

Hydro garden project yields bumper crop of benefits



McMonagle second-graders acquire hands-on learning with their hydroponic garden.

Students' needs for nutrition and healthy activity inspired a school garden at McMonagle Elementary, in the Westwood Heights district. For some students, outdoor activity is limited by fear of crime in the area, where fast food restaurants and party stores outnumber grocery stores and farm markets.

The school's 2010-2011 Discovering PLACE project involved implementing a hydroponic garden – where plants are grown in water

– with the help of community partner Scott DeSilva, of Flint's Urban Garden Supply. For most children, it was a brand-new experience.

"(Students) learn much more in this exciting, non-traditional setting."

-Dawn Knapp, McMonagle second-grade teacher

"Some kids come from families where Grandma or Auntie has a large garden, and they have a lot of knowledge," said Sandy Carey, the district's speech and language therapist, "but a lot of kids have very little exposure to gardens or the outdoors at all."

Carey was part of the four-teacher McMonagle team that organized the project. The team also included McMonagle second-grade teachers Dawn Knapp, Tomika (Kelly) Cooper and Sandra Wenger.

Along with growing lettuce, the garden yielded a bumper crop of tomatoes and sweet peppers. Children helped pollinate tomato plants in the indoor garden, where they also tracked temperature, pH and nutrient levels.

"(Children) learn much more in this exciting, non-traditional setting," said Knapp, noting place-based education "affords them hands-on experiences they will remember for a lifetime."

Carey escorted children of all ages to visit the garden, where they picked vegetables to take back to their classrooms.

"The teacher usually cuts it up for (the class) and they eat it," said Carey, although tomatoes were sometimes devoured before reaching a teacher's hands.

McMonagle teachers said they benefited from working with Beecher kindergarten and high

school educators. The project gave Carey a deeper awareness of the interplay between language and science curriculum objectives. It

also motivated children to expand their vocabularies.

"Kids learn the language best if it's something they can put their hands on. This project gave them a whole new set of words they didn't have before."

Armed with the indoor gardening experience, McMonagle teachers and students are now planning to expand the project into the outdoors, by building a raised-bed garden at the school.

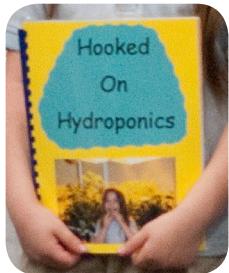
"Kids learn the language best if it's something they can put their hands on. This project gave them a whole new set of words they didn't have before."

**-Sandy Carey,
McMonagle speech
and language therapist**



Teacher Dawn Knapp points out plant features to McMonagle students.

Volumes of learning



Along with learning high-tech gardening techniques and increasing their knowledge of healthful food choices, Dawn Knapp's second-graders created books on their gardening experiences, while students in Sandra Wenger and Tomika (Kelly) Cooper's second-grade classes created cookbooks.

Since second-grade curriculum includes measurement, McMonagle lessons

became more relevant when children learned about cups and quarts in garden-inspired recipes the class had been reading about, such as fruit yogurt, applesauce, or a breakfast dish of potatoes, bell peppers, onions and tomatoes.

"They see they can grow this and cook it too," said Cooper. "We're trying to put a real-life application in place so they can use the information and transfer it into their own lives."

Along with reading, writing, art, measurement, and smart food choices, students practiced following step-by-step directions and learned why a creative, appealing writing style is important. Children also learned something about publishing and first editions, said Wenger, and became familiar with how books are organized while writing title and copyright pages, along with a table of contents.

"Students learned a tremendous amount throughout their gardening project," said Wenger, "and had a great deal of fun in the process."



McMonagle's book projects help skills in reading, writing and measuring to bloom.

Community Partners

- Scott DeSilva, Urban Garden Supply
- PE-Nut (Physical Education - Nutrition Education) program
- Peter McCready, The Chatfield School



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Community connection

McMonagle teachers worked with community partner Scott DeSilva of Flint's Urban Garden Supply to set up the school's hydroponic garden, complete with lights, plants and supplies. DeSilva also provided technical support throughout the project, along with equipment such as a thermometer and gauges.

On the company's Web site is a photo of the project, accompanied by the words: "We believe that education is the key to sustainable living. It's important to teach students how to lead a healthy life and protect our environment at an early age."

In return, students created a sign to acknowledge the contribution UGS has made to their project.

The community connection not only engaged children in a new style of learning, but showed them their community cares.

"I think it made them aware someone would be willing to help them," said Sandy Carey, a Westwood Heights speech therapist involved with the project. "That made the kids feel important."



Urban Garden Supply staff partners with McMonagle Elementary, setting up the school's hydroponic garden and helping it flourish.



Discovering PLACE support

The McMonagle project started with a year of Discovering PLACE professional development, as well as community partner brainstorming sessions to identify and develop a project based on student and community needs. Discovering PLACE awarded McMonagle teachers a combined grant totaling \$9,000 to purchase the hydroponic system, plants, tools and other garden equipment; the grant also funded a visit to The Chatfield School's environmental program. Discovering PLACE support continued during the project through a designated mentor who worked regularly with educators and conducted on-site workshops.

Discovering PLACE

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