

The Big Green Schoolhouse

A basement greenhouse has energized an inner-city elementary school in Brooklyn.

The minute you walk through the front doors, it's obvious something unusual is going on at Public School 114 in Brooklyn, New York. Arrows and pointing feet direct you through a maze of corridors and

staircases to the basement. In an area reserved for boiler rooms and cleaning supplies in most buildings, elementary students are potting plants, growing mushrooms, caring for fruit trees, identifying plant diseases, and

learning ways to conserve soil. Their classroom is an 18' x 42' greenhouse filled with cacti, bromeliads, hanging ferns, vegetables, orchids, orange trees, and more than 100 other plant species.

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Kindergartner Nicole Grant and her classmates get a firsthand look at an avocado in the greenhouse at Public School 114.

The greenhouse started to take shape three years ago, when teacher Karen Siegel (who now coordinates the program along with teacher Joan Wiehl) proposed the idea to the school principal and to the community superintendent of District 18. Siegel's goal was to create a program based on horticulture and gardening that would interest and involve *all* the school's 950 students, motivating them not only in science but in the rest of their studies as well. "Many of our students live in apartment buildings and have never had the opportunity to plant seeds or care for flowers and vegetables before," Siegel explains.

In the Greenhouse . . .

All students at P.S. 114 get involved in greenhouse activities. Every semester half of the school's 38 classes come to the greenhouse once a week for 45-minute lessons. The others work independently or in small groups at the greenhouse on special projects. For the younger students, typical lessons might include a simple introduction to plants or finding out where supermarket food comes from. The older children expand on these concepts, developing problem-solving skills that will help them in more advanced studies.

. . . and Beyond

Though the jungle in the basement is the most visible part of the science program, it's only part of what's going on. During spring and fall, students plant trees, prune shrubs, and tend vegetables in two outdoor garden sites.

Indoors, in the upstairs classrooms, teachers reinforce and expand what goes on outside and in the greenhouse through learning centers. If the greenhouse is the heart of the program, the centers are the arteries and veins, bringing the study of horticulture to all parts of the curriculum: reading, math, oral expression, social studies, and writing.

"There's so much learning going on here," explains Assistant Principal Harvey Kriedberg. "We take the students down to the greenhouse, teach them about different aspects of plant life, then bring them back to the classroom and keep the process going. There's

constant interaction between classroom and greenhouse."

Science and School Spirit

The students brag about the school, saying, "My school has a real commercial greenhouse in it!" Their enthusiasm carries over into their schoolwork, too. Science scores of the students have been much higher than those in previous years, for instance. "I've noticed a change in the kids since they started coming down here," Siegel says. "They want to come to school so they can be in this program."

They also have a "much different attitude," she adds. "By working to keep a plant alive and healthy, the students develop a respect for living things. They're less likely to damage branches of trees or kill shrubs."

The bottom line, Siegel says, is that the students are having fun while they learn. As one 4th grader put it: "Some people think science is boring, but having a greenhouse is better than going to the same old classroom every day. Social studies, math, science—the greenhouse makes them all more interesting." □

Emily Stetson is Managing Editor of *National Gardening* magazine, published by the National Gardening Association, 180 Flynn Ave., Burlington, VT 05401. Copyright © 1990 by National Gardening Association.

Editor's note: A longer version of this article appeared in the March 1988 issue (pp. 54-57) of *National Gardening*, the bimonthly publication of the National Gardening Association. This version is printed with the association's permission.

We are happy to report that the program has continued to thrive and, indeed, has grown dramatically over the years, expanding its activities and reaching more youngsters. P.S. 114 (also called the Magnet School of Earth and Space Studies) has linked its greenhouse with a planetarium and a geology lab and has formed a collaborative with the Brooklyn Botanical Gardens.

For information about the National Gardening Association's "Grow Lab Indoor Garden," a garden-based program for teaching students K-8, and "Growing Ideas," a newsletter published three times a year for K-8 teachers and other educators, write to NGA, 180 Flynn Ave., Burlington, VT 05401.

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