

Vegetables

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NMSU's Las Vegas Science Center Expands Curriculum

As the students of Memorial Middle School in Las Vegas, N.M. went home on May 31, the last day of the school year, they brought more than their notebooks and final art projects. Each had a chile and a tomato plant.

All 450 sixth-through-eighth-grade students have nurtured their plants from the moment they planted the seed in the school's greenhouse. When they get home they will plant the seedling somewhere in their yard and raise the plants until they bear chiles and tomatoes.

The plants are the culminating activities for the first year of activities at the Memorial Middle School Agricultural Science Center, a partnership between New Mexico State University and the Las Vegas City School District.

"This is a great way to extend the educational process that began here in the greenhouse," said Peter Skelton, NMSU faculty member responsible for the university's newest agricultural science center.

The five-acre science center on the school's 34.4-acre campus was founded in 2005 through a special legislative appropriation and is administered through NMSU's College of Agriculture and Home Economics. The center is engaged in earth and life science research and experiments with students, the development of greenhouse and educational curriculum for teachers throughout New Mexico and the country, and community outreach addressing small-scale agricultural resource constraints. In the planning phase are gardens and demonstration plots that will be used to evaluate the potential of specialty crops and resource conservation.

"Every one of the school's students has participated in some type of educational activity in the greenhouse this year," Skelton said. "We have provided students with hands-on learning opportunities that have been integrated across the school's core curriculum."

Originally, the greenhouse was to be an extension of the school's science

program. For science teacher Roberta Montano, the facility is a dream come true.

"It's nice having the greenhouse," she said. "In the past I had to use grow lights in my classroom during our botany work. This year the students have been able to conduct experiments for science fair projects."

Seventh-grader Girard Maestas has learned that corn grows better in non-acidic conditions as he watered plants with vinegar and orange juice. "The vinegar plants died, while the orange juice plants grew fine," he said.

Brittani Boyle experimented to see how osha, a medicinal root, affected corn plants. "It helped them, but was pretty much the same as water," she said.

Dillon Martinez discovered that the application of rock salt on plants killed grass in three weeks during his salination of soil experiment.

As the first school year progressed, Skelton said all of the teachers have found ways to use the center in their curriculum.

"An English teacher was seeking a way to include brainstorming activities in her class," Skelton said. "So I took advantage of a teaching opportunity that met a need for the development of the center by having the students design a vegetable garden on the campus. The students were responsible for locating a vegetable garden site, identifying and listing crops that could be grown under local climatic conditions and describing the techniques they would use for watering, altering microclimate and



amending the soil."

Math teachers have used visits to the greenhouse to demonstrate measurements and math's application in the work environment. Art classes participated by building a scarecrow for the center's corn patch.

Next year the reading teachers are planning to integrate the Farmer's Almanac into their curriculum and Skelton says they will design an almanac for the school.

"But this facility and project is much more than expanding the school's curriculum," said Skelton. "It is also an agriculture research center. We grafted apricot varieties and rooted grape vine cuttings in hopes of identifying species that will perform well in this environment. The scion wood and cuttings were obtained from the University of California at Davis plant material collection."

The facility is also a community demonstration site.

