GREEN BAY, WIS--In October 2008 students from Green Bay's Elmore Elementary School gathered for a pep rally. The excitement and enthusiasm steadily grew as students cheered, clapped and danced. However, the students were not cheering on a sports team.

Students were cheering for fruits and vegetables!

Students sang, "Wash the lettuce, carrots and tomatoes, yes we do, celery too. Chop up all the fixings, then we do the mixing. Stir and eat. A real treat!"

Students answered riddles about fruits, vegetables, and nutrition. Do you know what kind of vegetable you find written on a piece of music? Well, two beets, of course!

The pep rally concluded with the unveiling of the school's new salad bar, and the students receiving a bag of carrots for a snack.

It's not often that students get excited at the prospect of eating fruits and vegetables. However, Green Bay Area Food Services staff has worked hard to bring healthy food choices to students through new and innovative programs, including adding salad bars to Green Bay Area Schools.

Laura Rowell, Registered Dietitian and Food Service Specialist for Green Bay Area Public School District, says that when kids are exposed to more fruits and vegetables, they will consume more.

Dr. Tillo, Elmore Elementary School’s principal, echoes this sentiment, “We need to give kids the opportunity to try new fruits and vegetables, especially vegetables since kids don’t tend to like vegetables.”

Although salad bars provide students with easy access to fresh fruits and vegetables, they are often cost prohibitive for school districts.

As a result, Rowell, and her staff applied for the Hidden Valley Love Your Veggies grant in order to see their dream become a reality. While applying for funding, Rowell knew that simply including a salad bar in the school was not enough.
“We kept thinking and thinking outside the box. We knew we wanted to have a connection between growing and eating foods,” states Rowell. “We wanted education and a hands-on component.”

Rowell requested the assistance of Bill Wright, Brown County UW-Extension community gardens coordinator.

Together, they developed the idea to combine the salad bar with a gardening program to build the connection between growing and eating food.

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“We wanted to see if we could change children’s consumption of fruits and vegetables by using gardens,” explains Wright.

The innovative program, entitled Gardens Reaching Our World or the GROW Project, began in the fall of 2008. Rowell and Wright chose Elmore Elementary School since it represents the median social economic status for schools within the Green Bay Area School District. Approximately 50 percent of Elmore Elementary School’s 300 students, from four year old kindergarten through fifth grade, qualify for the free and reduced program.

The GROW Project featured a multifaceted approach to encourage children to use and understand the salad bar and its relation to gardening and agriculture.

After the pep rally introducing the new salad bar, students took a field trip to Tsyunhehkwa, an Oneida Nation certified organic farm, where they helped harvest corn.

Even though agriculture is a major industry in Wisconsin, some of the students had never visited a farm. The students talked about this field trip for the rest of the year said Dr. Tillo.

Visiting the farm helped put the gardening portion of the GROW Project into perspective for the students, allowing them to recognize that they were a part of a larger agricultural community.

The hand-on components were coupled with classroom lessons taught by dietetic students from University of Wisconsin-Green Bay. The first series of lessons taught Elmore Elementary students the health benefits of fruits and vegetables and how to properly use the salad bar.

Each day students passed the salad bar in the cafeteria and had the ability to choose the quantity they wanted to eat, including taking no fruits or vegetables.

“At the beginning, kids tended to heap their plates full of certain fruits and vegetables,” recalls Dr. Tillo, “I remember one child spooning a pile of pineapple onto his plate. We had to remind them to not take quite so much.”

However, as time went on, students became more comfortable. Rowell says that the students quickly adapted to the new salad bar and were excited, asking when new items would be added and how
long they would stay on the salad bar.

Items on the salad bar varied but typically included lettuce tomatoes, carrots, cucumbers, broccoli, strawberries, and celery.

The food service staff weighed the fruits and vegetables both before and after the lunch periods to determine the amount of produce taken by the students. This number was then divided by the number of students purchasing lunch each day to identify the average amount of produce taken by students each day, which was tracked over the course of the project. In addition, plate waste studies were conducted to analyze the percentage of food actually consumed by students.

During the first phase of the program when students had the salad bar but had not yet participated in gardening activities, students consumed an average of 21.65 grams of produce. As was expected, consumption of the salad bar began high with the excitement and novelty of a new option in the cafeteria. However, as the school year progressed, consumption decreased until the introduction of the gardening phase.

In January, the gardening portion of the project began. Wright taught students about the important connection between the garden and the salad bar.

Students participated in hands-on gardening by using a microfarm, an indoor garden built on a cart that uses a light source, to grow microgreens, immature plants that have been harvested for their tender leaves and stems. The microfarm provided a solution to Wisconsin’s short growing season, allowing the gardening lessons to occur from January through April.

Wright used the microfarm to reinforce the idea that students can grow their own salads. In each class, the students planted, watered and cared for microgreens, including kohlrabi, carrots, mustard greens, and sunflowers. At the end of three weeks, students harvested their microgreens using scissors. Students then tasted each type of microgreen individually before enjoying them together in a salad.

During this phase of the project, students consumed an average of 16.67 grams of produce from the salad bar. While the average produce consumed during this period was less than the average during the first phase, consumption steadily increased and stayed more consistent.

“I was surprised how the consumption of the salad bar decreased during the first ten weeks and then went back up with the introduction of the gardening,” recounts Wright. “I didn’t expect such a dramatic change in consumption.”
Surprisingly, the students retained the lessons they learned while gardening and continued to consume the same amount of produce from the salad after the gardening phase finished. The gardening and post-gardening phases also had more consistent consumption among students compared to the pre-gardening portion of the project.

“It’s apparent that when kids are exposed to fruits and vegetables they’ll consume more,” says Rowell. “But it’s more than just starting a salad bar. We need to ensure that education is right along side it.”

After completing the GROW Project, Rowell and Wright hope to confirm their finding with a larger study. In the meantime, the use of a salad bar in conjunction with lessons on gardening seems to offer hope and inspiration to school districts and educators seeking to instill healthy eating habits in their young students.