

Sheboygan Falls High School sophomore Jacob Strojny works at the school's new plastic injection molding machine.

A LOCAL Partnership

Sheboygan Falls School District teams up
with local businesses to expand
technology education

Anne Davis

When the Sheboygan Falls School District held its official open house last fall for the high school's new state-of-the-art Innovation Design Center, one of the stars of the show was making its debut in a high school setting.

A 33-ton injection molding machine made by Milacron in Cincinnati for commercial use was installed at the high school through an arrangement with a local business partner, Bemis Manufacturing. Giving students access to the machine is expanding the school's ability to offer technology education in new and exciting ways.

"It allows us to go full circle from design to manufacturing," explains technology education teacher Ed Hughes. "The more hands-on instruction you can do increases the learning capabilities tremendously."

During the open house, several students explained the machine's operation and passed out plastic key chains and golf ball divet repair tools they had designed and manufactured.

"It's more realistic than some other things. It kind of trains you for the real world," said one of the students, Preston Kvindlog, a senior who plans to become a mechanical engineer.

This is the first time a machine like this has been used in a high school setting, according to Milacron. But Bemis decided to work with the company to get the machine into the school as Sheboygan Falls was creating the Innovation Design Center. The machine allows the school to teach students how to manufacture plastic parts as well as be used to expose them to other skills such as hydraulics and materials management.

This year's robotics team used the machine to manufacture bright yellow eyeglass toppers to wear to their competition. And when a high school chemistry class began their unit on polymers, they visited the technology education lab to see first-hand how the plastics manufacturing process works.



Sheboygan Falls High School senior Mitch Christiansen models the eyeglass toppers students made for members of the robotics team.



The acquisition of the machine is the latest in a series of collaborations between Bemis and the school district that began to expand three years ago after Scott Kuehn took over as technical talent acquisition coordinator at Bemis.

■ Teaming Up

In addition to Bemis, Sheboygan County is home to several major manufacturing companies including the Kohler Company, Sargento Foods, Inc. and Curt G. Joa, Inc. Bemis, like the other companies, has experienced a severe shortage of highly skilled workers. Kuehn said there are as many as 3,000 open manufacturing jobs in the county.

In his new position, Kuehn

quickly identified local school districts as good partners to educate future employees — and their parents — about the types of manufacturing careers available. Although some — like engineering jobs — require four-year college degrees, there are many highly skilled jobs that pay well and require just a two-year degree.

“A four-year college is not for everyone,” said Kuehn. “This leverages the skill sets these students possess, so let’s play to their strengths.”

The first step in educating students — and their parents — was re-educating teachers and administrators.

Superintendent Jean Born said that as they began working with

Bemis, school officials were redefining their ideas about technology education. Instead of trying to teach students specific technical skills, they decided they needed to concentrate more on teaching them “soft skills” like teamwork, communication and problem-solving.

“It’s not about stuff. It’s about changing the way people think,” said Mary Blahnik, the district’s director of instruction.

■ Teacher Externships

One of the key steps to changing perceptions about manufacturing was a week-long externship that Kuehn set up for district teachers. The teachers met with employees at Bemis and listened to them explain



their jobs and the skills required to do them. The educators took part in hands-on projects and toured some of Bemis' suppliers.

After their experience, teachers were asked to develop a lesson in which Bemis employees could come into their classrooms and interact with students.

After three full rounds of the externship experience, the results have been palpable. Teachers have

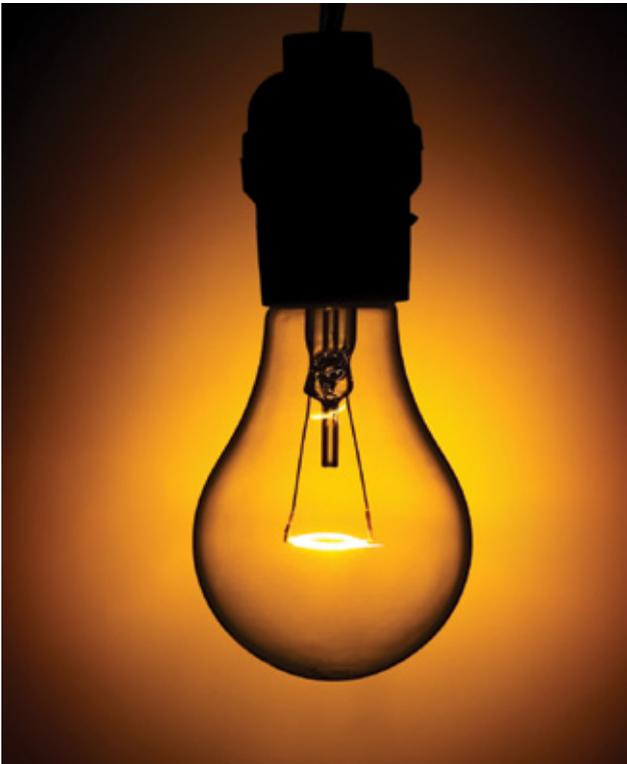
adjusted their curriculums to reflect their experiences and incorporate more real-world problems into their instruction.

"That externship forces them to think outside the box, and try to connect to real life examples," Born said.

Bemis has also done shorter externships with school guidance counselors and science teachers so they can learn more about the

modern face of manufacturing.

Kuehn also worked to expand traditional school-business partnerships like job shadowing, internships and youth apprenticeships. The long-term expectation is that by creating these connections with students while they are still in school, they may return to the area after they finish college or technical school and take a job at Bemis or one of the other local manufacturers.



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■ Connecting with Mentors

Other local manufacturers are also working with the Sheboygan Falls School District on technology education partnerships. Dan Schlagenhaft, an engineering manager with the Kohler Company's Combustion Engineering Group, has been involved for eight years with the county-wide robotics team that is headquartered at Sheboygan Falls High School.

He got involved when his children joined the team. He is one of the mentors and local business professionals who volunteer their time to work with the students as they design their robotics challenge. These connections can pay off later and bring students back to local companies as interns or employees.

"If you're here as a mentor, you have a greater opportunity of connecting with a student," Schlagenhaft said. "In this competitive market, it's almost essential that you connect to the top talent when

they're in high school. You can't wait until college."

In addition to arranging for the injection molding machine, Bemis helped in other ways with the renovation of the technology education center. The high school had purchased a CNC lathe machine but lacked the money — approximately \$3,000 — to set it up. Bemis sent in employees to set it up for free.

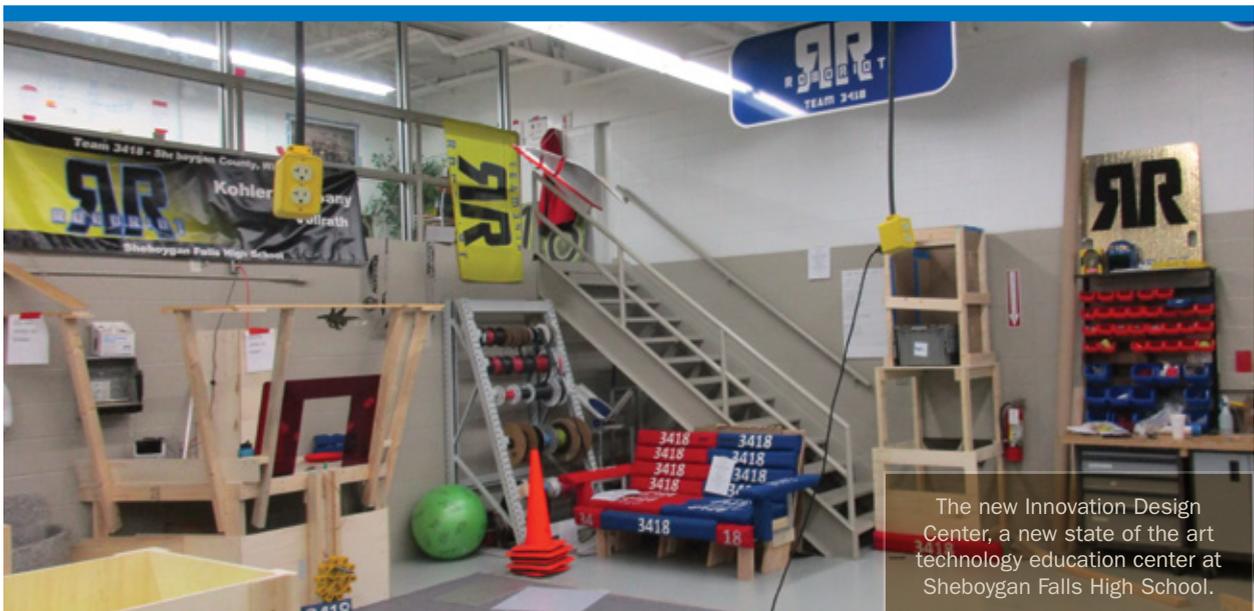
■ Help for a Small District

For a small district like Sheboygan Falls, finding the money to purchase expensive equipment like that used in the Innovation Design Center can be difficult. Kevin Dulmes, facilities manager for Sheboygan Falls, says that without the district's business partnerships with Bemis, Kohler and others, the center and the opportunities it represents would never have been realized.

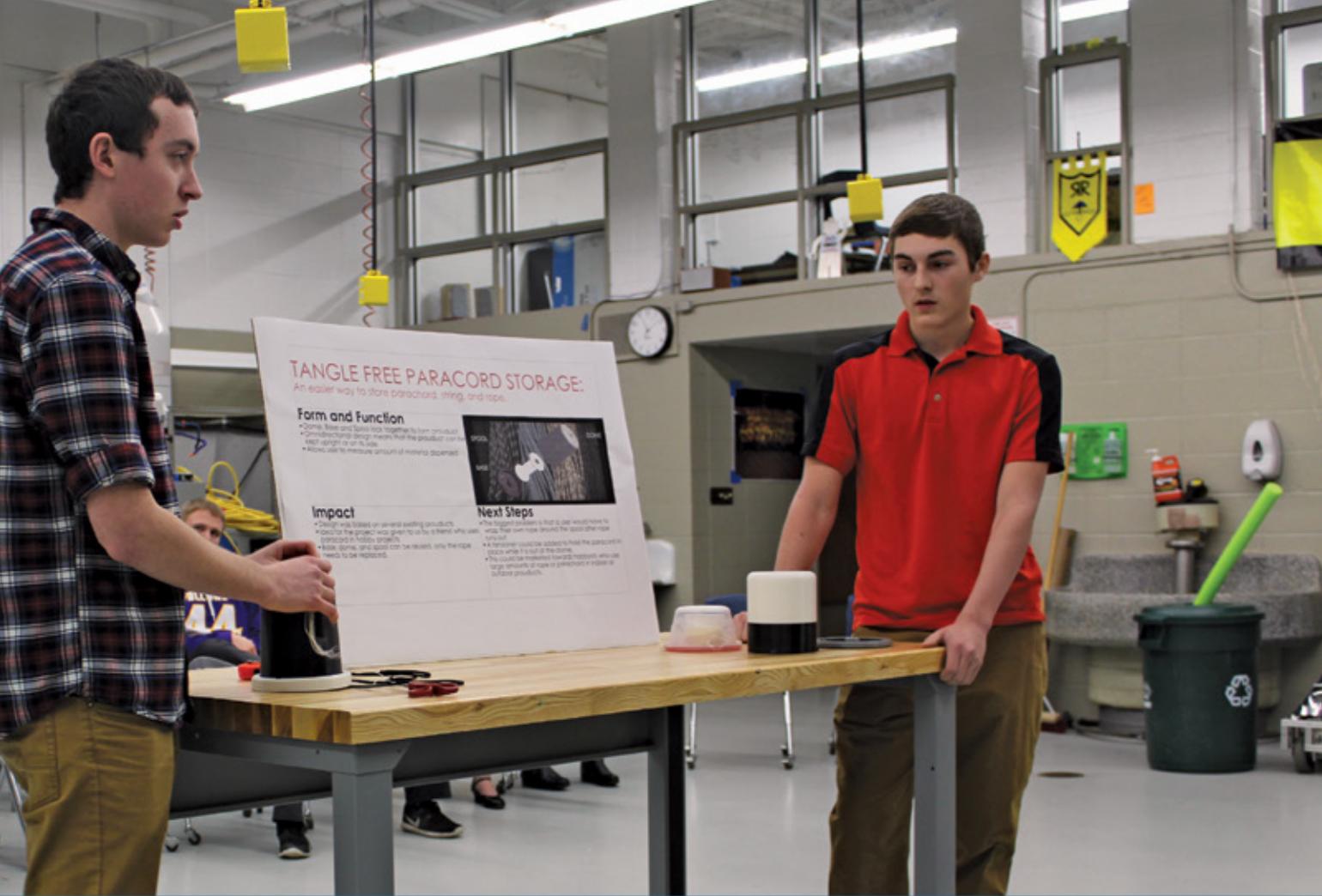
"That is a sizable investment small school districts couldn't afford," he said. "This would not have happened without the help



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The new Innovation Design Center, a new state of the art technology education center at Sheboygan Falls High School.



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of the local businesses. The financial impact on the district was very low.”

In recognition of the work that Bemis and Kuehn have done with the Sheboygan Falls School District, Bemis was awarded first place in the first-ever Educational Outreach Contest sponsored by the Manufacturers Association for Plastics Processors or MAPP. Bemis beat out 500 entries from companies across the country to win the award.

Despite their success so far, Sheboygan Falls and Bemis both recognize there is still a lot of work to be done. One of the biggest challenges is to reach out to parents of students and convince them that manufac-

turing is a viable career choice.

“They still think of a factory as a dark, dirty place,” Kuehn said.

Instead of the old, repetitive assembly line jobs, manufacturing employees today need to have high-level problem-solving skills, he emphasized.

One argument he makes with parents is an economic one. Some students go to a four-year school, rack up student loan debt, and then graduate only to end up working in a low-paying menial job because they can't find a position in their field. By contrast, students who focus on a manufacturing position in high school can earn credits toward

college while still in high school, graduate from school debt-free, and go right into a high-paying position.

The school district and Bemis are looking forward to finding new ways to work together.

“Our challenge was trying to determine a common purpose,” Sheboygan Falls High School principal Luke Goral said.

“There wasn't a connection before,” agreed Born. “Now there's a tight connection. The business and the school understand what each other wants and needs.” ■

Anne Davis is a freelance writer and former education reporter.