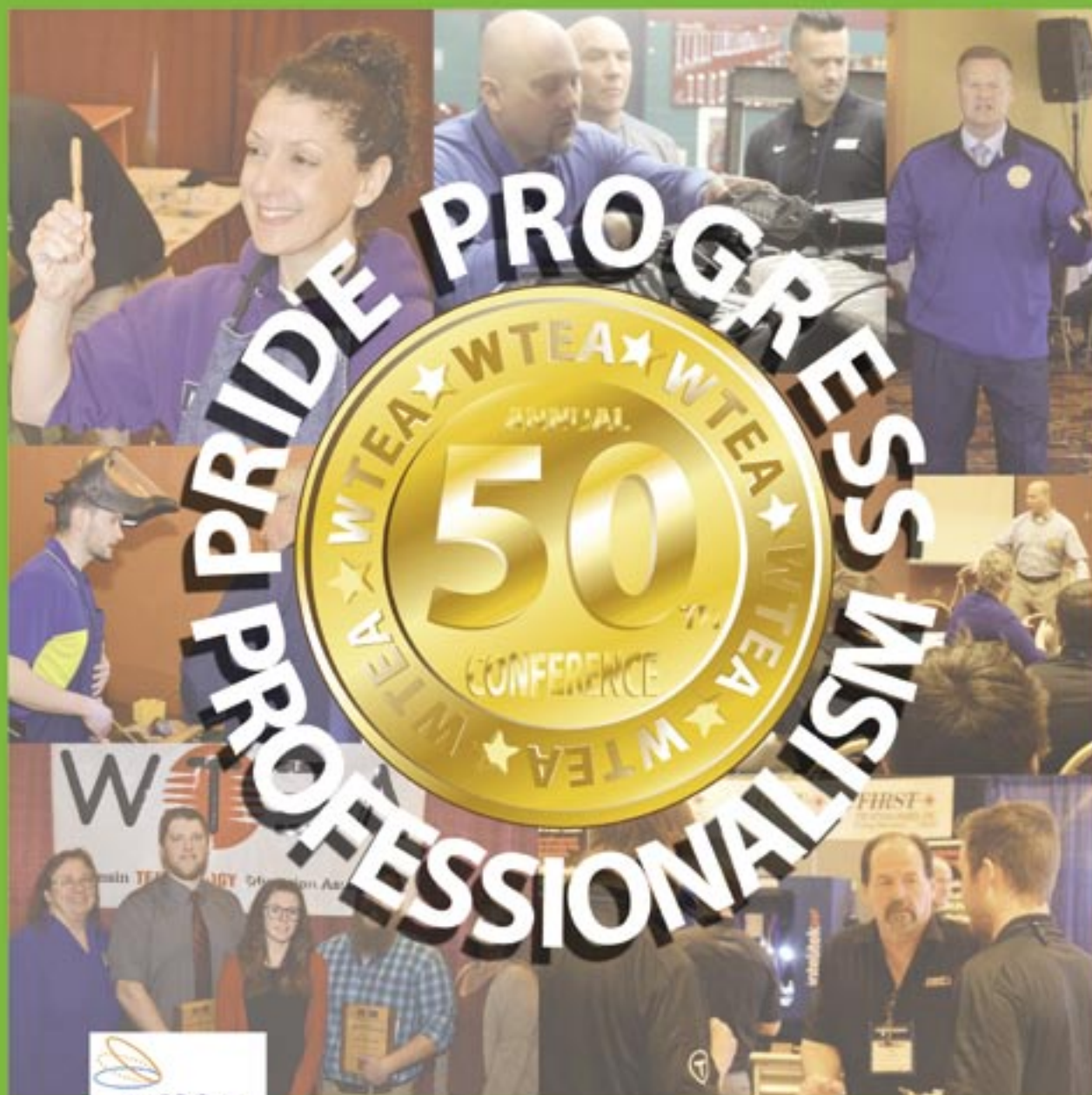


Interface

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Feature Article By LMI





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From the President's Desk

By Phil Bickelhaupt, WTEA President

Spring should be in full swing across Wisconsin as you sit down to read my first President's Message. Spring is always a great time of year as we cleanup the mess that winter left behind and we look forward to the summertime. This can also relate to our classrooms. Throughout our shops and labs students are finishing up their projects and begin the cleanup process as the end of the year nears. In addition, teachers start planning for next year's projects with all the knowledge and insight gained at this year's conference and that cycle continues year after year.

In continuing that thought of cycles continuing year after year, it is hard to believe the year is 2018. Do you recall the Y2K scare? Hard to believe it has been 18 years since the Y2K scare, considering that was the year everything was going to go haywire. Good thing for us, it didn't. The year 2000 is also the year I graduated from the University of Wisconsin - Stout and started seeking my first job. I would be remiss if I didn't share a bit of my journey to becoming President of the WTEA. As many of you, I started my new job and had a few great mentors to guide me in my first few years. Two of those great mentors were Dan Fara and Denny Nelson. Denny introduced me to the WTEA and got me involved from my early days in the classroom. I quickly learned what a great organization the WTEA is and I needed to be part of it. Dan encouraged me to become involved, to be active and to be heard, so I did. It was shortly after I started teaching (perhaps 3 years) I took over as a District Director when Denny moved into the Vice-President role in the WTEA. The rest of the story speaks for itself. However, my point here is simple - for teachers new to the profession, get involved, be active and be heard. For the veteran teachers, continue to be a mentor to those new teachers, introduce them to the WTEA and encourage them to be involved, to be active and to be heard. Thanks, Denny and Dan, for encouraging me to become involved and to be active!



As we move forward through 2018 and beyond, there are a few items I want to bring to your attention. If you haven't heard by now, next year's spring conference will be the WTEA's 50th Anniversary Conference. The WTEA Board of Directors has already started the planning for this conference as we want to make it the biggest and best yet. We are analyzing the feedback you provided in our post-conference survey to help us make decisions on the conference format. Mark your calendars for March 6-8, 2019 so you are sure not to miss this great conference.

Additionally, new Presidents typically talk about a call to action or specific goals they have for the organization. While I have no specific call to action at this time, I do have a few specific goals. A few of my goals are to continue to provide service to our members by providing quality resources, useful professional development, and creating opportunities for our students. However, the most important goal for me, is to strengthen the integration and partnerships with organizations and businesses that support Technology and Engineering Education. Steve Meyer, now Past-President, started a new Business and Industry Advisory Team within the WTEA led by Bryan Albrecht. I am anxious to continue to work with Steve and the new Advisory Team to develop relationships that will strengthen our organization and provide opportunities for our members and their students.

In closing, I am excited to tackle the role as your new WTEA President. As your President, I will work to make sure your voice is heard not only within our organization, but at the state and national levels as needed. To ensure your voice is heard, I need to hear from you about your concerns - what is good, what is not good, etc. Please feel free to contact me at anytime to discuss these items, voice your concerns or share information about how to strengthen the WTEA. Have a great end of the school year!



Plan now to attend the 50th WTEA Annual Conference

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WTEA BOARD NEWS

Winter 2017-18 WTEA Board Meeting Highlights

By Matt Schultz, WTEA Secretary/Treasurer

The following summary highlights the WTEA Board of Directors meeting held January 12-13, 2018.

- New Appointments:
Mike Cattelino:
Technical College Representative
Angie Arneson:
District at Large
Brian Albrecht:
Business and Industry Advisory Team Leader
- WTEA Board is looking to partner with supporting companies/organizations to sponsor different events at the Conference. There are plenty of opportunities for companies to get involved on all three days of the conference. Stay tuned to hear more about different opportunities. Contact Joe Cointea if interested in learning more. (joe.cointea@wtea-wis.org)
- Transcript high school credits with local Technical College. Contact your technical college to get this opportunity for your students started.
- CTE Incentive Grants went from 3,000,000 to 3,500,000 with a 1,000,000 increase over the next two years. 4600 certifications granted in 2016-2017.
- 52 experience-based licensee applications for 2017-2018.
- 86 experience-based teachers teaching in Wisconsin. 138 in the state (994 total licensed tech ed teachers).
- The WTEA is encouraging members to host a "High-Tech" Weekend in your area. Topics can include a wide variety of subjects such as CNC, Lasers, 3-D printers, Carpentry, Auto, Machining, etc. For more information contact Jesse Domer. (domerj@watertown.k12.wi.us).

*For additional information about this meeting contact any member of the Board of Directors.
Complete minutes are available from Matt Schultz at mjschult@kUSD.edu.*

- Dates to Remember -

April 24 - 25	45th SkillsUSA State Conference	Madison, WI
May 9, 5:00 pm	Northern Concrete & Big Ox Energy Tour	Denmark, WI
June 13 - 14	Marine Manufacturing Careers Exploration Event	Green Bay, WI
June 25 - 29	54th Annual SkillsUSA National Championships	Louisville, KY
June 25 - 29	WiFAB Retreat West	UW-Stout, Menomonie, WI
July 9 - 12	Automotive Technology Summer Institute	NWTC, Green Bay
July 11 - 13	Lemelson-MIT Event	FVTC, Appleton, WI
July 23 - 27	WiFAB Retreat East	FVTC Fab Lab, Appleton, WI
October 10 -12	Career Pathways Network National Conference	Louisville, KY
Nov. 28 - Dec. 1	ACTE Career Tech National Conference	San Antonio, TX
March 6 - 8, 2019	Celebrating our 50th Annual WTEA Conference	Wisconsin Dells, WI

Got Skills?

By Bob Morehead, WTEA Vice-President

During the 2017 WTEA conference, I presented a session titled, “Shop and Other Dirty Words.” In this presentation, I pointed out the difficulty in trying to answer the question, “What do you teach?” Technology and Engineering Education is a very broad field that means different things to different people. 17 years ago, fresh out of college, I was very proud to answer that question with “I teach Technology Education.” This didn’t always solicit the desired response. People assumed that I taught “computers and stuff.” Even fellow educators didn’t quite know what I did. I once had a conversation with a principal from another school district. After talking for about ten minutes, she still thought that I was the IT person for my district. I finally told her that I teach welding and machining classes. She responded with “Oh, you’re a shop teacher.”

The foundations of true technology education are based on teaching the broad-based conceptual understanding of how the human made world works. This provides students with knowledge that is transferable to just about every career field imaginable. Yet, if broad-based conceptual understanding is the only thing that we teach, then we are missing a huge component of technical education - skills. I had a conversation with a colleague last year. We were walking around my welding lab and he made a statement that I do not think I will ever forget. “Why teach skills? Skills can be sent to China.” I was so shocked that I really didn’t know what to say. I am well aware that we live in a global economy. I am perfectly fine outsourcing when it makes sense. With that said, this country is facing one of the largest skilled labor shortages in history. American manufacturing is alive and prospering and manufacturing is just one area that is hurting for quality skilled labor. I am pretty sure that our roads, bridges, buildings, and pipelines are not going to be contracted out to workers from the other side of the world.

A few years ago, I took a group of students to the SkillsUSA conference at UW-Stout. (It is not a coincidence that our student organization is named SkillsUSA.) One of my students took first place in the Precision Machining contest. He made an aluminum business card holder during the competition. I told him that someday he could put that on his desk in his own office. He responded with, “Mr. Morehead, if I have an office and a desk, then I failed.” He wanted to be successful working with his hands out on a jobsite - not sitting in some stuffy office all day. That same student graduated two years ago. He is working as a welder’s helper on a pipeline and

on track to make double what I am currently making this year. His post-secondary education consisted of about 12 months of technical college at a fraction of the cost that he would have paid attending a university. He choose that

path because of the skills that he had developed while in high school and goals that he had. He may not be working on the pipeline for twenty years, but I know that he will be successful in whatever he does. Everyone has his or her own version of what that dream job looks like. Your dream job may be an engineer or it could be a plumber. It is not for me to judge. If we don’t expose students to skills education, they may never make those kind of connections. I don’t expect all of my students to be welders and ma-

chinists. There are so many other transferable skills and concepts that they learn from these classes; precisions and tolerance, quality control, print reading, inspection, engineering, efficiency, communication, deadlines, customer service, and even science and math. Rigorous in-depth skills education can be transferable and more importantly, it can be life changing.

If we don’t teach skills, who will?



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From the Past-President's Desk

By Steve Meyer, WTEA Past-President

I hope all of you had a great conference. It was a whirlwind and I finally feel like I am getting caught up with things. I thought the conference this year was tremendous and I really liked some of the changes that took place. To me, it seemed like the trade show was busier than ever. I also like the awards banquet on Wednesday night. I know that it maybe didn't allow some people enough time to get to it, however, it did seem to make Thursday night a lot more relaxing for everyone and allowed much of our membership to have some down time and just "talk shop." Overall, I think we are continuing to make strides forward to provide more and more value to our membership. The WTEA, along with its annual conference, is a constant journey in continuous improvement.

With continuous improvement in mind, I believe our association is at a point where we need even more involvement by the association members. If we want to continue to grow and provide more professional development, more members need to share their best practices. One of the things I noticed in the post conference survey was that many members wished to see more break-out sessions for middle school teachers. This is a great problem to have and, I agree, it would be awesome to see more middle school breakout session opportunities. In order to do this, we need more middle school teachers to rally the charge. I encourage more middle school teachers to look into presenting a best practice or even holding a middle school panel discussion. I truly think that a few middle school teachers could start a trend that would grow. The WTEA board will look into ways to promote this more, but my best recommendation for making this happen would be for some middle school teachers to drive it home.

I also believe we can collectively grow the Project Showcase. This continually receives great reviews from our membership as a tremendous addition to our conference. I agree, it did seem like there were less items this year. I am not sure if it was just because it was in a bigger room or what. I understand it is not always easy to bring projects along, however, if every member just brought just one item, we would be bursting at the seams! The board will try to think of some ideas such as "best project award," or other incentives to freshen up the showcase. Also, the Project Showcase has always been open to all K-12 and technical college projects. It would be nice to see a larger variety of age ranges and content areas. Once again, I think the best way to do this is to have it driven by the membership. I encourage all of you to start thinking about this now and save items whenever they pop up. This

makes it much easier when the conference comes around next year.

Lastly, I want to thank the WTEA for everything you have done for me in my presidency over the past two years. I hold that position very dear to my heart and took a lot more away from it than I contributed. I am excited to pass the torch to Phil Bickelhaupt as he definitely has the leadership, know-how and passion to take our association to the next level. I am anxious to work as Past-President. A couple of my goals are to really focus and help the board plan a knockout conference with our 50th Anniversary coming up this next year. I am also excited to keep developing and working with our newly formed Business and Industry Advisory Team. I believe strongly that the more connections and support we have with business and industry, the more opportunities we will have for our association, for you as teachers, and for your students.

Have a great rest of the school year everyone and keep driving forward until the last minute of the last day. The young people of Wisconsin are counting on you. Then, take a break and celebrate your hard work and success.



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DIRECTOR REPORTS

District E Changes

Alan J. Mamerow, District E Director



Happy Spring to all WTEA members! It was great to see many of you at this year's Annual Conference. At the conference, Doug Kugler and I "swapped" director positions, with Doug taking over as a Director-at-Large, while I stepped into the District E Director role. Doug and I will be working together for the next few months to plan District events

for the future. We are currently looking to host a district meeting at the Lab Midwest Tech Center in Mequon in early Fall.

As Doug and I work together through this transition, we will be updating the District E contact list. If you are new to District E, have changed schools, or are in the areas surrounding District E, please let me know. I can be reached at mameal@hamilton.k12.wi.us or at (262) 957-6022. I look forward to connecting with many of you in the coming months. Finish the school year strong!

Tech Night Successful

Dave Stroud, Director -at-Large



My name is Dave Stroud and I am a Director-at-Large for the WTEA. I have been a Technology & Engineering teacher at Ashwaubenon High School for the past 17 years. A couple of cool things I'm doing with students this year include starting a Tech Night pro-

gram where one night a month we invite all Ashwaubenon students, parents, and community members to come into our facilities and participate in a hands-on activity focused on one of the areas we teach our students.

During the 4th term, I will be working with one of my classes to build five Little Free Pantries to be placed at each of the Ashwaubenon School District's schools as a community service project.

District F Meets at Blackhawk

Eric Sutkay, District F Director



Post conference is a great time to reflect on the first half of the year. Before the conference, the members in District F were given an opportunity to meet up for a nice evening of presentations, discussions, food and a tour. For some time now I have tried to meet my fellow educators in the western part of my district (Rock and Green counties), with distance and work schedule being the biggest road blocks. This winter I made no excuse, and it proved worthwhile. In February, Blackhawk Technical College welcomed a WTEA evening event where they opened the doors to District F members, brought in guest speakers and provided a very nice venue for educators to gather and discuss the profession. We had an opportunity to learn about the new curriculum and initiatives that Blackhawk had to offer as well as presentations from the College of Lake County and program directors. Blackhawk Technical College is

looking forward to working with local schools to provide trainings, certifications, equipment and mobile labs to its neighboring schools. This evening allowed for a connection to be made with the WTEA and the local technical college. You can be sure that you will see future upcoming events that you won't want to miss as this partnership continues to build!



New WTEA Board Member and a Industry Tour Opportunity

Angela Arneson, Director-at-Large



Greetings WTEA. I am Angie Arneson and I am your new Director-at-Large board member. I am excited for the opportunity to be part of the WTEA board and to network with different Technology and Engineering teachers from around our great state! I am in my seventeenth year of teaching middle school students and my role as a Technology and Engineering instructor has changed drastically throughout those years. I currently teach three Design classes, a 6th and 7th grade exploratory class, 8th grade Construction and a 8th grade Manufacturing class at Denmark Middle School. My goal each year is to have my 8th graders make a "Rememberable Mark" during their last year at the middle school that will last for years to come. Whether it is making games for the outside recess area or benches for around the school, it is something that they can come back to years later and say "Hey, I made that!"

One of my roles as a board member is to create opportunities for our members to attend industry/company tours. We have an exciting tour planned for May 9 at 5:00 pm. We will be meeting at Northern Concrete, 6601 County Rd R, Denmark, Wisconsin. We will be touring Northern Concrete Construction and Big Ox Energy. You may be asking yourself, "What is Big Ox Energy?" Big Ox Energy designs, builds, and operates renewable natural gas facilities throughout the U.S., which provides a 'green' solution for the disposal of organic waste materials (primarily in the food and rendering industries). Northern Concrete Construction performs all of the concrete work for Big Ox Energy projects as well as many other commercial, residential, and agricultural contractors throughout the Midwest. We will be able to tour both industries and see how they work together on one site. Following the tour we will have a social gathering at a local establishment. Please email me at arnesona@denmark.k12.wi.us by April 27 if you plan on attending the tour. Hope to see you there!

Dual Credit Effort Saves Area Students Over \$1 Million in Tuition

Submitted by Lee Colony, Gateway Technical College

Partnerships forged between Gateway Technical College and area school districts helped to save high school students \$1.44 million in college tuition costs for the 2016-17 academic year through dual enrollment. A total of 3,435 students earned college credit while in high school through dual credit, an effort which allows students in participating high schools to earn high school and Gateway credit at the same time free of charge.

"We are excited to see so many students taking advantage of Gateway's dual credit offerings," said Stacy Riley, Gateway vice president of Student Services & Enrollment Management. "The collaboration between Gateway and our high school partners is truly amazing and has proven extremely beneficial to so many high school students. The money students save toward their college education, and the time saved to complete their degree or credential, positively impacts each student and their family."

Gateway is on track to offer dual credit opportunities to nearly 5,000 high school students during the 2017-18 academic year.

The Wisconsin Technical College System released figures on the connection between high-schoolers taking career and tech ed classes and their success in school. The WTCS indicated that:

- High school students involved in career and technical education are more engaged, graduate at higher rates and typically go on to postsecondary education.
- Taking one career and technical education class for every two academic classes minimizes the risk of students dropping out of high school.

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June 14th – Sturgeon Bay

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Come join the *North Coast Marine Manufacturing Alliance* (NCMMA) and the *Wisconsin Technology Education Association* (WTEA) for two fun filled days on the water learning about Science, Technology, Engineering, and Mathematics careers and learning experiences in the boat and ship building industry. This event will include tours of *Marquis Yachts* and *Bay Shipbuilding* along with presentations from *Hands On Deck Inc.* boat building and *Sea Perch* underwater robotics student competition. Events will also include boat rides on the bay of Green Bay in Marquis and Cruiser yachts and dinner on the water with NCMMA members. The event is limited to 25 STEM educators. We hope you can enjoy us for some fun on the water with the Marine Manufacturing Careers Exploration event.



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ChallengeUSA's Spring Events Are On Their Way!

By Mike Paquette, ChallengeUSA President

For those not acquainted with ChallengeUSA, we were formerly named WEEVA. After an expansion to Illinois Autobahn Raceway in 2017, we took the new name of ChallengeUSA. This year we have 5 spring events to offer to everyone willing to develop a super-efficient electric or gasoline vehicle. This is the 25th year of energy efficient racing in Wisconsin. Help us celebrate it by checking out our events throughout the Midwest.

- UW-Stout - April 20th and 21st at the Menomonee Regional Airport
- UW-Platteville - April 27th and 28th
- Autobahn in Joliet, IL - April 29th and 30th
- Fox Valley Technical College - May 4th and 5th
- Road America - May 14th and 15th

We have over 75 cars in the state and more regionally who compete in these events every year. I have found that these are great events for students to see what is happening throughout the state in technology education and to develop relationships, network, and have a great time building an energy efficient car.

If you still want to learn more, ChallengeUSA will be holding a workshop this summer July 25th – 27th. We will be following the WTEA Conference format with 1.5 hour breakout sessions and providing hands-on tutorials. Speakers are nearly all lined up, and we are excited to have it held this year at Rolling Meadows High School, north of Chicago.

Have a great Spring and we look forward to seeing you soon! In the meantime, check out our website at www.challengewisconsin.org.



WTEA Foundation Scholarship

The WTEA Foundation is offering a renewable \$1000 scholarship for a high school senior who commits to pursue a career as a K-12 Technology & Engineering educator.

Eligibility

- Wisconsin resident
- Enroll in Technology Education at a Wisconsin University and start the fall semester
- Submit completed application form and 250 word essay



2018 Scholarship Recipient

Michaela Guerrini, UW-Stout

Deadline extended to May 15, 2018!

Details of the scholarship and the application form can be found on the WTEA Foundation website at www.wteafoundation.org.



SkillsUSA: It Can Happen Anywhere, Just Look At Us!

By Wauzeka-Steuben SkillsUSA Members

SkillsUSA was introduced as a new organization to Wauzeka-Steuben in 2015. Wauzeka-Steuben is a small rural school in Southwest Wisconsin whose enrollment hovers around 300 students K-12. Since its inception, participation in SkillsUSA has blossomed. In a rural school like ours, SkillsUSA can have such an huge impact on students through leadership skill development, enhancement of career and technical skills and in helping to make us career ready. In such a short period of time, it is clear SkillsUSA is an amazing experience and has unlimited potential.

In Wauzeka-Steuben's first year, our chapter had just three middle school students. Now, in our third year, there are a total of 33 members as of this writing or nearly 25% of our middle/high school! SkillsUSA Wisconsin has seen this growth and has recognized Wauzeka-Steuben for it.

By far the pride of the chapter is that Wauzeka-Steuben was awarded the 2017 SkillsUSA Lowe's Grant, making it just one of only 6 schools in the nation to receive this grant. Wauzeka-Steuben's SkillsUSA goal with the Lowe Grant was to build a new grandstand at the baseball field in Wauzeka. A groundbreaking ceremony was held on July 31 and was attended by Wisconsin SkillsUSA State Officers and Staff as well as school board, administration, staff members and of course, SkillsUSA members. The project was required to be completed by November 1st. SkillsUSA members, staff, and community contributed hundreds of hours to make this project successful. The chapter was thrilled to have the grandstand finished almost a full week ahead of schedule. The best part about the grant is that it will not only serve the student athletes of Wauzeka-Steuben, but our entire community as this ball field is used by the community for summer baseball. The dedication will take place at the beginning of the baseball season in 2018. The grandstand brought our chapter together to work as a team from start to finish. It will forever be a symbol of pride for SkillsUSA!

In addition to the grandstand, Wauzeka-Steuben has conducted multiple fundraisers and has participated in numerous other community service activities throughout the past two years to raise money for the chapter and create community exposure. The chapter also took a group of members to the Crawford County Highway Department to help with the Crawford County Clean Sweep on Friday, October 27th 2017. All of these activities connect us to community and as well teach us the true meaning of service!

Hosting 2017 SkillsUSA Week activities the week of Feb. 5-11, 2017, was fun for the whole school and gave our young chapter an opportunity to spread the word about SkillsUSA. There were dress up days on Thursday and Friday. Thursday was Job/Career day in which the students dressed up representing a job or career that they were interested in. Friday was SkillsUSA Color Day, where students dressed up with official SkillsUSA colors of red and white. The week culminated in a student service organization celebration! SkillsUSA Week 2018 will be even better!

If you think that's great, there's more. We represented ourselves and our school in SkillsUSA competitions!

On December 6th, 2017, the chapter took 24 members to our District competition held this year at Gale-Etrick-Trempealeau High School in Galesville, Wisconsin. Members competed in 5 different competitions which included Team Engineering Challenge(TEC), Welding, Automotive Service Technology(AMST), Prepared Speech, and Cabinetmaking. The middle school TEC team of three seventh graders placed third while another middle schooler that competed placed first in Prepared Speech. In the high school competitions, one of the freshman members placed third in AMST.

District competitions really end with the calendar year, but the new year saw SkillsUSA members on the road to State. Here's how we got to Madison in 2017!



On January 26th & 27th our entire chapter headed to SWTC (Southwest Wisconsin Technical College) to compete in many different types of contests from Team Engineering Challenge to Welding or just to observe the contests. There were six middle schoolers and six high schoolers who competed in Team Engineering Challenge. Team Engineering Challenge is a contest when a team of three people are assigned a problem and have a limited amount of time to complete the task/problem before they would have to test their solution. Finally there were four high schoolers who competed in Welding. All members did well but none placed.

The State Conference was April 25th and 26th, 2017 in Madison. This was the first year that Wauzeka-Stauben high schoolers competed at State. At the State Conference members participated in Team Engineering Challenge and then four new contests which included 3D Printing and Design, Welding Fabrication, Prepared Speech, and CO2 Dragster. Also, 2 members were voting delegates, which meant they had the ability to vote for the state officer team for the next year. A Wauzeka-Stauben middle school member placed 2nd in Prepared Speech and our Welding Fabrication Team placed 6th place out of 16 teams in the high school division. While we all worked

to earn recognition on stage, we realized that the lessons learned were far more impactful than going to Nationals!

The goal for 2017-18 is to have new students who will want to go to state to compete and gain the experience like the previous competitors did. As members of a rural school, we are so proud of our advisors Mr. Gillitzer and Mrs. Wilson-Smith. They allow us to pursue opportunities that without SkillsUSA, we wouldn't be afforded.

So WTEA members, as you read this in your rural schools, you may be asking, can you start a SkillsUSA chapter?

We would ask that you try. Start with a few members, allow their peers to have a say in what they want to do and then hold them accountable. If we can build a grandstand, have state winners and along the way fun and in the process create relationships with professionals to the careers we aspire to, we think it's worth it.

SkillsUSA. It can happen anywhere, just look at us.



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The advertisement features a large 3D printer on the left, a smaller 3D printer in the center, and a computer monitor on the right displaying a 3D model of a mechanical part. The background is dark, and the text is white and blue.

High Demand - Hard to Fill Careers in Manufacturing

By Ann Franz, Director of the NEW Manufacturing Allinace

As the director for the Northeast Wisconsin (NEW) Manufacturing Alliance, I am very thankful for working with so many dedicated tech ed teachers. Their passion sparks students' excitement about manufacturing careers. These educators are helping students develop skills and career awareness in high demand occupations. The Alliance provides labor market data for K-12, so educators can inform students of high demand – hard to fill occupations. We all know of the crisis in this country regarding college debt. As students make an investment in their college education, there also needs to be an understanding of the return on investment (ROI) of that education. The Alliance conducted two studies in 2017, in order to provide timely data to equip students as they make decisions of what types of occupations would be most viable in northeast Wisconsin.

The 8th annual northeast Wisconsin Manufacturing Vitality Index was administered in October and November 2017 by the University of Wisconsin-Oshkosh's Business Success Center. The sample was drawn from 601 manufacturers in Northeast Wisconsin with \$3 million or more in annual revenue and 25 or more employees. 147 companies completed either a telephone or online survey (24 percent response rate). The survey found 59 percent of the respondents reported increased sales with another 76 percent believed their sales would increase in 2018. Companies were investing in plant modernization at an all-time high at 74 percent in the study. This compares to just 5 years ago only 46 percent were investing in plant modernization. The expectation of increased plant modernization will mean a higher skilled workforce is needed to work with automation and robotics. The study had

over half of the respondents stating they were going to hire in Quarter 1 in 2018 and over 40 percent plan on hiring throughout 2018. What was troubling was 88 percent said they couldn't find the workforce they needed compared to the first year of the study in 2011 when 29 percent were concerned. The occupations that were hardest to fill include: CNC machinists, machine operators, engineers, welders, assemblers, electro-mech techs and general labor. Interestingly, CNC machinists/machine operators have been either the highest or second highest hardest to fill in the 8 years of the study.

The Alliance also conducted a study last spring of the Alliance's over 150 manufacturing members. The survey explored concerns about the impact of the retiring workforce, plus average age and tenure of its production and engineering workforce. It found that 85 percent of members are concerned about the aging workforce. However, only 35 percent have any programs in place to address the issue. In reviewing the over 30,000 employees' occupations that have the highest percentage of people 56 years or older working in that profession, the study found:

37% Maintenance Mechanics & Millwrights

35% Electricians

33% Service Techs, Electro-Mechanics & Machinists

32% Elec. Engineers & Mechanical Engineering Techs

31% Electrical Engineering Techs

When students determine what occupations they should pursue, this data should help them consider what are the high demand and hard to fill occupations as they graduate high school or college. Tech ed teachers can help guide students to have very successful futures in these high demand - hard to fill occupations.

High Tech Weekend Opportunity

By Dave Stroud, Ashwaubenon High School

There is currently a High Tech Weekend focused on masonry being planned for the middle of September to early October of 2018. The event will take place at Northeast Wisconsin Technical College (NWTC) and will be led by NWTC masonry instructor Dave Pries. We are looking at having the event be on a Friday evening and all day Saturday. Attendees will learn about tools,

materials, and techniques used by masons. There will be hands-on learning activities and curriculum that attendees will be able to take back and incorporate into their courses. When a specific date and time are determined, a message will be sent out on the Tech Ed listserve with details on how to register. Please contact Dave Stroud (dstroud@ashwaubenonk12.org) with questions.

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and other award and special recognition recipients!



HHI's Larry Granec and award recipient Shannon Flaherty and nominator Alan Mamerow



HHI's Larry Granec and award recipient Donald Tupper

**Congratulations to recipient Steve Brick!
(not pictured)**



John Neal and Larry Granec were proud to represent Haldeman-Homme at the exhibit booth at the WTEA trade show. Thank you to all who stopped by to meet with us!

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Why LMI Packaging Solutions?

LMI Packaging Solutions is a leader in the flexible packaging industry and is focused on partnering with food and beverage manufacturers that are looking for innovative lidding solutions.

Founded in 1967, by Chester Sykes, LMI Packaging Solutions was built with the vision of “creating a company where people could be heard.” In 1985, Chester’s daughter, Jean Moran, took over leadership as CEO and lead it through the challenges and changes of both the economy and packaging marketplace before handing over reigns to her son, JP Moran in 2017. Before turning it over to the 3rd generation, Jean established a culture of “finding your genius.”



With the help of an ever-changing industry, expanding and working with strategic partners in the tool die cutting, roll stock and other new business development opportunities, LMI Packaging Solutions is moving forward with rapid growth. Our Engineering and Technical Team is dedicated to provide a diverse selection of materials alongside our Design and Prepress Services who are experts in color theory and customer service to provide high quality designs and layouts.

Training & Development

Professional growth and development is a key to the success of our employees. We provide on the job training that includes technical, product and cultural trainings. LMI Packaging partners with Living as a Leader, Leadership Kenosha, Parkside, KABA and other organizations that allow our employees to get professional development and grow in their current roles as well as advance into potential future roles.

We also believe in providing training and education to our customers around materials and flexographic printing capabilities. Outside of our own employees as our lead

trainers, we value the expertise of our machine and product vendors to keep us in the know of new and upcoming changes to the industry.

Commitment to Education

LMI Packaging Solutions is committed to education, not only for our employees but for the community. The LMI Academy was started in 2017 and partners with local high schools in the area to provide opportunities for the young adults coming into the work force after high school. We provide work life experience on top of financial support if college is in their future.

It started out as a way to expand the way we gained employees and has evolved into a partnership with the education system to better align ourselves so we can support each other. With the new businesses moving into the area, there are so many amazing opportunities for our young adults to get on the job training and we wanted to tap into that. We also felt it was a way to help our community keep good employees in the area instead of losing them to competing cities.

Our first year, we partnered with Indian Trail Academy and Westosha Central High. We got to meet with interested students to explain who LMI is, what LMI does and why LMI wanted to partner with their schools. A few students were able to join us on a mini-manufacturing day at the facility where they got to see firsthand what they would be doing during the summer. In June 2017, we welcomed four students into the program and three still currently work for us in some capacity. A few jobs these students are able to work are Production Support, Die Cut Operators, Plate Maker, Press Helper, Press Operator to name a few, but the sky is the limit with growth of the program.



On top of getting on the job training, LMI is looking to help support these students financially with their education at a local university. This doesn't stop with our employees in the academy - we also provide tuition reimbursement for all employees who have identified courses or programs to advance their careers at LMI Packaging Solutions.

In addition to the LMI Academy, we are partnering with Kenosha Unified School District and working with the apprenticeship program where students are eligible to receive school credit for working. We currently have one student enrolled who will transition into the Academy at the time of graduation.

Skills Needed to Succeed in the Flexible Packaging Industry

As a manufacturing organization, we are located in one location. This provides opportunity for jobs in the following areas: Finance, Human Resources, Marketing, Business Development, Customer Service, Sales, Engineering, Creative Services, Printing and Die Cutting.

Throughout the building, experience is always looked at as a positive enhancement of one's resume however when we consider the skills necessary to work in our industry we are looking more for personal characteristics like initiative, ability to learn, multi-tasking, strong work ethic, soft skills and ability to maneuver change. We believe everyone can learn our operations as long as they are willing and eager. Computer skills, mathematical and mechanical aptitude are beneficial skills to have, however not necessary. No matter the skill level coming to work for LMI Packaging Solutions, the opportunities are great and professional and personal growth is inevitable.

We are more than a Manufacturing Company

LMI Packaging believes in giving back to our internal and external community. Our employees work with local organizations to give back through donating their time or resources. A few organizations that our employees are connected to are Boys and Girls Club, United Way, Humane Society, Girl Scouts and many more.



LMI Packaging also has two days during the year where all the employees get to come together in a different environment than the day to day job. One of these is our summer company outing that changes every year. We have attended Brewers games, Kingfish games, company picnics and most recently, the whole company went bowling.



Our second event is our Annual Day of Caring which has been going on for the past decade. It is a day where we shut down the company and all employees come together to have fun and give back to the local community. We strive to give our employees a day to get to know each other on a deeper level, contribute to a cause in which they may not have the ability to do so otherwise, and enjoy a day where they can laugh and let go of the day to day stresses of the job.

Outside of our company wide events, we do host a few events through the year for employees to enjoy with their families. Our biggest event is our Annual Easter Event. Our employees bring their kids to find eggs with the Easter Bunny and take pictures, as well as make crafts to bring home. We just celebrated our 5th annual event. Our first event we had about 30 people all together and this year's total number was around 120.

At the end of the day, we aren't just a manufacturing company, we are a company that comes together to provide a space for our employees to learn, grow and give back.





MY FAVORITE THING

My favorite thing about the conference was connecting with colleagues and seeing all the great projects our teachers are doing with their students in the classroom.

Phil Bickelhaupt, WTEA President



My favorite thing about the conference was getting to see teachers, professors, T & E industry supporters and college students all sharing their knowledge. The willingness to help each other and share ideas, projects, curriculum and more makes the WTEA a family.

Alan Mamerow, District E Director



My favorite thing about the conference was the excitement of seeing all the new projects & ideas that are shared by our WTEA members. The WTEA brings out the best in our profession through collaboration and innovation.

Bryan Albrecht, Business Advisory Team Leader



The best part of the WTEA conference was the opportunity to network with Tech Ed teachers. The conference is always a great way to connect with others in our field! I also really enjoyed Bryan Albrecht's presentation.

Angie Arneson, Director-at-Large



I was unable to attend the conference this year. However, my favorite thing about attending any WTEA conference is always being amazed at the high quality programs found around our state.

Bob Morehead, WTEA Vice-President



My favorite aspect of the conference was the excitement that was 'in the air' this year. It started with the awards banquet and went all the way through the drawings after lunch on Friday. Teachers are generally excited about their profession but this year it seemed to be at a higher level than usual.

Mike Cattellino, Technical College Representative



My favorite thing about the conference this year was the opportunity to be inspired by great educators who motivate me and remind me to always try harder to learn what I do not know and share it with those who do want to know. I get to see long time friends and dream about the future and talk smart about the past. Sometimes, I even get a chance to inspire and that is the best feeling of all.

Pete McConnell, District B Co-Director



My favorite thing about this year's conference and all of the prior conferences I have attended is to meet up with old friends, discuss the current trends in technology education and see what we need to do to keep us a driving force in the country.

Doug Dimmer, Director-at-Large



My favorite part the the conference was presenting to my peers and being able to share my passion. It was great meeting new colleagues and catching up with old friends and sharing ideas. I already can't wait for next year!

Jon Larson, District D Director



My favorite things about the conference is seeing old friends and meeting new tech ed teachers. I also enjoy project showcase - seeing great/new projects from around Wisconsin. Also I like getting new ideas/products from the trade show. I loved the sessions that were provided. I have been coming to the WTEA Conference for the past 30 years and found every conference to provide valuable information to take back to my classroom.

Douglas Kugler, Director-at-Large



My favorite thing about the conference is asking colleagues about the coolest things they are doing.

Mike Paquette, District C Director



My favorite thing about the conference is re-connecting with former students who are now teaching and achieving success.

Frank Steck, University Representative



My favorite part of the WTEA conference was the President's Reception and being able to talk to so many Tech Ed teachers from all over the state.

Dave Stroud, Director-at-Large



My favorite thing about the conference was meeting more of the educators in my district and building relationships.

Eric Sutkay, District F Director



My favorite thing about the WTEA conference was listening to four outstanding women providing personal insights into their selection of Tech Ed as a career, the barriers they face, and why they persist in their careers.

Sylvia Tiala, University Representative



AWARDS

2018 WTEA Awards

Presented at the Awards Banquet - March 7, 2018

Future Technology Educator Scholarship

Michaela Guerrini, UW-Stout
Sponsored by
WTEA Foundation



WTEA Award of Excellence

"For Exemplary Achievement in Technology Education"
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Jeff Martin
New Berlin Eisenhower
High School

WTEA Inspire Award

"For Fostering Future Technology Educators"
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Shannon Flaherty



Donald Tupper

Steve Brick

(unable to attend banquet)



EJ Pilarski
Jefferson High School

WTEASpecial Recognition Award

"For Contributions & Service to Technology Education"



Larry Beyler
Midwest Equipment Specialists



Aaron Pokrzywa
Slinger High School

WTEACommunity Service Award

"For Outstanding Achievement in Service Learning"
Sponsored by Goodheart-Willcox Publisher



Dr. Matt Janisin
Gateway Technical College



STARBASE Wisconsin
John Puttre, Director



James Brennan
Waukesha West High School

AWARDS

Middle School Program of the Year

*"Outstanding Middle School
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Parkview Middle School - Ashwaubenon

High School Program of the Year

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Ashwaubenon High School

Technology Educator of the Year

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Rich Hemler - Portage High School

WTEA 25 Year Award

"For 25 Years of Service to Education"
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ITEEA Program Excellence Award Nominee

Westosha Central High School

ITEEA Teacher Excellence Award Nominee

Corey McCauley, Hartford Union High School

ITEEA Awards presented at the ITEEA Annual Conference April 11-14

Special Thanks

The WTEA and the WTEA Foundation would like to thank the Awards program sponsors:

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AWARD WINNER

STARBASE Wisconsin Receives WTEA Special Recognition Award

Members, teachers and supporters of the Science, Technology, Engineering and Math community, more commonly referred to as STEM, gathered from around the state at the Chula Vista Resort March 7th for the 2018 Wisconsin Technology Education Association Conference. During the awards presentation STARBASE Wisconsin was presented with the “Special Recognition Award” for their continued contribution and service to technology education.



STARBASE is an acronym for Science & Technology Academies Re-enforcing Basic Aviation and Space Exploration. The interactive academic outreach program is a Department of the Defense program sponsored by the Wisconsin Air National Guard which opened its doors in 2012. The academy provides youth with a 25 hour STEM concentrated curriculum to increase their knowledge in STEM. Fifth grade students in Milwaukee public, choice, and charter schools spend five weeks exploring the world of the sciences through hands-on activities and experiments, technology projects, and interaction with military and civilian professionals with careers in STEM fields. To date, STARBASE Wisconsin has graduated over 5,600 students from the program.



The program focuses on 25 hours of STEM Instruction. Milwaukee Public School (MPS) students attend with their fifth grade class and teacher at the



STARBASE Academy located in North Milwaukee. The Academy has been in partnership with the Milwaukee Public School District since it opened. The program is free to students with only the cost of bus service and a sack lunch required to be paid by MPS. The STARBASE curriculum and activities are correlated to National Science Education Standards (NSES) and National Council



of Teachers of Mathematics (NCTM) Expectations. The program is offered in the summer as well with additional community outreach programs during the year.

The 25 classroom hour curriculum covers:

- **Physics:** Newton's Three Laws of Motion and Fluid Mechanics and Aerodynamics (3.5 hours)
- **Chemistry:** Building Blocks of Matter, Physical and Chemical Changes, and Atmospheric Properties (3.5 hours)
- **Technology:** Innovations and Navigation and Mapping (4.0 hours)
- **Engineering:** Engineering Design Process and 3-D Computer-Aided Design (4.0 hours)
- **Mathematics Operations & Applications:** Numbers and Number Relationships, Measurement, Geometry, and Data Analysis (2.0 hours)
- **STEM Careers:** Career Exploration and Personal Investigations (1.5 hours)

For more information contact John Puttre at STARBASE Wisconsin, (414)-535-5786, jputtre@starbasewi.org, or visit us on the web at <http://dma.wi.gov/DMA/starbase>.

WTEA High School Program of the Year Ashwaubenon High School Technology & Engineering Program Continues to Work Towards it's Vision

By Tom Barnhart, Jeremie Meyer, and Dave Stroud

In 2010, as part of the requirements to become a PLTW certified school, the Ashwaubenon High School Technology & Engineering department created the Ashwaubenon School District Technology & Engineering Careers advisory board, which is made up of representatives from the N.E.W. Manufacturing Alliance, Northeast Wisconsin Technical College (NWTC), The Beaux Mettler Foundation, local businesses, and members of the school district. One of the first tasks that the board tackled was to develop a mission statement and goals that the board would strive to accomplish.

Mission

To prepare Technology & Engineering students to be contributing members of tomorrow's workforce in N.E.W. by partnering with higher education, business, and the community.

Goals

- Give students authentic experiences.
- Sustain our local workforce with quality employees through student preparation.
- Expose students to training opportunities and jobs.
- Educate students on the needs/demands/skill sets required for tomorrow's workforce.

Give Students Authentic Experiences

We strive to give students authentic experiences in their learning so that when they go on to post-secondary education or into the workforce, the skills and knowledge needed to be successful won't be new to them. Because of this, we put a lot of effort into seeking grants and donations to fund the purchase of equipment and technology used in the real-world. We want our students using the same CNC mills & lathes, welders, modeling software, and construction equipment that they will encounter at NWTC and in business and industry. Being familiar with the equipment and technology used after graduation will also give students a greater understanding of the requirements of a particular career, and if they are interested in pursuing it.



For students that have an interest in what we teach, we offer a few extra-curricular activities for them to be involved in. SkillsUSA has been an offering in our program for the last ten years. We started small, but now average about 40 members a year, and regularly compete in district, regional, and state competitions. Competing in SkillsUSA gives students a sense of the skills necessary to be successful in the area in which they are competing. Also, traveling to the various schools that host competitions, like UW-Stout, Fox Valley Technical College, and Northcentral Technical College exposes students to post-secondary institutions that they may like to attend.



Formula Student USA gives students the opportunity to design and build a race car. With a club size of close to 20 students, skills in CAD, metal fabrication, welding, auto body, automotive systems, electrical, and auto painting, finishing, and detailing are learned. Students work with local companies to get access to technologies and expertise we may not have, and to raise funds or obtain donations to complete the project. When the cars are complete, the students get to test their work at Road America, which builds excitement for the following year, and gives students and their parents a sense of pride and accomplishment.



(continued on next page)

High School Program of the Year

(continued from previous page)

The Technology & Engineering department also runs the school's Community Service club. Some of our efforts here include finding volunteers to help out at community events, ringing bells for the Salvation Army's Red Kettle Campaign, parking cars during Packer games for the D.A.R.E. program, as well as using our technical skills to build things for the community such as Little Free Libraries, Little Free Pantries, playhouses, benches, and even a puppet theatre. Participating in community service activities and projects helps our students build empathy for others, and helps them become contributing members of our community.



Sustain Our Local Workforce with Quality Employees Through Student Preparation

To help sustain our local workforce with quality employees, we first had to know what the needs of our community were. Working with our advisory board helped us determine that we needed to focus on developing career pathways in the areas of Architecture & Construction, Manufacturing, STEM, and Transportation & Logistics. Once we knew what pathways would best sustain our local workforce, we developed a series of courses to fall within those pathways. Now, students interested in one of our pathways can take up to six courses that will prepare them to be successful after high school. After coming up with courses to fill out our pathways, we next had to focus on creating curriculum that aligns with industry and state standards, and that prepares students for 4-year and 2-year college, technical college, or apprenticeship.

Our department has been able to use our expertise as Career & Technical Education teachers to help out our entire school community. We have a leadership role in developing our school's Academic & Career Planning (ACP) curriculum that we implemented this year. We regularly meet with non-CTE teachers and share strategies on how to help our students successfully prepare for their futures.

Expose Students to Training Opportunities and Jobs

While creating our pathways, courses, and curriculum, we decided that the best way to prepare students for the careers that exist in N.E.W. would be to give them a head start on getting there. We regularly take classes of students to NWTC to tour facilities and learn about program offerings. Our students will even work right next to NWTC students to get a better understanding of the demands and expectations of students at the technical college. To promote consideration of entering a program at NWTC, our department now offers 13 transcribed credits in their welding, construction, and electro-mechanical programs.

Along with the opportunities at NWTC, we have a number of guest speakers come in to talk to our students about opportunities for post-secondary education and careers. Most recently, we have had Tim Zoch of UTI come in and talk about opportunities for training in the automotive field, Laura Bianucci from AWI talked to our students about training in welding, Jim DeLeers of DeLeers Construction talked to students about opportunities in the construction trades, Barry Scholz of Boldt Construction worked with our students for two weeks focusing on careers in masonry, Jon Hirsch of Auer Steel and Ryan Sinkler of Sinkler Heating talked to our students about opportunities in the HVAC industry, and many more. Company tours are another way to bring awareness to our students of the opportunities that exist. We've taken tours of Plexus, Bassett Mechanical, Jones Sign, Mercury Marine, Ace Marine, Pierce, and Lambeau Field to name a few. All of these experiences help students make more informed decisions about their futures, and in some instances, give them a foot in the door. Many times these relationships we have built with guest speakers and companies have opened doors for youth apprenticeship opportunities for



our students. The best case scenario is when a student with little direction or career aspirations saw or heard something that interested them, and this experience resulted in an after-school job or youth apprenticeship experience.



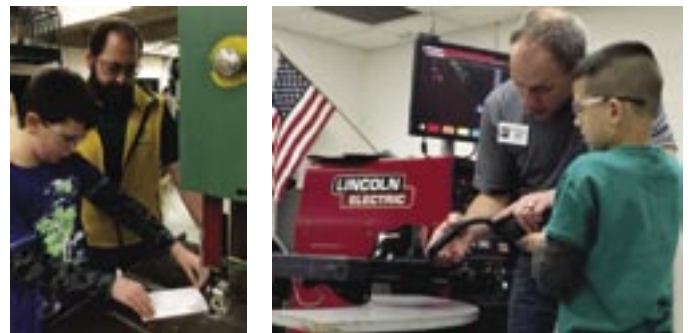
Educate Students on the Needs/Demands/Skill Sets Required for Tomorrow's Workforce

To best educate students on the needs/demands/skill sets required for tomorrow's workforce, we needed to upgrade our facilities. Just two years ago our department consisted of a traditional wood shop where woodworking and construction courses would take place, an automotive shop where students could take a number of small engines, basic car care, and automotive classes, and two computer lab classrooms where our PLTW and CAD classes would be offered. Now, due to the vision of our teachers, the hard work of our advisory board, and with the support of our administration, we have opened the Beaux Mettler Innovation Center, a state-of-the-art machining and metal fabrication center, and also a welding lab. These new spaces allowed us to create a manufacturing pathway, and enabled us to articulate with NWTC in the areas of welding, CNC machining, automation, electronics, fluid power, blueprint reading, and CAD. These additions allow us to better prepare our students for the careers that exist in our area.



To promote careers associated with the Technology & Engineering program, the Ashwaubenon School District Technology & Engineering team started a Tech Night program. Tech Nights are a once-a-month event where all

district students, parents, staff, and community members are invited into our facilities to learn about topics such as woodworking, welding, 3D printing, CNC machining, using a design process, and car care basics. Attendees take part in a hands-on activity that allows them to learn about the same things we teach our students. NWTC has had a presence at our events to show students and parents the opportunities that exist after high school.



None of this would be possible without the relationships we created with our community and business partners, and the trust and support from our administration. Another advantage our high school program has is having a top notch middle school program feeding it. Phil Layden and Corey Hansen at Parkview Middle School work closely with us to create a fluid program that starts by getting students interested in technology & engineering through numerous course offerings at their level, and seamlessly leads to the courses at the high school level. We have been able to increase the level of learning that happens at the high school due to the learning that has already happened at our middle school.

Thank You

The WTEA Technology & Engineering Awards Banquet, Silent Auction, and ticketed Raffle combined with cash donations from members raised over \$6,300 for the WTEA Foundation. We would like to thank the following companies for their donations to support our fund raising efforts.

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One Good Turn Deserves Another

By Pete McConnell, Prairie River Middle School, Merrill,

with assistance from Mike Roth, Cardinal Heights Upper Middle School, Sun Prairie

There is an inspirational activity buzzing in Wisconsin right now. Some call it the Freedom Pen Project while others call it the Never Forgotten Honor Flight Pen Project. It is a story about two old shop teachers sharing stories, teaching one another new tricks, and ultimately sharing a craft with their students so they can turn around and become young community heroes for all the right reasons. Pay attention. You might like some of these ideas and think “maybe I could do that in my school.” Pete McConnell, Prairie River Middle School teacher was looking for a new manufacturing activity to bring to his new middle school job - something that would be fun, effective, and obtainable at the same time. His buddy Mike Roth from Sun Prairie shared an idea. His 9th graders were involved in a project where they turned pens on bench top mini-lathes and donated them to the Badger Flight veterans as a token of their patriotic appreciation. The pen was turned, finished, assembled, packaged with a certificate of thanks and presented to the veteran during the “mail call” portion of the flight. Mike described the success they experienced, how they organized the program, and how proud he was of his students and community for supporting it.

Pete asked Mike “Hey, do you mind if I steal your idea and do this project with my eighth graders at PRMS?” He said “Absolutely not! It would be a great way to see the project grow!” Pete went back to Merrill and got a grant for \$1000 from the Community Foundation of North Central Wisconsin and asked Mike for a little training. Pete traveled to Sun Prairie where Mike played mentor, instructor, and friend teaching Pete how to get the equipment, run the program, and make the pens. Mike packed up a box of blanks, pen mandrels and other supplies and sent them home with Pete to get started. Pete stopped by Wood Crafters and got a couple of lathes and supplies and headed home. That day was January 21, 2017.

On January 24, 2017 PRMS eighth grade students started turning out pen blanks. In a short period of time they were turning out an acceptable product. Pete called Lt. Col. RET James Campbell from the Central Wisconsin Honor Flight and asked if the Flight program could use some pens. The Colonel said, “I can’t believe you are calling. We just ran out of pens from our friend Larry Redipenning at Wisconsin Rapids Middle School. Could you have 100 pens ready for the May 22nd flight?” The table was set to either flop or fly.

In the meantime, the word got out in Merrill. The community involvement and interest was almost immediate. Money for new lathes from community friends came in. Several civic and community organizations got involved and in a short time there were seven new lathes, tools, supplies and interest like crazy! Channel 12 from Rhinelander got involved and the Foto news from Merrill was on it. The Wisconsin State Journal got Sun Prairie some coverage and the excitement was in full swing. The kids responded by volunteering after school and by the middle of May, they had their first batch of pens to deliver to the project. The press, parents, dignitaries, and Lt. Col. Campbell came for a little ceremony and it was official.

The new school year came with a renewed sense that this new project was awesome and new students were coming to both schools. Pete and Mike both continued to get more donations and interest with continued coverage from the press and gratitude from school boards, the Honor Flights, and the communities. Both schools were proud and determined to set the goal to continue the program and support each other’s efforts. Mike may have gotten a little tired of Pete calling him every time there was a new donation or a new quota made. With that said, there is no way the PRMS program would have thrived without the mentoring and support from Mike Roth and his program.

There was some interest among board members at the WTEA winter board meeting. Plans were made at this meeting for the Spring Conference and someone said “wouldn’t it be cool if you guys could show the membership what it looks like to turn pens?” Pete said he would call Mike Roth. Frank Steck from UW-Platteville got on board and Mike Chopin from Waterloo High School agreed to pull together resources and put up eight lathes



in the student showcase on Friday of the conference and teach conference attendees to turn a pen. There was a great interest in the activity and the teachers turned pens most of Friday morning. The four mentors trained and discussed, laughed, and maybe teased a little too. It was a blast and there was such a nice interest in the activity.

A thought occurred to Pete and Mike Roth. There are 6 Honor Flights in Wisconsin. They are: Never Forgotten Honor Flight-Mosinee, Honor Flight Northland-Duluth, Old Glory Honor Flight-Appleton, Freedom Honor Flight-LaCrosse, Badger Honor Flight-Madison, and Stars and Stripes-Milwaukee. What would happen if the WTEA teachers around the state would come together and figure out how to pull our resources together and supply pens for all the veterans for all of the flights? It does not have to be one school for one flight. Get two or three schools from that region to make the commitment to get involved. I do not know what the specifics are from each Honor



Flight, but if there was an interest, we could definitely make the connections and investigate the possibilities. I am not aware of all the Flight activities, but very willing to do the homework and find out. What do you think?

There will be lots of questions about cost, tools, materials, processes, and all the stuff good tech ed teachers ask. The four mentors from the conference have vowed their

assistance in training and assistance to set up the program. The WTEA will assist in this process if there is an interest and I would be willing to work with the WTEA Executive Board as well as the District Representatives to explore the possibilities as to how this project could be successful. How awesome would it be to stand back one day and know that every veteran that flies on an Honor Flight in the State of Wisconsin has the opportunity to receive a pen that is hand crafted by volunteer Technology Education students from all over the state?



Thank you for considering the opportunity to turn a pen to respect the good turn of another. I will conclude with my appreciation to all of those involved in the past and the future that will continue to make this a gratifying and successful project for our students and our communities. For more information about this project contact Pete McConnell at mcconnell.pete@gmail.com or Mike Roth at mproth1@gmail.com. For Honor Flight information go to <https://neverforgottenhonorflight.com/contact-us/>.

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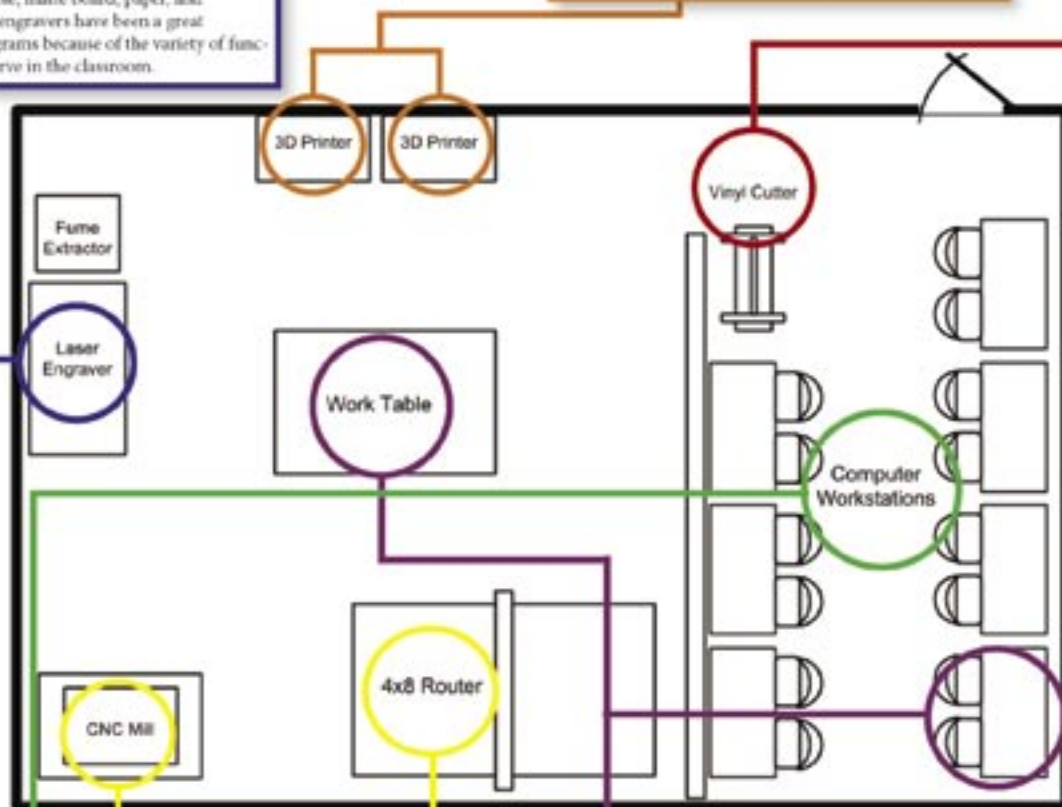
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UW-Platteville Students Take on WTEA

By Natalie Elfering, UW-Platteville Technology Education Association President

The past WTEA Conference on March 7-9th was attended by many educators and students, including seven future technology education teachers from the University of Wisconsin-Platteville. The conference provided plenty of opportunities to educate ourselves about the current and future industrial world from speakers, sessions, and vendors, learn from and network with current technology education teachers, and have fun.

All seven of us students agreed that the “New Teacher Seminar” was the most beneficial and informative. Matthew Keister stated, “I enjoyed the new teacher seminar because the information that was shared is necessary for any classroom management and learning basis. The relationships built [in the classroom] are the number one building block for learning in general or controlling the students.” Other students commented that it was very informative and relevant to what we, as students, need to know right now. The lessons and tips talked about in this session are things that we would never be taught in our classes at college. Hearing classroom management advice from individuals who work with high school and middle school students daily is much more beneficial anyway. William Simonar



(L - R) Matthew Keister, William Simonar, Natalie Elfering, Michael Wesp, Timothy Cerjak, Dominic Kuhn, and Thomas McCormick.

made an excellent point saying, “I honestly think that the new teacher seminar could be turned into a whole day seminar. We learned a lot in the two-hour session,

but we definitely did not talk about enough. As college students, the other seminars can be helpful, but they are not as useful as the new teacher seminar. By the end of the session, there were still a ton of unanswered questions.”

The vendors that attended the tradeshow were also very informative and willing to answer any questions we had. Keister commented that the most interesting vendor for him was either iCEV Career & Technical Education Online Curriculum Platform or Industry 4.0 Building Blocks. “iCev provided lesson plans and curriculum on an

online platform for all Career Technical Education (CTE) and Industry 4.0 was a robotics program that provided curriculum and the robotics that are an integral part of future industry. It was very eye catching to market classes, especially to prospective students,” he said. A vendor that appealed to me, Natalie Elfering, was FIRST Technologies Inc., especially their new program, KIDS Lab. This kit



Two of our members creating pens on wood lathes at the conference.

is a project-based STEM solution designed for students in grades K-8. I found it both interesting and important because I believe incorporating STEM and design techniques in elementary school will really help to produce more STEM-minded students who will eventually pursue a career in the trades or some other STEM field. I hope to bring this program to my school as a future educator.

A few people we networked with at the conference included our past technology education teachers, some of whom are UW-Platteville alumni, along with many other UW-Platteville alumni, first or second year teachers, and SkillsUSA Wisconsin Executive Director, Brent Kindred. Simonar stated, “It was great to catch up with my high school tech ed teachers, and they introduced me to a lot of people that they have known for a while or people they went to school with.” Keister, who will be student teaching soon, tried to pick the brains of the new teachers to try and understand what they are learning in their first years as teachers. He also says, “My favorite part of the conference was networking with prospective cooperating teachers so that they can put a face to a name. I believe this will help me greatly.” As individuals who are going to be entering the career of technology education soon, networking at this conference and making connections will benefit us greatly, especially when we need advice or help in the future.

We would like to thank all those who made the 49th WTEA Conference possible and are looking forward to attending again next spring!

Middle School Challenges

What Is the Real Goal of a Middle School Technology and Engineering Teacher?

By Nick Berens, Hayward Middle School

I suppose some people will say that this is an easy question, and all you have to look at are the standards for the content you are teaching. Enough said, this article is done, go ahead and flip the page to the next.

But stop for a second and think about what it really means as a middle school technology and engineering teacher. What am I really trying to accomplish with my classes, by the time the students are finished and move on to the high school level?

I am currently in my 15th year of teaching, and I have had my share of good and bad years — as probably many of us have. About three years ago I left a school district that was an amazing place to work — it was the best job I have ever had. Unfortunately, it was an hour commute each way. I decided to take a job in the town where I live so that I could spend more time with my family. Up to that point I had only taught at the high school level, whereas the new job was teaching middle school. Since my student teaching days, I always promised myself that I would never teach middle school because it just didn't seem like my cup of tea, although I did have a great experience and cooperating teacher to work with. So needless to say, when I took the new job I was quite apprehensive. It has certainly been a learning curve to figure out middle school age students.

To be honest, though, now after teaching middle school for three years, I am not so sure that I would move back to the high school level if a position was ever available. Here are the reasons why my mind has changed on teaching middle school technology and engineering.

What is the real goal of a middle school technology and engineering teacher?

Is the goal to have kids create projects to give them a knowledge of technology? Is it to start teaching them the basic skills needed in measurement, cutting, and sanding? Should we give them experiences?

The answer to all of those above would be a resounding yes. Since middle school is the first place that a lot of students are exposed to technology and hands-on activities, we need to make sure that they have a great introduction and solid foundation to all of the potential skill sets available to them.

I believe that we need to instill in our students a much larger respect for the skilled trade careers that are available in the workforce today, and will be in the future. We currently have such a shortage in all of the trades that, along with getting students interested in a career in the trades, we need to also show other students how important the trades really are to the economy.

What I mean by this is that we — the technology and engineering teachers — have a more important role in fixing the shortage than what we think. We need to change how people view and think of the trades. Not only do we need to expose students to the trades and spark their interest, we also need to show others how important the trades are. If we can improve how people view the skilled labor force, then more parents may learn to respect the trades and encourage their children to explore those career paths.

A career as a teacher is not easy, it's tough work — we all know that. There is not a whole lot of appreciation or recognition. The pay isn't the greatest, and I believe that society doesn't really have the respect for educators that they once did. This makes the job more difficult because students get the same mindsets from their parents. I admit that I have questioned leaving the profession many times, but have decided to stick with it. Sure, I could make more money working in the industry or trades. I have even been offered several jobs, without even applying.

I recently had an interesting conversation with a friend of mine that I have the utmost respect for. He is a plumber and runs a very successful plumbing business. We have



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talked many times about the shortage of good workers, and he has said that he doesn't even care if they already have the skills, he would gladly teach them. He simply can't find honest, hard-working people that are willing to learn the job. He has offered me a job several times. He also told me that he knew I was a good teacher. That really struck a chord with me, since this plumber friend of mine is a very straight forward, honest guy. He just offered me a job and then told me that I am a good teacher. I seriously considered his job offer, but then thought maybe I have more that I can do as a teacher. That moment truly forced me to contemplate what my real purpose as a teacher is.

I think that we all have our own reason for being a teacher, and as technology and engineering teachers we have the additional purpose to not only expose students to the potential of finding a great and rewarding career in the skilled trades, but we also have the responsibility to instill in all of our students a respect for those trades. If our future society doesn't know how important those careers are, then we'll always have a shortage of skilled workers.

One last story to hopefully provide some inspiration. I recently received an invite to a former student's wedding. I had not heard from this student in several years,

and out of the blue, he asked for my address so that he could send me a wedding invitation. Needless to say, I was very honored and excited for him!

The reason that this means so much to me, is that this student enrolled in some of my drafting classes, and even though they were not the easiest for him, he worked hard and completed the courses. After he graduated from high school, he began a career at Marinette Marine, installing insulation in ships. When I ran into him about two years after he graduated, he told me about his job and he was extremely excited about the opportunity. It was awesome to see how proud he was. Then he told me that the reason he liked his job so much was due to the fact that he received a promotion when they found out that he could read blueprints. He was then put in charge of a small crew and received a raise in pay. He said that he learned it all from my class!

Teaching is not easy, it's not always pretty, and it can be exceptionally frustrating. But don't get stuck on the small potatoes. Focus on your real purpose. It's not always just about the day-to-day grind, or meeting this standard or that standard. The purpose is the big picture — and doing our part to help, prepare and improve our students, their lives, our communities and society.

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Why Technology Education?

By Brian Schiltz, Tomahawk High School

In an effort to stay current on the newest technologies in the manufacturing and automotive industries, I subscribe for newsletters and periodicals for myself, as well as the students. There was a particular article that got me thinking deeper about who it is that I am trying to influence, educate, and prepare for the real world (<http://www.thefabricator.com/article/arcwelding/molding-the-welders-of-tomorrow>). I presented my students with a simple, yet daunting, question, "Why Technology Education?" I have listed below some of the answers I got.

Technical education is important because education is changing. People don't need to know the logarithm of 10. People need to know how to change their tire if they get a flat in the middle of nowhere or build a kitchen table to fit the corner space they have in their dining room. They can take pride and save resources in doing the job themselves. Technical education focuses on getting students ready for the obstacles that everyday life throws at us.

- Savanna

If you want to go into the tech industry it gets you a head start. If you are going to be a welder or a technician in the auto industry, it's nice to be able to take a class to prepare you for your job whether it's a welder or auto tech.

- Tanner

So that way people have knowledge of technology that we use today and can spark them to greater things in life so they can make the world better and more innovative.

- Joseph

I think it's a good way to teach people about real life situations about technology in the manufacturing industry.

- Clayton

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Because we must acquire a very exclusive set of skills that many will never have the opportunity to acquire.

- Keegan

It's Technology Education because it covers all the tech involved in industry. A very important group of classes for the jobs we have in America.

- Metals student

The reason why I choose to partake in Technology Education is because it's different from any other classes I've have taken in the past, and I want to learn more about technology and how much of an impact it has on everyone, and the way technology is going to evolve.

- Autos student

Technology helps us better understand how things work, and prepare us for our future. Technology is becoming more relevant everyday, so it is important to understand its purpose.

- Caleb

We need technology education because of the rapid technological advances happening in the world. Technology is our future and it will never slow down or stop.

- Easton

Because there is a growing demand in jobs and a demand for people to take those jobs.

- Brock

Because it is the most demanding and expanding work field in the world.

- Natalie

Technology is our world, the more informed we are today, the better prepared we are for tomorrow.

- Metals student

Technology is a more advanced way of retrieving information. There is no limitation on the information. Technology is the combination of multiple people's intelligence, compared to an individual. It's a challenge.

- Kenzie

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