

Outdoor Classroom | *Opens Doors to Research*

SCHOOL GARDENS HAVE been in the spotlight in recent years, touted by policymakers and academics alike as a valuable educational tool in the national fight against childhood obesity.

And so they can be, agrees Louis Manfra, an HES Department of Human Development and Family Science assistant professor and co-director of the MU Child Development Laboratory (CDL). Indeed, researchers have been exploring the link between the CDL's outdoor preschool classroom and student attitudes towards food since the MU Children's Learning Garden officially opened on May 1, 2014 just east of MU's Stanley Hall.

"The garden clearly opens doors to food nutrition research," Manfra says. "But it can't be limited to that."

So it is that Manfra, who also serves as CDL's director of research, education and development, is examining this spring whether the garden can help preschoolers learn pre-math skills. The CDL research project splits the preschoolers into two groups, one of which is exercising number skills in the garden by performing such tasks as counting seeds or using measurement sticks to determine the growth or width of plants. The other group is also

sowing seeds and observing plants, but without practicing those number skills, Manfra says. By comparing the counting and number knowledge of the two groups—each of which ultimately will receive the same outdoor instruction—researchers will gain some insight into whether outdoor math-related activities are more effective because they're more interesting to children, Manfra says.

Other types of research are also under way at the garden, built with a donation from alumna Marlese Gourley and her husband, Robert Gourley. Chris Murakami, a learning, teaching and curriculum recent doctoral graduate who manages the garden, says researchers are also studying the value that early childhood teachers see in garden-based education. One preschool teacher observed in a study interview that her students have been learning about other organisms in the garden's ecosystem.

"They've gotten really good about knowing where worms should be," the teacher noted.

Student interest in natural science has increased in general because of the garden, Manfra says. And while the CDL already is reaping the benefits of growing student and parent pride



Chris Murakami helps the children of the CDL harvest lettuce from the garden

in the large, attractive garden as well as the student-teacher interactions it encourages, CDL administrators continue to seek out creative ways to provide learning experiences and build healthy relationships with food.

In short, Murakami says: "We want it to be an ideal learning environment for children to connect with nature and learn through experiences with food."

"The garden clearly opens doors to food nutrition research" -Louis Manfra



The MU Children's Learning Garden presents a great experience for the children to learn both gardening and healthy eating.