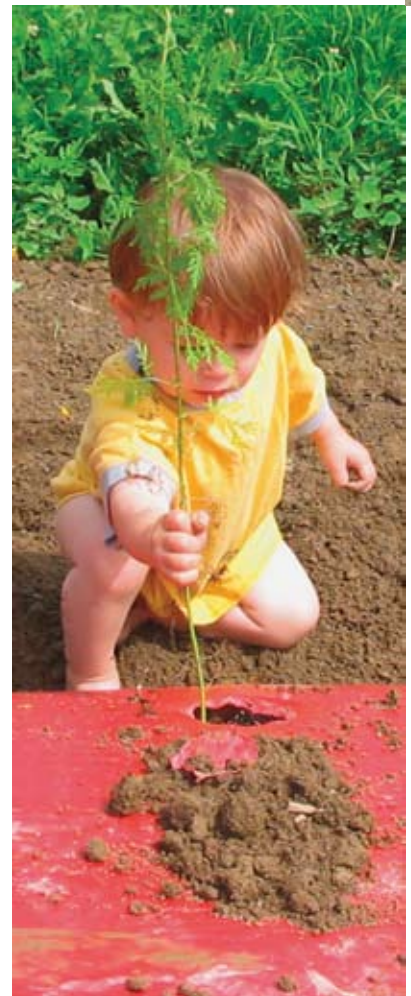
Every year without fail, the toddlers pick and taste vegetables before they are ripe. Teachers' recognition of this ritual of tasting green tomatoes lets it become an opportunity for children to learn from direct experience as their mouths pucker in response. It also gives one teacher a chance to share her cultural heritage by cooking and eating fried green tomatoes with the children.

Teachers learn to trust children with gardening jobs, understanding and accepting that they can't do the job the same way or as long as adults can.

Teachers grow through opportunities to stretch their comfort level in their teaching (Nimmo 2002). We have been surprised to find that even teachers who grew up in a semirural environment are apprehensive about the world of gardening, whether it is the unexpected creatures, the threat of dirt, or the sweat of pulling weeds. To support a cautious teacher or to foster gardening in an urban setting, children can first grow flowers or herbs in a container garden in the classroom. We have seen teachers gain confidence and venture further into the garden after such introductory experiences. Soon they develop a broader perspective regarding outdoor curricula.

Ted, an energetic child, often struggled with his emotions and overwhelming sensory input. His peer relationships suffered as a result. He could not effectively communicate his needs and ideas, and when the classroom environment became too much, he would rush through the room pushing over structures and bumping into friends.

When invited into the garden to explore one morning, Ted picked vegetables, carried pumpkins, pushed the wheel barrel, and poured the large watering cans. The natural environment gave Ted the sensory input that his body needed through the physical challenges of lifting, pulling, and pushing. When he needed a break, the bean tipi or the sunflower





The garden brings a rich history of cultural activity involving the specialized knowledge of horticulturalists, the expertise and labor of farmers, and the everyday life experiences of diverse families.

In many cities, local councils create community gardens in empty lots. These gardens provide a natural space for urban citizens of all ages to cultivate the earth where land is at a premium. In the center's garden, adults and children negotiate their roles and skills in bringing a real-life project to fruition. It is OK that children can't do it all by themselves. They learn while working with adults who are passionate about nature, and the impact is reciprocal. As the teachers and the children learn about the plant world, other collaborators, such as Farmer John, learn about the importance of children's play and gain a respect for the ideas of young children.

house provided a space away from social demands. He felt successful in the garden.

Ted's first peer collaboration involved problem solving: how to move a huge pumpkin. Ted continued to gain confidence as his peers saw him as a gardening expert and went to him for suggestions. In time this new confidence carried over to Ted's interactions with his peers in the classroom.

We uncovered opportunities to support relationship building with and between families. As parents recognized the significance of the children's efforts, care, and thought in the garden, they were happily dragged along the rows by their children to pick vegetables and herbs for mealtime at home. Families, including older siblings, attend the center's annual Harvest Festival in droves, having the opportunity to taste-test salsa, pickles, and other goodies grown and created by the children for this celebration of community.

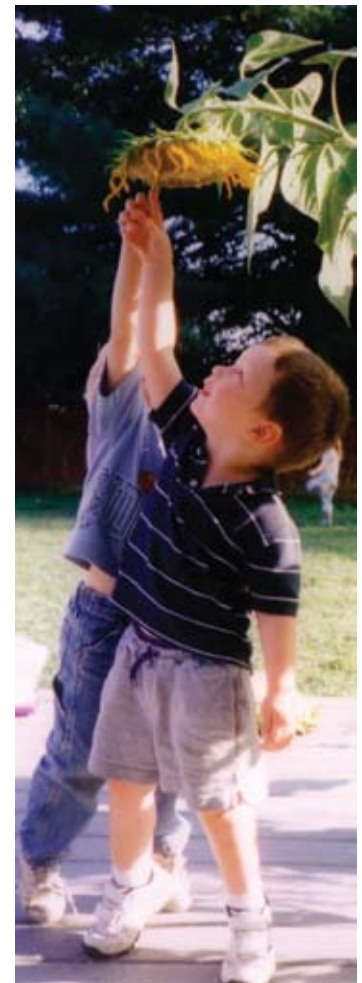
A place for developing community

Unlike the natural world of woods, the garden exists because of human interaction with plants. The garden is a focal point for children to develop enduring relationships with other adults in our community beyond parents and teachers. While the intent in having a garden has always been child focused, staff have come to appreciate that the garden brings a rich history of cultural activity involving the specialized knowledge of horticulturalists, the expertise and labor of farmers, and the everyday life experiences of diverse families.

Each spring Farmer John (as he is affectionately known by the children), arrives from the nearby university farm to rototill, measure, and set up the garden beds. One year he came early in the morning, before the center opened, so that the tractor noise would not be disruptive. When the children arrived they found changes in their garden and wondered what had happened.

We talked with John about making his hard and skillful work more visible to the children. In the following year he organized his schedule to come to the garden during school hours so the children could observe, ask questions, and even participate.

At the center we value the children having opportunities to relate with different adults in the context of their own work. We could see that our thinking as early educators and Farmer John's observations of young children were having an impact. In the fall when he arrived with his



tractor to help put the garden to bed for the winter, John invited the older children to work with him in taking down the plastic sheeting that provides a barrier for weed control

As part of a larger research project about children's contact with community adults, we asked John how the children helped his work and what he has learned from them:

The children make me realize that my adult world isn't the only world and that their world is as important or perhaps more important. I have learned to be patient, not to take things for granted, to communicate better, to say things in their terms, not in adults' terms, but still to speak to them with the same respect you would to an adult.

A place to invite and uncover diversity

As children build relationships with adults of the community, like Farmer John and others who have a passion for gardening, plants, and farming at the center of their efforts, they observe and

share experiences with people whose occupations are very different from those of their parents, who mostly work in offices. Children learn about human diversity through these contacts with perspectives and teaching styles that are not necessarily as child focused as are those of their parents and teachers.

The garden provides occasions, both planned and spontaneous, to discuss issues related to social class, disability, and community support. As in Ted's story earlier, children who may have difficulty finding a niche inside the classroom, because of ability or language, often discover that their peers see them as experts in the garden. The antibiotics framework proposed by Derman-Sparks and Ramsey guides staff thinking in the direction of social equity and includes the following early childhood learning theme:

Commit to the ideal that all people have the right to a secure, healthy, comfortable and sustainable life and that everyone must equitably share the resources of the earth and collaboratively care for them. (2006, 112)

The simple question, "Why do you think it is important to have gardens?" inevitably engages children in thinking about



access to food. Toward the end of harvest time, Beth often poses the following problem to the children: "I have noticed that many families have been enjoying the food in the garden, but there is still a lot more in the garden waiting to be eaten. What do you think we could do with the extra food?"

The children discuss families that might not have enough food and the importance of sharing as a community. These discussions have led to inviting volunteers from a local food bank to visit the center to harvest food with the children and explain how the food will be used.

A place to widen social views

One summer, parents and teachers erected a gazebo in the center of our garden, with walls of metal mesh. Three children immediately ran to explore the new structure, and one preschooler proclaimed, "This has holes in it. It must be a poor person's house." The three children then began role-playing family life within the "house."

After a short wait, not to disrupt the play, the teacher approached the children and asked, "Why do you think a person who is poor would live here?" They replied in unison, "Because it has no windows and no doors."

The teacher followed up by exploring the children's limited ideas about poverty and noting the cultural variations in housing. She read the children's book *Houses*, by Gallimard Jeunesse and Claude Delafosse, and asked the children to hypothesize about the different features of dwellings and the needs they meet: "Why do you think there is no glass or wood over the windows and doors in the adobe?" "Because it is hot. With nothing over the windows, the air can come in," replied a preschooler.


Confronting the intertwined complexities of sustainability and equity (such as toxic waste dumping in a low-income neighborhood) is a teaching challenge. But the center's staff clearly view children as emerging stewards of the earth. In interviews with Farmer John, we discovered a similar line of thinking: "The children give (my work) more of a purpose," he said. "I think they make it more meaning-

ful to try to provide their produce, things that are safer for our environment. You realize how precious our future is and that it all rides on the kids.”

In looking critically at the center’s garden curriculum, we invited teachers working on the center’s Diversity, Equity, and Bias Task Force to brainstorm ways to become more intentional about the use of the garden as a tool for learning about diversity. (Their ideas of potential investigations are detailed in a web design in an expanded version of this article online in *Beyond the Journal*, January 2008.) In an early spring questionnaire to families, we asked, (1) What plants do you grow in your garden? (2) What would you like to see grown in the center garden? (3) Do you have a traditional or favorite recipe you would like to share? and (4) Would you like to participate in our collaborative garden?

We want the garden to reflect the diverse taste buds and cultures of the families at the center and for it to be a place for those families to harvest foods they will enjoy cooking and sharing together. One parent asked to grow chickpeas to make hummus, a high-protein food her daughter, a vegetarian, likes especially. We added many plants and activities that were familiar to the families and collected numerous new recipes to try, such as Swiss chard soup, boiled squash leaves, and pumpkin cake.

Parents shared other cultural talents such as their knowledge of cultivating herbs, making sun prints, dying fabric with plants, and pressing flowers. Just as the garden at the center supplies produce to the families, so a small garden at an urban child development center can contribute to the home economy of city-dwelling families in ways similar to traditional backyard gardens.



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Conclusion

The garden sustains childhood rights. We began with the garden as a place for wonder and the unexpected. Through its opportunities for joyful play, the garden sustains the rights of childhood. As stewards of the earth, working beside their peers and adults, the children in the garden construct a sustainable future for themselves and their communities.

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In her book, *The Challenge to Care in Schools*, Nell Noddings argues that giving children opportunities to care for plants and the environment is part of developing a moral disposition to care. She also reminds us that even though human life is completely dependent on plants, “We are raising children today who do not know why beehives are placed in orchards (if they even know what a beehive is), how new plants are created, or why there is danger in heaping chemical fertilizers in our fields” (1992, 133). This separation from the local environment concerns us at the center and many of the community adults who have collaborated with us in the garden project.

Our response is to embrace the concept of place-based education (Sobel 2004), in which curriculum emerges from an intimate understanding of the local geography and community. For instance, John, the center director, became interested in the cultural phenomenon of maple sugaring in New England and discovered that the infant care teacher tapped her own maple trees each year and boiled the sap into syrup. At home John explored mapling with his own 9-year-old and eventually encouraged the center’s mapling expert to share her knowledge with the kindergartners. Together the children collected gallons of sap from an ancient tree near the center. The teacher boiled the sap at home for later tasting at school. The essence of such an experience is to connect children to their local ecology and culture, rural or urban, in ways that will be memorable, and in so doing sustain a deeper awareness of their growing identity.

The garden as a place of intersection. We have come to view the garden as a unique place between the natural environment and the social environment, one where children can create a meaningful cultural relationship between the work of humans and the complexities and unknowns of the natural world. In this process of children’s learning, adults grow in their understanding of children and become, as we all hope, advocates of children’s rights and voices for sustaining children’s futures as citizens of the world.

Farmer John summed it up when we asked, Who are the children at our center? He said, “They’re part of our community. They’re the leaders of tomorrow. Future farmers of America, some of them might be. Yeah, they’re our future. I guess I see myself in them.”

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Resources for Gardening with Young Children

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