

# Interface

Journal of the WTEA

Volume 59  
Number 3  
Spring 2020

## Technology Education: Building Wisconsin's Workforce

Conference Highlights  
WTEA Awards  
Virtual Instruction Tips

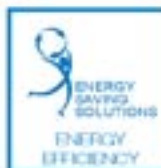






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### WTEA Refund Policy

The WTEA Membership fee is not refundable. The WTEA School Subscription fee is not refundable, but is transferrable to other staff in the same school district. The portion of the non-member conference registration fee equal to the amount of the WTEA membership fee is non-refundable. Refunds for Conference Registration and/or Awards Banquet must be received by US Mail or by email at least 15 days prior to the event. Exhibit space cancelled after Jan. □



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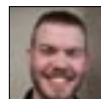
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## Winter 2019-2020 WTEA Board Meeting Highlights

*By Matt Schultz, WTEA Secretary/Treasurer*

- New Appointments:
  - Bob Morehead Vice President.
  - Mason Pautsch - ITEEA Representative
- WTEA Conference 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. Contact Joe Cointea if interested in learning more.
- Transcript high school credits with local Technical College, contact your technical college to get this opportunity for your students started.
- Brewer Game - WTEA Summer Outing July 26, 2020  
Brewers vs. Pirates - Tailgating and Tickets - Contact Joe Cointea for reservations.
- 52 experienced based licensee applications for 2017-2018.
- 86 experienced base teachers teaching in Wisconsin 138 in the state (994 total licensed tech ed teachers)
- WTEA Operating Handbook updated - Phil Bickelhaupt
- The WTEA is encouraging members to host a "High-Tech" Weekend in your area. Topics can include a wide variety of subjects; CNC, Lasers, 3-D printers, Carpentry, Auto, Machining, etc. Contact Joe Cointea.
- WTEA is kicking off a new program called the WTEA Student Ambassador Program. This program will support high school students interested in a career as a Technology Education Teacher. The WTEA Board of Directors has appointed a committee to lead this effort. If you are interested in learning more or being apart of this committee and efforts. Contact Matthew Schultz. mjschult@kUSD.edu
- Challenge USA and SkillsUSA Events (Canceled)

*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.*

**This issue of Interface is also available on the WTEA website - [wtea-wis.org](http://wtea-wis.org)**

### - Dates to Remember -

April 28 - 29	<b>SkillsUSA WI 47th Annual State Conference</b> <b>(CANCELED)</b>	Madison, WI
May 15	<b>WTEA Foundation Scholarship Application Deadline</b>	
June 17 - 18	<b>Aviation Manufacturing and Education Tour</b>	To Be announced
June 22 - 26	<b>SkillsUSA 56th Annual National Conference</b> <b>(CANCELED)</b>	Louisville, KY
July 6 - 9	<b>Automotive Technology Summer Institute</b>	Wisconsin Rapids, WI
July 26	<b>Milwaukee Brewers WTEA Family Outing</b>	Milwaukee, WI
October 15 - 17	<b>Career Pathways Network National Conference</b>	Atlanta, GA
December 2 - 5	<b>ACTE Career Tech National Conference</b>	Nashville, TN
March 3 - 5, 2021	<b>Celebrating our 52nd Annual WTEA Conference</b>	Wisconsin Dells, WI
March 24 - 27, 2021	<b>ITEEA 83rd Annual Conference</b>	Denver, CO

## Unprecedented

*By Dave Stroud, WTEA President*

These are unprecedented times. Schools closed on March 17th due to COVID-19 and there is no indication of when they might reopen. This has not only put the education of our students in jeopardy, but also all of the activities they look forward to such as prom, the SkillsUSA State Leadership and Skills Conference, ChallengeUSA and Formula Student USA track events, and Senior's last few weeks of being together before going through graduation ceremonies, celebrating at graduation parties, and then going off to continue their education or start their lives. New terms have been introduced into our everyday lives such as "social distancing" and "flattening the curve." Our public health system is being put under enormous strain due to the number of people contracting the virus. And our economy is suffering as non-essential businesses are being forced to close to contain the spread of the virus.

But these unprecedented times give us the opportunity to do great things. I've seen teachers working tirelessly to connect with their students and continue to provide them an education. The same day the schools closed and most days since, I've seen teachers from all over the state share resources and strategies on the listserve and in virtual meetings to help their fellow educators. School districts are providing meals to students that might otherwise go without. Health professionals are risking their lives doing everything they can to help the sick. And the government is working to get needed supplies to health professionals, support to struggling businesses, and help to everyday Americans that lost their source of income so they can continue to provide for their families.

In times like these, we have to remember to do what we ask of our students on a daily basis. We want our students to try new things, always do their best, learn from their failures, improve and try again. These unprecedented times are giving us the perfect opportunity to model those ideals for our students.

A few weeks ago we finished up a successful 51st WTEA Conference, and I would like to thank a few people that helped make it happen and congratulate our award winners. Let's start with the thank yous. Phil Bickelhaupt has done an excellent job leading the WTEA for

the past two years. He was at the helm during the 50th anniversary of our conference which was a huge event. I want to thank Phil for his service, and all the guidance he will give me over the next two years. I would like to thank



the WTEA Board for all of their work planning and running this conference. The conference wouldn't happen if it weren't for a group of dedicated professionals that put in the required work. It wouldn't be much of a conference if we didn't have teachers volunteer to present and share their knowledge. Thank you to all that spent the time preparing a presentation to help your fellow teachers learn. And a special thank you to Steve Johnston, our program coordinator. Steve spends an enormous amount of time contacting presenters, setting up the schedule, and sends out the survey at the end so we can make improvements for the

future. Another highlight of the conference is the trade show. A big thank you goes out to all of our vendors that come to talk to teachers about learning opportunities for their students. I would also like to add that many of these vendors have been offering free resources on the listserve since the schools closed. That is a true partnership, and I'm going to make sure to thank them in person the next time I see them. Tom Barnhart is our trade show coordinator. Again, we wouldn't have the trade show we do without Tom's efforts. Thanks Tom. The last thank you goes to everyone that brought items for the Project Showcase and to Steve Meyer for organizing it. What better way to get new project ideas than having an area dedicated to just that. I just remembered one more group I would like to thank. We have many sponsors at the conference that cover the cost of a lot of different things and keep the overall cost of the conference low for our attendees. I would like to thank all of them as well.

Now for the congratulations. I want to start by talking about the importance the WTEA Board puts on the awards. We believe this is a big deal. If you are nominated for an award, that means one of your colleagues thinks highly of what you do. Now I get that we are the type of people that don't like to brag about what we do. We do what we do because it's the right thing to do and we love it. Filling out an award nomination is not bragging. It's

just highlighting all of the great things you do. It brings a sense of pride to your program, school, and community. So I'm going to ask for a favor. When nomination time comes next year, take five minutes to nominate a teacher or program that you think does a great job. And if you are nominated for an award, fill out the materials so you have a chance to be recognized for the outstanding work that you do. Please and thank you.

Congratulations to our award winners!

Technology Educator of the Year - Jay Abitz

Program of the Year - Mukwonago High School

Inspire Award - Guy Kopp

Award of Excellence - Terry Bores, Jennifer Dobner, and  
Brad Dzikowski

Future Technology Teacher Scholarship recipient -  
Eric Bergsbaken

Special Recognition Award recipients - Lauri Domer,  
Milwaukee Tool, and Shad Torgerson

WTEA Leadership Award - Frank Steck

We are trying something new this year that I think

will be a lot of fun. We thought it would be a good idea to get together more often throughout the year, so we are going to have the first annual:

Milwaukee Brewers WTEA Family Outing

July 26th, 1:10 pm vs Pittsburgh Pirates

\$30 per person

Custom tailgate space prior to the game

Block seating in Loge Bleachers

WTEA recognized on scoreboard

Tickets can be purchased on the WTEA website

In conclusion, I'm proud to be your WTEA President for the next two years. I will work as hard as I can to make sure the WTEA is an organization that you find to be a valuable part of your teaching and learning. We are always looking for new ideas and feedback as to the direction the WTEA is heading. If at any time you feel you have something to offer, don't hesitate to contact me or your district director. Angie Arneson has been saying that in these unprecedented times "we are stronger together." I truly believe that, and I know you do too.



**Pittsburgh  
Pirates**

**Sunday, July 26, 2020 - 1:10 pm Game Time**

**Watch the WTEA Homepage for updates on this event - [wtea-wis.org](http://wtea-wis.org)**

**Members, family, colleagues, exhibitors, advertisers are all welcome to join us.**

**\$30  
per person**

**Purchase tickets at the WTEA eStore or mail your check to:  
WTEA Family Outing  
PO Box 531  
Rhineland, WI 54501**

**We have a reserved block of seats in the Loge Level Right Field Bleachers.**

**Reserved Tailgate space for WTEA.**

**Tickets will be passed out in our tailgate area.**

**Contact Dave Stroud or Joe Ciontea for additional details,**



# ANNOUNCEMENTS

## Aviation Manufacturing and Education Tour June 17 and 18

*By Angie Arneson, Seymour Middle School*

Greetings WTEA! I wanted to take the time to make a “shout out” for the Aviation Tour that will take place this summer on June 17 and 18. Please make sure to add the WTEA Aviation Manufacturing and Education Tour to your “list of things to do” this summer, as it is shaping up to be an amazing tour. I personally attended last year’s truck tour and was extremely impressed with the knowledge, resources, once-in-a-lifetime experiences and contacts that I made just by attending.

I realize that the summer months can get busy with many different things occurring, but I would highly encourage you to attend the Aviation Tour. You never know what you might take away from the tour or the added knowledge that you could bring back to your students. Stay tuned to the WTEA website for registration information and updates on the event based on the worldwide health situation.

## Ashwaubenon High School Builds Little Free Library for Green Bay Police Department

*By Dave Stroud, Ashwaubenon High School*

Students and staff at Ashwaubenon High School (AHS) recently completed a Little Free Library project for the Green Bay Police Department. Technology & Engineering staff at the high school were contacted about the possibility of building a British Police Box themed bookcase that would be placed in the front entrance of the Green Bay Police Department with the intent of connecting to youth in the community, promoting literacy, and creating a distraction for children that are brought to the police station for sometimes not so nice reasons. AHS students and staff worked together to design, plan, build, and finish the bookcase. For more information, go

to the link, <https://fox11online.com/news/local/green-bay-police-open-free-library-for-children> or contact AHS Technology & Engineering teachers Jeremie Meyer or Dave Stroud.

**Completed bookcase stocked with donated books from the Green Bay School District.**



## WTEA Foundation Scholarship Applications Due May 15

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 prior to May 15

Details of the scholarship and the application form can be found on the WTEA Foundation website at [www.wteafoundation.org](http://www.wteafoundation.org).



**Plan now to attend the 52nd WTEA Annual Conference**

**Technology Education: Building Wisconsin's Workforce**

**March 3 - 5, 2021 • Chula Vista Resort • Wisconsin Dells**



# ANNOUNCEMENTS

## WTEA Now Has a YouTube Channel

*By Phil Bickelhaupt, WTEA Past-President*

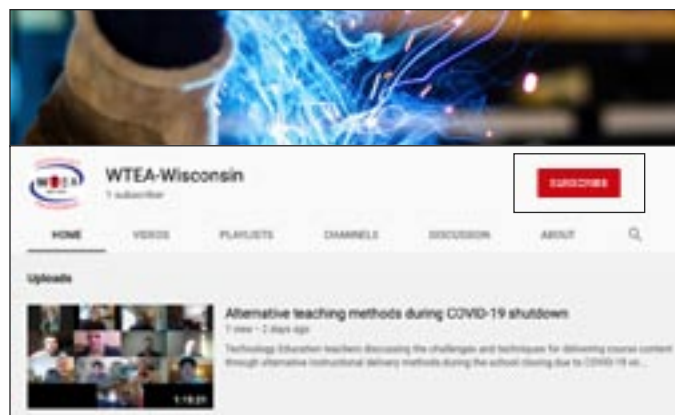
The WTEA has joined YouTube! We will post informational videos along with many other videos related to the Technology and Engineering Education field. To submit videos to be considered for posting on our YouTube Channel, send them to Phil Bickelhaupt at [phillip.bickelhaupt@wrps.net](mailto:phillip.bickelhaupt@wrps.net) or Joe Ciontea at [joe.ciontea@wtea-wis.org](mailto:joe.ciontea@wtea-wis.org). We will review your video to see if it meets the WTEA's qualifications for posting, and if it does, we will post it!

The WTEA is specifically looking for videos related to the mission of the WTEA, which is, *"The WTEA provides professional development for classroom instructors and proactive leadership in advocating the advancement*

*of technology education by promoting relevant curriculum, communicating information, and networking with leaders in education, business, and industry."*

To find the WTEA channel, search WTEA-Wisconsin at [youtube.com](https://youtube.com) or visit <https://bit.ly/wteayoutube>.

Make sure to Subscribe when you visit!



**The WTEA has compiled a list of the online resources that have been posted on the listserve and shared via virtual meetings and posted it on our website.  
Look under the "Links" tab at [www.wtea-wis.org](http://www.wtea-wis.org).**

## Certiport and TeachMe3D Announce Strategic Partnership

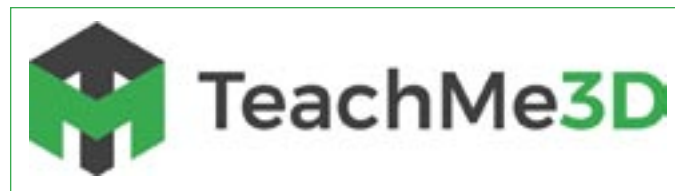
Certiport, the leading provider in certification exam delivery, announced that it has partnered with TeachMe3D, the "must have" resource for teaching 3D modeling in the classroom. Through this strategic partnership, Certiport and TeachMe3D provide a platform that seamlessly integrates student learning, exam preparation, and certification. Schools can now take advantage of the ease and simplicity of a single platform to prepare students for the necessary skills for career oriented certifications.

"We are excited to partner with Certiport," said Alex Hammel, co-founder of TeachMe3D. "It's clear that schools are looking for ways to ensure students are prepared for life after they graduate high school. TeachMe3D allows students to independently learn 3D modeling software, while Certiport delivers the industry recognized

certifications that many high demand, high wage companies are looking for."

In addition to the benefits for students, school districts in Wisconsin have a financial incentive as well. Through the Technical Incentive Grants program, schools receive up to \$1,000 for each student that attains an industry certification. This can generate significant revenues for schools that can easily cover the costs of implementing a certification program and support other initiatives in the district.

To learn more about our Certiport, please visit [www.certiport.com](http://www.certiport.com). If you would like to learn more about TeachMe3D or have any questions, visit [www.teachme3d.org](http://www.teachme3d.org) or email Alex Hammel [alex@teachme3d.org](mailto:alex@teachme3d.org).



## WTEA VICE-PRESIDENT

### Teaching Welding From Home

*By Bob Morehead, WTEA Vice-President*



Back in early March hundreds of us were gathered at the Chula Vista for the 51st Annual WTEA conference, and now we are locked into our homes trying to teach a hands-on curriculum from our living rooms. It is an unprecedented situation that has be-

come the new normal. With new challenges comes new solutions! I had started a Miller Openbook account about a year ago, but never really took the time to do much with it. My interest was reignited after attending a sectional presentation at the conference. The week after the conference, I put together a class with just a few modules to try out in the upcoming trimester. Little did I know that the Miller Openbook platform would provide the bulk of my curriculum for all of my welding class. Miller offers this product for free anytime, but with the coronavirus pan-

demia many of the WTEA sponsors have offered free or discounted products to help make our jobs easier. On behalf of all the technology education teachers in the state of Wisconsin, I would like to thank our industry partners that have stepped up to provide us with resources to make distance learning a smoother process! Stay safe!



**Bob Morehead speaking at SkillsUSA Regionals held in February at UW-Stout. He encouraged the students to consider a career in Technology Education.**

## eLearning for STEM

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# VIRTUAL INSTRUCTION TIPS

## Editor's Note:

*The members of the WTEA Board of Directors were asked to provide their perspectives and helpful advice along with important links to websites they are using during this pandemic. The following pages contain several reports from many of the Board members.*

## Interesting Times in Technology Education

*By Ar Pronschinske, District H Director*



In these uncertain times, we are forced to move from traditional hands-on activities in the labs to online instruction. I, like many of you, have looked for resources that work online. One of the sites I direct my students to is Phet Colorado. It shows simple simulations

for a lot of different areas - physics, electricity, fluid dynamics, etc. - the link is below. One thing our district is doing, knowing that some of the students do not have Internet at home, is offering wireless hotspot access for them to use.

Here's the link: <https://phet.colorado.edu/en/simulations/category/physics>.

## District A Meeting Held Online

*Sylvia Tiala, District A Director*



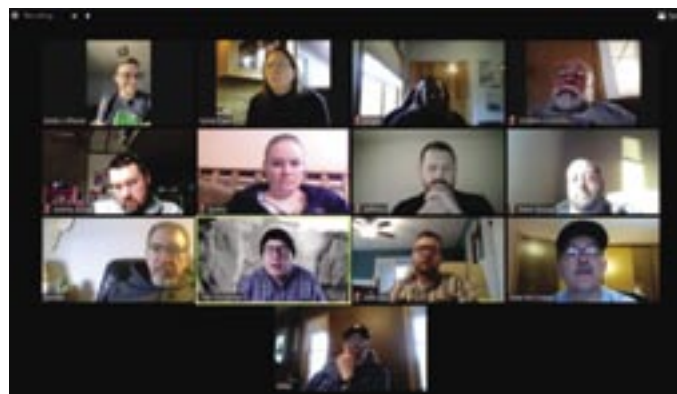
The amazing thing about WTEA is the organization's ability to bring people together – particularly in the “new normal” and these days of shelter in place. Over a dozen Tech Ed teachers from around the state came together for the District A spring meeting. There was a lively discussion related to teaching methods, resources, and strategies for dealing with the new reality of distance learning. A number of teaching resources were discussed such as Onshape's Standard

(<https://www.onshape.com/education-plan>) cloud-based CAD platform available to students for free and Tinkercad (<https://www.tinkercad.com/>) a CAD program for novice students. Tinkercad-circuits for electrical circuits (<https://www.tinkercad.com/circuits>) and micro-bit (<https://microbit.org/>) were resources that were mentioned for electricity and electronics. It was amazing to hear how professionals from across the state are sharing ideas and resources to support their students and student learning in these interesting times.

As disruptive as the current situation is, I am looking at what an opportunity that the Coronavirus has provided for the Technology and Engineering education profession. If we look at the ITEEA's national standards (<https://www.iteea.org/File.aspx?id=42547&v=d9f7fa62>) we have an opportunity to meaningfully visit some

of the standards that are often overlooked such for helping students: understand the characteristics and scope of technology, understand the core concepts of technology, changes in society caused by the use of technology, and more. It will be interesting to see how this moment in time impacts our profession and our approaches to learning and teaching.

My most important take-away from the District A meeting was the level of caring and dedication that all participants, and all of Wisconsin's teachers, have for their students. Everyone is trying to help one-another and their students with adjusting to this “new normal”. Thank you everyone for all that you do for your students, for one another, and for your profession. You are all rock stars!!



**District A – March 24, 2020 Online Meeting**

**Note: A link to this meeting can be found at:**  
<https://youtu.be/DLh1mFiJrCc>

# VIRTUAL INSTRUCTION TIPS

## Suggested Strategies

*Stephen Hadfield, District G Director*



Hello fellow technology education teachers. I hope this finds you all well in what are some of the most trying times to be an educator, and especially a technology and engineering educator. As I reflect on the last few weeks of trying to find a constructive approach to teaching hands-on, project based classes in an online platform, it has reminded me of being a first year teacher. Sometimes I'm just a day or two ahead of students, trying to be over-the-top creative, and possibly failing a time or two in my approach.

The following has worked really well for me:

- Create short 4-5 minute "how-to" videos that go along with each lesson or activity.
- Come up with simple, hands-on projects or activities students can do from home with a few basic tools.
- Find a time or two to video chat with each of your stu-

dents (they need the connection now more than ever).

- Use online curriculum/lessons as a resource, not as a replacement.
- Reach out to your fellow peers for approaches and ideas they are using.

For those of you that attended the WTEA Conference, you may remember that a common message from our Thursday keynote presenter was that students need to be prepared for the future by learning multiple skills and diversifying their abilities. Possibly a "silver lining" to these trying times is that our students are being forced to do just that. Students are learning how to utilize technology on multiple platforms. Students are understanding new methods to a team approach. Students are learning how to communicate in an entire different way. Students are figuring out how to use their devices as tools. Students are learning how to check and respond to an email.

Stay well and find a positive in each and everyday of online learning and teaching!

## Online Resources

*Brian Schiltz, District B Co-Director*



These are some crazy times we are living in. However, I feel that things happen for a reason. While there is some concern that lingers in my mind, I am also grateful for the time I get to slow down and appreciate the things that really matter in life - my family. I hope others are also able to shift gears and

slow down to embrace the little moments that flutter away in the hustle and bustle of everyday life. It's rather ironic that in this time of "distancing" I have grown closer to my wife and children, even if this means I have to watch "Nailed It" for the very first time and then our kitchen and dining room turn into a cupcake factory of mass proportions. There is something to be said about formal education. However, some of life's best lessons can be learned and taught right in the kitchen while you have four kids competing against one another trying to bake and decorate cupcakes that look like the cookie monster or a minion.

We have been asked to provide some of the links that we are using during this time. The main one I am using

for my students is the Success for Teens book. It is a great tool students can use to learn and reflect on themselves. The waybuilder is a site that takes some navigation, but has some decent resources and information. The last one I will mention is a resource I am using more at home, although, during our Flexi-schedule resource hour I was offering a section on Primitive/Apocalyptic Survival Skills. I think this one is pretty self explanatory as to why I feel it is important, especially in our current state of affairs.

### **Success for Teens**

<https://www.success.com/success-foundation/>

Online pdf of student book

<https://www.success.com/wp-content/uploads/2018/08/eS4T.pdf>

Online pdf of facilitator guide

<https://www.success.com/wp-content/uploads/2018/08/SuccessforTeensFacilitatorGuide.pdf>

### **Free online resources**

<https://waybuilder.net/free-ed/>

Fowler's Makery and Mischief on Youtube and the 30 day survival challenges

<https://www.fowlersmakeryandmischief.com/>



## Using the Home Office to Stay Connected

*Barb Bauer, University Representative*



The WTEA spring conference was a great opportunity for me to catch up with alumni and listen to what is going on in our public schools. So many of the technology education teachers are lighting up their classrooms with fun activities. I think my favorite session was listening to Hudson Middle School's

Never too Early for Engineering. Please keep in mind that the presenters have shared their presentations. They are available on the WTEA website.

We were asked what are we doing as educators with

COVID 19. The first thing was for me to set up an office at home. Then came the reality! Learning so many new things in a small amount of time, and trying to have answers. I can honestly say that my colleagues have been there for me. Dr. Tiala set up our "virtual" Thursday lunch. This is a time that we get together and chat about what we are doing and asking for help in navigating new areas. This has been very helpful and I encourage all of you to do something like this. A good way to stay connected.

Staying connected in the rural areas of Wisconsin has been tough at times. Stay positive and kind. We are in this together and are a part of history with COVID 19.

---

## Virtual Teaching

*Angie Arneson, Director-at-Large*



Greetings Virtual Teachers! By now you have been virtually teaching for a few weeks and hopefully have created a routine of how to communicate with your students and parents. I personally have become very comfortable with having virtual meetings using Google Hangouts/Meet or Zoom. Some of

the other resources that I have been using include: Flip-

grid, Google Classroom and Virtual Tours. Flipgrid is a great resource that allows your students to share videos with you and the rest of the class. Check out Flipgrid at <https://info.flipgrid.com/>. A virtual tour that I had my students take a look at was the Henry Ford Museum and then I asked the students some questions based on the tour.

My theme through all of this is "We are in this together" and this is what is helping me through this different situation. If you need any further guidance, please let me or another board member know.

---

## Staying Connected to the Students

*Dave Stroud, WTEA President*



The schools closed the week prior to our spring break. We were given that time to prepare for distance learning upon our return to teaching on March 30th. Our third term was going to be extended until our initial return date of April 14th. Our expectations were to work with students to finish up the

term by reviewing what we had learned and finishing up any existing assignments, projects, etc. I currently have two woodworking courses and about 32 projects that aren't complete. The students might not get a chance to get these done, so I'm planning on finishing them up so they have something that they can bring home.

If we are required to do distance learning for part of the 4th term or remainder of the year, we have an idea of how that might work. Our school might offer one Technology & Engineering course 4th term and every student that was enrolled in one of our courses will be placed into that course. Some of the content of that class could include: career exploration, employability skills, blueprint reading, sketching, dimensioning, the engineering design process, measurement, math for the trades, technical vocabulary/writing, intro/review of safety, virtual guest speakers and tours. We feel that students would learn more by being at school, but we are confident that if we need to extend distance learning through the end of the year that we will still be able to give students valuable experiences.

# VIRTUAL INSTRUCTION TIPS

## Staying Connected

*Mike Cattelino, Technical College Representative*



Online instruction, solely online instruction, is something I never thought I would need to facilitate. I teach Machine Tool, Machinist Apprenticeship, and Industrial Manufacturing Technician Apprenticeship. A lot of hands-on resources are included in those programs so online courses would

never be required. Then along came March 2020 and that all changed. The message came out loud and clear. We were closing all campus locations immediately and until further notice, extending Spring Break by one week, and then all instruction will move solely online until further notice.

I was not prepared for this, no one really was. I already utilized Blackboard for class and content management so little did I realize how close I really was to going solely online with instruction. My biggest struggle? How do I get all that great shop equipment home and dispersed

to my students to utilize in order to demonstrate competencies? Really Mike, come on man! Move on.

With a lot of support, and more trial and error, I was able to put together materials in time for classes after Spring Break. I was not sure how it would go as some students had limited internet access at home, others didn't have the best devices, etc. I took time to set up a test class in Blackboard the morning before my first class. I was ready!! Test class time comes, computer freezes. I can't click anything, can't ESC, can't Ctrl/Alt/Delete - nothing works. I can't even power down, unplugging won't work with a battery life of 100%. Eventually the computer 'thaws' and comes back to life. The test goes on without a hitch. Whew!

I am moderately pleased with how the online instruction process unfolded. Students were very patient and accommodating. The online mode of instruction is not the same as a face-to-face class, so I hope that the students are pleased with the instruction online. In the end if this helped prevent the spread of the virus it is worth it.

---

## Collaboration Between Districts

*Doug Dimmer, Director-at-Large*



I hope everyone is doing well amidst what has occurred over the past month and have settled on a way to implement your coursework to your students. I know I have a tremendous amount of material my students have used to create projects sitting back in my classroom and labs waiting to be

finished. I am hopeful there will be a date we can get back and continue where we left off, if we follow the plan put into place.

On the lighter side, prior to being locked out of our schools, several of the neighboring school districts in the Waukesha and Washington County areas had gotten together to create a consortium/association to build better relationships between our districts and to collaborate on different concerns regarding students safety and practices. It has given us a chance to schedule meeting times to tour schools, look at and survey equipment, understand the demographic of the ideal student population they are dealing

with and diagnose each others' curriculum so we can, as a group, inspire students to become ready for the next stage of their lives - be it work, training or higher education. It was formed not to alienate schools or programs but to unite our common goals to strengthen the workforce of the future. The group was brought together by teachers who are willing to lead and listen and create pathways of communication between area friends and colleagues who are striving for the same purpose.

It has made me realize, as an organization, we are all here to create a better industrial market for Wisconsin in the future, but we can't do it alone. Reach out to neighboring schools and businesses and find some common ground to start the means of a way to communicate. I know as districts we are to meet on a regular basis, but once or maybe a couple times a year is not enough. We have established a monthly timetable to meet with each others' schools to make this work. I applaud districts and areas which have already created groups to do this and look forward to hearing of more. Stay safe and good luck in the times ahead.



# Interesting Times in Technology Education

*Jon Larson, District D Director*



This is an interesting time in Technology Education. Every year around this time I am busy trying to implement some sort of idea that I found at the tech ed conference feeling invigorated and excited to finish out the year. As we all know that came to a halt pretty fast. I, like many of you thrive on the hands-

on, engaging experiences that we provide for our students on a daily basis. What I can tell you from my experience so far is that this will pass and we can still engage with our kids and push them to explore new ways of learning to better equip themselves for the future.

There have been lots of services that have opened

their doors to allow us access to teach our students. I have been working to compile a list of resources that I started to assess during our spring break and look to implement them during our final 9 weeks of school. You can continue to look to each other through the listserve, as I've seen many great things shared there. Also, use the WTEA website as another resource with all kinds of curriculum.

I teach an 8th grade introductory Technology Ed class where I focus on teaching them about technology and how things are made. Now that we can't do that in our shops, I have found that the TED Ed videos and the How It's Made videos are great for showing the way things are made in industry. They are great conversation starters and my young students have made many great comparisons between different processes.

---

## Accessing Resources From Many Different Origins

*Pete McConnell, District B Co-Director*



My recent contributions to adapting to the new deliveries of instruction has been more related to research and study. I have been paying attention to the heightened activity on the Technology listserve and that is a comfortable place for me to visit, interact, and offer assistance. I was mentioning

to a professor recently that I hoped the current pre-service teacher candidates were getting an opportunity to participate and witness the power of collaboration. The professor hoped they were accessing the listserve, but mentioned that it can be a challenge to convince people to get engaged and sign up for the listserve. I was recently working with new teacher candidates and urged them to connect with the listserve, participate at the WTEA Spring Conference, and make some inquiries to the WI DPI and SkillsUSA to access resources. I have been a strong proponent for accessing resources from many different origins. During the development of Technology Education, there was a time that the storage device was a 5 1/4" floppy drive. We would travel to workshops we called High Tech Weekends that focused on Manufactur-

ing, Transportation, Construction, and Communications. Sharing and creating was the fuel that drove the passion for learning about new activities and curriculum development. It was and remains a fun element of Technology and Engineering Education! The floppy disks would have simple text documents like the instructions for the WTEA Paper Car Contest or instructions for a Fixed Route Vehicle Problem Solving Activity. Sometimes we would share games and simulations that demonstrated the early developments of software programming like Frogger and The Great Paper Airplane Race! They were exciting times and at that point in time, the sharing was in a workshop face to face setting. As I reflect today, I am fast forwarded to a current time where the listserve exists to aide in our sharing and problem solving processes during this challenging chapter of our lives. Although the tools have changed, the passion, drive, and commitment to assist our colleagues and students still depend on our efforts.

Sign up, get involved, and share. It might just be that this is the common thread that binds us all to a peaceful and successful solution to the challenges that lie ahead.

Thank you sisters and brothers of Technology Education and Engineering! You make me very proud to share this profession with you all. Stay well. Stay involved.

**If you are not receiving the Technology Educators listserve postings, you can sign up by contacting Brent Kindred at: [brent.kindred@dpi.wi.gov](mailto:brent.kindred@dpi.wi.gov)**

## Gateway Provides Online and Virtual Learning

With the global COVID-19 pandemic closing schools and colleges nationally, educators have had to find ways to continue to provide education to students in a virtual and online format. That can be challenging for technical education because of its very nature: Students learn by doing, by applying in a hands-on format what they've learned in a lecture and book format first.

Prior to the outbreak, Gateway Technical College provided online and virtual learning to students as an option to meet their needs. Gateway still had to pivot quickly to find other ways to bring that learning online to support their students as they continued their coursework toward their degree and chosen career.

Here are a few ways Gateway has pivoted to deliver online instruction and student support:

- A Diesel Instructor had a concern about meeting ASE Accreditation requirements during this semester. They solved this problem by using worksites to cover ASE-required tasks to complete the diesel program. The key piece to that was coming up with a Youth Apprentice Skills Checklist to make sure student progress was properly documented.



- A member of Barber and Cosmetology faculty pre-recorded a demonstration using a GoPro camera and then played it during the virtual class session.
- Virtual tutoring with a huge increase in hours is offered to students. Students click on the link to the session they want and someone is there in the virtual environment to help them.
- Disability Support Services, Student Support Counseling, Learning Success Coaches continue to serve students via phone, email, Google chat and Zoom.
- Student Services experts including Academic Advising, Admissions, New Student Specialists, Student Finance, Registrar and Veterans Services will be available to assist students via expanded Zoom virtual meetings, email, chat and phone.
- Faculty continues to have the support of our Instructional Technologist for assistance in Zoom, Loom and Jabber, the virtual platforms Gateway is using to deliver instruction and services to students.
- Simulated learning for Nursing students, as well. The college has switched learning to a virtual simulation product. Students “care” for online patients. They “interview” them and “care” for them online. Students have remained in their clinical groups, meet with their instructor and other students as a group through Zoom, talk about their patients, then break up to individually “care” for their patients again.
- Our Nursing faculty have created a virtual open skills training lab. Through Zoom, they’ve taught students how to use basic household equipment and items to use for skills training, such as using fruit to practice injections and beverage bottles for trachea-related training. Students couple that with one-on-one instructor feedback through Zoom to ensure they gain the proper skills as well as their regular coursework materials.
- Lastly: Make sure to communicate with students. Tell them what you are going to do, how you will communicate, make sure to communicate it and then be open to their feedback.

Academic coursework will continue in an online delivery format for the remainder of the semester. A small number of courses, though, may still require a hands-on lab experience as part of the curriculum. At this time, courses that require hands-on lab experience will postpone face-to-face labs until April 27 and may extend their course through May 15. Students will be notified through

their Gateway student email or Blackboard of their specific course requirements by their program faculty.

Students involved in a Gateway-sponsored clinical or internship experience have been told to monitor their Gateway student email and Blackboard for any updates from clinical faculty. The college continues to monitor the situation and work with clinical sites to ensure student safety.

Gateway is working with each of the 23 private and public school districts in the tri-county area to determine the best approach to support all dual credit students with a focus on student success. Alternate teaching opportunities include:

- Faculty are mentoring High School Transcribed Credit using a virtual platform for Transcribed Credit courses taught at the high school.
- Start College Now students are transitioning to online delivery. Program Deans and faculty are connecting with each student to support course completion.

***Visit the WTEA Home Page***  
***[www.wtea-wis.org](http://www.wtea-wis.org)***

- Faculty teaching Contract For Service Distance Learning/VANguard courses have developed online environments and continue teaching through Zoom. VANguard is Gateway's virtual academic network—a collaborative partnership with area high schools to deliver curriculum over a state-of-the-art videoconferencing system. VANguard offers multiple curriculum options, including regional courses from participating high schools, Gateway Technical College courses, and WADEN\* courses. The partnership is facilitated through Technical Assistance contracts between participating schools and the college.

These can be trying times as educators work hard to meet the needs of their students by shifting learning online. Educators have shown that they are innovative and successful, though, as they strive to help students meet their educational goals even in the varying technical education programs.

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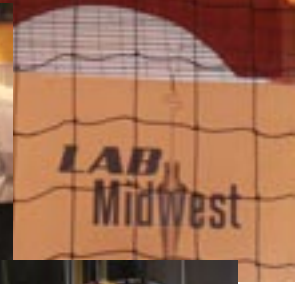




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# Highlights



***Technology Education: Building Wisconsin’s Workforce • March 3 - 5, 2021***

# WTEA AWARDS

## 2020 WTEA Awards

Presented at the Awards Banquet - March 4, 2020

### Future Technology Educator Scholarship

*Sponsored by WTEA Foundation*



Eric Bergsbaken  
UW-Stout

.....

### WTEA Inspire Award

*"For Fostering Future Technology Educators"*

*Sponsored by H2I Group*



Guy Kopp  
Cuba City High School

.....

### WTEA 25 Year Award

*"For 25 Years of Service to Education"*

Presented at the Annual Membership Meeting

March 6, 2020

*Sponsored by First Technologies, Inc.*



Bob Forsythe	Russ Hermann	Jon Howe
Colin Kachel	Brian Kanable	Duane Krueger
Robert Lee	Paul Lendobeja	Harvey Menn
Mark Oelstrom	Tim Shock	Todd Vander Loop

### WTEA Leadership Award

*"For Commitment and Service to the WTEA"*

*Sponsored by Goodheart-Willcox Publisher*



Frank Steck, PhD, UW-Platteville

.....

### WTEA Special Recognition Award

*"For Contributions & Service to Technology Education"*



Lauri Domer  
ChallengeUSA



Milwaukee Tool  
Katie Gavin, VP HR  
(Accepted by  
Doug Dimmer)

Shad Torgerson.  
Turtle Lake School District  
(Accepted by  
Dale Koehler)





# WTEA AWARDS

## WTEA Award of Excellence

*"For Exemplary Achievement in Technology Education"*  
Sponsored by Goodheart-Willcox Publisher



Terry Bores  
Wisconsin Rapids  
High School

## WTEA High School Program of the Year

*"Outstanding High School  
Technology Education Program"*  
Sponsored by Goodheart-Willcox Publisher



Mukwonago High School

.....

## WTEA Technology Educator of the Year

*"For Outstanding Contributions  
to Technology Education"*  
Sponsored by Goodheart-Willcox Publisher



Jennifer Dobner  
New Berlin Eisenhower  
Middle/High School



Jay Abitz - Freedom High School



Brad Dzikowski  
Hartford Union  
High School

.....

## **ITEEA Program Excellence Award Nominees**

Hudson Middle School and Portage High School

## **ITEEA Teacher Excellence Award Nominee**

Steve Kmosena - Mosinee High School

*ITEEA Awards presented at the ITEEA Annual Conference March 11 - 13*

## Special Thanks

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

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## AWARD WINNER

### 2020 WTEA Technology Educator of the Year

## Jay Abitz

*Freedom High School*

My teaching career started in 2007, but looking back it started much earlier. I learned the job I would eventually make my career from my father, Bob Abitz. He starting at Freedom in 1972 and built the auto program from almost non-existent to one of the best and most recognized of his era. I watched him teach, build relationships, and establish himself in the community and within his profession. I could not have a better example and mentor.

High school is when my interest in cars really bloomed. Clueless as what to do with my life after high school, I enrolled at Fox Valley Technical College to study Collision Repair under another legend, Bob Smith. I was just hanging out and working on cars when the suggestion was made that maybe I become a teacher. Timing might even work out that I could take my dad's job in Freedom! When I transferred to UW-Stout, I was often told that teaching Auto was "out of date" or irrelevant, but I knew that was not the case in Freedom. People would ask "What are you going to do if you don't get that job in Freedom?"

During these years I was unknowingly developing my educational philosophy. In fact, I kept the four page paper I wrote on that topic and it still rings true almost 20 years later. My focus was always on the experiences I could provide my students. I knew then, just as I do now,



life is about the experiences. Students will not remember a certain page number or lecture given, but they will remember the experiences that my program provides for them and the basic skills I teach them will benefit them in the future. They will remember welding on rusty cars that turned into nationally publicized SEMA builds! They will remember the friends they made and the teacher they enjoyed. They will remember the field trips out of state and the magazine articles written about

them! Sometimes it still amazes me that we actually took high school kids to LAS VEGAS!!



Many of my students do not go into the automotive industry. That doesn't mean that what I teach them isn't relevant to their lives after high school. I'm not just teaching them to change oil or fix a dent, I am teaching them problem solving, creative thinking, team work, and determination! I also teach them to embrace the struggle, working on cars is hard, I don't have all the answers, lets figure it out together! These are the skills I see many of my former students display in successful careers! Build relationships with your students, show them that you value what you do every day and they will too!

I am not the only one teaching and they are not the only ones learning. I figured out a long time ago that these students bring a lot to the table! They have skills and knowledge taught to them by others that they can share





in the classroom! I try to learn something from them every day! I also have a network of people; friends, alumni, community volunteers, and people that just walked in off the street wanting to help us and I take all the help I can get! These outside contributors bring a variety of skillsets, knowledge and experience to my classroom and our after school auto club that I could never have provided on my own. I have continued my own education with a Masters Degree, industry certified training from I-CAR, Sherwin Williams, 3M, Snap-on, FVTC, UTI, on the job training, and more. I show my students that I am a life-long learner and hopefully they will be too!

I was asked during my job interview how I was going to be different than my father, how I would step out of his shadow. I told them I was going to do bigger and better things. I added technology, tools, and equipment to our already awesome program. I began writing grants and negotiated school district and community support for the rest. I took chances on bigger projects, some paid off, some not so much. We went from fixing dents, to full rotisserie restorations, custom paint, fabrication, electrical, mechanical, suspension, we do it all! I took students on field trips, hosted open houses, attended and hosted car shows, competed in SkillsUSA and founded our Auto Club. All of this in an effort to showcase the quality of student work and share all the cool stuff we were doing! This job cannot be done to a high level without the willingness to do a little extra.

Over the past 13 years I have added over \$150,000.00 in equipment, tools, and materials to our Tech Ed department. Writing grants and begging for money has become part of my job. I have built relationships in the school and community and within industry with many people willing to support my educational efforts. I have an administration and school board who support my vision and say "Yes" to many of the ideas I have brought before them. I



have been blessed to work with a number of fellow tech ed teachers at Freedom, each of whom have taught me something different. My cooperating student teachers Jay Hansen and Paul Koski pointed me in the right direction and helped mold me at young age. My dad's department cohort for many years, Mark Starke, kept me on the straight and narrow for my first 5 years and the younger me definitely needed it!

Most importantly my success and dedication to this job is a direct result of my loving, supportive, and patient wife of 10 years, Jamie. Even in the beginning stages of raising our 3 boys, Alex (8), Aaron (5), Jayce (3), she has always worked with me to accomplish my goals. She deals with the long hours outside of school, the field trips and competitions that take me away overnight and often for a week, and the driven focus that puts those projects and this job often on my mind 24/7. Behind every good teacher, there is a supportive and understanding family. These boys love working on cars and motorcycles with dad and being dragged around to car shows and racetracks. Ask yourself, are you the teacher you want your kids to have? I so look forward to having my kids in class, sitting in the same desks I did, having their dad as a teacher. It turned out pretty well for the Abitz family and Freedom High School the first time!





# AWARD WINNER

## 2020 WTEA High School Program of the Year Mukwonago High School

### Mission Statement

The Mukwonago High School Technology and Engineering department provides students with high quality, hands-on classes to help encourage ingenuity and productivity by using industry-ready equipment and by collaborating with highly trained staff.

### Department Goals

- Education for Employment must be viewed as a vital responsibility of all teachers.
- Gainful employment must be a part of each student's educational preparation for life.
- Career choice and learning are life-long processes.
- Career and technical education curriculum development is a continuous process.
- Maximum use of resources must be developed through partnerships.

### Department Program

Our classes follow the Wisconsin State Standards for Technology and Engineering. The units we introduce are displayed daily with target goals aligned to the correct strand of standards per class. With our new facility, we are able to have our students work on machines that are similar to local industry in Waukesha County so that our students are potentially ready for work after high school.

Mukwonago Area School District (MASD) has a lengthy 10-year curriculum revision cycle for regular content area departments. However, due to the ever changing climate of business and industry, all Career and Technical Education courses are ever changing. The most recent revision to the Technology and Engineering department came in 2018-19. This revision was necessary as the department was able to offer more opportunities for students, and better align all pathways to industry needs in South-eastern Wisconsin. According to the Office of Economic Advisors, Wisconsin Department of Workforce Development, the Construction industry had the most potential growth (21% or 3,090 jobs) and need for employment by the year 2022. Because of this, MASD refined the Construction Pathway and created a better sequence of classes leading to the capstone class of "Building Trades" which



is a transcribed class through Waukesha County Technical College and has a large project each year where the class builds an offsite home. The second pathway that was refined was the Manufacturing pathway due to the local industry needs in and around Mukwonago. This

pathway also has a sequence of classes that ends with a transcribed credit option for students. Many students from Mukwonago have taken advantage of Start College Now in Manufacturing to get a jump start to their career. Once new courses are identified as needs for our school, community, and region, they are taken to the school board for approval. Once approved, teachers work through the rest of the school year communicating with local industry leaders and the technical college to develop course outcomes. When those have been established, the teacher develops the curriculum to meet the needs of the students. Any significant resources that are needed for the new course are taken into account when writing the Carl Perkins grant in the spring. The instructor is paid curriculum writing time over the summer to be ready to implement the new course in the fall at the start of the new school year. MASD is part of the regional career pathways initiative and offers all four: Construction, Advanced Manufacturing, IT, and Nursing to our students.



A School-to-Work house under construction.

### Related Activities

We offer a number of clubs and activities related to Technology & Engineering that include SkillsUSA, Engineering Club, and Robotics. We have also made our facilities available to the public and we have also been involved in community projects in Mukwonago and extend into Waukesha County. Every year we work with the Waukesha County Business Alliance group to provide students in the manufacturing strand classes a chance to tour local manufacturing businesses. We also have a number of automotive students each year compete in the Technicians of Tomorrow contest to display their skills in automotive competencies. We also have our building trades class work with local contractors on the School-to-Work house.

#### Technicians of Tomorrow Contest.



### Program Facilities

Thanks in part to a successful referendum as well as a Fast Forward grant and industry donations, the Mukwonago High School Technology & Engineering labs were remodeled and outfitted with new equipment for the start of the 2018-19 school year. \$4.5 million dollars was dedicated to the remodel of the Metals/Manufacturing, Woods/Construction, Welding, and Engineering labs. \$500,000 was spent on new equipment to outfit each lab with industry-standard equipment.



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## Today's Platteville Students Preparing for Tomorrow With WTEA

*By Matthew Bahr and Dominic Kuhn, UW-Platteville*

Members of the UW-Platteville Technology Education Association had the opportunity to attend this year's annual WTEA conference. One thing that has held true over the years for students attending this conference is the many valuable opportunities that every student has to improve their future careers. This year both Technology and Agriculture Education students attended, creating a diverse group of future educators.



When asking students about their experience they appreciated the opportunities for a wide variety of useful and practical break-out sessions. Every year students attend the New Teacher Seminar given by Steve Meyer. Alec Wetzell, a senior Agriculture and Technology Education major said, "My most memorable experience at the conference was the new teacher seminar, the examples of technology lessons along with advice given from Steve was helpful for me as a future teacher." Jessica Tripalin, a non-traditional junior shared, "It was exciting to see the different teaching personalities, methods, and ideas that were shared. The idea of being myself in the classroom was easier to see." Another break-out session that a UW-P student found intriguing was the Wisconsin Forest Products Kit: A Class-room Resource! Tiffany McCulloch, a

senior Agriculture and Technology Education major said, "The forestry presentation provided information that could be used in both an Ag and Tech Ed classroom, the kit gave an idea of topics to teach from."

This year's trade show was a fun and educational experience. Students enjoyed the newest and latest technologies for the classroom. Will Reinicke used the VR device and head-set to practice real world skills. UW-P students were able to network with current teachers and industry professionals. Speaking with veteran teachers is an invaluable opportunity for us.

Senior Tech Ed major, Dominic Kuhn, tabled a new metal casting program and high school contest that he has been working in conjunction with Dr. Kyle Metzloff and the metal casting program at the University. (For more information on the casting program, visit [castingcomp@uwplatt.edu](mailto:castingcomp@uwplatt.edu)) When speaking to Dominic about the contest he said, "What this is, is an opportunity for high school students to design and create a casting mold that can be shared with all high schools in the state. This builds awareness of the influence that casting has in modern industry."

UW- Platteville Tech Ed Association is led under the direction of Dr. Frank Steck, who has dedicated many years of his life to educating future teachers. This was his final year as the advisor for our program and as the academic advisor to many of the students who attended. Frank's knowledge and experience has guided many students over the years. Thank you, Frank, for all that you have done for your students.

The UW-Platteville students had a great learning experience at the conference. The knowledge obtained in these two days is beneficial to future educators. We cannot thank the WTEA enough for this experience.



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## TEECA Chapter Members Attend WTEA Conference

*By Dirk Bruxvoort, TEECA President, University of Wisconsin Stout*

During this year's Wisconsin Technology Education Association's annual conference, the University of Wisconsin Stout TEECA chapter sent a total of twenty students to Wisconsin Dells to attend the conference. Students enjoyed the opportunity to attend seminars, meet teachers within the field, and see things that are happening in the world of technology education that may be different than what they are used to. TEECA vice president Riley Seifert said, "The seminars are incredible to attend and crammed full of information valuable to anyone in Tech Ed. The speakers at these seminars are very inciteful and responsive to questions that I and many others had about the various topics being discussed." Riley also talked about how important the networking opportunities were saying "The networking opportunities are priceless, I was able to connect with numerous tech ed teachers from all around the state listening to their advice and hearing their stories on how to handle specific situations." Sophomore Matt Kapitz also said he found one of the most valuable parts of the conference getting to network with teachers saying

"I found it very encouraging to hear from other teachers who were able to answer the questions I had about being a new teacher."

The University of Wisconsin Stout TEECA chapter would like to extend a huge thank you to the WTEA for hosting this conference as well as all of the seminar speakers, event coordinators, and all of the people attending the conference that gave our members such a warm welcome. We look forward to next year's conference.



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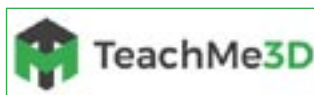
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## **Conference Networking**

*By Louis VandeHey, District C Director*

Every year that I go to the annual WTEA Conference I seem to come back with several new ideas, or new equipment proposals, or some other thing that I want to implement in the classroom. This year was no exception. I had plenty on my mind while I was on my drive home from Wisconsin Dells after this year's conference. Something that stuck out to me this year was how much networking I've done over the last couple years, and how many people I've come to know in the Tech Ed world. It also made me realize how much I enjoy having a network of professionals to bounce ideas off of, or to listen to what they're doing in their schools that is working well or opening doors to new and exciting avenues.

After the realization that the biggest takeaway I have from the conference every year is the growth of a professional network, I began to think about what has afforded me the most personal growth. This past year I have had

the privilege of serving on the board of directors for the WTEA, and it has, undoubtedly, been the biggest contributor of growth in my network. Participating in the awesome events that the WTEA organizes every year, and having opportunity to plan my own events, has been awesome. I have brought back so many cool ideas, or taken my students on field trips to places that a WTEA event introduced me to – just in one year!

I would strongly encourage anyone interested in growing their professional network, or participating in valuable events, or giving back to the community that they're a part of – to find out how you can become a larger part of the WTEA organization. Reach out to any of the contacts listed on the WTEA website or the Board Directory in the Interface and ask how you can get involved. Grow your professional network, and bring out the best version of yourself as an educator.



## ITEEA Baltimore

*By Mason Pautsch, ITEEA Representative and Dave Stroud, WTEA President*

Recently a group of Technology & Engineering teachers from Wisconsin traveled to Baltimore, Maryland to attend the 82nd International Technology & Engineering Educators Association conference. The conference usually runs from Wednesday through Saturday, but was canceled after Thursday's events due to the COVID-19 virus.

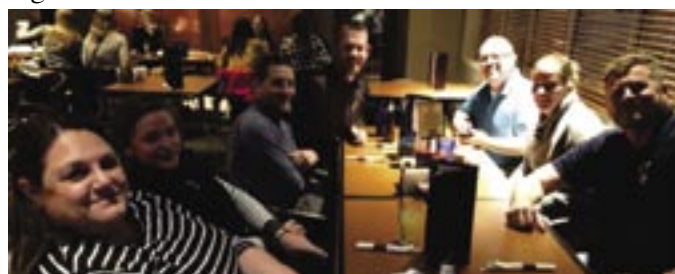
Even though the conference ended sooner than expected, we still made good use of our time and attended many valuable sessions, visited the exhibitors area, and checked out the STEM Showcase, which is kindergarten through college students displaying STEM related projects and learning what they are doing at their schools. We kicked off Thursday by attending the President's Roundtable where we received updates on initiatives and resources that ITEEA is working on. Later that morning we attended the Program of Excellence General Session where Hudson Middle School received a Program of Excellence Award. Jodie Bray, Chris Deleon, and Aaron Harker were present to accept the award.



**Program of the Year Awardees. Jodie Bray, Chris Deleon, and Aaron Harker of Hudson Middle School (last three, second row, right side).**

Other sessions that we attended before the conference was cancelled included Planning for the Future of Technology & Engineering Education which focused on the research and efforts by the ITEEA and teacher preparation institutions to deal with the shortage of teachers, Safety Microbadging which talked about the the series of safety microbadges that were offered this fall/winter by the ITEEA, Cardboard Prototyping in the Classroom which talked about cheap prototyping alternatives and finally, Attracting and Retaining Females in STEM Courses which addressed the male/female ratio in STEM related classes.

That evening everyone from Wisconsin got together for dinner. Steve Kmosena had arrived earlier in the day and for a while thought that he had made the trip just for this dinner. Fortunately, Steve received his Teacher Excellence award Friday morning. That evening much of the discussion revolved around COVID-19 and what was going on back home. We had an enjoyable evening discussing education with those that are most familiar with it.



**The Wisconsin delegation out for a nice meal.**

Since the conference was over and most of us weren't able to catch our flights home until Saturday or Sunday, we spent our free time checking out the Baltimore Inner Harbor and surrounding areas. Baltimore is a very historic city where many significant events took place. From the top of the Baltimore World Trade Center we could see Fort McHenry where Francis Scott Key wrote the "Star Spangled Banner" while detained by the British during the Battle of Baltimore. The first monument in honor of George Washington is in Baltimore, but unfortunately it was closed to visitors. One of the top aquariums in the world is in Baltimore as well as the Babe Ruth Birthplace Museum for any of you baseball fans out there. Speaking of baseball, the conference center was right next door to historic Camden Yards, home of the Baltimore Orioles.

The 2021 ITEEA conference will be held in Denver Colorado, March 24-27. Just like WTEA, ITEEA posts all of the presentations and content from their conference sessions on the ITEEA website at [ITEEA.org](http://ITEEA.org) under the resource tab. ITEEA has also started compiling online learning curriculum and activities for teachers who are currently affected by the COVID-19 outbreak. Under the COVID-19 Teacher Resources tab you will find a variety of K-12 STEM related content to help you during this time. If you would like to learn more about the benefits of being an ITEEA member, Mason Pautsch and Dave Stroud will be hosting an informational session at the 2021 WTEA Conference highlighting resources the ITEEA offers.



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LEFT: Congratulations to Brian Schiltz of Tomahawk for winning the Makerbot Sketch in the WTEA raffle donated by H2I Group

RIGHT: Congratulations to Guy Kopp from Cuba City for receiving the Inspire Award sponsored by H2I Group



We look forward to getting out to meet with you again in the future when things return to normal. Until then, please reach out by phone or email to your local representatives if there is anything we can do to be of service or if you would like more information on our eLearning content.

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## CESA 3 Provides Training in Manufacturing

*By Tom Martin, CESA 3 School to Work Coordinator*

The Cooperative Education Service Agency (CESA) 3, in Fennimore, Wisconsin has in the last three years evolved to become our region's training center. In manufacturing, this means creating a candidate that we believe will have the proper foundational footing to respond to the ever-changing nature of the manufacturing industry.

We are doing this by providing access to rigorous certifications for our students in measurement, electronics, mechatronics and soon torque and PPE's.

Precision Measurement Instrument (PMI -<https://www.snapon.com/Industrial-Certification/Certifications/Precision-Measurement-Instruments>) is a 30+ hour curriculum allowing students to be introduced and then apply their knowledge to 21 different measuring tools most commonly used in industry. We've heard that our students were not efficient when it comes to measurement. With PMI, we are striving to have students mathematically proficient with a slide caliper.

Also, industry told us that students were lacking in their knowledge of electricity and electronics. We began with providing our schools with a certification in the use of the Multimeter (<https://nc3.net/wp-content/uploads/2019/01/Multimeter.pdf>). With the Multimeter certification, our goal in this 30+ hour curriculum strives to instill the application basics from voltage to temperature with students. As we evolve to our next certification, students build on that knowledge of the Multimeter.

Our manufacturing world is propelled by electricity. Our next certification in AC/DC Fundamentals ([https://nc3.net/wp-content/uploads/2019/01/Festo-Certification-Program-Guide\\_Electricity.pdf](https://nc3.net/wp-content/uploads/2019/01/Festo-Certification-Program-Guide_Electricity.pdf)) is a major step in enabling students to understand and witness Ohm's, Watt's and Kirchoff's laws, as well as being able to build series and parallel circuits. I took the training last month and I look forward to going back through the training with professionals in order that they make this curriculum with students a part of their pedagogy.

Our next step is in the world of mechatronics. We have partnered with Mobilemodular, a Green Bay based company to provide educators with access to two Automation trainers (<http://www.mobilemodulartraining.com/benefit-sandfeatures>). We are looking forward to this professional development and having trainers throughout the region.

Recently, the state Department of Workforce Development announced a new round of Technical Education equipment. CESA 3 would like to partner with a district

to write two more certifications, allowing districts to empower students to be as career and life ready as possible.

Personal Protective Equipment is a mandatory part of the manufacturing world. CESA 3 would like to access the NC3 3M PPE certification (<https://www.nc3.net/2019/08/05/3m-safety-improving-every-life/>) in order to provide high school students with relevant content knowledge. This would elevate candidates to classifications in which we are having a dialogue around candidate retention and training instead of retraining.

Finally, torque is a mechanical and electrical concept which is frankly obtuse to many. The NC3Torque Credential (<https://nc3.net/wp-content/uploads/2019/01/Mechanical-and-Electronic-Torque.pdf>) we believe cross trains students to become responsive to whatever processes or responsibilities are asked of them.

CESA 3 is taking a proactive approach to candidate development. We are now seeking a like-minded partner to create a manufacturing academy for which companies will benefit by training and mentoring potential candidates in our Youth Apprenticeship program.

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# ARTICLE

## Lennox Presents Technology In Your Classroom

*By Eric Sutkay, LakeView Technology Academy*

As I began planning this article, the thought of it not applying to anyone this school year never crossed my mind. I thought it would be a great resource for individuals to use in their classes, and an opportunity for students to see firsthand what it is like working in industry. My, how this has changed. But the reality is that students still need to be aware of this and somehow we must bring it to their attention, and we will find a way. It may require us to find a new method of delivery or it may all blow over and this too will be something you can introduce this year.

If you attended the WTEA Conference this year there should be no doubt that you saw the presence of Lennox representing the HVAC industry. This company is invested in providing information and education for high school students on the importance and relevance of the HVAC industry.



learning about. Charlie was interacting with the kids and asking them about what they would expect to happen if a switch was activated or not. How cool is it for your kids to be able to answer industry related questions and diagnose HVAC issues. Not only do the kids get the hands on practical application of the tool for the industry, but they are exposed to the actual equipment they might encounter on the job. Lennox brings along one of their mobile furnace units equipped with multiple thermostats to replicate a zone heating application and smart technologies. This presentation is not a simulation of what might happen using a computer program or software, this is the actual equipment communicating triggering different sensors, switches and relays that the kids can see functioning.



I recently had Charlie Willkomm and Dave Chatmon in my classroom to talk about the industry, the technology behind their equipment, and even the relevance of using the ohmmeter or Snap-On 504 Digital Multimeter, if you are offering the NC3 certification. This was a great opportunity for the students to see someone from industry diagnosing HVAC issues with the tool that they were

Charlie, Dave and the entire Lennox crew do a great job of posing questions for students about their prior knowledge of the industry, tools and technology. These guys are great to have in the classroom for a visit. They bring along an actual furnace (minus the housing) and new, up to date thermostat technology that will relate to the kids' everyday smartphone technology usage. There is no doubt that this is a great opportunity for you and your students. Consider inviting Charlie Willkomm and Dave Chatmon from Lennox to present. If the opportunity does not allow this year, consider it for next year. Lennox VisionTECH has been cancelled for this year, but they are looking at different platforms for some online training and education. Contact Dave at [Dave.Chatmon@Lennoxind.com](mailto:Dave.Chatmon@Lennoxind.com) and Charlie at [Charlie.Willkomm@Lennoxind.com](mailto:Charlie.Willkomm@Lennoxind.com).

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## ChallengeUSA Updates

*By Alan J. Mamerow, ChallengeUSA Electrathon Coordinator*

Due to current events, all spring ChallengeUSA competitions have been canceled. While we are disappointed about not being able to host any competitions, we are making the most of our “extra” time this spring to work ahead preparing for next year:

- Supermileage and Electrathon rulebooks will be undergoing their bi-annual review and revision this summer. If you have any input, ideas, or would like to be directly involved in the updates, please let Lauri Domer know at [cusamotorsports@gmail.com](mailto:cusamotorsports@gmail.com).
- Revisions will be made on the Electrathon monthly log book and final report rubrics and templates and will be sent to teams and added to the website before the start of next school year.
- Event dates are being discussed – we hope to have a 2021 event schedule finalized by late fall.
- Good news - October 12, 2020 we will hold our annual fall race at LaCrosse Fairgrounds Speedway!

As we work on closing out this season (or lack thereof), we understand that many teams have already paid 2020 event registration fees. Contact Lauri Domer for race fee refunds or donating the money back to ChallengeUSA. In addition, Electrathon final report sections that have been submitted are still being graded, so be on the lookout for feedback that your teams can use going into next year.

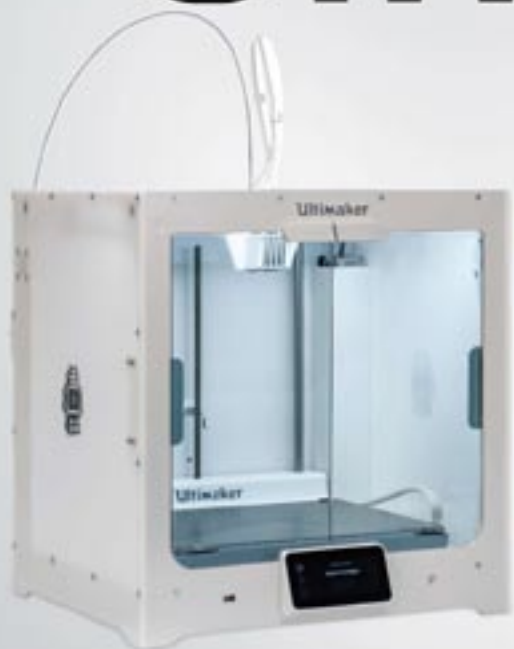
Finally, we are currently looking to fill the Vice President position starting in May. If you are interested in this position please contact Mike Paquette, President. ([cusamotorsports@gmail.com](mailto:cusamotorsports@gmail.com)).

As always, don't hesitate to reach out to a ChallengeUSA board member with questions, and keep an eye on [www.cusamotorsports.org](http://www.cusamotorsports.org) for updates.

### Note:

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# The World Created the Tech Ed Teacher

Humanity has an innate need to build, to create, to produce. Roads and bridges, appliances and automobiles, homes and skyscrapers. From villages to nations, communities to empires, humanity has an innate need to build, to create, to produce.

But none of this happens without the people who know how to - and are able and willing to - do the hard work of building, creating and producing. For this reason, the world created the Tech Ed Teacher.

The world needed someone with the patience of a saint, the craftsmanship of an artisan, and more bandwidth than one can measure. Jack of all trades and master of many, from woods to autos, welders to the tools of construction, CNC machines to industrial robots, electrical circuits to mechatronics. Energy, power, design, agriculture, the world expects him to know it all.

The Tech Ed teacher doesn't teach math, physics, communications, science or economics - she teaches all of them - at the same time. Perhaps no other person, in any role, in any career, is expected to know so much about so much.

It matters not from where their students come, but to where they are going. Challenging their high-flyers and dragging the weak and the wounded, from honors students to those barely scraping by, the Tech Ed Teacher takes all comers makes a place for every single one.

In doing so she plants seeds of curiosity and lights sparks of interest that will grow and glow in them. She uncovers abilities they didn't know they had and spawns life-changing self-confidence in even the greatest of self-doubters. Mentor, coach, advisor, role model and friend to any and all who walk in the door.

The world's Welders and Plant Managers, Electrical Engineers and Maintenance Technicians, Auto Mechanics and Researchers, HVAC Techs and Rocket Scientists, how many of them would not have found their calling if not for the fire of fascination ignited by their Tech Ed Teacher?

It's not about the money. It's never been about the money. Perhaps able to command far more treasure in a career outside the school than on the inside, the Tech Ed Teacher stays true to her students, perhaps even sacrificing time with her own children to make sure someone else's stays on the right path.

Employers may change, and with them the careers for which the Tech Ed Teacher prepares his students. Technology may change, and with it the skills he teaches. Administrations may change, and with them their strategies and goals, but through it all what will never change is the Tech Ed Teacher's unwavering commitment to his students and his community even in - especially in - the lean years of shoestring budgets and cost reductions.

Long after retirement is an option, many if not most will hang on, because it's not about them, it's about their communities. It's about their students.

But when, at last, the years and life catch up. When he tires more easily than he would like and earlier in the day than he once did. When the time comes to sweep the shop, to pensively flip the light switch and to lock the door behind him one last time before shuffling down the quiet hallway and into the twilight of his life, he does so leaving behind a body of work that will span generations. . . .

Mechanics and their machines, carpenters and their buildings, engineers and their systems, machinists and their creations, industrial CEOs, technicians, innovators, problem solvers and troubleshooters - humanity - all owe so very much to the Tech Ed Teacher.

Yes, the world created the Tech Ed Teacher, and the Tech Ed Teacher built the world.

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