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Exploring Manufacturing in Wisconsin

SUMMER 2026

From Out-of-Date to Cutting-Edge

In Belleville, Wisconsin, a rural community of about 2,500 people, the school's engineering lab once held machines so old and slow that students barely bothered with them. Enrollment in design courses was thin. Student interest was thinner.

Then came the Fab Labs grants. And everything changed.

"There's been a huge switch," said Nicholas Berthelon, the district's 8-12 technology education teacher and fab lab director. "A majority of students were not interested at all in 3D printing and 3D modeling. And now, since having that updated and much better and faster technology, there's been quite a few more students who see that they can do some really cool things."

In late April, the WEDC Secretary and CEO visited Belleville to announce that the district is one of 11 school districts this year that will receive a total of \$250,000 in Fab Labs Grants to continue efforts to revolutionize classrooms into fabrication laboratories (fab labs). These hands-on learning environments have become the cornerstones of STEAM education across the state.

This announcement marks the fourth time Belleville has received a Fab Labs grant since the program was established. School districts receiving Fab Labs Grants this year include:

- **School District of Beloit** – \$25,000
- **Colby School District** – \$25,000
- **Rio Community School District** – \$25,000
- **School District of Arcadia** – \$25,000
- **St. Francis School District** – \$25,000
- **Alma School District** – \$25,000
- **Kewaunee School District** – \$25,000



Nicholas Berthelon, 8-12 Tech Education teacher, Belleville High School, demonstrates some of the Fab Lab technology

- **Fall River School District** – \$25,000
- **Whitnall School District** – \$20,690
- **School District of Belleville** – \$17,600
- **Lake Mills Area School District** – \$11,710

A fab lab is a high-technology workshop equipped with computer-controlled manufacturing components such as 3D printers, laser engravers, computer numerical control (CNC) routers, and plasma cutters. Through the Fab Labs Grant program, WEDC supports the purchase of fab lab equipment for science, technology, engineering, arts, and mathematics (STEAM) educational purposes for students of all grade levels.

Since the program began in 2016, WEDC has awarded more than \$5.7 million

in grants to 136 school districts to create classroom education that meets industry needs and trains Wisconsin's next generation of skilled workers.

During his visit, the WEDC Secretary learned from Belleville students and school leaders what happens when that investment takes root and a district embraces the fab lab curriculum.

Belleville has made integrating their Fab Lab districtwide a major priority. From kindergarten through twelfth grade, elementary students will engage in hands-on STEAM exploration through ten LEGO Education SPIKE Essential Sets, while middle and high schoolers will utilize AI-integrated robotics kits, advanced 3D printers, and injection molding equipment, creating a seamless pipeline of innovation for students.

This year's \$17,600 grant will allow Belleville to continue building out the high school's manufacturing capabilities.

Belleville High School currently has state-of-the-art 3D printers, injection molding equipment, vinyl cutters, heat presses, laser engravers, and screen-printing tools all thanks to the Fab Labs Grants, according to Berthelon, the driving force behind each of the district's fab lab grants. He adds that a student-run business class called Wildcat Manufacturing puts all of it to work, producing custom T-shirts, wooden cribbage boards, euchre boards, and aluminum trailer hitch covers stamped with personalized logos.

For Meera Allen, a high school junior, the fab lab wasn't what she expected. She signed up because she liked art. What she found sparked new interests in manufacturing that she didn't know before.

"I liked doing art, so that first got me into it," she said. "And then once I started doing it, I loved being in the shop and working with my hands and doing all of this other stuff."

Allen has since designed her own sign project from scratch and helped produce shirts for Wildcat Manufacturing, work she'd never imagined doing before walking into Berthelon's class.

The experience has reshaped what she thinks comes next.

"I'm thinking about going into the trades and working with some of the equipment that the fab lab has provided to us," she said. Before the fab lab, she had never touched any of it.

Ari Mehta, a senior, came in from a different direction. He had been tinkering with

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Preparing Wisconsin Students for Careers in Tool & Die



By Laura Gustafson, Tool, Die & Machining Association of Wisconsin Executive Director

Wisconsin's manufacturing industry continues to depend on skilled workers in tool & die, precision machining, mold making, and

advanced manufacturing. For middle and high school students, now is the perfect time to begin exploring these rewarding careers that combine technology, creativity, problem solving, and hands-on work.

Students interested in tool & die careers should focus on building strong foundations in classes such as geometry, algebra, engineering, robotics, CAD (computer-aided design), welding, machining, and manufacturing technology. These classes can help students develop valuable skills that employers are looking

for. Participation in STEM clubs, robotics competitions, technical education programs, and school shop classes also provide practical experience and exposure to modern manufacturing environments.

Equally important are workplace skills such as communication, teamwork, reliability, and critical thinking. Today's tool & die industry uses advanced CNC equipment, automation, and digital technologies, making adaptability and continuous learning key for long-term success. When students are able to demonstrate these skills, employers are often willing to take a chance and train candidates in the more technical aspects required to do the job.

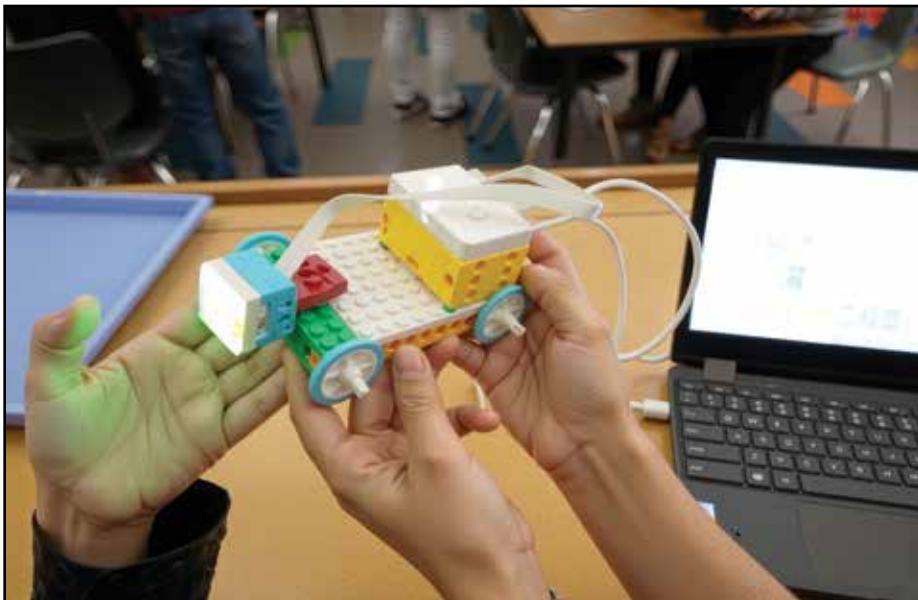
Students are also encouraged to explore apprenticeship opportunities, plant tours, job shadowing programs, and internships to better understand career pathways in manufacturing. More often than not, if you reach out to a tool & die shop in your area, they will be more than willing to invite you to stop by and take a tour. Wisconsin offers many excellent technical college programs and apprenticeship tracks that allow students to earn while they learn and build strong careers without taking on significant college debt. Contact your local Wisconsin Technical College to learn more about this.

The Tool, Die & Machining Association of Wisconsin (TDMAW) plays an important role in helping students, parents, and educa-

tors connect with these opportunities. Through industry partnerships, educational outreach, scholarships, networking events, and career awareness programs, TDMAW helps students discover the wide range of careers available in Wisconsin manufacturing. The organization also works closely with member companies to promote apprenticeships, technical education, and workforce development initiatives across the state. TDMAW offers student memberships for \$15 per year. Visit our website, TDMAW.org, for more information!

By taking advantage of these resources early, Wisconsin students can position themselves for stable, high paying, and skilled careers in one of the state's most important industries. Between 16% and 18% of Wisconsin residents work in manufacturing, with Wisconsin consistently ranking among the top states in the nation for manufacturing employment as a percentage of its workforce. That strong manufacturing base is one reason careers in tool & die, automation, and precision manufacturing remain so important across Wisconsin. We encourage students to talk to their instructors and parents to learn more about opportunities in this important & vibrant industry!

From Out-of-Date to Cutting-Edge Continue from Page 1



More than using standard LEGO blocks, students at Belleville integrate LEGO® Education SPIKE™ Essential STEAM curriculum units to develop problem-solving skills.

electronics and engineering projects at home for years. The fab lab was the next step, and it gave him something he couldn't access at home.

"Having access to great equipment is super helpful," Mehta said. "I had a small, old 3D printer at home. So, it's been a great experience learning how to use different machines, different software, stuff that I don't have access to at home."

His most memorable project: machining an old piece of brass into a sculpture on

the CNC mill. The fab lab didn't change his direction; he always knew he wanted to go into engineering — but it cemented it. "It really has solidified that I want to go into engineering," he said.

The latest grant also brought something less expected to the shop floor: artificial intelligence (AI).

ChatGPT and similar tools are blocked on student computers in Belleville, but AI is entering the curriculum through VEX robotics kits

equipped with vision sensors and integrated cameras. Students will then program the robots to perform image detection and recognition. Berthelon's approach is deliberate: Students learn to build and operate robots without AI first. Only once they understand the fundamentals does he introduce what technology can add.

The program reaches well beyond high school. The district's 525 students in kindergarten through sixth grade cycle through the Discovery Class, a required elective that functions like a traditional shop class rebuilt for the modern era, complete with laser engravers, 3D printers, and robotics equipment. At the middle and high school level, roughly 100 to 120 students engage with the fab lab each year, a number that has grown steadily as word spreads.

The district has also partnered with local engineering firms and manufacturers to keep its curriculum aligned with what industry actually uses.

Community education classes are also in development. These classes will be open to parents, neighbors, and local residents for a small fee. Ideas in the works include a T-shirt making class where participants design graphics, cut vinyl, and press a finished shirt in a single afternoon, and a laser engraving session where everyone leaves with a custom wooden lantern they made themselves.

"School districts tend to be the center of the community," Berthelon said. "If the community doesn't know what's happening in here

and doesn't know about the cool things the kids are getting access to, then that's doing a disservice to the community that's supporting us."

Perhaps the most lasting impact of the fab lab isn't any single piece of equipment. It's the shift in what students believe is possible for their careers after they graduate.

"Kids who were against the engineering side of things are now realizing maybe I could be a mechanical engineer, a CNC mill operator or work in cabinet installation," Berthelon said. "I try to show them there's so many more opportunities out there. It's just expanding their world view."

Through the WEDC's Fab Lab grant program, Belleville has built the kind of learning environment that continues to inspire students every day who come through the fab lab. Students now know there are dozens of versions of what that path can look like — and some of them start with a 3D printer, a robotics kit, and a little bit of code.

"We're extremely supportive of it," Berthelon said. "Especially being in a more rural community, there's quite a few students that post-high school are going to be going into some sort of trades or STEAM-related fields."

Courtesy of the Wisconsin Economic Development Corporation

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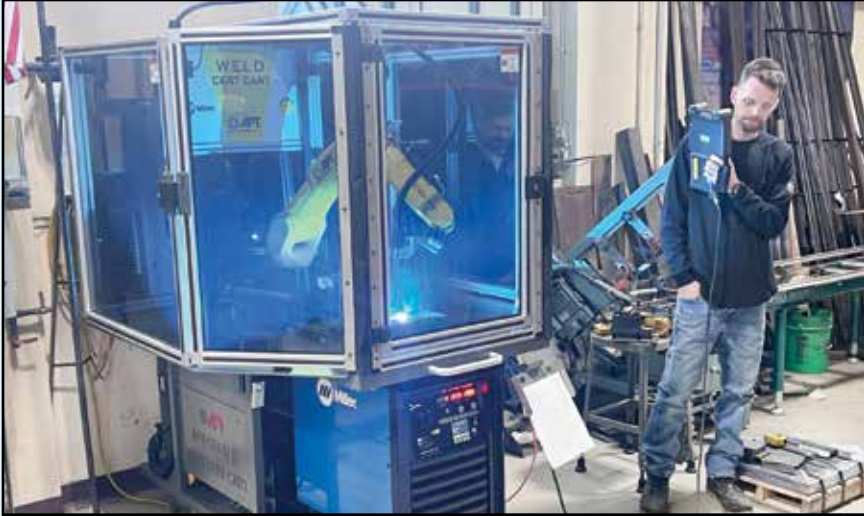
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Highlights from the Fab Lab Grant Recipients



School District of Beloit – \$25,000

Beloit Memorial High School (BMHS) is officially moving forward with the construction of a new Medical Careers Lab over the summer and fall months, targeting an opening date of January 2027. The facility will drive an expansion of the Health Care pathway within the school's Health, Human, and Education Services (HHES) Academy link. The creation of the high-tech training space was made possible through a \$25,000 Fab Lab Grant awarded to Beloit Memorial High School by the WEDC, backed by an additional 50% in matching funds provided by the School District of Beloit.

In addition to receiving the \$25,000 Fab Lab Grant, Beloit Memorial High School and the PACMES Academy are excited to share that thanks to a \$100,000 Fast Forward Grant from

the DWD, Beloit Memorial will be adding a state-of-the-art FANUC Robotic Welding Cell to our already robust Technology Education Department. This cutting-edge equipment will provide students with hands-on experience in advanced manufacturing—building real-world skills that are in high demand. The robotic welding cell will also integrate into our state-of-the-art CNC Lab, expanding opportunities for students to explore precision machining, automation, and robotics together.

These additions are a huge step forward for our CTE programs, offering even more industry-recognized credentials and helping students take the next step in their career pathways.

www.sdb.k12.wi.us



Colby School District – \$25,000

The Colby School District is very excited to have been selected as a Wisconsin Economic Development Corporation Fabrication Laboratories Grant recipient. This grant is going to help us expand opportunities for students in emerging technology education areas that we were working on through referendum construction happening at the district this summer.

After securing this grant, we have dedicated classroom space for a Fab Lab at Colby High School, but students from all levels of the district will certainly benefit from the changes incorporated in this space. Likewise, we know

that part of our duty at the school is to work to enhance knowledge of community members in these areas, and once we have the space up and running, we plan to have community events that children and adults alike can take part in and benefit from.

We will be incorporating many new technologies into our Fab Lab that have not been previously available to students and staff members in the Colby School District as a result of this grant, including several 3-D printers, robotics projects, laser cutting technologies, as well as other technologies.

www.colby.k12.wi.us



Rio Community School District – \$25,000

The Rio Community School District is

preparing to completely transform its technology and engineering lab ahead of the upcoming school year. Thanks to funding from the 2026 Fab Lab Grant, the district is introducing industrial-grade manufacturing equipment and advanced workstation computers into its curriculum. This award marks a pivotal moment for Rio, allowing the district to expand hands-on learning opportunities and ensure our students remain at the absolute forefront of technical education.

The primary goal of this lab overhaul is simple: to bridge the gap between classroom concepts and the real-world skills currently demanded by Wisconsin employers. By bringing industry-standard tools directly to our students, the district can better prepare them for high-paying engineering, manufacturing, and technical positions the moment they graduate.

Rather than just reading about modern production workflows, students will now actively manage them. The grant funding has

been strategically distributed to build a comprehensive, multi-disciplinary workspace. For advanced prototyping and fabrication, the lab is adding two Bambu X1 3D printers and an Epilog Fusion Maker 12 Laser Engraver. The heavy machining capabilities are getting a massive upgrade as well, anchored by a Onefinity CNC Router Elite Series Foreman (48x48), a Powermatic Drum Sander, and a Laguna 220V Bandsaw.

Beyond traditional woodworking and machining, the lab will feature specialized stations for digital design and electronics. Students will gain practical experience in electrical engineering using a new classroom pack of Arduino Starter Kits, Hakko soldering stations, and Fluke True RMS Multimeters. Additionally, graphic production capabilities are expanding with an industrial Ryonet screen printing kit, Cricut digital cutting machines, and a multi-seat education license for CorelDRAW Graphics Suite 2026.

To power this massive new ecosystem, the district is installing seven high-performance HP Z2 Desktop Computers from Paragon Development Systems. These industry-grade workstations will give students the computing power necessary to master complex design, rendering, and automated manufacturing software.

The Rio Community School District extends its deepest gratitude to the grant committee for this incredible opportunity. This investment fundamentally changes what we can offer our students, giving them the confidence, experience, and competitive edge they need to step directly into the workforce as the next generation of industrial leaders.

www.rio.k12.wi.us



Highlights from the Fab Lab Grant Recipients



Alma School District – \$25,000

The Alma School District, nestled between the bluffs and the Mississippi River in Buffalo County, is proving that small rural districts can be powerhouses of modern technical education. Following the successful launch of its initial Fabrication Laboratory in 2025, the district is now utilizing a second transformative grant from the Wisconsin Economic Development Corporation (WEDC) to bridge the gap between digital design and industrial

production. While the lab’s first phase established a foundation in 3D modeling, this latest expansion introduces a powerful suite of equipment that moves students beyond basic prototyping and into the realms of precision subtractive manufacturing and autonomous systems.

A centerpiece of this expansion is the addition of two Next Wave CNC machines; the Shark HD 544 and the Shark HD 510 Plus. These industrial-grade tools allow students to fabricate large-scale, high-precision projects, complemented by a 3D Digitizing Probe Kit for scanning and replicating physical objects. To further diversify their production capabilities, the district has integrated a Full Spectrum Laser Rotary Chuck, enabling 360-degree engraving on cylindrical surfaces. Another key expansion was the addition of newer Bambu 3D printers, in particular, three printers that offer multi-toolhead capabilities. These advanced printers introduce multi-material, large-scale additive manufacturing at higher efficiencies, in-turn allowing students to create more complex parts that were previously impossible to produce onsite.


Beyond fabrication, the grant has launched a comprehensive robotics and aerospace curriculum. The new MINDS-I Drone

Lab invites students to design, assemble, and program UAVs, integrating physics and engineering into a flight-based environment. The addition of the UAV’s was a perfect complement to our onsite Students In Aviation (SIA) flight simulator. To further ensure a continuous learning pathway, the district has invested in a suite of scalable robotics systems, including VEX EXP bundles and Parallax Micro:Bit packs. These resources, paired with BitMaker Grove expansion boards and programmable robot cars, allow students as young as third grade to explore logic and automation, building the foundational skills necessary for the advanced manufacturing workforce.

By investing in this specific array of sub-

tractive tools and programmable electronics, Alma is providing students of all ages with more than just theoretical knowledge. They are gaining mastery over the exact hardware and software used in modern industry. Supported by the WEDC, the school board, and local partners, the Alma Fab Lab has become a high-energy environment where rural students have direct access to the future of automation and engineering, proving that world-class innovation can thrive right here in Buffalo County.






School District of Arcadia – \$25,000

The Arcadia School District is proud to celebrate the receipt of a generous grant that will strengthen and expand opportunities within our Career and Technical Education (CTE) program. These funds will allow the district to purchase much-needed equipment for both the welding and automotive instructional areas, helping ensure that students have access to modern tools and hands-on learning experiences that reflect current industry standards. This investment represents an important step forward in preparing students for successful careers in the skilled trades and technical workforce.

Many Arcadia students thrive in hands-on, collaborative learning environments where they can see the direct results of their work. By expanding these opportunities, the district continues to honor the strong work ethic and community values that are deeply rooted in Arcadia families and the surrounding area.

This grant also reflects the growing recognition of the importance of skilled trades and vocational education in today’s economy. Careers in welding, automotive technology, and related fields offer students pathways to stable, rewarding employment while helping meet critical workforce needs throughout the region.

The Arcadia School District extends sincere appreciation to the foundation and supporters who made this grant possible. Their investment in our students and programs will have a lasting impact for years to come. Through partnerships like these, Arcadia will continue to provide high-quality Career and Technical Education opportunities that empower students to discover their strengths, pursue their passions, and contribute positively to their communities.



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Kewaunee School District – \$25,000



In addition to the recent WEDC grant for the district’s Fab Lab facilities, local support made it possible for the district to purchase a brand-new Welding Fab Table last fall.

“This addition to our welding lab has already made a huge impact. The Fab Table gives our students the chance to practice precision fabrication, refine their welding techniques, and experience the kind of setup they’ll encounter in professional shops. Its sturdy design, adjustable fixtures, and pre-

cision layout make it the perfect platform for accurate, safe, and creative metalwork. Our welding program and STORM Manufacturing classes focus on developing both skill and confidence. With this new equipment, students are already working on exciting projects like smoking racks for a local fish market, bike racks for the City of Kewaunee, and many other small structural frames. Each project helps them apply classroom learning to real-world applications while understanding the importance of craftsmanship and teamwork.”



Highlights from the Fab Lab Grant Recipients

Fall River School District – \$25,000



As a result of the immense support of our community, the Fall River School District is currently in the construction phase of a new CTE addition that will be up and running in the fall of 2026. This state-of-the-art space will allow our students to experience advanced technology and industry-grade equipment in our labs. Beyond the traditional classroom learning, the expansion creates vital opportunities for students to design and manufacture products for our community through our student-run business, Pirate Fabrication and Design.

With the money awarded to us from the WEDC Fab Lab grant, we will be purchasing a CNC router with an automatic tool changer and a vacuum table to minimize setup times and maximize safety and efficiency, which teaches students modern manufacturing principles. Having this machine in our shop will allow us to expand the CNC capabilities for our manufacturing and building trades pathways. Students will now have the precision tools required to engineer unique and customized projects made from woods, plastics, e-panel, and much, much more. We will be

able to expand the experiences for our students because the software we currently use for our CNC plasma table is the same that will be utilized with the new router. Additionally, the purchase of the new router as a result of the Fab Lab grant, will allow us to expand our curriculum in our buildings and trades course. Students will have the capability to make state-of-the-art cabinets and signs. By replicating the workflows of Wisconsin manufacturers, we are ensuring our students are not just learning a trade but also understanding the business of manufacturing.

We recognize in Fall River that almost 2/3 of our students leave our high school and enter directly into the trades, workforce, or military. Our goal is to provide the best possible work-based opportunities through our CTE programming to ensure that our students find success in their post-high school endeavors. We are incredibly grateful to the WEDC and our local community for investing in our youth, and we welcome industry partners to collaborate with us as we train the next generation of Wisconsin's skilled workforce.

fallriver.k12.wi.us



Whitnall School District – \$20,690



An exciting transformation is underway at Whitnall Middle School. Thanks to a recent Fab Lab Grant, the school is bridging the gap between standard classroom learning and modern industry. The goal was simple, to upgrade their lab spaces so students can get early, hands-on experience with high-tech equipment that directly mirrors the tools used in modern engineering and manufacturing careers.

At the center of this initiative was a new Epilog laser engraver. This piece of equipment arrived just before spring break, and the impact has been immediate. Already, 100 students have learned how to set up digital artboards and operate the machinery. By the end of the school year, every seventh and eighth grader enrolled in the Manufacturing & Engineering and Building Trades classes will have direct experience running it. Currently, Building Trades students are using the laser to construct precise architectural models, mastering blueprint scales, basic building codes, and digital CAD design assembly along the way.

But the work isn't just staying inside the classroom. Students have already used the laser to craft parking signs for Veterans Day,

trail markers for the school forest, and even custom gears for the high school's theater production of Hamlet. The ultimate vision is to launch a student-run custom shop, showcasing the skills of these young makers directly to the local community.

The real power of this middle school program is how it connects with Whitnall High School. By introducing advanced design software, 3D modeling, and workshop safety protocols early, the district is laying the groundwork for student success. This proactive approach eliminates the steep learning curve freshmen usually face. Instead of spending ninth grade learning the basics of tool operations, Whitnall students can now walk into the high school lab ready to dive into complex, real-world projects on day one. With the fundamentals already covered, high schoolers can focus on earning major, resume-boosting credentials from industry leaders like Autodesk and the Fab Academy. Backed by strong partnerships with local businesses, Whitnall is turning elective classes into a powerful professional pipeline, preparing students for great, high-paying careers right here in our regional economy.

www.whitnall.com



Lake Mills Area School District – \$11,710

The Lake Mills Area School District features active Fabrication Laboratories (Fab Labs) at the middle and high schools, focusing on STEAM education. These cutting-edge workspaces are equipped with computer-controlled tools like 3D printers, CNC routers, and laser engravers to provide hands-on career and technical training.

In addition to the recent WEDC grant, the district also recently received a \$5,000 grant from the Lake Mills Area Community Foundation (LMACF) to boost technology and engineering programs at the middle school.

This grant will help purchase a new laser printer so students can engrave their own designs. The school hopes to continue growing the Fab Lab with even more technology.

Thanks to educator Nate Grundahl, LMMS students are not only learning cutting-edge technology and engineering skills, but also building empathy, compassion, and a spirit of service.

We're proud to support the next generation of innovators right here in Lake Mills! - LMACF

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ATECH Partnership Expands Career Opportunities for Students



Appleton Area School District

At Appleton Technical Academy (ATECH), partnerships with local industry are helping students gain real-world experience while preparing for high-demand careers in manufacturing and industrial technology. One of the academy's strongest and fastest-growing collaborations is with a nearby, major packaging company, a partnership that continues to create meaningful opportunities for students

through advanced training, mentorship, and youth apprenticeships.

Most recently, ATECH celebrated two students who officially signed on as youth apprentices with the packaging company in industrial maintenance: Jamal Mais and Frank Somers, both entering their junior year.

Through the apprenticeship program, Jamal and Frank will gain hands-on experience while working toward an Industrial

Congratulations to Appleton Technical Academy (ATECH) student Izzy LaChapelle for earning a gold medal in Welding Sculpture at the SkillsUSA State Competition this February! Her first-place finish is an incredible achievement that highlights both her talent and dedication to the skilled trades.

Izzy is also graduating with her Technical Diploma in Welding, further showcasing her hard work and commitment throughout her time at ATECH. Her accomplishment is especially notable as she is the second ATECH student in two years to earn first place in Welding Sculpture—and the first female student to do so.

We are proud to celebrate Izzy's success and the outstanding way she represents ATECH and the Appleton Area School District.



Maintenance Specialist certificate through a partnership between ATECH and Fox Valley Technical College (FVTC). Students can earn seven college credits free of charge while attending ATECH, helping reduce the cost of continuing education after high school.

As part of the program, each student will complete at least 450 hours of paid, on-the-job training during their junior year while working alongside experienced company mentors. Students who continue into a second year of youth apprenticeship during their senior year can complete an additional 450 hours of training. Upon successful completion of both coursework and workplace learning requirements, students earn a Wisconsin Youth Apprenticeship Certificate of Occupational Proficiency.

The partnership also creates long-term opportunities beyond high school. If students choose to continue working with the company after graduation, the company offers tuition reimbursement for remaining coursework needed to complete the certificate program, as well as additional support for technical diplomas or associate degrees in the field.

The youth apprenticeship program is just one part of the growing relationship between ATECH and the packaging company. In 2024, ATECH officially opened the new Amcor Learning Lab, made possible through a company grant.

The state-of-the-art lab features advanced automation equipment and robotics designed to prepare students for careers in Industry 4.0 and industrial automation. Through hands-on learning in the lab, students can earn industry-recognized micro-certifications through the Smart Automation Certification Alliance (SACA), giving them valuable credentials before graduating high school.

The company's employees also play an active role in student learning by serving as mentors in the lab and sharing industry

knowledge and career insights. Students have opportunities to tour company facilities throughout the Fox Valley region, helping connect classroom learning to real-world manufacturing environments.

ATECH, located within Appleton West High School, was established in 2014 to help address the growing demand for skilled manufacturing workers in Northeast Wisconsin. The school combines traditional academics with hands-on technical education in areas such as welding, machining, automation, and mechanical design.

Students learn in labs that mirror modern manufacturing facilities and gain practical experience through project-based learning and partnerships with local businesses. ATECH students can also earn nearly one-third of the college credits needed for an associate degree at FVTC before graduating high school.

As manufacturing industries continue to face workforce shortages, partnerships like the one between ATECH and the packaging company are helping build a strong pipeline of future talent while giving students affordable pathways into rewarding careers.

For students like Jamal and Frank, the opportunity represents more than just job experience — it's a direct connection between education and a successful future in Wisconsin's growing manufacturing industry.

If you're interested in learning more about ATECH or supporting our mission of graduating students who possess the knowledge and skills necessary for successful entry into the career pathways of modern advanced manufacturing, check out our website at atech.aasd.k12.wi.us.

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Developing Skills for the 'Real World'

How Stratford's Student-Run Business Serves the Community While Developing Future Professionals



*Brock Fritz, Director of Communications
Wisconsin Association of School Boards*

Walk into Stratford High School and you might see students constructing a deer blind, crafting metal signage or building a doghouse.

Drive around town months later and you're likely to see those same products in the woods, outside of a local buildings or housing a member of the Marathon County Police K-9 unit

That's the result of the Tiger Technology Club, a student-run business that designs, builds and sells products to the Stratford community.

"Our program specializes in giving students exposure in a wide variety of courses and career fields," Stratford Technical Educa-

tion Teacher Blake Lehman says of the high school's technical education department, which includes courses on woodworking, construction, graphic design, engineering, metalworking, automotives, electricity, small engines and manufacturing. There's also a Youth Apprenticeship program and a class that teaches do-it-yourself skills, such as basic plumbing, electricity, drywall repair, small engine maintenance, siding repairs and everything else students should know before graduating and entering the "real world."

"These skills are important to help them safely do basic, hands-on things on their own once they graduate," says Lehman, who is entering his seventh year of teaching. "Soft skills will help them become more college,

career and life ready, which are the three big things our district focuses on."

The Tiger Technology Club provides these skills by giving students the ability to create and sell a variety of custom products. The club produces items like custom fire truck vinyls, conference tables, banners, doghouses, metal signage and more.

Many of the products rely on community partnerships. The deer blinds are a result of a partnership with a modular home builder, which donates most of the materials needed for construction.

"Community partnerships are crucial for us to do what we do," says Lehman, who advises the Tiger Technology Club alongside Marshall Lehman. "Many local businesses donate materials to help us grow our program and allow students to gain access to larger, more advanced projects. Partnerships also allow our students to gain connections with potential employers."

The Stratford construction students, typically juniors and seniors, then build the blinds from scratch before marketing and selling them to community members.

"They use all basic construction skills," Lehman says of the skills the students develop. "They learn how to read a blueprint, as well as framing, insulation, siding, shingling, etc."

Once the blinds are ready to sell, the stu-

dents post on the school's social media page to market their products. When someone purchases a blind, they drive to the Stratford High School, pick it up and bring it home.

The 6x6, fully insulated blinds are modular, coming apart in six pieces. Therefore, they can stack the sections on a trailer and transport them to their desired location without specialized equipment. One-way vision vinyls are applied to the windows to conceal the hunters inside.

The start-to-finish process fits the tech ed program's desire to create confident, capable students.

"We hope our students gain confidence in themselves to take on basic projects once they graduate high school," Lehman says. "We want our students to continue doing hands-on things, and not have to rely on hiring people to do things that they could do themselves. We also hope some students are able to find a career that interests them due to the wide variety of courses we offer."

This article was originally published in the October, 2025 issue of School News. Reprinted with permission.

stratford.k12.wi.us



Pittsville High School Manufacturing & Entrepreneurship Program

"Panther Creations"



*Stephen Hadfield, Technology Education
Instructor and CTE Coordinator
Pittsville Area School District*

Students in the Pittsville Manufacturing & Entrepreneurship Program at Pittsville High School are gaining more than classroom experience — they are running a real business that creates custom awards, plaques, signs, and other products for customers throughout the

community.

The student-led business gives learners hands-on experience with modern manufacturing equipment, design software, customer service, production planning, and entrepreneurship. From personalized recognition awards to custom business signage, students are involved in every step of the process.

Students learn to use industry-standard tools such as laser engravers, CNC machines,

and graphic design software. Students work directly with customers to create unique products tailored to individual needs. The program allows students to develop technical skills while also learning the importance of communication, teamwork, problem solving, quality control, and meeting deadlines.

The goal is to provide students with authentic learning experiences. By operating a live business, students see firsthand how manufacturing and entrepreneurship works in the real world. They are not just completing assignments, they are creating products that people, organizations, and businesses actually use. The Panther Creations business has produced awards for local sports teams, schools, businesses, community organizations, and special events.

As manufacturing continues to evolve with advanced technology and automation, programs like this help bridge the gap between education and industry. Pittsville High School's Manufacturing Program is giving students the opportunity to learn by doing while making a positive impact in the community.

The success of the live business continues to grow each year, showcasing the creativity,



craftsmanship, and dedication of the students involved. Through hard work and innovation, these students are proving that hands-on education can create meaningful opportunities both inside and outside the classroom.

To learn more about Pittsville's Panther Creations Manufacturing & Entrepreneurship student run business, view the student developed website: <https://sites.google.com/pittsville.k12.wi.us/panthercreations2024>

www.pittsville.k12.wi.us





Sparking Early Interest in Engineering, Manufacturing, and Technology Careers



In the spring of 2025, the Muskego High School Technology Education program and the Lake Denoon Middle School Technology Education program were the recipients of two outstanding awards presented at the Wisconsin Technology Education Association Conference: the WTEA High School Program of the Year and the WTEA Middle School Program of the Year, respectively.

We are grateful for our talented staff, the hard work and creativity of our students, and the support of our community that enables programs like Technology Education to grow and succeed. — *Muskego-Norway School District*

Muskego-Norway School District

The Muskego-Norway School District continues to expand its commitment to advanced manufacturing, automation, and robotics education through the development of the Automation & Robotics Innovation Labs at Lake Denoon Middle School and Muskego Lakes Middle School. Supported through recent grant funding, the initiative will enhance existing fabrication laboratories with cutting-edge robotics and automation technologies

designed to introduce students to Industry 4.0 concepts at an earlier age. The project reflects the district's long-term vision of creating a seamless STEM and Career & Technical Education (CTE) pathway that prepares students for high-demand careers in Wisconsin's evolving manufacturing workforce.

The expanded labs will provide students with hands-on opportunities in



Congratulations to our WarriorBots on their strong finish to the season! Making it all the way to the finals at the State Championship!

Continued on Page 21



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Bay Link Manufacturing® Celebrates 12 Students



Green Bay Area Public School District

The Bay Link Manufacturing® program at West High School recognized 12 students and their hard work on May 6, 2026.

Bay Link Manufacturing® instructor Andrew Belongia presented students with CNC operator certificates from a local technical college.

Students in the Bay Link program this year represented Southwest and West High Schools.

Bay Link Manufacturing® is a high-precision manufacturing learning lab equipped to complete projects for local companies in the areas of industrial welding, machine fabrication, and metals.

Juniors and seniors from East, Preble, Southwest and West High Schools are able to learn about the business of manufacturing through sales, marketing, accounting, production planning, bidding and purchase orders, and customer service. The program immerses students in relevant, real-world experience in high tech careers in manufacturing, engineering, marketing and business.

Interested applicants must complete an application and interview process. Students selected to participate in Bay Link Manufac-



turing® attend a block of time each day for an entire school year. Students who complete the course may graduate with college credits as well as high school credits.

Students who complete the Bay Link Manufacturing® program are prepared to attend a 2- or 4-year college to pursue on-going education in the field of manufacturing and engineering or may be prepared to enter the world of work in an entry-level position.

Over the last 11 years, Bay Link Manufacturing has welcomed more than \$200,000 in donations from community partners, and earned nearly \$100,000 through the work of the students.

For more information about Bay Link Manufacturing® see <https://west.gbaps.org/quicklinks/bay-link-manufacturing>

What students had to say:

With future plans to attend college, Bay Link Manufacturing provided Green Bay West High School senior Brennan Corpus with a solid foundation in CNC Machines.

"I learned how to use the CNC machine and other machines," Brennan said. "You can learn a lot of new things. They teach you every machine in the shop and how its used or what you should and shouldn't do."

Green Bay Southwest High School senior Isaiah Bath applied to the Bay Link Manufacturing program to sharpen his skills in the trades while still in high school.

"I've learned to stick with weld and MIG weld efficiently," Isaiah said. "I also learned how to operate a CNC machine and how to use the manual mill. I would like to work at Robinson or another union who focuses on metal. Bay Link is the perfect place to go and have fun."

Green Bay Preble High School senior Alonso Alvarez applied to Bay Link Manufacturing program to prepare for his future careers as a journeyman.

"I applied to the Bay Link program to improve my experience for the manufactur-

BAY LINK® MANUFACTURING

ing apprenticeships that I can apply for in the future," Alonso said. "Some skills this program has taught me has been getting the knowledge for CNC machines and getting the experience working on projects we are contracted for."

Green Bay Preble High School senior Andrew Rosario Marrero plans to pursue a welding degree. Bay Link Manufacturing is a step toward that degree.

"I've learned manufacturing skills," Andrew said. "My proudest moment has been being hands-on and I applied to be a part of this program because it is dual credit."

Green Bay West High School junior Kobi Aguon said he wanted to pursue Bay Link Manufacturing because he liked Technical Education and the idea of working on CNC machines sounded like something he may want to do in the future. Now, he has the skills for a future career!

"I've learned to measure with a dial caliper; operation of a manual mill and time management," Aguon said. "My proudest moment was creating my 123 Block which is a project on the CNC and Manual."

Green Bay West High School senior Thomas Tipple said he applied to be in the Bay Link Manufacturing program for the opportunities it provides and the skills it teaches.

"I applied for the opportunities it provides and the skills it teaches," Thomas said. "I've learned CNC machining, accurate measuring and a good work ethic."

With future plans to attend college, Bay Link Manufacturing provided Green Bay West

High School senior Brennan Corpus with a solid foundation in CNC Machines.

"I learned how to use the CNC machine and other machines," Brennan said. "You can learn a lot of new things. They teach you every machine in the shop and how its used or what you should and shouldn't do."

For Green Bay Southwest High School senior Dominick Bretl, Bay Link Manufacturing not only set him on path for a future career, but it enhanced friendships and social skills too.

"I will definitely take the skills that I learned in the class with me on my life journey and to my job in the future," Dominick said. "[Bay Link is] fun and you get to meet new people."

Green Bay Southwest High School senior Adrian Ehlers is a big fan of the Bay Link Manufacturing program.

"I would advocate to apply to Bay Link," Adrian said. "It's a fun class with high reward. I applied to experience my future career."

Green Bay West High School junior Jovonny Nolasco wants to pursue CNC machining and welding after high school. Bay Link Manufacturing is an important step in that process.

"Everything we do is a proud moment," Jovonny said. "I've learned how to G code and how to use the CNC machine."

www.gbaps.org





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MASH Offers Robust Career Pathways in Trades & Manufacturing



Medford Area School District

Manufacturing is a cornerstone of Wisconsin's economy, contributing more than \$70 billion annually and employing 1 in 6 workers across the state. Today's manufacturing careers are far from outdated; they're high-tech, creative, and in demand, offering opportunities in automation, robotics, welding, engineering, and more.

From construction and automotive repair to welding, machining, and electromechanical systems, MASH (Medford Area Senior High School) students have access to more than a dozen specialized classes that give them the tools, training, and confidence to succeed in technical fields.

"Our goal is to give students as many onramps to success as possible—whether that's straight into a job, military, a technical school, college, or an apprenticeship," said MASH principal Jill Lybert. "Every course is built to be hands-on, relevant, and reflective of what employers are looking for today."

Metals

On the metal side, Metal Manufacturing introduces students to machining equipment and welding methods, while Metal Manufacturing II offers advanced welding skills including TIG welding and blueprint interpretation, with opportunities for transcribed/dual credit through the local technical college.

Electromechanical

Students looking to enter industrial maintenance or engineering technology fields can dive into the Electromechanical course sequence. Starting with safety and electrical basics in Electromechanical I, the program progresses through AutoCAD, microcontrollers, fluid power systems, and SolidWorks 3D modeling. These advanced classes also offer dual credit opportunities and align with

real-world applications in automation and modern manufacturing.

Starting Early: Laying the Groundwork

For younger students just beginning to explore the trades, Introduction to Technology A and B offer foundational experiences. Tech A focuses on woodworking and manufacturing processes, while Tech B expands into blueprint reading, basic welding, and home maintenance, including creating a custom fishing rod. A unique offering, Just for Girls Tech, encourages female students to explore woodworking and light welding in an empowering, supportive environment.

Those interested in more advanced craftsmanship can progress to Wood Manufacturing, where teamwork and quality control are central as students design and produce furniture. For students who want to take their skills even further, Cabinet Making allows them to individually craft complex projects using advanced tools and techniques.

Automotive and Small Engine Training

For students drawn to mechanics, MASH offers a comprehensive path: Small Engines introduces students to internal combustion engine maintenance and repair, while the ABC's of the Automobile teaches practical car care skills. Students can then advance to Auto Mechanics I and II, covering everything from basic vehicle systems to computerized diagnostics and alignment.

With over 20 courses designed to build technical skill, problem-solving ability, and career readiness, MASH is helping students find purpose and prosperity through the trades.

www.medford.k12.wi.us



Medford Area Public School District Moves Forward with Tech Ed Expansion and Remodel

Just over one year after residents of the Medford Area School District (MAPSD) approved a \$22.6 million referendum, major progress is being made on a transformative expansion and remodeling project for the district's Technical Education building.

Originally constructed in 1977, the tech ed building is undergoing significant updates to better serve today's students and prepare them for modern career and technical opportunities. The project includes both new construction and renovations designed to enhance hands-on learning in fields such as robotics, engineering, welding, and business.

Among the most notable changes will be a new corridor connecting the main high school building to the tech ed facility — a long-requested improvement for accessibility and safety. The expansion also includes four new classrooms: one dedicated to robotics, two for Project Lead the Way

engineering courses, and a larger, state-of-the-art welding shop. A new maintenance storage area is also part of the plan.

In addition to these new spaces, the existing auto and woods classrooms and shops are being enlarged and remodeled to provide more room for equipment and student projects. New storage areas will also be added to help keep materials organized and accessible.

The renovations extend beyond the tech ed building itself. The current engineering and driver's education classrooms in the main building will be remodeled to create two new business classrooms. One of these will support the district's growing entrepreneurship program, which gives students hands-on experience running a school-based business that designs and sells Raider gear — including shirts, hats, and other spirit items.





Inside the Success of Eagle Manufacturing

A Student-Run Business Built on Innovation, Teamwork, and Real-World Experience

By Thomas Burr, NPHS Senior
Northland Pines School District

Every day, millions of products are manufactured across the country. In a world increasingly driven by artificial intelligence and robotics, our classroom business is powered entirely by people. At Eagle Manufacturing, students are the designers, managers, marketers, and manufacturers behind every product we create.

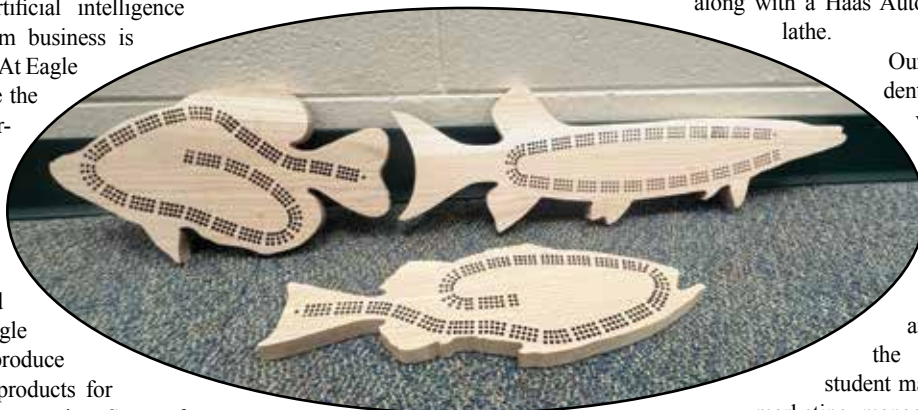
Eagle Manufacturing is a student-run business within Northland Pines High School in Eagle River, Wisconsin. We produce a wide variety of custom products for customers throughout the community. Some of our specialty products include sports banners, custom engraved awards, outdoor firepits, and custom cutting boards. If a customer has a unique idea or special request, we work together to make it happen.

Many of our repeat customers are local businesses. These partnerships provide us with a steady stream of work while also challenging us to improve our repeatability and quality control.

Producing one custom item is very different from manufacturing 100 identical products with the same level of precision and quality.

To meet those expectations, students use

spread across three specialized labs. Our woodshop focuses entirely on woodworking and houses a 4x8 CNC router. In the metals lab, students operate welders, a CNC plasma table along with a Haas Automation CNC mill and lathe.



Our Fab Lab is where students use laser engravers, vinyl printers, sublimation machines, and 3D printers to customize many of the products we make.

At the center of all three labs is our office and design space, where the graphic design team, student manager, accountant, and marketing manager coordinate projects and communicate with customers.

Every day begins with meetings to discuss upcoming jobs, production timelines, and priorities for the day. Organization and communication are critical because every student has a specific role within the company. From the office crew and design team to the woods, metals, and CNC crews, each group is responsible for operating different machines and completing different

industry-style manufacturing concepts such as jigs and fixtures, procedural documentation, and quality control checklists. These systems help maintain consistency not only within one class period, but also between different classes each trimester and from year to year.

Behind every finished product is a wide range of advanced manufacturing equipment

stages of production. By working together, we are able to fully meet the needs of our customers while gaining hands-on experience in real manufacturing environments.

The process begins when a customer inquiry is directed to our student manager. The manager gathers the necessary information so the team can create an accurate estimate for customer approval. Once approved, a work order is created, and the design team develops a proof for the customer to review.

While the design is being finalized, the student manager coordinates with the other departments involved in production so work can begin efficiently. Communication and teamwork are essential because every department relies on one another to complete the project successfully. Once the product clears our quality control inspection, an invoice is created and the customer is contacted to arrange pickup.

Throughout this continuous process, our marketing manager promotes the products we create while working alongside the product development team to design new ideas. We are constantly searching for new products that can keep production moving during slower times of

Continued on Page 16

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Tiger Tech — A Win for the Students, School, and Community



Roy Ward, Technology Education Teacher,
Webster High School
Webster School District

Under the umbrella of Tiger Tech are two unique hands-on learning opportunities for students at Webster High School, Tiger Manufacturing and Tiger Construction. In 2006, I started Tiger Manufacturing (MFG), a student-run business. At that time, we partnered with Dave Wegner, the owner of a local cabinet business, with the intention of giving students real life work experience using advanced manufacturing software and equipment, being self-sufficient, and providing funds and projects for students who could not afford them. We accomplished all the goals, fostered new partnerships, and have continued to grow. Our yearly goal is to get one year better than the year before. It has been continual improvement and win/win/win for the students, school, and community.

In 2015 we started manufactur-

ing houses. We typically build them on a foundation just outside of our shop. They are then sold and moved off-site. The first houses were engineered to be moved and intended to go on a full basement. The houses are 3 bedrooms, 2 baths, open concept, with a vaulted ceiling in the dining and living rooms, and come with custom-made kitchen cabinets. We have built four of these houses which has paved the way to our latest project, a duplex. This will provide student teachers a place to live for free while finishing up their teaching degree.

In 2017 using Tiger MFG funds, we purchased a Haas Mini Mill and started producing metal parts for a local manufacturing company (NG) who supported us with the start-up of Tiger MFG. In 2018 we expanded again when we received a Fast Forward Grant to purchase Haas TL-1 lathe which started our partnership with a major manufacturing and engineering company.



In 2018 we took our first SkillsUSA students to the State Leadership and Skills Convention in Madison, WI. Thanks to Tiger MFG, students don't have to fundraise dollars to participate and have the skills to do very well in the Computer Aided Manufacturing competitions. We have 12 gold medals at State and we were fortunate to have a team of 3 win Nationals in the 2025 Automated Manufacturing Technology competition.

In 2020 we worked with Dan Carney, GM of a collaborative robot (cobot) based systems company, and wrote another grant to add automation to one of our older donated lathes. We purchased a Universal Robot (cobot) and students are able to figure out how to stage, pick, place, and program parts to be made with automation.

In 2022 we purchased a 5 Axis Haas UMC-500 with the help of NG. The company donated the \$40,000 we were short of to make the purchase a reality. We needed a machine that wasn't tied up all the time for production and to provide the next level of learning for students who are ready. It also got us involved with competing at a college level in the Project MFG Advanced Machining League. We made Regionals (top 16) the last two years and are featured on two episodes of their Clash of Trades YouTube show.

Currently, we are looking into replacing one of our older lathes with a Haas DS-20Y which is a dual spindle with live tooling on the Y axis to do drilling, tapping and milling.



There is never a dull moment here at Tiger Tech. Our new principal talks about moving the needle forward and we certainly have been doing that for the last 20 years. Our advice to schools is just get a little bit better every year. You'll be amazed with what you can do if you surround your program with local business support and volunteers who are willing to share their time and expertise with students. It's a lot of work, but it is rewarding work.

www.webster.k12.wi.us



Eagle Manufacturing Continued from Page 15

the school year.

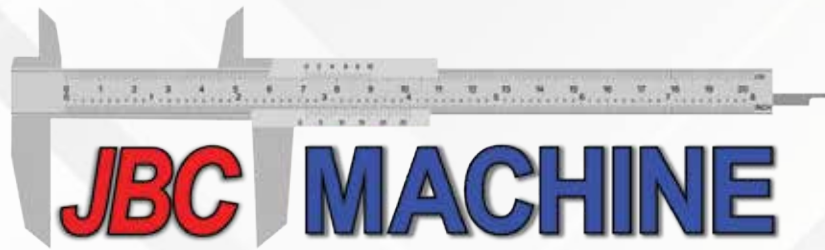
Although each student has a specific role within the company, the class is about much more than simply completing a daily task. The overall goal is to teach students how a business operates and what it takes to become an entrepreneur. Every role provides a different learning opportunity, but all students share responsibility for researching, prototyping, marketing, pricing products, and tracking profit margins.

At the end of every class, we reflect on two important questions: How did I contribute today, and what did I learn?

In a world that never stops moving, manufacturing continues to quietly build the future around us. Programs like Eagle Manufacturing prove that the future is not something already decided — it is something we create ourselves.

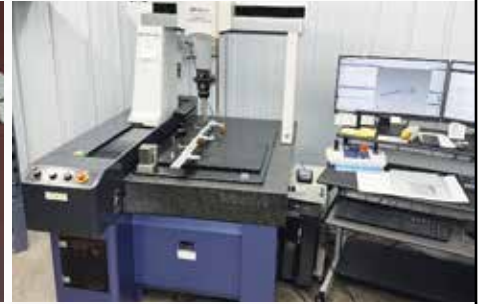
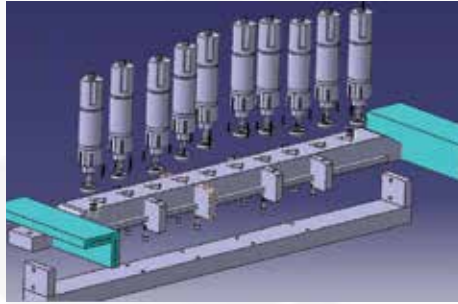
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JBC Machine is committed to continuing education and training for our employees. As of 2023, we have graduated seven employees through the apprenticeship program with Fox Valley Technical College, making them journeyman machinists. In addition, we constantly cross train every employee to ensure no matter who machines your parts, we will produce the same quality results that we are known for every time.

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Hands-On Learning, Real-World Results



Kimberly Area School District

For more than two decades, instructor Kris Sahr has been laying the groundwork for student success, teaching the fundamentals of machining while fostering confidence, curiosity, and craftsmanship. Through his

Metals program, students gain a foundation they can build on for years to come.

The program's curriculum mirrors coursework at Fox Valley Technical College, giving students who continue their education a strong head start. With two CNC mills, a CNC lathe, six manual lathes, and a dozen

other machines, the shop hums with hands-on learning and discovery every day.

"Our program includes one of the few complete, industry-level machine shops found in a high school setting," Sahr explains. "Students come into this class at all different levels. Some have parents or grandparents with a full metals shop at home, while others arrive with no prior experience, just a spark of interest. By the time they leave, they've built the skills and confidence to step into nearly any machine shop."

In Metals 1, students explore sheet metal, welding, lathe work, and hand tools while completing practical projects that strengthen both technical ability and life skills. Metals 2 deepens those fundamentals and Metals 3 allows students to focus on individual interests such as machining, welding, or pipefitting. Students in the Metals program build a strong foundation in machining and fabrication through hands-on learning that connects directly to math, science, and real-world problem-solving.

"Every part of machining, from setting tool speeds and feeds that determine how fast and how deep the machine cuts, to choosing the right materials, relies on math and science," Sahr explains. "It connects classroom learning directly to the work they do

in the shop."

Beyond classroom projects, students see how their skills make a difference in the community. From crafting parts for local projects to competing in SkillsUSA, these young machinists are putting their training to the test.

"Recently, my students and I made a replacement part for the Village of Kimberly," Sahr shares. "Projects like that show the real-world value of what we teach."

Interest in the Metals program continues to grow year after year. Mr. Sahr's classes consistently fill up, showing how much students value the skills and experiences they gain. Many first hear about the program through friends or family members who have taken the class and middle school preview nights help inspire the next group of students to get involved.

Many students continue their studies at college, while others move directly into local manufacturing jobs, an industry always eager for skilled workers.

kimberly.k12.wi.us



Fab Lab Grant Funding Enhances Learning Opportunities



Rob Heller, Ellsworth High School Assistant Principal

Ellsworth Community School District

Ellsworth High School is excited to utilize Fab Lab Grant funding to enhance learning opportunities for students in our new Career and Technical Education (CTE) Center. These funds will allow us to provide students with hands-on experiences using industry-standard equipment, including our new CNC

Haas mills and lathes as well as 14 welding booths equipped with Miller Multimatic 250 welders. Access to this advanced technology will help students develop technical skills while working in an environment that closely mirrors modern manufacturing and fabrication facilities.

The addition of this equipment will significantly strengthen our programs in manufacturing, construction, welding, and engineering. Students will gain valuable experience operating precision machinery, developing fabrication techniques, and solving real-world engineering challenges. By learning with the same tools and technologies used by industry professionals, our students will be better prepared for post-secondary education, apprenticeships, technical training programs, and direct entry into high-demand careers.

Fab Lab Grant funds will also help launch Panther Manufacturing, a student-run business designed to provide authentic entrepreneurial and workforce experiences. Through Panther Manufacturing, students in technology education courses will design and manufacture products, while business education students will take the lead in marketing, advertising, sales, and customer relations. This collaborative approach will create meaningful cross-curricular learning opportunities that connect classroom instruction to real-world business operations.



Participation in Panther Manufacturing will allow students to develop essential employability skills such as communication, collaboration, leadership, problem-solving, and project management. These experiences will help prepare students for success in both college and career pathways while fostering a culture of innovation and teamwork. Ellsworth High School is extremely grateful for the opportunities provided through the Fab Lab Grant and looks forward to the lasting impact these funds will have on our students, programs, and community.

In May of 2025, Ellsworth was one of 20 schools in Wisconsin selected to receive a \$25,000 Fab Lab Grant from the WEDC.



www.ellsworth.k12.wi.us





LENNY'S LEAP

Planning for life after high school starts sooner than you think—and there are smart ways to get ahead. Lenny's Leap at Lakeshore College is a dual enrollment program that helps students earn college credit while still in high school, creating clear, student-centered pathways toward a degree or career. Some students even complete a credential by the time they graduate high school.

Even better, many of the credits earned transfer to other colleges and universities, including Lakeshore College.



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Cost savings toward college

Contact Us! Connect with the Lakeshore College Dual Credit Team:

920.693.1366

LennysLeap@lakeshore.edu

Scan the QR code or visit our website at lakeshore.edu/lennys-leap.
Take the leap today!





Bridging the Gap Between Education and Industry



Mellen School District

The Mellen School District is proud to showcase its Career and Technical Education (CTE) program which is designed to give students experience in trade and manufacturing education.

A major highlight of the program is its pathway to higher education and career readiness through programs such as Drafting and Woods which offer articulated credit through our local technical college and the ability to take courses online through our Start College Now program to prepare our students for

apprenticeships or to get a headstart on their post-secondary education.

The ultimate goal of our program is to prepare students with both the technical and employability skills needed to build a successful career.

Modernizing the Department

Thanks to several grants, community support, and some creative financing we have built a modern CTE department which includes the following:

- Two laser engravers

- A High-powered CNC router
- A CNC plasma cutter
- 2 Multi-Color 3D Printers
- A state-of-the-art vinyl cutter

Student-Led Manufacturing

With this new equipment our student led manufacturing class, Black Granite Manufacturing, is now more capable than ever to fulfill the needs of our community and the surrounding areas with quality student-made items.

In this course, enrolled students do not just complete assignments—they run a legitimate business. Students design, manufacture, market, and sell goods and services to real customers with real expectations. Because we are a small school located in Northwestern Wisconsin and do not have much industry in the area, we focus primarily on producing popular products such as cutting boards, Adirondack chairs, custom plaques, metal signs, and vinyl lettering. Students have created a web page for customers to submit orders for existing products or to order something custom made.

Youth Apprenticeships: The technical skills students have learned in class come together for our juniors and seniors, who are encouraged to apply their knowledge out in the workforce as Youth Apprentices. Cur-



rently, roughly 65% of our eligible juniors and seniors are actively involved in the Youth Apprenticeship program.

Seeing young people gain real, hands-on experience in high-demand career fields has brought immense pride to the Mellen School District. By bridging the gap between education and industry, Mellen is ensuring its students graduate not just as capable learners, but as highly employable leaders ready to tackle the modern workforce.

www.mellendiggers.org



DWD Awards Equipment Grants to Three School Districts

In January, the Wisconsin Department of Workforce Development (DWD) awarded \$23,249 in Wisconsin Fast Forward grants to three school districts in the state.

The Advanced Manufacturing Technical Education Equipment grants will benefit more than 500 students and help address the state's skilled workforce shortage by supporting schools as they prepare students for quality, in-demand jobs. School districts will use the funding to expand career pathway options by upgrading technical education training equipment and facilities.

"Fast Forward grants help prepare our future workforce for careers in high-demand, high-skill industries," said the DWD Secretary. "The state-of-the-art equipment, including laser cutters, welders, and advanced wood fabrication tools, will enable schools to provide coursework that aligns with industry standards and strengthens our state's advanced manufacturing workforce."

These grants may also reduce higher education costs for families through dual enrollment credits, industry-endorsed certificates, and technical endorsements on high school diplomas.

The Wisconsin Fast Forward program was expanded in 2018 to invest in the workforce of the future by reimbursing school districts to enhance or improve a techni-

cal education facility or acquire equipment used for in-demand fields. The program has provided Technical Education Equipment grants of more than \$8.2 million to over 253 Wisconsin school district projects to help students explore careers and transition from high school into the workforce.

The current round of grants will support the following projects:



Turtle Lake School District, Barron County — \$7,167

The funds will be used to update equipment and enhance safety with Miller Multimatic 220 AC/DC Welders and a Hypertherm Powermax Plasma Cutter, enhancing the quality of the instruction.

www.turtlelake.k12.wi.us



Parkview School District, Rock County — \$10,190

The funds will be used to purchase a CNC plasma cutter and a CNC laser. The machines will provide students with hands-on

experience in coding, design, fabrication, and manufacturing.

www.parkview.k12.wi.us



Hurley School District, Iron County — 5,892

Grant funds will be used to purchase a Cantek three-phase jointer and add a second laser engraver to help prepare students for successful careers in the manufacturing industry.

www.hurley.k12.wi.us

Spotlight Northwoods Manufacturing

Northwoods Manufacturing is a student-run business located in the Hurley K-12 School in Hurley, Wisconsin. All of our projects are handmade by students with assistance from our Wood Shop Instructor, Roger Peterson, and our Metals Instructor, Jake Hostettler. All of our revenue goes to our shop and ensuring that we have up to date materials, machinery, and tools.



All workers in Northwoods Manufacturing are high schoolers, but our program goes beyond high school. All 8th graders in the Hurley K-12 School go through a semester of woodshop as part of their school year. This class gives them the opportunity to learn work ethic and teamwork along with woodworking and other life skills. It also ensures that if they chose to pursue going into woodshop in High School that they are at the level they need to be to keep up with the upperclassmen.

The first projects for almost every single 8th grader are making a cutting board and turning a pen. Making these projects allows them to learn to use every machine in the shop (excluding our CNC, which can be used to engrave cutting boards after production). After they are done with this, all of the students are free to make what they want to and pursue what interests them. This leads to endless possibilities of what we can create.

For more information go to <https://www.northwoodsmfg.net>



New Lisbon's Ben Morey Named WTEA Educator of the Year!

*The Technology Educator of the Year Award recognizes a *technology educator who has provided outstanding contributions to technology education. — WTEA*

By Ben Morey, New Lisbon Junior High/High School
New Lisbon School District

My name is Ben Morey and I am the recipient of the 2026 WTEA Educator of the Year award. I have been teaching Technology Education for 23 years and have been a teacher at New Lisbon Junior High/High School for the past 22 years. I have been a proud member of the WTEA for 22 years.

Why Teach?

When people ask me why I chose to become a teacher, I tell them that I like kids and I get to play with power tools! I enjoy teaching students about the skilled trades and working with students as they learn high level skills that help them become contributing members of the workforce. I am passionate about exposing students to new skills, new technologies, and new opportunities that are available in industry today.

My Beliefs About Tech Ed

This I believe about technology education in preparing students for their future: Technology education provides students with unique challenges and opportunities that require “hands-on, minds-on” problem-solving. Technology education introduces students to tools, industry-relevant skills, and real pathways

that connect learning to meaningful careers. Through designing, building, testing, and refining, students develop confidence in their ability to create solutions that improve their communities and influence the world. Technology education creates adaptable, innovative thinkers—the future workforce who will lead, design, and transform the world.

My Classroom

My classroom is a place where a wide variety of learning opportunities take place. I bring excitement, energy, and expertise to my students each day. I teach Design & Engineering, Woodworking, Construction, and Welding; from basic to advanced levels. My goal, as a Technology & Engineering Teacher, is to provide active learning that is hands-on and minds-on. I am strategic in how I use my time to get the most out of the 44 minute class period. I teach skills in chunks, and break things down into learnable parts so that concepts are easier to remember and understand.

I work to build community and camaraderie in my classroom by asking my students, “Tell me something I don’t know.” I want students to feel comfortable communicating and giving honest feedback through project evaluations where I ask students for suggestions to improve. Reflecting is an important skill to model, so students can improve. My students



enjoy collaborating, brainstorming, and having a part in the direction of the class project or unit.

My students have required labs and projects that they complete to show mastery of skills. I make it a goal of mine to demonstrate tasks in several different ways; have visuals available and always check for understanding. I want my students to demonstrate and explain skills learned to their peers as this helps with

student mastery and allows for a continuous learning culture and student engagement and empowerment.

I love that I get the opportunity to teach students hands-on, minds-on skills such as operating the oxygen & acetylene torch to cutting a rabbit/dado wood joint on the table

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Engineering, Manufacturing, and Technology Careers Continued from Page 11

robotics programming, automation systems, engineering design, fabrication, and system integration. New equipment and resources will support classroom instruction as well as extracurricular opportunities, including the district’s growing robotics and drone programs. Students will gain experience using industry-relevant technologies that promote creativity, critical thinking, collaboration, and real-world problem solving. By engaging students in authentic learning experiences at the middle school level, the district aims to spark early interest in engineering, manufacturing, and technology careers.

A key component of the initiative is building stronger alignment between middle school learning experiences and the advanced STEM opportunities available at Muskego High School, including robotics, engineering, manufacturing, and fabrication coursework. The district’s Innovation and Fabrication Labs are designed to create a progressive learning model where students continually build technical skills and confidence throughout their educational journey.

The district continues to strengthen partnerships with Wisconsin manufacturers and industry leaders. These collaborations help ensure that programming remains aligned

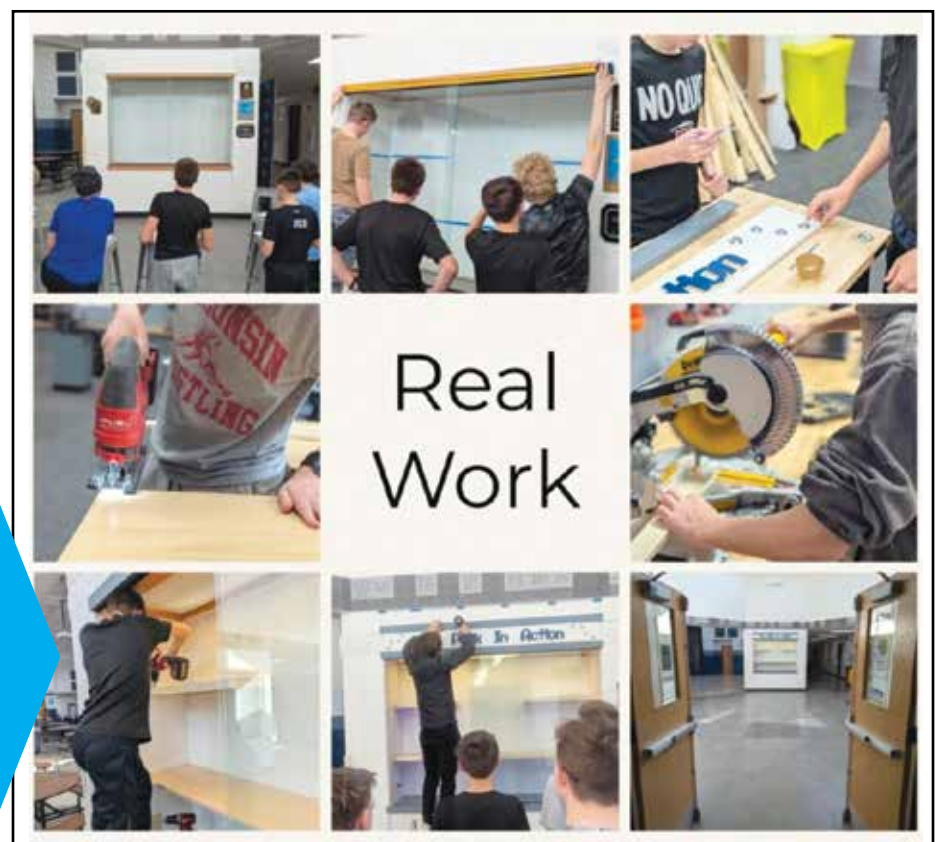
with workforce needs while exposing students to real-world applications and career pathways. Through these investments, the Muskego-Norway School District is not only expanding access to innovative educational experiences but also helping develop the next generation of skilled workers, problem solvers, and manufacturing leaders for Wisconsin’s future economy.



In April, Mr. Sobczyk’s Tech Ed students at Lake Denoon Middle School reworked the layout of the display cases at the front entrance—replacing shelving and breathing new life into the space!

These display areas are perfect for showcasing student work, and what makes this even more special is that the space itself is now a product of student craftsmanship.

Great work by our students and staff!





Forest Park Middle School named WTEA's Middle School Program of Year!

*This award provides recognition to a *middle (or junior high) school which delivers an outstanding program that provides students with an introduction to the areas and concepts of technology and engineering. — WTEA*



*Craig Adams & Doug Johnson
Forest Park Middle School, Franklin Public Schools*

Forest Park Middle School is a sixth - eighth grade middle school with an enrollment of about 1100 students in Franklin, Wisconsin. The Tech Ed department consists of two teachers, Craig Adams and Doug Johnson. We are very fortunate to have a new facility which was completed in 2019. The facility consists of three classrooms including a manufacturing area, an engineering area, and a robotics lab.

6th, 7th, 8th Grade Courses

There are two semester long classes that meet every other day for each grade level. Both teachers are teaching at the same time, one in the engineering room and the other in the manufacturing room. Classes spend one quarter in each room. At the end of first and third quarters, classes are “flipped” to the other room.

In sixth grade all students take an introductory “Engineering and Technology” course. During the engineering half of the class, students do an exciting “Egg Crash Car” engineering activity. They are also introduced to 3D modeling software and 3D printing. Finally, students design and make the “Puzzle Cube”. On the manufacturing side they use mostly hand tools and learn basic skills while making a wood key holder, wood photo board and a tic tac toe game. Students are also introduced to injection molding.

In seventh grade, students have the opportunity to take a follow-up elective Engineering and Technology class. Over 90 percent of students take this class. In the engineering classroom students complete an advanced 3D modeling activity where they design a 3D printed key chain, an architecture activity

where they design a cottage, and finally a vinyl heat transfer T-shirt design. In the manufacturing room students make a thermoformed acrylic napkin holder and a light up picture frame where they learn how to solder a series LED circuit. They are also introduced to vacuum forming and blow molding.

Eighth grade students are offered two elective classes, “Manufacturing and Design” and “Engineering in Action”. About 70 percent of the eighth graders participate in these classes and are challenged to take things to the next level. Students who choose the Manufacturing class make a custom designed acrylic clock, forged screwdriver, custom designed CNC plasma cut grill spatula, custom keepsake box and a wood pen set. In the Engineering class, students work on a custom designed 3D printed LED glow phone/airpod holder, custom model rocket, custom CO2 car and also a couple robotics and mechanisms activities.

Integrating Engineering & Manufacturing

Our goal in the Tech Ed department is to provide students with many hands-on experiences that give them technological awareness and understanding, promote good craftsmanship and pride, prepare them for high school and introduce career opportunities. All of our courses are hands-on, project-based and are designed with a strong engineering component integrated with a manufacturing component. We believe it's important for the students to understand the close relationship between the two. Our projects are also designed to give students exposure to a variety of materials including woods, metals and plastics. We feel plastics is an area that is often overlooked in schools but yet is extremely important since it is a very large industry in Wisconsin. Students

are exposed to a number of different plastic processes including injection molding, thermo forming, vacuum forming, blow molding and of course 3D printing. We would like to thank the Society of Plastics Engineers for their support!

Can't Wait to Take it Home Test

When choosing projects for each of the classes we try to make sure the projects are ones which the students like and will be successful at. Projects must pass what we call the “Can't wait to take it home test” when the students finish them. We try to keep the students excited and motivated throughout the progression of our classes. One way to do this is to make sure students have a customization option for all their projects. We are constantly amazed at the ideas and designs the students come up with!

Students start taking Tech Ed in sixth grade not knowing what to expect. For most students it quickly becomes their favorite class. One of our favorite student quotes which we hear often is: “Tech Ed is the only reason I come to school!” In a recent conversation with an eighth-grade girl, she mentioned how when she started Tech Ed in sixth-grade she thought it was going to be a “dumb” class but she quickly discovered how much she liked it and then took every elective class we offered. Now she has signed up for three freshman Tech Ed classes next year at the high school!



If you're interested in learning more about what we do, our complete curriculum including lessons, templates, reviews, rubrics, etc. can be found at: <https://tinyurl.com/fpm-steched2026>

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www.franklin.k12.wi.us



WTEA Educator of the Year

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saw. From designing a part in CAD to successfully cutting it out on the CNC plasma cutter, students are engaged and working with their brain and body, constantly problem solving.

Many of my classes (Woods 2-Fundamentals of Woodworking, Construction-Fundamentals of Construction, Welding 1-Oxy Fuel Cutting) are transcribed with our local Technical College (Western Technical College). I communicate with local industry experts on a regular basis to stay current on what they are looking for in new employees and what technology should be implemented. My goal is to make sure my content and curriculum is current and up to date with local industry standards and technologies used in the workforce.

My Acceptance Speech Says It Best

God is Good! I am thankful and honored to receive this award. I have a poster in my classroom that talks about careers and it is broken down into four parts: The World Needs IT, You Get Paid for It, You Are Great At It, and You Love It. If you can find a career that hits

all of those four parts—you have found your purpose. I have found my purpose—helping kids better themselves, teaching them skills, believing in them, and watching them go out into the world and make a difference.

I am so thankful to my family, my three awesome children and my wife, Rachel. Rachel is the best teacher I know. She brings high energy, high standards, and high effort. They say, “Iron sharpens iron” —I am a better teacher because of her. I've told people in the past that I teach next to my wife, and they say, “How can you teach next to your wife?” After 22 years, I don't know how I could not teach next to her. She makes me a better teacher

A wise person (my wife) once told me, “Teaching is a verb. Teaching is action, teaching is movement, teaching is presence. Let's Teach 'em Up!

newlisbon.k12.wi.us





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