

VISION

CJ STEM

Empower Students to Serve the World

Discovering talents and skills and beginning to discern what you are really good at doing is part of the student experience. There is a sense of joy and satisfaction when a young learner builds knowledge and experience to the point of realization, "Hey, I can do that!"

Empowering students to serve the world is a foundational concept behind the structure of the CJ STEM program. Incorporating living out faith integrated with the academic component is something that Meg Draeger takes to heart as the coordinator of the program.

"Students taking science, math and technology courses as well as those enrolled in the *Project Lead the Way* courses are strongly encouraged to put their new found abilities to work in service to others.

This gives them meaningful practice in honing their skills, and many in our community are rewarded because of their willingness to act," she said.

Draeger and teachers keep a fresh list of ideas to spark inspiration for projects beyond homework and studies on the school's Web site. Recent posts include designing and constructing boardwalks for Five Rivers Metroparks; setting up software and providing computer training at an after-school or adult day care facility; or creating healthy living posters and announcements for area agencies.

"The goal is to connect the academics with action. When students see the effect their work has on those around them, they feel great and begin looking for ways to do even more."



Students participating in the Toys for God's Kids work together to cut, assemble, stain, sand and brand wooden toy cars that will be distributed to poor children around the world.

Toys for God's Kids

A service project specifically sponsored by CJ STEMM involves making wooden toy cars. Offered as a school REACH (Recreating Earth As Christ Hopes) service project, the cafeteria transforms into a mini version of the North Pole on a monthly basis as students work side-by-side with toy-making tools to craft gifts for boys and girls they will never meet.

The mission of the sponsoring nonprofit organization, Toys For God's Kids (TFGK), is to provide handmade, sturdy, attractive toys free to God's children everywhere. The organization's Web page and Facebook page share grateful responses from recipients accompanied by photos of many smiling faces holding their new treasure.

Draeger learned about Toys For God's Kids from an announcement in a local parish bulletin. After speaking with the local TFGK coordinator, a retired IBM engineer, Bernie Thompson, she designed a service learning session for the summer STEMM camp in which students learn about industrial, manufacturing, and quality engineering and assemble cars. Draeger's experience as an industrial engineer enabled her to collaborate with Mr. Thompson and Alexandra Rivers '04, Quality Engineer at Norwood Medical to create an effective presentation and assembly instructions to guide the students.

An Innovative Teaching Grant from the Miami Valley Catholic Schools provided funding to purchase materials and tools to assemble four production kits to be used for the ongoing project, and equipment to expand the project in the future.

"The exciting thing about the CJ TFGK project is that, as an established production site, we can determine who the recipients of our cars will be, and further develop the project as an integral component of our PLTW Engineering courses and new STEMM Center," said Draeger.

This summer CJ students on the Belize mission trip, including Matt Dudon '14 and Kyle Shoup '14, who are PLTW engineering students and CJ TFGK production leaders, will hand deliver cars to children there.

Students who sign up for the project understand that the children who receive the cars have so little, and the wooden car may be the only toy they ever own.

"I feel happy making a toy that's going to give a little boy or girl some happiness. They are going to have something to play with," said Ayreon Wilkinson, a freshman elf who joined the February session.

Classmate Rachel Marx '16 felt drawn to this particular project as well. "I liked that this project was hands-on and for a good cause. I think it is cool that something I made might become another child's favorite thing to have."

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