

By Leslie Mladinich

Growing Learning Gardens

Outside classrooms teach valuable lessons

You'll never look at an orange the same way after studying the humble lunch bag staple with a class of first-graders at Cleveland Elementary School in Oakland.

Students, told not to eat the orange slices they patiently hold, first have to answer some questions prompted by gardening teacher Sarah Stephens.

"What shapes do you see?" she asks.

The senses are quizzed next. Students offer "feel" for the bumpiness of its skin, "smell" for the perfume of its blossoms and "taste" for the sweet juice or sour white pith. Looking at a diagram of a tree on a white board in an outside classroom behind a tool shed, students fill in the vocabulary

of roots, branches and leaves that make the oranges grow on the tree.

It has been 15 years since chef Alice Waters started the school garden as a live classroom promoting nutrition at Martin Luther King Jr. Middle School in Berkeley and former California Superintendent of Schools Delaine Eastin set a goal of having a garden in every school. Since then, some 4,000 school gardens have gone beyond teaching food science and into most areas of the state's curriculum.

Calculating the garden's perimeter and learning about the X-Y coordinate system by locating certain plants for math, making comic book-style illuştrations on the fight of pests on crops for art and matching birds and insects to particular plants and flowers for biology are valu-

able for elementary and middle school children's learning, experts say.

"It's a great challenge to younger students to see (concepts) in the classroom, but when you go to a garden, it's in action," says Lisa Bennett, communications director for the Center for Ecoliteracy in Berkeley, which supports school sustainability projects such as gardens.



In most cases, the outside laboratories wouldn't be percolating were it not for small armies of parent volunteers.

That's how Stephens started at Cleveland. She's turned a volunteer job of building terraced vegetable beds and coordinating parent work days into a grant-funded job teaching 50 minutes of ecoliteracy in the garden every other week for all of Cleveland's 15 K-5 classes. Now fruit trees, herbs, wildflowers and two dozen vegetables grow in Cleveland's four different gardens. Seventy-seven of Oakland's early childhood education centers, elementary and middle schools have gardens.

Parents were instrumental in bringing a socalled "learning garden" to Oakland's Hillcrest Elementary School. All it takes, says parent volunteer Cara Brockbank, is one person to take the lead and find others who are interested in carrying it out.

A small butterfly garden sits among droughtresistant native plants popping with yellow, pink and blue flora near Hillcrest's entrance. Students and teachers can walk up manicured paths on a hillside framing the blacktop playground in the back of the school without trampling over flowering blueberry plants and herbs.

Brockbank spent two hours every week last summer hand-watering the entire campus so the spring's work wouldn't die, so she's happy that PTA fundraising will finance an irrigation system this year. Proceeds from after-school classes in mulching, composting and seed and harvest cycles go toward buying plants.

"Parents come and go, so you need plants that are easy to maintain," says Brockbank. Realizing that teachers are already saddled with state mandates in curriculum, Hillcrest parents are building an education around gardens little by little.

"It feels so good to see the kids so interested," Brockbank says.



Students at Oakland's Cleveland Elementary show off the harvest from their school garden.



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education

Growing Test Scores?

Interpreting the direct relationship between garden education and test scores is a different story. An *Atlantic Monthly* article appearing in January, ominously titled "Cultivating Failure," has garden committees at many schools talking.

The article claims school gardens have "hijacked state curricula" and that test scores in reading and math haven't been raised for kids learning in them. It argues that students, especially those struggling academically, should be working in the classroom, not the garden, and that the trend has, in part, been foisted on schools by "foodie" parents.

The article overlooks many areas where students are receiving a critical education, says Linda J. Mizes, school gardening coordinator for Contra Costa County's Master Gardener program. Mizes has helped about 43 teachers and parents in 28 school gardens.

"I could spend hours discussing other academic-related issues that the gardens address: water conservation, energy use, pollution issues, not to mention the literary and graphic arts which the gardens inspire and support," Mizes said.

In an essay responding to the article, Bennett admits that research directly correlating to garden education to test scores in certain subjects is in the beginning stages, but there is data for science scores being higher for students with garden education.

Toris Jaeger, a retired teacher who oversaw garden lessons in Orinda's four elementary schools, says one of her favorite

How to Grow a Learning Garden

There are many types of learning gardens at schools and preschools across the East Bay, from modest ones planted in half wine barrels to large farm-like ones in large beds.

Starting small and being creative are the best ways to give school gardens ground to grow on, says Rachel Pringle, co-author of *How to Grow a School Garden:*A Complete Guide for Parents and Teachers and program coordinator at the San Francisco Green Schoolyard Alliance. Here are some tips she has for parents and teachers who may want to start a garden at their school:

- Do your homework: Search the Internet for other schools or organizations in your area that support school gardens.
- Take a tour: Look at examples of school gardens to get ideas.
- Form a committee: Find like-minded parents who are interested in stewarding the project.
- Develop a plan: Take a tour of your school site, find the spot where you have sun (at least six hours per day), water (a hose bib nearby), and space for planting.
- Find start-up funding: Many hardware stores and nurseries may offer supplies at a discount or give a small grant to a local school garden. Start-up costs can range from \$500 to \$1,000.

lessons for fourth-graders is on native plants. Students identify and adopt a plant in their area, study it, collect seeds, flowers and stems, and grow the plant either from seeds, nuts or cuttings.

What's not debatable is the interest kids have in tasting what they grow.

"One of the really interesting findings about the relationship between kids and the gardens is their choice to eat or not to eat vegetables," says Bennett. "It is a universal truth that when young children are involved in growing fruits and vegetables they are more likely to try them."

Renowned chef Lesley Stiles is finding this true at Pleasant Hill Middle School, where students are growing broccoli, asparagus and other fruits and vegetables in the Troy Spencer Memorial Garden, named after a popular science teacher whose wish it was to see a garden at the school.

"They are actually eating kale," says Stiles, a parent volunteer who started the garden with another parent, Stephanie Jacob. Kaiser Permanente, which has given \$100,000 in grants to East Bay schools, has also helped fund a salad bar at Westwood Elementary School in Concord.

Also not likely to be measured by academics is the sense of community a garden grows.

Says Cleveland's Stephens, "When teachers bring the students out themselves to do a lesson in the garden and get their hands dirty, the students can see the teachers learning, too."

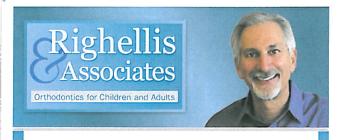
Leslie Mladinich is a Bay Area-based freelance writer

- Check in with school administrators: Talk with the principal, janitors and others that use the schoolyard to see if a garden would be appropriate in the spaces you've considered.
- Plan for a groundbreaking work day: No matter the size of your garden, get the community involved, have good food available for volunteers, find tools and cultivate your parent population for pick-up trucks, tools and expertise.
- Some school sites, due to lack of space or funds, may find it easy to have a few simple planter beds and a classroom with a circle of tree rounds. Other schools may have funds to hire a landscape architect to redesign space into an outdoor classroom.
- Build your garden program: Think about how lessons can be taught in the garden, and know that it will be better sustained over time if it is used by the teachers and can incorporate state curriculum standards.

What's also important is to let the school garden be an exercise in experimentation, said Patrick Safinya-Davies, who works in a nutrition education program through the University of California's Cooperative Extension.

"If you get in the mindset that it's going to be a perfect garden, it just doesn't work as a school garden," he says.

- Leslie Mladinich



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