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Take the Common Core Outdoors

School gardens offer lessons beyond science and healthy eating

BY JANE S. HIRSCHI

When Michelle Obama planted a vegetable garden on the White House lawn with Bancroft Elementary students in 2009, she made the point that school gardens are a natural place for children to learn about local food systems and eating healthy food. Digging down into loam to discover sweet potatoes, nibbling on sweet lettuce, filling carts with luscious collard greens to give to the local food pantry—these images of schoolchildren in the



Students at the Special Start preschool program at the Peabody School in Cambridge, Mass., explore new growth in the garden (Susan Young).

garden have done as much as anything to elevate the profile of the school garden as a vehicle for children's good health.

There's something very important missing from this picture, however: the school garden as outdoor classroom.

In the outdoor classroom garden there are also garden beds filled with growing sweet potatoes, lettuce, and collard greens. There is a garden bed, too, specifically for asexual reproducer plants (also known as strawberries) and flamboyantly sexual reproducers (like lilies and tulips). There's a bed just for digging in and borders or raised beds to clearly distinguish the path from the growing space. You'll see the conspicuously placed compost bin teeming with insect life and hand lenses nearby to explore it with. Herbs line the pathways; they are intended for touching. Throughout the garden, vegetables have "gone to seed." Intentionally. The pea plants are labeled with

individual children's names. Rain gauges, weather vanes, air and soil thermometers dot the garden beds.

Undoubtedly, less food is grown here than in the First Lady's garden. Instead, there are many more garden signs explaining and identifying. There are projects and experiments "just to see what happens." In the outdoor classroom garden some plants are grown just so that you can then pull them up and look at their root systems.

Rich Soil for Rigor

The teachers at the vanguard of extending their classroom lessons to the school garden are part of a profound shift in classroom practice. Employing an inexpensive, low-tech resource right outside their classroom doors, they are building a body of practice that can guide other educators in teaching skills targeted by the Common Core State Standards (CCSC). In four public school districts in the Boston area—Boston, Lynn, Gloucester, and Cambridge—hundreds of elementary teachers have made the school garden an essential resource for their students to practice reading, writing, and math as well as science skills. Teachers are making the school garden an active part of their academic lessons.

At the [Martin Luther King Jr. School](#), fourth grade teacher Christine Fetter used to rely entirely on the Wisconsin Fast Plants her students planted inside her classroom for learning about measuring and charting growth. With the help of the districtwide school garden program, [CitySprouts](#), Fetter has extended her math unit outside into the New England garden in early March to plant peas. The garden coordinator installs the pea trellis and prepares the garden bed ahead of the first outdoor lesson. On planting day the garden coordinator assists Fetter's students as they plant and

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mark their pea seeds. Fetter then takes her class out weekly so that each student can measure and record their plants' growth.

The math lesson is rife with science connections. For instance, Fetter asks her fourth graders to compare the impact of temperature and soil diversity on the peas' rate of growth outside and on the Fast Plants (which don't produce seeds) inside. They compare the Fast Plants' truncated life cycle with the full cycle of the pea plant in the garden. As a bonus, students harvest and eat the peas a few months later. For her fourth graders it's a memorable lesson on estimating, measuring, collecting, and graphing data—and tasting fresh-from-the-garden vegetables.

Fetter says, "I have been planting peas with my fourth graders for more than six years. My students love the fresh taste of the peas and are also amazed that they were able to grow a vegetable, to watch the process from a seed to something they could actually eat!"

Writing Takes Root

Making cider in the fall is a rich sensory experience that resonates with the history and culture of New England. Increasingly, cider pressing in the schools has also become the platform for teaching skills targeted by CCSS, such as sequencing events and informational and procedural writing and as a prompt for descriptive writing. Every fall CitySprouts provides its 18 partner schools with a cider press, a couple of bushels of apples, and a small team of organizers led by the garden coordinator.

At the [Ingalls School](#) in Lynn, Mass., second grade teacher Samantha Trunfio discussed each step of the process with her students during the cider pressing activity. Back in the classroom, students wrote and drew out the various steps involved. Other writing projects that have centered on the school garden include first graders' how-to books on planting and caring for the garden and student-authored field guides identifying plants, trees, and compost animals living in the school yard.

First grade teachers Marty Wrin and Lindsay Barton at the [Cambridgeport School](#) in Cambridge make weekly visits to the school garden with their classes. What the children notice in the garden leads to conversations back in the classroom about ideas and evidence-based predictions. Writing skills have also been an important aspect of their garden-based lessons, as well as reading texts to support what they've experienced in the school garden.

Barton says, "Our first visit was simply to familiarize students with the garden and begin to learn about sketching and recording our observations. The second visit was a provocation for our unit on living things. We asked children to make lists of things in the garden they thought were living, not living, or dead. This led

to several interesting conversations in both my class as well as Marty's. It was a beginning point for the unit and a chance for children to begin learning about how to have a science discussion. After these conversations, each child chose a plant in the garden to study over time and think about questions of dead versus alive. We have also used it as a way to discuss how living things respond to the environment as the weather changes. We've visited the garden weekly and continue to observe, sketch, and collect data on the changes we see."

The school garden as outdoor classroom is a rich place for students to observe, explore, describe, and ponder. It is a resource that engages students in real-world problems and puzzles. While the CCSS don't prescribe curriculum, they do emphasize the need to provide students with engaging, real-world applications for the skills they are learning in both English language arts and mathematics.

Cultivating New Knowledge

Scott Feuille is the [North Texas Regional Director of REAL School Gardens](#), a program that supports more than 90 high-need schools in the Dallas–Fort Worth area. While many of the teachers they work with first approach the school garden as a science resource, many then discover the broader applications for learning inherent in the school garden.

"The educators we support do so much more than science in their school gardens," Feuille says. "For example, fourth and fifth graders must apply their knowledge of measurement and area to determine how much organic fertilizer is required for their veggie and perennial beds. In language arts, students hone their descriptive writing skills and develop poetry. As a matter of fact, a master's student at Texas Christian University, Kristen Payne, did her thesis on REAL School Gardens educators, and they reported that one of the biggest gains their students make is in language arts."

Michelle Obama is right. Schools with gardens are a natural place for kids to experience firsthand how food grows: from seed to plate to compost. Indeed, there are an increasing number of school-based efforts around the country that are designed to give kids a context for healthy eating, or "food education." Many of them include school gardens as part of their program. [FoodCorps](#), a national AmeriCorps initiative, is one such effort focused on school gardens as a food education resource. (FoodCorps is partnering with CitySprouts and dozens of other school- or community-based organizations in 12 states.)

Less noted, however, is the shift taking place in teachers' practices. Teachers are demonstrating that the outdoor classroom garden is a natural platform for students to learn the skills the CCSS expect all students to master.

Ultimately, school gardens need to be more than food education sites. Unless teachers perceive school gardens as outdoor classrooms critical to teaching the skills and content they're responsible for imparting, students will have limited exposure to any school garden experience. Teachers' practice of extending classroom lessons to the outdoor classroom garden is

making the case that all schools need this resource. Teachers are proving that school gardens can be thriving centers of learning for what all children need to know, including CCSS math and language arts skills.

Jane S. Hirschi is executive director of CitySprouts in Cambridge, Mass.