

# INTERFACE

Journal of the WTEA

Volume 61  
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Fall 2021

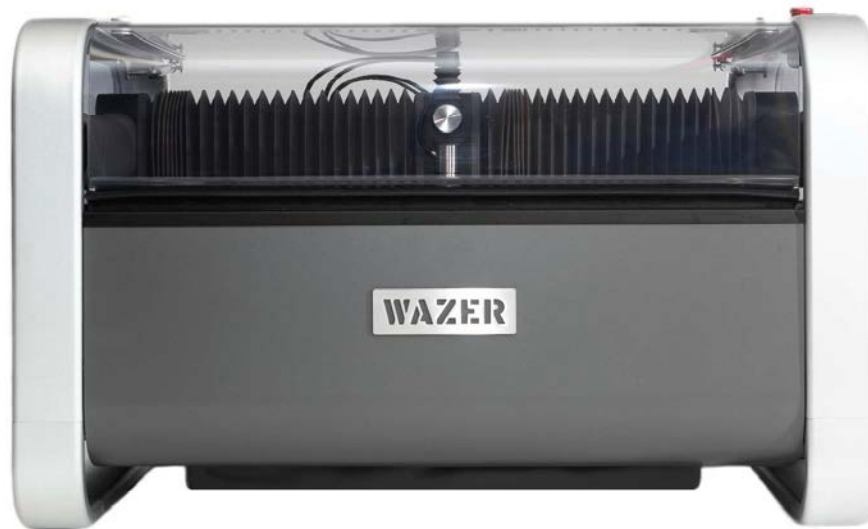
## Technology Education: Building Wisconsin's Workforce

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**A Unique School / Industry**  
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# TABLE OF CONTENTS

## Feature Articles

### 10 Mini Golf, Anyone?

Slinger High School TE partners with local industry on a unique project



### 14 Long Term WTEA Partnership

Inkworks kicks off 26th year of printing the *Interface*!



### 22 Is Your Lab Safe?

Recent national study reveals Wisconsin Tech Ed labs' safety results



- 2 WTEA Board of Directors
- 3 President's Message
- 4 WTEA Board News & Dates
- 5 WTEA Student Ambassador
- 6 Nominations
- 8 District H - Summer Workshops
- 9 WATDA Annual Teacher Institute
- 12 WTEA Conference Preview
- 13 WTEA Conference Registration
- 16 Eric Mumm - Teacher of the Year
- 17 PLTW Award to Lancaster HS
- 18 WTEA Scholarship - Jonathan Butler
- 19 WTEA Scholarship - Gavin Junk
- 20 WTEA Summer "Aviation" Tour
- 21 *Interface* Subscription
- 24 A Look Back



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## The First Time In A Long Time

By Dave Stroud, WTEA President

I'm not going to lie, the last 16 months have been difficult for me as a teacher. Being a Technology & Engineering Education teacher in a global pandemic was not something I was prepared for, and burnt me out like nothing before. I started looking forward in time to see when would be the earliest I could potentially retire. I questioned the value and impact of all the things I do for students. I really didn't enjoy coming to work everyday.

But I pushed through and made it to the end of what was the most difficult year of teaching since the beginning



Roosevelt Arch at Yellowstone National Park

of my career. And now, as I'm writing this near the end of another summer, I can say that for the first

time in a long time I'm feeling good again about teaching.

I think it had to do with a recent driving trip my family took out west. We had been hearing for years that people from Wisconsin like to drive this loop out west that hits many tourist attractions. So we loaded up the Suburban and drove out west to see what everyone was talking about. Along the way we stopped to see my brother in Rochester, MN, a giant statue of the Jolly Green Giant, the Corn Palace, The Badlands National Park, Wall Drug, Mount Rushmore, the Crazy Horse Memorial, Wind Cave National Park, Devil's Tower, Yellowstone and Glacier National Parks. It was 16 days I will never forget and it has helped me forget the last 16 months. Now I just have to figure out if it was visiting all of those awesome places, or driving over 4400 miles with my family that makes me excited to get back to work.

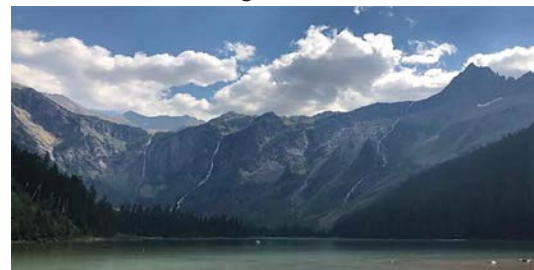
Now for what's going on with the WTEA. We are going to plan for an in-person conference this year. We are not sure what the turnout will be, but that is our plan moving forward. Please communicate with your district director your opinion of this plan or any questions you may have. We understand that things could change, but feel that a traditional conference is what the majority of our members want. We learned a lot from our virtual conference last year and hope to improve our normal conference experience with features from last year's conference. Our 53rd Annual Conference will be held March 16-18 at the Chula Vista Resort in Wisconsin Dells, so please mark your calendar.

We will be holding elections for Vice President of the

WTEA this year. Our current VP is Bob Morehead. Bob has always done an outstanding job and is not only a leader in his district, but statewide. I have yet to ask Bob if he would like to run for the position again, but even if he does, any member can run for this position. I always like to be as transparent as possible. If we only have one individual that runs for a position, then there are no elections, as the WTEA Board of Directors vote on the candidate at our winter meeting. Please talk to a board member if you are interested in running or know of someone who would be a good candidate.

We are asking all of you to help identify current high school students that might make great Technology & Engineering teachers in the future. The WTEA Student Ambassador Program had a successful year last year and we would like to keep building momentum so our profession has quality teachers for years to come. If you have a student or students that may be interested, check out the website <https://sites.google.com/wteafoundation.org/wtea-sap/home> or talk to Matt Schultz for more information.

Watch for communication this fall from your district director about district meetings. District meetings allow directors to give the membership updates as to what is going on with the WTEA, and allows members to share ideas or ask questions. Please plan to attend your district meeting. Directors will also be looking for ideas or feedback on High Tech Weekend events. There are a few ideas in the works, but with the current uncertainty

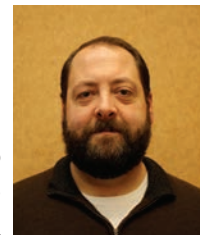


Avalanche Lake at Glacier National Park

caused by the pandemic, we may have to wait a little longer to start holding these events again. Stay tuned.

We are planning to hold our first WTEA Summer Outing during the summer of 2022. You may remember that this event was planned for the summer of 2020 before the world shut down. The event will be a tailgate and Brewers game with all Technology & Engineering teachers and their families invited to attend. Watch for additional information on this event in the winter edition of the *Interface* and at the WTEA Conference in March.

As always, if you ever have any questions, concerns, or ideas, please contact your district director or any other board member. Take care and have a great school year!



Dave Stroud

# WTEA BOARD NEWS & CALENDAR

## 2021 WTEA Annual Membership Meeting Highlights

By Matt Schultz, WTEA Secretary/Treasurer

The meeting was held via Zoom on March 4th, 2021 at 4:00pm. The link was provided to all members via the virtual conference website. There were approximately 30 people present.

- **Call to Order** – Dave Stroud
- **Approval of 2020 Minutes**
- **Board Changes - Directors**
  - o Emily Fransway installed as District A Director
  - o Brennen Mickelson installed as Dist. C Director
  - o Anna Vitale installed as At-Large Director
  - o Meghan Walters installed as At-Large Director
  - o Matt Schultz installed as At-Large Director
  - o Barb Bauer installed as Program Advisor
  - o Kevin Miller installed as DPI Rep
  - o Duane Apel installed as *Interface* Editor
- **Board Changes - Executive**
  - o Mac Chopin was installed as Sec/Treasurer
  - o Doug Dimmer was installed as President-Elect

o Acknowledgement of Service to WTEA

- Past President
- Outgoing Sec/Treasurer
- Directors
- Interface Editor

- **Financial Report** - Joe Ciontea
- **25 Year Awards** - Joe Ciontea
- **Program Coordinator Report** - Steve Johnston
- **Awards Committee Chair Report** - Matt Schultz
- **Student Ambassador Program** - Matt Schultz
- **Interface Editor Report** - Doug MacKenzie
- **No New Business**
- **Acknowledgements from Dave Stroud**
  - o Conference Organizers
  - o Sponsors
  - o Award Winners
- **Announcements from Dave Stroud**
  - o 53rd WTEA Conference: March 16-18, 2022
- **Adjournment of meeting**

*For additional information about this meeting contact any member of the Board of Directors.  
Complete minutes are available from Matt Schultz at [matt.schultz@tlabeloit.com](mailto:matt.schultz@tlabeloit.com)*

### - Dates to Remember -

Nov. 4 - 5	Career Pathways Network National Conference	(Virtual)
Nov. 22	WTEA Awards Nomination Deadline	
Dec 1 - 4	ACTE CareerTech VISION 2021	New Orleans, LA
Dec. 3	WTEA Vice-President Nomination Deadline	
December 20	Early Bird Deadline - WTEA Conference Registration	
March 9 - 12, 2022	ITEEA Annual Conference	Orlando, FL
March 16 - 18, 2022	Celebrating our 53rd Annual WTEA Conference	Wis. Dells, WI



## CALL FOR PRESENTERS!



2022 WTEA Conference Theme:

***“Technology Education: Building Wisconsin’s Workforce”***

**53rd Annual Spring Conference • March 16 - 18, 2022 • Chula Vista Resort, Wisconsin Dells**

Presenter form must be submitted by December 1, 2021 by mail, website submission or e-mail.

Directly submit via online form at: [http://www.wtea-wis.org/wordpress/?page\\_id=9699](http://www.wtea-wis.org/wordpress/?page_id=9699)

E-mail: [johnston@mwt.net](mailto:johnston@mwt.net) • Phone: 608-689-3033

# STUDENT AMBASSADOR PROGRAM

## WTEA Kicks Off Year 2 of Program Encouraging Tech Ed Students to Pursue Teaching Careers

By Matt Schultz, Director at Large

The WTEA Student Ambassador Program is kicking off its second year of supporting students interested in a career in technology education. Year one was a success. Five Student Ambassadors participated in the program ranging from freshman to seniors. The program awarded a scholarship to Luke Bousley, from Southern Door County School District, who plans to attend the University of Wisconsin-Stout in the fall.

Students enrolled in the program are working with the WTEA and their mentoring teachers on a variety of experiences preparing them for what it is like to be a Tech Ed teacher. Ambassadors are preparing and teaching mini-lessons, volunteering in teacher related activities, attending the WTEA Virtual Conference, and attending virtual college tours of UW-Stout and UW-Platteville.

This program is meant to help facilitate a positive avenue for high school students who wish to pursue a career in Technology Education. The WTEA is aware of the crisis of licensed Tech Ed teachers in the state and is asking you, Wisconsin teachers, to help fill these vacancies in classrooms. Reach out to a student who shows potential in your

### A Note From Your New Editor

As your new editor I wanted to share a few thoughts. Former editor, Doug MacKenzie, told me to feel free to use his *Interface* layouts, or to "just make it my own." So, You may notice changes in the design of the magazine. I welcome your feedback - both likes, and dislikes!

I also encourage you to share school Tech Ed projects and events, etc., by sending me articles to publish. (You also receive a \$10 discount on your membership!) Without such articles, we would not have a magazine.

Last, I want to thank Doug, and also Joe Ciontea, our executive director, for all of their assistance and guidance. Doug is one of the most organized people I have ever met and has made this process so much smoother for me.

Also, special thanks to our *Interface* printer, Dennis Kittleson, of Inkworks, in Stoughton, for his patience with me, and especially for his 25 year partnership with us! Please consider Inkworks for any printing needs you may have.

classroom. Start working with that student. It only takes one conversation to help that student realize that they have a gift to help others and that teaching might be in their future.

For more information please visit the WTEA Student Ambassador page on the WTEA website.

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## Be Part of the WTEA Team

We are currently accepting nominations for the office of WTEA Vice-President. This is your opportunity to serve your profession in a leadership position. The Board of Directors works together as a team to plan and coordinate professional development activities, give association awards and promote the advancement of our profession. The Board meets up to four times per year; meetings are held both face to face and electronically as appropriate. If you have questions please contact any member of the WTEA Board of Directors.



### Vice-President

(2 year term): Spring 2022 - Spring 2024

Nominations should be sent to WTEA President-Elect, Doug Dimmer, at [ddimmer@cedarburg.k12.wi.us](mailto:ddimmer@cedarburg.k12.wi.us)

Ballots will be mailed to members approximately February 1st.

If candidates run unopposed, a unanimous ballot is cast by the Board and no paper ballots are mailed.

Nominations will be accepted until Friday, December 3, 2021.

## WTEA Awards Nominations

Each spring at our annual awards banquet, held at the WTEA Spring Conference, the WTEA recognizes technology educators, industry, and technology education programs that have demonstrated outstanding achievement. During the 2020-2021 school year the WTEA Awards Committee changed the award process due to virtual learning. The committee thought it would be better suited to recognize the teachers who had to work so hard to adapt their classes and programs to virtual learning. This year the WTEA Awards Committee is returning to the traditional awards we have done in the past. The nomination page has been updated to allow for nominations to be entered.

The WTEA needs your help as educators to identify these worthy teachers, programs, and other professions that deserve recognition. The WTEA is looking for educators that are going above and beyond in their classroom. The WTEA has a variety of award categories that covers teachers, programs, and examples of classroom excellence. Members are encouraged to visit the WTEA's awards page on the website. There you will find the criteria for each award. As a profession we need to continue to recognize greatness in our profession. The WTEA Awards Banquet gives us that opportunity.

The awards committee will contact the nominee and request information regarding the nominee's curriculum,

achievements, and contributions to technology education along with letters of endorsement. To nominate a teacher, program or industry please visit the WTEA Awards webpage at: [https://www.wtea-wis.org/wordpress/?page\\_id=413](https://www.wtea-wis.org/wordpress/?page_id=413). If you have additional questions, please reach out to Matthew Schultz, Awards Committee Chair at [awards1@wteafoundation.org](mailto:awards1@wteafoundation.org)

The awards ceremony will be held in March as part of our annual conference.

Notes:

- **Nominations must be received by November 22nd** to be considered for recognition the following spring.
- Technology Educators must be a member of the WTEA to be considered for award recognition.
- For a detailed description of the awards please visit our website or contact any member of the board of directors.

Attn: Matthew J. Schultz  
The Lincoln Academy - Beloit  
Eclipse Blvd, Beloit, WI 53511  
[awards1@wteafoundation.org](mailto:awards1@wteafoundation.org)

## Technology & Engineering WTEA Education Awards

Lifetime Achievement

Technology Educator of the Year

Future Technology Educator Scholarship

Special Recognition Award

Program of the Year

Award of Excellence

Inspire Award

Community Service Award

Check out the WTEA website at  
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# CESA 3 Provides Robust and Relevant Experiences in Mechatronics, Multimeters, and More This Summer

By Art Pronschinske, District H Director

The Cooperative Education Service Agency #3 recently provided District H professional technology and engineering educators with numerous opportunities at enrichment.

The three-week series began at Lancaster High School on Monday, July 12, with Career and Life Ready Coordinator, Tom Martin, leading professionals through a day's training on the functionality of a multimeter. This training culminated with the National Coalition of Certification Center's (NC3's) Multimeter Certification that would later progress to student proficiency, but more importantly begin a student's journey toward mastery of the tool.

From there Martin led training on July 19 covering the twenty-one most utilized precision measuring devices in industry. Beginning with the application and scaling of the six-inch rule and continuing all the way through dual-read (either to plus or minus) dial indicator, professionals utilized each tool in order to review, but more importantly, to understand the certification program provided. This training led to another NC3 certification providing immediate comprehension, but for students the invitation to enhance opportunities at in-class and external application.

Martin led training around AC/DC fundamental concepts for educators. Three days of intense training took place and the instructor and professionals all admitted that each of the 1 ½ days was exhausting. Martin added, "We [participants] concluded that while we did well with the DC side, the AC was truly eye opening." These two courses were also tied to capstone NC3 certifications.

The series culminated with the region's first Splash



into mechatronics. In partnership with First Technologies and Mobile Modular, CESA 3 hosted eleven professionals at Belmont's brand new lab.

Mechatronics is a multidisciplinary field that refers to the skill sets needed in the contemporary, advanced automated manufacturing industry. At the intersection of mechanics, electronics, and computing, mechatronics specialists create simpler, smarter systems. Mechatronics is an essential foundation for the expected growth in automation and manufacturing.

Led by Ed Kralovec from Northwest Wisconsin Technical College and a member of the Mobile Modular team, professional educators learned all about the basics of mechatronics which, essentially, is building circuits. As the circuits built one upon the other, professionals gained confidence and were reassured that their training and perseverance paid off in the form of education which will ultimately benefit students throughout the region.

Art Pronschinske, District H Director, concluded, "CESA 3 has been a great partner for all of us in career and technical education, particularly technology & engineering." He added, "Their [CESA 3's] commitment to our region makes them an ally for everyone."



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# SUMMER TEACHER TRAINING INSTITUTE

## Automobile & Truck Dealers Association Foundation Sponsors Annual Event

By Brent Kindred, Vice-President - WATDA Foundation

One of the most important activities for the Foundation, is holding our annual summer teacher training institute. The host for this year was CSM Wisconsin Kenworth. This is a great facility for having the summer institute, with a well equipped training room and ample lab space for demonstra-

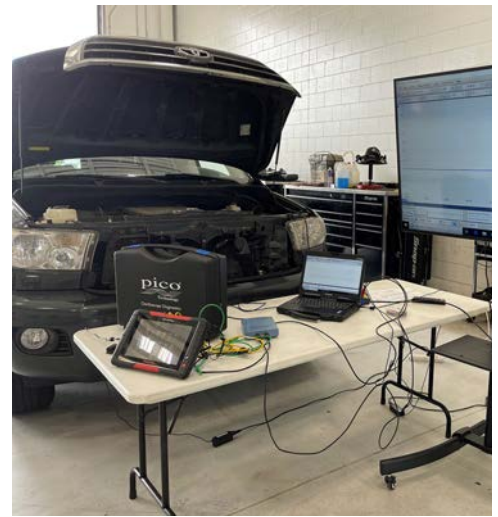
tions. They were welcoming every step of the way and helped coordinate an outstanding learning event for teachers.

Since there were still COVID-19 concerns, in-person attendance was limited (it did fill to capacity) and we

where they could talk individually about their programs, curriculum, teaching strategies, etc.

The essence for all the Foundation's professional development events is to help teachers and programs to be better.

We want Wisconsin's local transportation programs to be healthy, contemporary and to encourage students to pursue this career pathway.



offered a distance learning option for those who could not attend. In attendance were high school and technical college instructors and CESA personnel. In total we had 30+ educational institutions benefit from this training.

The event started off with a welcome address from Wisconsin Kenworth staff. After the welcome, teachers attended the following sessions; ASE areas 6 & 8, automatic transmissions, youth apprenticeship, inclusion and diversity in transportation programs, student scholarship program updates, alignment demonstration, vehicle multiplexing with electric vehicles, and more. In addition to the sessions, teachers had opportunities for social networking--time



Check out the  
WTEA  
website:  
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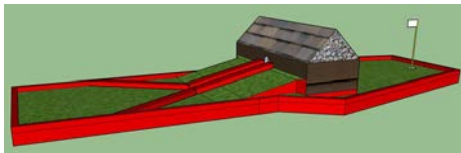
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**Technology Education: Building Wisconsin's Workforce**  
March 16 - 18, 2022 • Chula Vista Resort • Wisconsin Dells



## Slinger High School Designs and Builds Mini Golf Course for Quad

By: Brent Hug & Matt Kolpack, Slinger High School

Slinger High School was approached by Quad (formerly Quad Graphics), located in Hartford, Wisconsin, in the fall of 2019 with the idea to create a one-of-a-kind project. “At first we anticipated a type of project that would involve our building construction courses,” Matt Kolpack, Woods



and Construction instructor at SHS. “Typically, that would mean a shed or small building which has been a

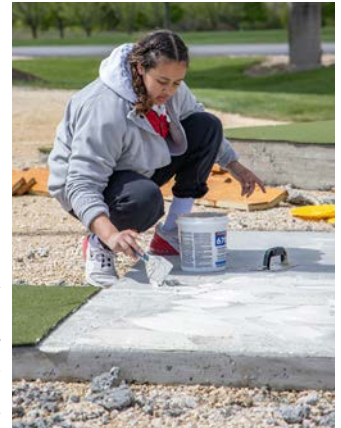
popular request of the High School over the years.” There was no need for a shed or small building however, instead, a new mini golf course.

Quad is home to almost 16,000 employees spread over several plant locations with shifts working around the clock. Once a year Quad holds an employee appreciation celebration for those individuals and welcomes them to the Hartford plant from all over the state. Families are invited to spend the day enjoying great food, music, and the amenities located on the Quad grounds. A basketball court, disc golf course, baseball diamond, and pavilion can all be seen filled during the celebration, but the main attraction is the golf tournament located on the mini golf course. The golf tournament has been a tradition for many years and the course was starting to reflect that.

The original construction of the course took place over 10 years ago. The course was a series of platforms made from 2”x 6” treated lumber covered with plywood and then wrapped with outdoor carpeting to resemble the greens. The course was decorated with obstacles which all had some symbolism relating to the history of Quad. Time was taking its toll on the course, plywood was

rotting out, carpet was fraying, and some of the obstacles became homes for various wildlife. The once pristine course was in dire need of an update.

That is when members of Quad (Gregory Kubisch, David Pye and Lindsay Ourada) reached out to Kolpack and colleague, Brent Hug, Architecture and Design instructor at SHS. “Within the first few meetings it was very clear that this would be a great opportunity for a number of classes we teach at SHS,” explained Hug. “Matt was able to see the value for his building construction courses and I was going to utilize the architecture students to create the plans for the course.” This began a



two-year process which involved over 50 students.

With most school-to-community projects there is an emphasis on creating a student-client relationship. Hug began the initial design process by inviting the members of Quad to meet with the Architecture and Design students in the classroom. “This was a great opportunity to ask questions and create a project scope for a real-life project. This allowed students to immediately take ownership of the project



and get excited about the potential the course had,” said Hug. The next step of the process was to take students out for the initial site visit where they took measurements of the existing holes, photographed the locations, and sketched potential ideas while being on site. “Being at Quad made everything feel real. Designing a mini golf course is something I never saw myself doing,” said Kayla Jeoffords, a SHS graduate.

Plans for the course were then generated in the classroom using various software programs including AutoCad and SketchUP. Students were required to create two-dimensional drawings, three-dimensional drawings, and to create a schedule for their final design pitch meetings with the representatives from Quad. “I was trying to create an environment where students were put out of their comfort zone by speaking with a client they haven’t had as an instructor. David, Greg, and Lindsey were gracious enough to take time out of their day to speak with the students and listen to their designs,” stated Hug. Kayla Jeoffords added,







“We were really nervous but also relieved to get feedback from them right away.” Designs were finalized and then sent on the next stage of the process.

Kolpack had his building construction students ready for the next part of the project which involved prefabricating the concrete forms and bumpers in the high school shop. Things were moving along nicely until the school year drastically changed in the spring of 2020 and Slinger High School went virtual from March through June, due to COVID-19. “We were fully anticipating completing the project in spring but everyone involved remained flexible and we delayed the project until we were back in school,” explained Kolpack.

Fortunately, SHS went back to school five days a week in September of 2020 and the project was approved to continue. This created challenges for the new students who were going to build the project and did not have any experience in the course design phase. “It challenged the kids to communicate and begin thinking critically about the design to construction process,” explained Hug. “We had to reach out to the prior year students with questions and it became a huge team effort to keep the initial vision for the project intact.” A new group of building construction students began to create the mini golf forms at the high school over the winter and were prepared for installation in the spring.



The onsite construction of the course took place at the beginning of May this year. Students were excused from school and bussed to the Hartford plant to pour the concrete and then returned the following week to replace the forms with bumpers, apply the turf, and install any obstacles the plans required. Over the first two days the students needed to set their forms and pour the concrete, nine holes one day and nine holes the next. Over the course of the two days

the kids poured just over 30 yards of concrete and gained valuable experience with real world construction processes. “It was all hands-on deck once we arrived on site,” said Kolpack. “Nobody had ever built a mini golf course so it was a lot of trial and error at first. Everyone from the Quad maintenance staff to the concrete truck drivers embraced the idea of the educational experience for the kids.”

Students returned the following week to complete their mini golf holes. The concrete was lined with cedar golf ball bumpers and covered with turf to provide a longer lasting product for Quad. The course was elevated with hole numbers, flags, as well as refurbished and new obstacles. “We were blown away with how everything turned out, from the initial designs to the finished product, we couldn’t have asked for anything more,” explained David Pye. The course can now be used by employees and their families and, as planned, the much-anticipated employee appreciation celebration. Hug finished by saying, “It was a long and challenging process but without the sup-



port and flexibility of Quad, these students would have missed out on a great experience. We were proud of how the students responded to the project and we look forward to participating in more projects like this in the future.”





## 53rd Annual Technology Education Conference & Trade Show

### Tentative Conference Overview

#### **Wednesday, March 16, 2022**

5:30 p.m. – 8:30 p.m. Conference Pre-registration  
6:45 p.m. – 9:00 p.m. Awards Banquet

#### **Thursday, March 17, 2022**

7:30 a.m. – 3:00 p.m. Conference Registration  
7:00 a.m. – 9:00 a.m. Project Showcase Setup  
8:00 a.m. – 4:00 p.m. Trade Show  
9:00 a.m. – 3:30 p.m. Project Showcase  
8:55 a.m. – 9:05 a.m. General Welcome  
9:05 a.m. – 10:00 a.m. 1st General Sessions  
10:15 a.m. – 3:30 p.m. Concurrent Sessions

#### **Thursday, March 17, 2022**

7:00 p.m. – 9:30 p.m. Presidents Reception

#### **Friday, March 18, 2022**

7:30 a.m. – 11:30 a.m. Conference Registration  
6:45 a.m. – 7:45 a.m. WTEA Breakfast  
7:45 a.m. – 8:30 a.m. WTEA Membership Meeting  
8:45 a.m. – 12:15 p.m. Concurrent Sessions,  
Demonstrations & Project Showcase  
12:30 p.m. – 2:00 p.m. 2nd General Session  
& Luncheon  
2:15 p.m. – 3:30 p.m. WTEA Board Meeting



#### **Thursday Keynote Speaker:**

**Dr. Roger Stanford**  
President  
Western Technical College



#### **Friday Keynote Speaker:**

**Leigh B. Estabrooks, Ed.D.**  
Invention Education Officer  
Lemelson-MIT Program  
MIT School of Engineering

**Session Topics Include:** Clean Energy Careers, Finance 101 for new teachers, Fostering Maker Faire, Plastics Technology Class, Simple Hydro-dipping/Painting, Engineering Academies, Project/Community Based Education, Women in Woodworking, FANUC Robotics, Aerospace Education, Pallet Wood Projects, 3d Scanning for printing and CNC, Apprenticeships, Welding and Machining, Building High Mileage Vehicles, Project Showcase, Skills USA, Middle School Roundtable, Manufacturing Project Ideas, New Teacher Boot Camp, and much more!



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# 2022 Conference Highlights

March 16, 17 & 18



Awards Banquet - Wednesday Evening

Trade Show - Thursday

President's Reception & Silent Auction - Thursday

Keynote Speakers - Thursday & Friday

Educational Sessions - Thursday & Friday

Project Showcase - Thursday & Friday

Early-Riser Breakfast - Friday

WTEA Annual Membership Meeting - Friday

Colleague Networking - All 3 Days



## Note:

If the 2022 conference gets canceled or changed to a virtual event due to COVID-19, registration fees will be refunded or credited upon request.

## WTEA Membership Application & 2022 Conference Registration Form

Membership year runs from September 1st through August 31st

Last Name \_\_\_\_\_ First Name \_\_\_\_\_

Home Phone (\_\_\_\_) \_\_\_\_\_ Local Tech College District \_\_\_\_\_ # years teaching \_\_\_\_\_

School Dist. \_\_\_\_\_ School Name \_\_\_\_\_

School Address \_\_\_\_\_

School City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_ E-mail: \_\_\_\_\_

**Check appropriate boxes below & total amount due.** (To pay fees with a credit card go to the WTEA website)

**Membership Fees:** [ ] 3 year membership - \$75.00 [ ] 1 year membership - \$30.00 \$ \_\_\_\_\_

**Spring Conference EARLY BIRD Registration** (Must be postmarked by December 20, 2021)

[ ] \$135 members [ ] \$165 non-members \$ \_\_\_\_\_

**Spring Conference Registration** (After December 20, 2021:

[ ] \$160 members [ ] \$190 non-members \$ \_\_\_\_\_

**WTEA Awards Banquet** (Wednesday, March 16, 2022) [ ] \$28 \$ \_\_\_\_\_

[ ] Bill my school district - purchase order is attached [ ] payment enclosed **Total \$** \_\_\_\_\_

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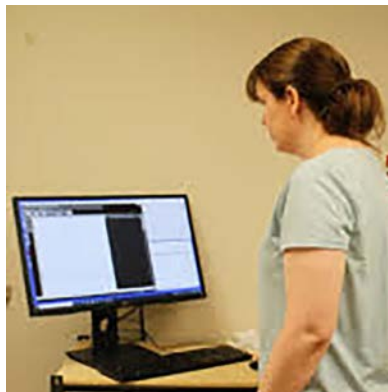
Our founder, Dennis Kittleson, started Inkworks in 1992 with the purpose of providing a unique combination of technical expertise and exceptional service. Dennis is a 1979 graduate of Stoughton High School and during the spring semester of his senior year, was a co-operative education student working for a local printing company. After gaining

considerable experience in the printing industry, he decided to open his own printing company. Thus, Inkworks was born.

Our foundation, built around honesty, integrity and humility, has remained rock solid over the years and continues to grow stronger all the time. We're proud of what we've built so far, but we never lose sight of what we value most – our customers.

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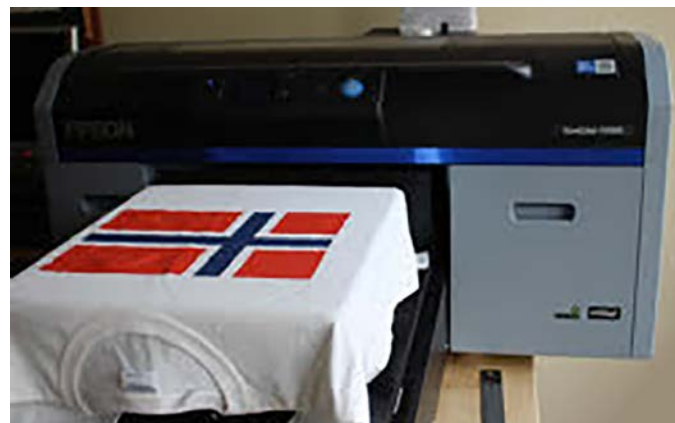
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# CTE INSTRUCTOR RECEIVES AWARD

## Eric Mumm Named A Wisconsin Teacher of the Year

Eric Mumm could not believe his ears. Wisconsin Superintendent of Public Instruction, Carolyn Stanford Taylor, informed Mumm, a Lancaster High School Technology Education teacher, he had been selected as one of five 2021-22 Wisconsin Teacher of the Year recipients by the Herb Kohl Educational Foundation.

"I thought, that's not right," Mumm recalled. "What did she say?" Educators awarded a Herb Kohl Fellowship are considered for Wisconsin's Teacher of the Year honor.



or. He was awarded a \$6,000 personal grant when named a Herb Kohl Teaching Fellow, and Lancaster HS received a matching grant of \$6,000. Mumm receives an additional \$3,000 personal grant as a teacher of the year. He is believed to be only the third CTE instructor to receive the Wisconsin Teacher of the Year honor since 1990. Fellowship recipients are educators who

have been chosen for their superior ability to inspire a love of learning in their students, their ability to motivate others, and their leadership and service within and outside the classroom.

"I was surprised," Mumm said of his selection. "Because I - and it's not me being modest - I really don't feel like the best teacher in this school district or building. I am really fortunate to be rewarded for something I love to do." When Mumm began at LHS eight years ago, he shared a classroom with a familiar face, Duane Leaser. "This honor for Mr. Mumm was well-deserved," Leaser said. "He is very talented, creative, smart, and his expectations of his students are very high." Leaser, who recently closed the book on a 20-year Tech Ed career at LHS, taught Mumm as well. "I feel good about turning the department over to him, knowing our hard work over the last 20 years will be maintained."

Fellow teacher Andrew Haas nominated Mumm for the Kohl Fellowship. "He gives 110 percent to everything he does, whether it's teaching, blood drives, or coaching, Haas said of Mumm. "He's so humble, but if there's anyone deserving of praise, it's him, because of the passion he has, not only for what he teaches, but for this community."

Lancaster High School Principal Mark Uppena stated, "I am extremely proud of Mr. Mumm. He deserves all the accolades that he gets." Lancaster Schools District Administrator, Rob Wagner, added, "It was a cool moment to be there and see Mr. Mumm's reaction, and how humble, yet grateful, he was as he was acknowledged. Watching it, you realize how important education is to him and how important it is for him to pass that on to others, not just students,

but staff as well."

When Mumm was asked about his accomplishments so far, he stated, "I am particularly proud of our Career Exploration Day, an event that connects students with local employers and helps them explore career interests. I have developed and organized the event for the last six years along with my CTE team. Students get to meet with area businesses, organizations, and individuals to discuss career opportunities. Our students experience it all, from shaking the hand of a business owner, to asking a question, to working with robotics."

Mumm also advises the National Honor Society and SkillsUSA, and is an assistant coach for football and middle school track. As a husband and father of two, Mumm keeps busy at home as well. In his free time he enjoys spending time with family and being outdoors (camping, hiking). He adds, "I also work at a local ag tourism company. I bartend weddings, drive tractor during the fall pumpkin picking season, and scoop ice cream in the ice cream truck."

As a Teacher of the Year, Mumm will serve on the Wisconsin Teacher of the Year Council for five years. The Council allows for two-way communication and collaboration between the DPI and educators. "I'll be able to network with educators from big schools, small schools, Native American nation schools - people that are in completely different situations than I am. I think it'll be great for me, to get better as an educator. I hope to bring that here and help lead this building, this school district, wherever I can."

Asked to summarize how it feels as a CTE teacher to be a Kohl Award recipient and a Wisconsin Teacher of the Year, Mumm stated, "It's an awesome feeling! I'm extremely proud to represent Tech Ed, CTE, and rural schools with this honor. I will have the opportunity to meet policy makers and administrators. I hope that I represent these groups in a positive way that can help our organizations in the future. It's meaningful to me because it supports what we do. It means we're not forgotten and the work we do preparing students for careers is appreciated."

Mumm's tip for new educators, "Know that the work you do is important, no matter what impression you might receive from others. Don't think your classes are second best or subpar. You are preparing students for very important careers. Our society needs skilled and technically-intuitive workers; you are building that foundation."

*\*Special Thanks to Rob Callahan - Lancaster Schools, Mark Mueller - DPI, Kevin Miller - DPI, and Art Pronschinske - District H Director, for contributing to this story.*



# PLTW DISTINGUISHED PROGRAM

## Lancaster High School Receives National Recognition

Lancaster High School has been recognized as a 2020-21 Project Lead The Way (PLTW) Distinguished School. It is one of just 204 high schools across the U.S. to receive this honor for providing broad access to transformative learning experiences for students through PLTW. PLTW is a nonprofit organization that serves millions of PreK-12 students and teachers in over 12,200 schools across the U.S. The PLTW Distinguished School recognition honors schools committed to increasing student access, engagement, and achievement in their PLTW programs.

Instructor Duane Leaser (now retired) is credited with starting the PLTW program at LHS. Tech Ed teacher, Eric Mumm, teaches Introduction to Engineering Design, Civil Engineering and Architecture, as well as Principles of Engineering. Computer Science Principles is taught by a Business Education instructor.

To be eligible for the designation, Lancaster High School had to meet the following criteria in the 2019-20 school year:

- Had 95 percent of students take the End-of-Course (EoC) Assessments;
- Had 25 percent of students or more participate in PLTW

courses, or of those who participated in PLTW, at least 33 percent took two or more PLTW courses;

- Offer and had students enrolled in at least three PLTW courses;
- Had strategies and procedures in place that support reasonably proportional representation with regard to race, ethnicity, poverty, gender and can support such claims with relevant data.

"It is a great honor to recognize Lancaster High School for their unwavering commitment to provide students with an excellent educational experience despite the unusual circumstances and unique challenges that the COVID-19 pandemic presented to the educational landscape this past year," said Dr. Vince Bertram, President and CEO of PLTW.

"They should be very proud of their achievements in unlocking their students' potential and equipping them with the knowledge and skills necessary to thrive in life beyond the classroom no matter what career path they choose."

Lancaster High School is part of a community of PreK-12 schools, colleges and universities, and corporate and philanthropic partners across the country united around a passion for providing students with inspiring, engaging, and empowering learning opportunities.



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# WTEA FOUNDATION SCHOLARSHIP

## Part-time Job, Plus Mentoring, Leads Butler to Pursue Tech Ed Career

Jonathan Butler, a graduate of Mishicot High School, will receive the WTEA Foundation scholarship as he pursues a Technology Education degree at Lakeland University this fall. The Technology Education program at Lakeland includes technology and skills training provided by Lakeshore Technical College. The following is the essay he submitted with his scholarship application.

When it came down to choosing my future career it wasn't someone that prompted my choice, rather something. When I was sixteen years old I was accepted for an entry level position at the Mishicot Country Store which is a branch of the Country Visions Cooperative. I have worked there for two years now and have gained many valuable lessons and experiences. Throughout working there I have had many job titles including being one of their main mechanics on their Stihl equipment. This position helped me recognize my enjoyment in mechanics and engine repair.

Another experience that I encountered was mentoring Mishicot middle school students. I was asked to help out with struggling middle schoolers at the beginning of my sophomore year in high school. After doing this for several weeks, I realized my enjoyment for teaching children

and watching their eyes light up when learning something new. Throughout my job and mentoring experience, I have learned many valuable lessons and have ultimately used



these experiences to help shape my future.

Using these experiences, I have decided to try and incorporate both mechanics and teaching into my future profession. This is why I decided to become a technical education

teacher.

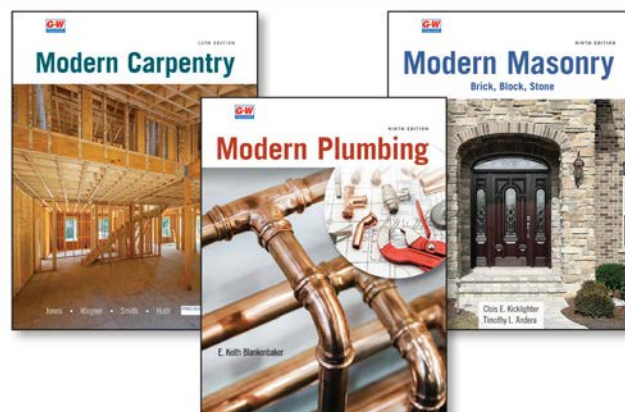
Within this career, my goal is to educate students on basic building, mechanical, and industrial skills to prepare them for the workforce and many experiences they will encounter later in life. In conclusion, my first job experience has taught me many life lessons and ultimately prompted me to choose my future career path in technical education.

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## Gavin Junk Finds His Passion After Creating Tutoring Program

Gavin Junk will receive the WTEA Foundation scholarship as he starts his post-secondary education at UW-Stout this fall. He is a June graduate of Mishicot High School and is pursuing a degree in Technology Education. The following is the essay he submitted with his scholarship application.

My sophomore year I was selected to attend the Washington Leadership Conference through FFA. I learned valuable lessons on how to be a better leader and how to strive to better our community. Everyone who attended was to come back and make an impact on their community. My FFA advisor, Ms. Propson pushed me into starting a tutoring club at Mishicot because she saw my passion for helping other students.

I started a tutor program my junior year where students could drop in after school for help in schoolwork. With this opportunity, I found my true passion, which is why I will be attending UW Stout for a Technology Education teacher. Ms. Propson's love for teaching has inspired me to want to become a teacher.

I want to become a Technology Education teacher be-

cause it engages kids and creates a hands-on learning environment. Technology Education has great opportunities, it improves personal, workplace, and technical skills that



are grounded in academics. I want to help kids learn, get them involved in SkillsUSA and help them think of the technical trades as a possible future career. My desire is to be that teacher who changes the world one student at a time.

I am glad Ms. Propson saw my skills in teaching and helped pushed me to go outside of my boundaries. I will commit myself to better my education and continue to give back to the Technology Education program in the future.

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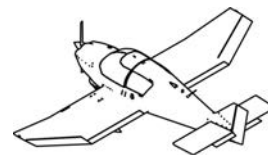
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## WTEA SUMMER TOUR

**Save the Date  
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# **The WTEA Summer Tour is Set for June 21-22, 2022**



**The Theme: AVIATION**

**Location: Appleton & Oshkosh Areas**

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### How it works:

Complete the form below and list every technology educator in your building. If your department has teachers in more than one building, duplicate the form and provide us with the correct school address for each educator. That way separate buildings in the same school district can be combined to increase your savings. All names listed must be employees of the same school district. Tally the fees on the form and send it along with a check or school purchase order to the address on the bottom of the form. **To be eligible for all benefits of this special pricing, school subscriptions should be sent as soon as possible.**

### What you get:

Each person receives: a personal copy of the *Interface*, all association mailings and notices, invitations to attend regional technology education meetings and workshops, unlimited access to the WTEA website, discounted admission to the association's annual technology education conference, and eligibility to receive all association awards (educator of the year, program of the year, award of excellence, 25 year award). All mailings will be sent to the school address on the form. This school year subscription will expire the following fall. This form will be published in the *Interface* each fall; it is also available on the WTEA website.

— — — — — **Please type or print all information. Duplicate this form as necessary.** — — — — —

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Name and email	# of years teaching	Fee
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2 _____	_____	\$25
3 _____	_____	\$20
4 _____	_____	\$20
5 _____	_____	\$15

***Each additional person is \$15 each; names and school address may be attached on a separate sheet.***

Please note: The *Interface* is published 3 times per year: fall, winter and spring.

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or Fax (920) 239-8948**

## Key Findings from Wisconsin's Responses to the 2020 National T&E Education Safety Survey

By: Tyler S. Love, Ph.D. and Ken Roy, Ph.D.



In April of 2020 the T&E Education - Facilities and Safety Survey (TEE-FASS) was sent out to ITEEA members to collect responses about a myriad of safety topics related to K-12 Technology and Engineering (T&E) education, Career and Technical Education (CTE), and maker-spaces. This study revealed some important findings due to the limited amount of prior research in this area as discussed in another article published on this study (Love et al., 2021).

There were 718 participants from 42 states who completed the survey, of which 42 participants were Wisconsin educators. This article will present a very brief overview of a few key findings from the study. To view the full results from Wisconsin and see how they compared to the national averages please visit <https://sites.google.com/view/2020-te-safety-study/>

### Results

Below are just a few of the key findings that emerged from the responses submitted by Wisconsin educators.

► **Course preps** – Wisconsinites reported higher numbers of course preps than the national average. Approximately 33% had four preps and 50% had five or more per semester.

► **Course Foci** – Wisconsin respondents had a higher emphasis on teaching traditional courses (woods, metals, construction) versus engineering focused courses.

► **Class Size** – Class sizes were slightly lower than the national average. (Only 14% said their average class size was above 25 students, and 51% said their largest class was above 25 students).

► **Students with Disabilities** – The percentage of SWD in a T&E class was similar to the national average. Approximately 43% of Wisconsinites reported that 16- 25% of students in their classes were diagnosed with a disability.

► **Budget and Administrative Support** – Only 38% believed they had a sufficient budget for safety expenses, much lower than the national average. However, the majority of Wisconsin teachers viewed their administration's support as good (36%) or excellent (24%).

► **Safety Training** – Far less Wisconsin teachers reported receiving safety training in their graduate level course work (12% in teaching methods courses and 14% in technical course work). Only 57% reported receiving safety training in their undergraduate teaching methods course, and only 52% in their undergraduate technical courses. Additionally, 62% of Wisconsinites never received safety training from their school district. One positive finding was more teachers received some form of safety training from their state association (WTEA) in comparison to teachers in other states.

► **Facilities** – Wisconsin had a higher percentage of hybrid T&E classroom/lab facilities (79%) and solely dedicated T&E labs (19%) than other states. Moreover, Wisconsin reported having a greater percentage of large square footage

facilities (40% had a facility over 1,200 square feet). These findings could be connected to the greater focus on traditional courses that Wisconsin participants reported teaching.

► **Soldering** – Among those Wisconsin teachers who indicated their students conduct soldering activities, only 27% reported some form of ventilation is used while soldering.

► **3D Printing** – Among those Wisconsin teachers who indicated they use 3D printers in their lab, approximately 77% said they do not use any form of ventilation while their 3D printer is operating.

► **Student Requirements** – One positive statistic from this study was that all Wisconsin teachers said they require students to wear ANSI/ISEA Z87.1 D3 safety glasses with side shields when working with solid materials. However, not all teachers required students to always sign a safety acknowledgement form (83%), secure long hair (88%), and other important practices to work in the lab.

► **Facility Safety Practices** – Wisconsin mirrored the rest of the country in terms of critical safety engineering controls and practices that are needed in labs. For example, only 52% of teachers had safety zones on the floor around hazardous equipment and work areas, 76% had an eyewash within 10 second access, 69% had accessible master power shut off switches, 69% had lockable tool storage, 57% reported having sufficient project storage, and only 69% had a first aid kit among many other critical lab safety controls.

► **Equipment** – There was a much higher percentage of teachers in Wisconsin who used table saws in their labs (88%). Among those teachers, a greater percentage had SawStop table saws (78%) in comparison to the national average (56%). Wisconsin teachers also allowed more student led operation of the table saw while the teacher was in the lab.

► **Safety Incidents** – Wisconsin teachers reported a higher rate of safety incidents per year (55% reported 1-10 incidents, 10% reported 11-20 incidents). Nationally, the main cause for these was hot glue guns, however in Wisconsin the most prevalent causes were student operated equipment/machinery (38%), hand or portable power tools (31%), sharp materials or splinters/slivers (24%), and hot glue guns (24%).

► **Minor Safety Accidents** – Wisconsin had a higher occurrence of minor accidents in both one- and five-year spans. Almost 70% of teachers reported 1-5 minor accidents within the past year while 14% had 6-10 minor accidents. Within a five- year span Wisconsin was 8% lower than the national average in the 1-10 minor accident occurrences category, but 14% higher in the 21-30 accident occurrences category. It was not investigated whether the focus of the courses played a role in these increased accident rates.

► **Major Safety Accidents** – Major accident rates were



also higher over one- and five-year spans in Wisconsin. The occurrence of 1-5 major accidents during a one-year span was 12% higher than the national average. Additionally, the occurrence of 1-10 major accidents over the past five years was 14% higher. Most of the minor and major accidents resulted in cuts or lacerations, and all occurred to fingers.

► **Perceived factors for Unsafe Conditions** – Wisconsinites had similar responses to the national population, citing the following as what they believed were the top three factors associated with unsafe conditions: 1) student failure to follow safety protocols, 2) overcrowding, and 3) percentage of students with disabilities in a class. The national population also cited classroom management and inadequate facilities as top factors.

In addition to calculating percentages, some statistical analyses were conducted using the responses from the national population of 718 teachers. These tests were conducted to examine if any factors served as significant predictors of incidents or accidents. From these analyses a number of factors were found to significantly contribute to or reduce the likelihood of accidents. Among those found to reduce the chance of accidents were factors such as having safety glasses for every student, having safety zones labeled near equipment/hazardous areas, having a SawStop table saw compared to another type, and many other factors. The full list of statistically significant factors can be found in Love et al. (2021).

Interestingly, the type of safety training received was found to be one of the most significant predictors of accidents. Analyses revealed that different safety training opportunities completed as isolated experiences did not significantly reduce the chance of an accident occurring. However, when these opportunities were combined to create a more comprehensive training experience, the rate of accidents significantly decreased.

For example, teachers who received T&E safety training in an undergraduate or graduate teaching methods course, and safety training from their district upon initial hiring, and safety training updates within the past five years from either their district or an external source were 37% less likely to have had an accident occur within the past five years. This indicates that teacher preparation programs and school districts play an integral role in ensuring educators have the initial and continual safety training they need to reduce the chance of accidents.

### Recommendations

A number of recommendations resulted from this study. For example, there are a number of safety issues which need to be addressed to comply with federal, state, and local legal safety standards, and also align with better professional safety practices. One example is the requirement for students to always tie back long hair, secure loose clothing, and remove or secure loose jewelry when working in a lab setting. Another is the need for ventilation

when using soldering and 3D printing equipment. Emerging studies have found many desktop 3D printers produce hazardous levels of ultrafine particles (UFPs) during operation, posing a risk not only for students, but more so for the instructor who is working in that area throughout the day.

From this study a number of other critical and very practical data driven safety recommendations were provided. They can be found in a recent National Science Teaching Association Safety Blog Commentary by Dr. Ken Roy (Roy, 2021), and in the report presenting the full Wisconsin article at <https://sites.google.com/view/2020-te-safety-study/>.

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### “In Response to John P. Morgan”

*Jim Bensen, Founder & Past President, WTEA*

I read with great interest, the anonymously submitted article in the last issue of *Interface*, relating to the impact of John Morgan on our profession. When I was a professor and administrator at UW-Stout, we knew John well and regularly engaged him in our program to supervise student teachers in Industrial Education/Technology Education. We also invited Mr. Morgan on many occasions to come on campus and speak to our students who were preparing to become educators. John, in this context, was absolutely terrific!



One of John's unique talents was to grab the attention of others and he knew how to use it to drive home his message! I recall one time, when he was on the Stout campus, of his use of the element of surprise. John was introduced by one of our professors, offered his “thanks,” walked over to the classroom door and stood alongside the waste basket. He started to talk and “quick as a cat,” he gave the waste basket a “soccer kick” across the room and the basket bounced off the other wall. The students sat right up, real straight, and John commenced to deliver his in-

tense and highly passionate message!

John talked how everyone is different, everyone is important, everyone has unique needs, everyone responds in their own pattern, everyone sees, hears, feels, smells, as an individual! There are students who are outstandingly creative and others that just want to follow the plan. John reminded the class that some students they will be teaching will be tremendously motivated, others are on motivations “negative scale”! We are big, small, heavy, light, quick, clumsy, smart, or less so, but everyone is IMPORTANT! John shared stories of unsuccessful students in his school, who when given the chance, were able to find tremendous success!

In what seemed like ten minutes, the hour-long class was over and the students sat in their seats like they were frozen in place! They gave one the feeling that they were “stunned” by the absolute passion and high energy with which John shared his experiences with them! The message was an hour that they remembered well into their lives as teachers! Mr. Morgan, was dynamite! ....and hundreds who were impacted by him became successful citizens!



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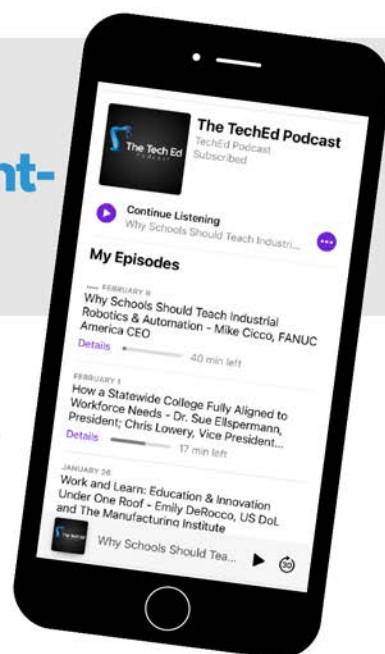
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