



*Two KTEC students test their robotics theories as part of PLTW.*

## KTEC's Reach Extends Beyond School Grounds

**R**ecently, 8th grade students in Michelle Zazula's class at Kenosha School of Technology Enhanced Curriculum (KTEC) were working on a design and modeling lesson. The assignment was to create a hair brush. One group wanted the handle on their brush to pull out to reveal a mirror. Zazula had never considered the mirror option with the 3D solid modeling software Autodesk Inventor Professional, so the students were challenged to investigate and figure out how to make it happen.

And that's just what they did. After extensive research and trial and error, the students discovered how to use the software application to model the reflective properties of a mirror. Then they taught it to their classmates.

"That's Project Lead The Way," says Dr. Angela Andersson, KTEC principal. "In any good STEM curricular program, no teacher is going to have all the answers. But she didn't say, 'You can't do this because I don't know how. She challenged her students to figure it out.'"



KENOSHA SCHOOL OF TECHNOLOGY  
ENHANCED CURRICULUM





KTEC is a charter school which opened in 2007. Many wondered if the pre-school-8th grade school could succeed, especially if it wanted to, as its charter stated, “create a diverse group of students that are prepared for high school, post-secondary, and career tracks that involve STEM.”

Today more than 450 students walk the halls of KTEC, and another 300 are on a waiting list hoping to join them.

“PLTW has been a part of things since the day we opened,” Andersson says. “Our 6th-8th grade science classes are all PLTW, but we also use STEM technology throughout the school, including all of our reading, writing and math classes. For example, kindergarten students learn about engineering by playing with LEGOS, and 3rd and 4th graders know all about gear ratios.”


But it wasn’t easy to reach this point. Andersson remembers those early days at KTEC. “Students needed to be taught quite a bit about collaboration and working with partners,” she recalls. “You don’t always get to select your partners but you need to work with everyone.”

Teamwork and collaboration exists outside KTEC, as well. The school works closely with Carthage College, University of Wisconsin – Parkside and Gateway Technical College, as well as area businesses. “We work with schools to raise awareness about STEM, and nearly every day there are students from Carthage in our building, many gaining teaching experience,” Andersson explains.

“Also, 6th grade students hold a contest designing a peg board model. After the students select the top six designs, engineers from Power Brace Corp. select the winner, and use the company’s 3-D printer to produce a scale model of the toy.”

KTEC is sharing what they know. Through a grant with the State Department of Public Instruction, teachers from around the state visit Kenosha to see what KTEC is all about. “Teacher professional development and the opportunity to share ideas is valuable for the school, and ultimately helps students here and across the state,” Andersson says.

The growth continues throughout the Kenosha area. Of the 23 elementary schools, 11 are implementing Legos Robotics in at least one grade level this year. Andersson reports there is a proposal to add PLTW as an elective at all middle schools in Kenosha, providing every middle school student the opportunity to have at least one PLTW classes.

“There is no more excitement in the world than at KTEC right now,” Andersson concludes. 

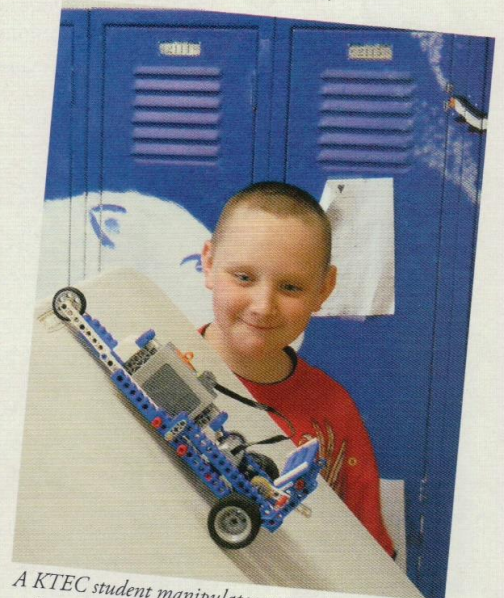
For more information on Kenosha School of Technology Enhanced Curriculum, visit [www.ktec.kusd.edu](http://www.ktec.kusd.edu).



*The winning team cheers as their Sumo-bot prevails.*



*A KTEC student launches rocket propelled by compressed air in a 2-liter water bottle.*



*A KTEC student manipulates gear ratios in an effort to “power-up” his race car.*