



## Dressed for Success: Johnsville's Scott Zachmann Uses Neckties to Engage in Fun, Unique Way with Students



Anoka-Hennepin School District

Scott Zachmann was taught from a young age to dress well in professional settings.

"My dad always said, 'dress for success,'" he said. "So for a long time, neckties have kind of been my thing."

And most days, Zachmann, who just started his 14th year teaching fourth grade at Johnsville Elementary School in Blaine, wears one — even if it means confidently sporting a hotdog necktie. Or a bright yellow necktie with a bunch of smiley face emojis. Or a tie featuring the classic Nintendo game, Duck Hunt.

In fact, no matter the tie, no matter how badly it clashes with the shirt he's wearing,

which Zachmann says happens often, he happily wears a tie most days for one simple reason: it's his students who are picking the tie out for him.

"The kids love the ties — they really get a kick out of it," he said. "It's important to them."

In the back of his classroom, Zachmann has a tie rack that features 58 neckties and another five bowties. Most are pretty ugly — intentionally so, and are a mix of ties students and colleagues have gotten him as gifts over the years. Every morning, he has one of his fourth-grade students pick the tie he'll wear for the day from the rack.

**"The tie thing has been fun for me, because they have a memory of their elementary days that sticks with them, he said. I have kids all the time who come back and say they remember picking the ties."**

Choosing who gets to make the daily selection is easy, he said. Every student gets to pick the tie he wears on their birthday. Other days, he picks students randomly. Sometimes he'll reward a student who did something amazing in class, other times he'll use it as a chance to lift a student who is having a rough day. Regardless, it's a fun way to engage with

Continued on Page 17



## Eastview Coach Pushes Student Rider to Twin Cities Marathon Finish

Emily Buss  
Communications specialist  
Rosemount-Apple Valley-Eagan  
Public Schools

Lifelong distance runner Tom Sharp is no stranger to the challenges of running a marathon. The 26.2 mile-trek is one the Eastview High School cross-country and track and field coach has completed several times before. But this year's running of the Twin Cities Marathon was a more rewarding challenge than previous marathons, as he crossed the finish line pushing junior Ryan Costley.

Ryan, 16, and Sharp were one of three marathon teams that included a rider pushed in a specially designed wheelchair. Ryan has a rare neurodegenerative disorder called ataxia telangiectasia, or Louis-Bar Syndrome, which has required him to use a wheelchair since he was in elementary school. Despite his diagnosis, Ryan is an active student-athlete, participating with the Dakota United Hawks adaptive sports.

The inspiration to run with an adapted athlete came after Sharp saw a story about Peter Klein, a fellow long-distance runner who pushes wheelchairs during marathons to raise awareness of various causes.

"The foundation of our team at Eastview is all about giving back to the community and finding ways to include others in what we do," Sharp said. "It's a big thing for me to teach my kids about inclusion and service to others."

After contacting Klein this summer, the two registered for the Twin Cities Marathon,



received approval to run with riders and began training. They coordinated with the nonprofit myTEAM TRIUMPH, which provides persons with disabilities opportunities to participate in athletic competitions alongside an able-bodied athlete. Sharp focused his attention on athletes from the Dakota United Hawks and discovered that Ryan would be in his chemistry class this fall.

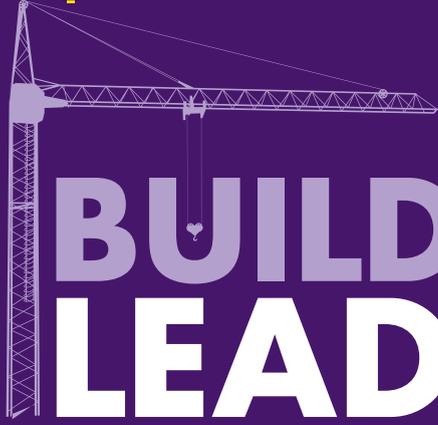
"I knew I had to push Ryan," Sharp said. "He is a stand-out student in my class. He's an amazing kid, such a smart kid, and I knew he

Continued on Page 17

## THANK YOU TO OUR ADVERTISERS FOR YOUR GENEROUS SUPPORT!

Minnesota State University Mankato • North Dakota State University • Minnesota State Community & Technical College  
UW River Falls • MN Utility Contractors Association • Rochester Community & Technical College  
Minnesota Educators of the Gifted & Talented • Bellin College • The College of St. Scholastica • Finishing Trades Institute  
Rochester Area Builders Association • Augsburg University • Hamline University • Century College

 MINNESOTA STATE UNIVERSITY MANKATO



# BUILDING LEADERS

CONSTRUCTION MANAGEMENT PROGRAM



Welcome to the Minnesota State University, Mankato Construction Management Program.

Ranked #1 nationwide as the best value construction management program in 2016, 2018, and 2019 by Best Value Schools, we pride ourselves in producing leaders who are equipped to creatively advance our society and communities.

Our ACCE-accredited program blends general education courses with technical and managerial concepts in the construction discipline as well as the business sector. Our highly-respected faculty see the value in providing students with a project-based learning environment to solve design and construction problems with big ideas in mind.

Partnering with business and industry nationally and globally, many students are given the experience and opportunity to enter into rewarding careers in civil, commercial, residential, and industrial construction following graduation.



## Contact us

Wiecking Center Suite 302  
Mankato, MN 56001  
(507) 389-6385  
mohamed.diab@mnsu.edu  
<https://cset.mnsu.edu/cm/>



MINNESOTA STATE

Minnesota State University, Mankato  
A member of Minnesota State



## Third Year's a Charm for Growing District 196 Construction and Building Trades Elective



Emily Buss, Communications specialist  
Rosemount-Apple Valley-Eagan Public Schools

Commercial and residential construction in District 196 is booming, and so is enrollment in a course at Eagan High School that teaches future contractors the tools of the trade.

The Construction and Building Trades course is now in its third year and continues to provide student unique opportunities to explore the trades career. Funded by a Construction Careers Foundation grant, the elective is open high school students of all abilities. Whether

they are prepping for job in the field or swinging a hammer for the first time, educator Ryan Hauenstein said the course encompasses all aspects of learning.

"We continue to here from students, parents, colleges and industry professionals that the need to prepare workers to enter the trades remains critically important," he said. "Each year we are getting more and more requests to enroll in the

course and we continue to grow our professional partnerships to increase opportunities for our students."

The first semester was all about the basics. Students learned about the profession by visiting construction sites, interviewing professionals and honing in their creativity on a gable-end, 12-by-16 storage shed. The rest of the year was spent sharpening their saws on a larger project for a real client — a tiny house.

Rain or shine, even on sub-zero winter days, the students hammered away at the

project. Hauenstein said braving the elements is a real-life factor in the construction business and learning how to persevere through unfavorable conditions was an important lesson for students. As the 250-square-foot home grew, so did the skill-sets of each student, as well as their interest in the field.

This school year, students are embarking on their third project — a tiny cabin. Work began in September, soon after the first day of school. Students quickly constructed walls and the decking for the trailer, allowing for the project to progress outside by October. Not only is this a year of growth, it's also a year of mentorship. Returning students who were part of the pilot program continue to be involved and serve in supervisory roles, guiding new students to success. In addition, these students also have the opportunity to participate in internships and apprenticeships with school partners.



"For decades we've been pushing the traditional college track, but for some kids that isn't the best fit," Hauenstein said. "Here in the trades environment, they thrive. And they can walk away and not just see a grade, but something they build with their own hands."

[www.district196.org](http://www.district196.org)  
(651) 423-7700



## New Construction Class at Minneapolis Roosevelt High School Shows Students an Alternative to College

What if you're a student who needs something different? What if you're at your best when you're thinking through your hands?

Acceptance into a registered apprenticeship program to become a skilled tradesperson, such as an electrician, plumber or pipefitter, allows an ambitious young person to combine their learned knowledge with practical skills involving their hands. Unfortunately, careers in construction aren't on the radar of many high school students.

Luckily, Roosevelt High School in south Minneapolis is doing something to change that. Through its Auto and Construction Program, Roosevelt High School offers students the opportunity to learn about automotive repair, welding, and now, construction.

As the only high school in the Minneapolis school district to offer classes in construction, Roosevelt gives its students the opportunity to learn real-world skills, which can give them a leg up in pursuing a career in one of 30 construction trades, from a career as an electrician to bricklaying.

Catherine Ludowese, a teacher at Roosevelt High School leads the new construction program, which was launched in September 2018.

"Roosevelt's program offers three different pathways for our students," Ludowese says. "We have an automotive services pathway, an auto body repair pathway, and a now, a construction and welding pathway."

"The goal of the program is to prepare students for careers that may not involve college," says Ludowese, "such as an apprenticeship program in one of the skilled trades, or an immediate start in the workplace after they graduate from high school."

In this first year of the construction trades program, Ludowese offered five classes in Construction 1, where she taught the students about basic safety, measurements, and assembly, and gave them experience working with tools, such as power saws. This spring she teaching three classes in Construction 1 and offering two classes in Construction 2 for students continuing with the construction track. Next school year, she hopes to offer more advanced construction classes (Construction 3 and 4) for students who desire to continue pursuing their learning of construction.

"We know that we're filling a big need with these classes," says Ludowese. "In our first semester alone, 91 students enrolled in our five Construction 1 classes. We've been amazed with

the level of interest that our students have shown so far."

While Ludowese's class teaches skills that are applicable to a work environment, it also teaches skills that are applicable to student lives, and gets them excited about building and creating.

"Whether a student pursues a career in construction or not, they're gaining valuable experience," Ludowese adds. "For example, some of our students may never have lifted a hammer before. We show them how to do it right. And that's a skill they can use the rest of their lives."

In their first project for Construction 1, the students worked on making a giant jenga game, where they learned how to measure and cut wood. For their second project, the students created a cornhole game (bean bag toss), which allowed them to learn how to properly drill holes



and yes, even sew the beanbags. For their last project, the students learned about electricity while learning how to wire an outlet.

"The program is designed to let the students have fun," Ludowese says, "by teaching them how to make games and showing them how the skills they are learning apply to real life."

Although Ludowese's class is a lot of fun,

Continued on Page 4

# **R** Roosevelt Student Finds Empowerment, Independence in Construction Internship



By Emily Sweeney

Omelkeir Muhumed's name means "bringing goodness" and she does that often when she leads by example, as an older sister, as a student and on the construction site.

The Roosevelt 10th grader is the oldest of eight children in her family. Her youngest brother is 10 months old.

"I always help out with my brothers and sisters," Muhumed said. "I look out for them and help watch them."

Muhumed's patience and natural leadership skills make her a great teacher and her peers attest to that.

"People ask me for homework help and sometimes I help them with social studies or science," Muhumed said.

But this summer Muhumed wanted to lead in a different way. She was going to be the first person in her family to work in the construction trades through a paid construction internship with the Minnesota Trades Academy.

"I've never done any of this before and it's so cool," Muhumed said. "I am even getting class credit for this internship at my school."

The Minnesota Trades Academy offers two different tracks for students to learn about the construction trades through hands-on experience. Track I is a six-week introduction to construction career opportunities. Youth who participate in Track I can move onto Track II, a nine-week trade specialization course the

following summer. The completion of both tracks can set a student up to launch a career in the construction industry, beginning with a registered apprenticeship with a Minnesota building trades union for those who are 18 and have a high school diploma or GED.

Doing something new by herself did not intimidate Muhumed. She's accomplished a lot on her own before.

"My family and I moved from Ethiopia to Minnesota when I was 10," Muhumed said. "It was hard when I first came here because I had to learn English while going to school and both of my parents had to work, so no one was at home when I was getting out of school and trying to do my homework."

This fall marks an academic milestone for Muhumed. She anticipates finishing up her English as a Second Language courses. While for many people being fluent in two languages is a challenging and rare accomplishment, Muhumed speaks four.

"English is my third language, I'm learning Spanish now, too," she said. "I learned Arabic when I attended schools in Ethiopia, but I grew up speaking Somali."

While Muhumed did not have experience with construction, she had perseverance and a willingness to try new things on her own. Reflecting on her internship with the Minnesota Trades Academy, Muhumed sees that she was always capable of doing construction work.

"I used to play with computer programs that let me design and create buildings," Muhumed said. "I've always liked being able to create things and being artistic."

## **Muhumed's Favorite Project**

During her time with the Minnesota Trades Academy, Muhumed learned to use tools that she had never seen before. Her favorite project so far was a group partnership with Habitat for Humanity.

"Our (MTA Crew) team does everything together," Muhumed said, "At the Habitat for Humanity site, we installed two windows in a house, and so we could give a family a home."

It's the tangible work and rewarding feeling of helping her community that motivated Muhumed to consider a career in construction.

"I am not sure what I want to do after high school yet, but I think I will go into the construction and building trades," Muhumed

said. "I am definitely considering it now because Minnesota Trades Academy let me see the different careers and projects I can work on."

## **Construction is for Women, Too**

Muhumed is one of the few girls in the Minnesota Trades Academy internship program.

"I thought there was going to be a lot of girls interning with the Minnesota Trades Academy and I was surprised when there weren't," Muhumed said. "I think more girls would love it if they joined, they might just be nervous that it would be too hard for them or that they have to lift a lot of weight but that's not true."

To other women who may not be sure if construction is for them Muhumed offers this advice:

"Girls, I know you can do it, just give it a try," Muhumed said.

*Reprinted with permission from Construction-careers.org*



[roosevelt.mpls.k12.mn.us](http://roosevelt.mpls.k12.mn.us)  
(612) 668-4800

## **New Construction Class at Minneapolis Roosevelt High School** Continued from Page 3

she says: "There's no easy 'A' here. The class has high standards that push the students to go outside of their experience and learn new valuable and applicable skills."

As for the future, Ludowese says that she wants to get more funding so that she can take her students to visit active construction sites where they can talk to real construction workers. She also would like to expand the diversity in her classes, to attract more female students and students of color into the construction trades.

"There is a huge opportunity for women and for people of color in Minnesota's construction industry," Ludowese says. "We want to encourage and support these students to get involved, and help them explore careers in construction."

Maybe, for example, Ludowese notes, "that the girls in our school will feel more confident about signing up for these classes after they see that they're being taught by a female instructor." Overall, Ludowese is on a mission to give those students who don't fit the typical expectations of a four year college a different opportunity.

"We want to encourage students to foster their skills," she says, "and show them how many opportunities come from the development of their expertise."

Roosevelt is one of a growing number of high schools throughout Minnesota offering construction classes for students preparing for apprenticeship programs in construction. These schools, known as Construction Apprenticeship Preparation (CAP) schools, are supported and encouraged by Minnesota's building trades, construction companies and others that have teamed up under the Construction Career Pathways (ConstructionCareers.org) umbrella to encourage high school students throughout the state to consider construction as a career choice.

At the end of the day, Ludowese sees the construction trades courses at Roosevelt as an opportunity to prepare her students to approach life head-on. Through her class, she wants her students to "use their hands, enjoy their learning, feel safe, feel that they belong, and most importantly, feel that they are a better person through their effort and valuable contributions to their developing work."

*Reprinted with permission from Constructioncareers.org*

[roosevelt.mpls.k12.mn.us](http://roosevelt.mpls.k12.mn.us)  
(612) 668-4800

## CAREERS IN BUILDING & CONSTRUCTION TRADES



CAD (COMPUTER AIDED DRAFTING TECHNOLOGY)



FACILITY AND SERVICE TECHNOLOGY (FAST)



CARPENTRY



WELDING TECHNOLOGY

**HANDS-ON EXPERIENCE**  
ACCESSIBLE | AFFORDABLE | EXCEPTIONAL

**REGISTER NOW | RCTC.EDU**



*A member of Minnesota State*

507-285-7557 | 851 30th Avenue SE | Rochester, MN 55904 | Equal Opportunity Employer/Educator  
For more information, contact: [eric.sime@rctc.edu](mailto:eric.sime@rctc.edu) or 507-280-5006



## Bemidji Career Academies



*Brian Stefanich  
Solway Elementary Principal  
Bemidji Career Academies Director  
Bemidji Area Schools*

The Bemidji Career Academies program's goal is to equip students with the skills necessary to obtain high-skilled employment while staying in the community. Rather than sending students out of the community to attend college, perhaps never to return, the Bemidji Career Academies seeks to partner with local businesses, agencies and schools so that students can find an opportunity to earn a vocational certificate or diploma without leaving Bemidji. Through community collaboration and intentional coursework design, Bemidji Career Academies allow students the opportunity to thrive in today's workforce while staying in Bemidji and becoming productive income earners contributing to the economy of the Greater Bemidji area.

The uniqueness of the Bemidji Career Academies lies in the tremendous numbers of collaborating businesses and agencies that support the 18 existing career academies.

Bemidji Career Academy students are given the opportunity to assess their skills and talents as they pertain to the world of work, build skills transferable to the workplace by taking courses specific to their chosen Career Academy, access free college courses while in high school, and have the opportunity to participate with community businesses

who provide invaluable "real world" workplace experience.

We currently have 40 students in grades 9–12 in the Construction Trades Academy, 150 students in grades 9–12 in the Health Careers Academy and 14 students in grades 9–12 in the Information Technology Academy. We are currency partners with over 50 business and industry partners in the Greater Bemidji area. Our partners not only sponsor the academy of their choice but they open their doors for our students to tour, job shadow, intern and volunteer on site to explore a possible career in that area. We also have a strong partnership with our local Boy Scouts of America Exploring Program.

The explore program directors work with our Bemidji Career Academy partners to create Exploring posts. The posts meet once or twice a month on site to provide interactive activities that help our academy students explore, pursue and develop their special interests with our community professionals while still in high school. Together, we are equipping young people with character, leadership and life skills that can be used today in their futures at no cost to our students.

Bemidji and our region, like numerous regions across the state and nation, have highly-skilled tech jobs with limited or no qualified applicants to fill open positions. The Bemidji Career Academies

**Continued on Page 10**





## Construction Technology Class at Kasson-Mantorville High School



*Kasson-Mantorville Schools*

What comes to mind when you think about a high school classroom? Four walls, desks, and a whiteboard? For students in the Construction Technology class at Kasson-Mantorville High School, it could mean 80 degrees and sun or 5 degrees and 20 mile per hour winds; and that's just the weather. The

classroom they learn in is something they construct together and alongside community supports. Their classroom is a residential construction site.

Each year students in the Construction Technology class at Kasson-Mantorville High School build a house on a lot purchased by the district. Students begin their learning

journey by framing the entire house on a foundation built by a subcontractor. Students then continue with the installation of windows and doors, insulation, drywall, and siding. Throughout the process, students learn skills which include tool and worksite safety, measuring, blueprint reading, issues facing contractors, and information about utilities. In addition to construction-based skills, students are learning to simply be good human beings in the workplace. Using effective communication skills is essential in making sure everyone is working together throughout the home building process. Students are having to communicate to ensure that the work is done in a high quality manner because the house needs to be ready to sell once the final touches have been made.



Organizational skills are at the top of the development list as well so that everyone is working together, and so that subcontractors have the time and space to complete their specific work to ensure the utilities are ready.

While students are engaging in real-life experience and developing skills working at the house site, they also get career exposure by having an opportunity each quarter to participate in a job shadow day. The program has partnered with Rochester Area Builders (RAB) to give students the opportunity to experience what a "day-in-the-life" is like in a career they are interested in. With over five hundred members, RAB has a great pool of employers to pick from so that students are able to learn about the career, make connections and possibly create a path to a career after graduation. Students are not required to solely shadow careers in the construction industry. In addition to shadowing contractors, electricians and excavators, students have also had the opportunity to shadow bankers, financial advisors and even a catering service.

The program was started in 1993 by industrial technology instructor, Phil Johnson. The first house sites were on lots across the street from the school so that students could carry all the tools that would be needed from the school to the worksite each day. Since then, a trailer has been purchased to carry tools and equipment, with building sites always staying in Kasson near the school. After Johnson retired, the program was continued by current home builder, Tony Paulson and then taken over by the current instructor, Aaron Davis. Each of these instructional leaders have brought something unique and special to the learning environment, and have built a program that is something our entire district and community is thankful for and takes great pride in.



[www.komets.k12.mn.us](http://www.komets.k12.mn.us)  
(507) 634-1100



**\$45,740** = The Average Annual Salary for Trade Jobs in SE MN.

# CONSIDER the TRADES

Need more convincing? Go to [www.ConsiderTheTrades.com](http://www.ConsiderTheTrades.com)

Brought to you by the  
**Rochester Area Builders Inc.**

**NDSU**

COLLEGE OF  
ENGINEERING

NORTH DAKOTA STATE UNIVERSITY

Build a construction career  
with a degree from NDSU.

# CONSTRUCTION MANAGEMENT AND ENGINEERING

- » 98% job placement
- » Award-winning student teams
- » Scholarships available
- » Four-year accredited degrees  
in Construction Engineering  
and Construction Management

Begin your experience today at [ndsuh.edu](https://ndsuh.edu).

[facebook.com/ndsuhengineering](https://facebook.com/ndsuhengineering)

[@NDSUengineering](https://twitter.com/NDSUengineering)

[@ndsuh\\_coe](https://instagram.com/ndsuh_coe)

[ndsuh.edu/coe/youtube](https://youtube.com/ndsuhedu/coe/youtube)

## Trades Show & Tell Event Aims to Educate Students and Parents



Stephanie Menning, CAE, IOM

Workforce development is a top issue for the construction industry and has been for years. This year, the Minnesota Utility Contractors Association (MUCA) decided to add its own event to the mix in attracting and educating students and parents about the great careers in construction. We hosted our first Trades Show & Tell event at ERX Motor Park in Elk River this past September.

In the photo above, one of the attendees was a 13-year old student (in pink) with her

dad. Upon arrival, her dad exclaimed, "She wants to be a welder!" I immediately told him if she pursues it, she'll make a ton of money and will be able to write her ticket to anywhere she wants to go in the industry. They visited the exhibits and she took a computer-simulated welding test hosted by the Ironworkers Local 512. She passed the test with a score of 72!

Many construction industries are seeking to help families recognize that the time and debt incurred in a four-year college

program is not for everybody. Most parents don't know that a Minnesota construction worker earns an average of \$63,321 annually. In addition, almost all contractors and most unions will train employees at no cost. At left, another student learns the art of masonry and concrete work from Cement Masons Local 633.

The construction industry offers high wages, a variety of career options, and the opportunity to help build a cleaner, greener and more sustainable world. Whether it's building an environmentally friendly office complex,

installing storm water retention systems to protect our precious resources, or upgrading our utilities to keep our homes warm and well-lit, there is something for everyone. Very few careers offer the opportunity to operate big equipment, or simply drive by a building or stadium, on a road, or over a bridge and claim, "I helped build that!"

MUCA would like to thank our exhibitors for taking the time to share the skills and craftsmanship needed to succeed in construction at our first event this year.

**Exhibitors:** ABC of MN/ND-Project Build; Bogart, Pederson & Associates; Cement Masons Local 633; Central Lakes College; Flannery Construction; GATR Truck Center; Ironworkers Local 512; Laborers Training Center; Minneapolis Electrical JATC; Minnesota Street Works; MN & ND Bricklayers; Operating Engineers Local 49; Plaisted Companies; RDO Equipment; Rock On Trucks; Swanson & Youngdale, and Terra Construction.

### Mark Your Calendars!

Join us for our next Trades Show & Tell event on Friday, September 25, 2020 at ERX



Motor Park in Elk River, MN.

### About Minnesota Utility Contractors Association

The Minnesota Utility Contractors Association (MUCA) is a non-profit trade association serving over 140 companies in the underground utility construction industry since 1978. MUCA's mission is to promote the underground utility industry by providing safety training, continuing education, scholarships and legislative relations. For more information, please visit [www.muca.org](http://www.muca.org)

## ATTENTION STUDENTS! SAVE THE DATE: TRADES SHOW AND TELL EVENT SEPTEMBER 25, 2020

INVITE YOUR PARENTS AND  
MEET THE PROS!

*Meet with professionals from a variety of  
construction and craft trades*

*Prize drawings for students and parents*

### CONTACT OR QUESTIONS:

STEPHANIE MENNING  
(651) 288-3422 | [STEPHANIEM@MUCA.ORG](mailto:STEPHANIEM@MUCA.ORG)



## CONSIDER YOUR OPTIONS:

*College Debt?  
Or... Earn While You Learn In a Great Career!*



## In Building Solar-Powered Ice Fishing Houses, Mounds View District High School Students Gain Real-Life Construction Experience



Across the United States, high schools have responded to the needs of high achieving high school students by offering numerous opportunities to earn college credits, from AP and IB courses to partnerships where students are taught entry-level college courses in the high school.

For the most part, college credit is geared to students who plan to attend a liberal arts college or university, with courses being offered in subjects such as biology, calculus, world history, or a language, such as Spanish, French or German.

Often overlooked are students who intend to take a different path with their lives following high school. Students who dream of working with both their minds — and their hands — in construction-related careers such as plumbing, pipefitting, welding or ironworking.

Fortunately, that gap in educational opportunities for some high school students is changing. And a good example of this is



the Construction and Solar Energy pathways program offered through Mounds View Public Schools (District 621). The program is available to both students of Irondale High School and Mounds View High School, the two public high schools within the 621 District.

“Several years ago, we realized we needed to offer opportunities for our students to learn more about high-demand, high-wage jobs in the construction-related trades,” says Michael Werner, Mounds View School District’s Coordinator of Post-Secondary Planning. “By partnering with the MnSCU system, we now not only offer opportunities to begin learning a trade, but a process that allows them to earn credit toward a two-year or four-year degree.”

“In other words, we’re creating more options for our students — they can either pursue a career in construction immediately out of high school, or they can enter a Minnesota state college or university, or both,” Werner says. “More options is a good thing for students who are trying to discern a future career path.”

One such opportunity being offered to students attending the district is the Construction and Solar Energy course. The two-hour, one semester course (September through January) taught by instructor Mark Ahlers, allows students to learn and work together to build a solar-powered ice fishing house that meets real-life building codes.

“Any student in grades 10 through 12 can take the course and learn skills such as basic plumbing, how to produce technical drawings, read building plans, build models/prototypes, and develop safe working practices,” says Werner. “While at the same time, earning credit that can be applied at a college.

As part of the *Multi-Craft Core Curriculum*, students learn from solar installation companies that send representatives to share information and insight about installing solar energy systems. In working with solar

installation companies, students gain knowledge about the basic components of a solar energy system, such as how energy works, how to prep for solar panel installation, and how to calculate the cost and the return on investment (ROI) for solar energy systems.

In addition, students participate in fieldtrips outside of class. In the future, the high school would like to invite more building trades professionals to come into the classroom and share their insights about careers in construction.

In January, the students completed their solar-powered ice-fishing house and will sell it to purchase materials needed for program’s next building project. The ice fishing house will likely be sold through an auction.

### Building Pathways to the Future

The Construction and Solar Energy class is one of six courses that Mounds View Public Schools recommends as part of its Construction and Solar Energy pathway, a series of courses to prepare students for a future career in the construction industry. The Construction and Power pathway is one of five pathways offered by the school district developed to prepare students for future careers. Those pathways include: Automotive, Business, Engineering & Manufacturing, Construction and Solar Technology, and Liberal Arts.

The other courses within the Construction and Solar Technology pathway series include:

- Intro to Engineering Design I and II
- Computer Integrated Manufacturing
- Digital Electronics
- Engineering and Manufacturing I, II and III
- Welding

Students are encouraged to take a number of general education courses to complement what they’ll be learning in the Construction and Solar Energy pathways program. These courses include:

- ARCC Communications Studies
- ARCC College Writing or AP Lang/Comp or CIS Comp
- ARCC Physics
- ARCC Biology
- ARCC College Algebra
- Energy Concepts

By entering into the Construction and Solar Energy pathway, students start to understand the importance of other subjects such as math or communications to a career in construction.

“Like every other high school in America, we hear students lament, “Why am I studying algebra? How am I going to use it in the real world?” says Werner. “Then they

start to get into our Construction and Solar Energy program or our Welding program and begin realize how important math really is to the success of their project.”

“One of the aspects that I like about the program at Irondale is that students see the connection between a career in construction and classes such as math or writing,” adds Mullin. “Math is used by skilled trades professionals every day on the job. Communications is critical to ensuring that everyone on a project team is doing what they should be doing at the right time. The beauty is that in the Construction and Solar Energy class, the students get to see how math is applied in real life. That’s powerful.”

The Construction and Solar Energy program has articulation agreements for courses within the Solar Pathway program. Articulation agreements allow students to apply credits earned in specific courses in high school toward a college degree.

“It’s important that students not only pick up valuable skills and earn college credit, but that they recognize construction as a legitimate alternative to college or the military,” says Werner. “Our focus is on letting students experience these types of opportunities before they graduate.”

*Reprinted with permission from Constructioncareers.org*

[moundsvIEWSchools.org](http://moundsvIEWSchools.org)  
(651) 621-6000



## Bemidji Career Academies Continued from Page 5

are a bridge between education and business-industry leaders. The demand for additional skilled business and industry employees continues to grow in the Greater Bemidji region with a need for advanced manufacturing, finance and professional services, healthcare, information technology, construction trades, and many others. Strategies to create access and enhance educational resources to recruit, train and retain a quality workforce are of utmost importance. Each career academy has a workplace learning experience that involves a real world exposure for our students. Our goal is to transition from job shadowing and industry tours to a youth apprenticeship and internship model.

**Bemidji Career Academy Website:**  
[www.bemidji.career.academies.com](http://www.bemidji.career.academies.com)

### Construction Trades Career Academy

The Construction Trades Career Academy is a competency based training program designed to assure graduating students have demonstrated knowledge and skills essential to perform basic skills in the construction workplace. The Academy will prepare students for jobs which require constructional skills including: woodworking, basic rough

framing, roofing, basic drywall installation, and working from a set of blueprints. The Construction Trades Academy training will prepare graduates to enter the building trades sector in positions such as: carpenter, carpenter helper, drywall installer,

roofer, mason assistant, cabinet maker assistant, landscape worker, and painter. The combination of skills gained through this training is highly transferrable to construction trades jobs in many sectors of the economy.

Bemidji High School partners with Headquarters Regional Development Commission (HRDC) which is a regional planning and development organization that serves local governments, development organizations, community leaders and others in a five county area. Bemidji High School is responsible for our instructor, Tony Hommes, who also has his contractor license, and students in our Advanced Construction, Construction Technology I and Construction for Women courses.



The Construction Trades Academy also partners with a nearby technical college and a construction/engineers company. Our students real work experience is being on the building site each day for 60 minutes. Our Advanced Construction students are at the college each Friday earning credits in the College Introduction to Plumbing/HVAC course.

We will train our students in their chosen career field with the hope that they will stay in our region to work and raise their families! The academies are truly a win-win for all stakeholders involved; students, parents, community CEO's, Business & Industry partners along with our strong collaboration with Northwest Technical College and Bemidji

### Construction Technology for Women

**Open to:** 9–12, 1 term, ½ credit

**Prerequisite:** *Woodworking Technology I or Introduction to Industrial Technology*

This course is designed to give female students an introduction to the construction, maintenance and operation of residential homes through a variety of hands-on experiences in construction-related areas. Upon completion of the course, a student should have a broad understanding of home building techniques and processes and have the knowledge to benefit them as a future homeowner. This course will also show students the many career opportunities that are possible in the field of carpentry and construction.

State University. Our graduation rates will increase thus providing a pipeline of students for our high tech, high skill job openings.

[www.bemidji.k12.mn.us/bhs](http://www.bemidji.k12.mn.us/bhs)  
(218) 444-1600

## CAREERS IN CONSTRUCTION

### Construction Laborers

Perform tasks involving physical labor at construction sites. May operate hand and power tools of all types: air hammers, earth tampers, cement mixers, small mechanical hoists, surveying and measuring equipment, and a variety of other equipment and instruments. May clean and prepare sites, dig trenches, set braces to support the sides of excavations, erect scaffolding, and clean up rubble, debris and other waste materials. May assist other craft workers.

**Median wage (2016)** \$16.07 hourly, \$33,430 annual

### Construction Managers

Plan, direct, or coordinate, usually through subordinate supervisory personnel, activities concerned with the construction and maintenance of structures, facilities, and systems. Participate in the conceptual development of a construction project and oversee its organization, scheduling, budgeting, and implementation. Includes managers in specialized construction fields, such as carpentry or plumbing.

**Median wage (2016)** \$42.93 hourly, \$89,300 annual

### Construction & Building Inspectors

Inspect structures using engineering skills to determine structural soundness and compli-

ance with specifications, building codes, and other regulations. Inspections may be general in nature or may be limited to a specific area, such as electrical systems or plumbing.

**Median wage (2016)** \$28.12 hourly, \$58,480 annual

### Operating Engineers & Other Construction Equipment Operators

Operate one or several types of power construction equipment, such as motor graders, bulldozers, scrapers, compressors, pumps, derricks, shovels, tractors, or front-end loaders to excavate, move, and grade earth, erect structures, or pour concrete or other hard surface pavement. May repair and maintain equipment in addition to other duties.

**Median wage (2016)** \$22.06 hourly, \$45,890 annual

### Civil Engineers

Perform engineering duties in planning, designing, and overseeing construction and maintenance of building structures, and facilities, such as roads, railroads, airports, bridges, harbors, channels, dams, irrigation projects, pipelines, power plants, and water and sewage systems.

**Median wage (2016)** \$40.16 hourly, \$83,540 annual

### Construction Carpenters

Construct, erect, install, and repair structures and fixtures of wood, plywood, and wallboard, using carpenter's hand tools and power tools.

**Median wage (2016)** \$20.96 hourly, \$43,600 annual

### Cost Estimators

Prepare cost estimates for product manufacturing, construction projects, or services to aid management in bidding on or determining price of product or service. May specialize according to particular service performed or type of product manufactured.

**Median wage (2016)** \$29.71 hourly, \$61,790 annual

### Cement Masons & Concrete Finishers

Smooth and finish surfaces of poured concrete, such as floors, walks, sidewalks, roads, or curbs using a variety of hand and power tools. Align forms for sidewalks, curbs, or gutters; patch voids; and use saws to cut expansion joints.

**Median wage (2016)** \$18.84 hourly, \$39,180 annual

### Electricians

Install, maintain, and repair electrical wiring, equipment, and fixtures. Ensure that

work is in accordance with relevant codes. May install or service street lights, intercom systems, or electrical control systems.

**Median wage (2016)** \$25.35 hourly, \$52,720 annual

### Plumbers

Assemble, install, or repair pipes, fittings, or fixtures of heating, water, or drainage systems, according to specifications or plumbing codes.

**Median wage (2016)** \$24.74 hourly, \$51,450 annual

### Architects

Plan and design structures, such as private residences, office buildings, theaters, factories, and other structural property.

**Median wage (2016)** \$36.99 hourly, \$76,930 annual

### Heating and Air Conditioning Mechanics & Installers

Install, service, or repair heating and air conditioning systems in residences or commercial establishments.

**Median wage (2016)** \$22.07 hourly, \$45,910 annual

Source: O\*NET



## Technology Education Course Offerings at Park Rapids Area High School



### Park Rapids Area Schools

The Industrial Technology Department provides opportunities for experience with developing insights into the broad aspects of industry such as construction, energy, communications, manufacturing, and transportation. It concerns itself with industrial production and servicing, including such principles as

application of mechanisms, creation of new ideas and products, implication for consumer literacy, wise application of leisure time, respect of quality workmanship, and skills essential toward vocational proficiency. The curriculum provides course and experiences of a vocational nature for students entering post-high school programs and opportuni-

ties for students interested in exploring more deeply the vocational, cultural understanding and consumer aspect of American Industry.

### Courses:

- Auto & Power Equipment
- Metals Processes
- Woods Processes
- Drafting
- Electronics
- Welding/Machining
- Intro to Engineering
- Furniture Reconstruction
- Advanced Wood
- Building Trades
- Auto Mechanics
- Aviation

Each year students in the Park Rapids building construction classes build a 28'x52' 2-BR house. This home includes 2 bedrooms, 2 baths, laundry room, plumbing and electrical finished on main level, and includes complete cabinets and a Vgroove vaulted ceiling. The home is complete and ready to move to the buyer's site.

Jeff Dravis is the teacher in charge of building the houses every year. He said "The students build everything. Right now they are building the cabinets to put into the kitchen. They get to be a part of every aspect in building the house. The only thing they cannot do is the electrical and plumbing but they get to watch and ask questions along the way. It's a great class and the community has helped a lot to make this possible."

### Student Thoughts:

Student contributors are: Hunter Carnell, Kaden Safratowich, and Ty Aukes. All three are Seniors.

*"We've taken part in 4 house building project at Park Rapids Area High School."*

*"By far one of our favorite classes and gain a lot of great experience."*

*"I feel we are well equipped to tackle projects when we buy our first homes and are experienced enough to work for a construction company in the future."*

*"We get to meet a lot of great people in the community during this project. We get to connect with the plumbers and electricians while they work on the house as well as when we take trips to the lumber yard."*

*"Favorite parts of the project are Shingling, Siding, Soffits and Drywall."*

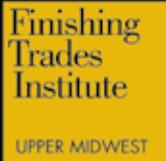
*"Before the sheetrock goes up, we get to sign our names on the studs!"*

*"Its cool watching the Moving Truck come to lift the house and haul it to the buyer."*

*"We learn how to treat the equipment and scaffolding with respect."*

*"The class is fun but also serious, just like life and work. This class definitely prepares us for that."*





**Finishing Trades Institute**  
UPPER MIDWEST

## GET HANDS ON!

### CAREERS IN THE FINISHING TRADES ARE IN HIGH DEMAND

Finishing Trades Institute of the Upper Midwest is an educational institute dedicated to developing professional trades people, advancing their skills and certifying their qualifications.

 Free College Credit

 Hands-On Experience

 A Debt-Free Career Path

FINISHING TRADE WORKER AVERAGE ANNUAL INCOME: \$70,000

ATTENTION HIGH SCHOOL SENIORS AND SENIORS+

Register today for FTI UM's Post-Secondary Enrollment Options Program for the 2019-2020 school year. Experience our hands-on approach. Explore career pathways to a lucrative and exciting career in the finishing trades!

Learn more at [www.FTIUM.com](http://www.FTIUM.com)

 FTIUM
 @FTIUM
 @FTIUM1

## CONNECT WITH TEACHING TODAY MN!



**Watch for updates, contests,  
grant deadlines,  
and breaking news!**



**[facebook.com/TeachingTodayMN](https://facebook.com/TeachingTodayMN)**



## District High School Construction Programs Participate in Statewide Playhouse Competition



Anoka-Hennepin School District

Tim Nestrud has a simple approach to helping address the shortage of skilled construction laborers facing the nation: get kids building stuff.

Over this past summer, Nestrud, who is a construction careers teacher at Anoka-Hennepin's Secondary Technical Education Program (STEP), hatched a plan to do just that. He developed a competition of sorts — schools with technical education programs across the state would build playhouses for children, and the final products would be judged and then sold.

"We're really hurting for kids who want to get into the trades," he said. "I figured a competition of sorts might generate some interest."

The idea quickly gained some traction elsewhere, with the Minneapolis Home and Garden Show joining the fray. The February event is now going to host the judging of the playhouses, as well as

a silent auction where visitors of the convention can bid on the houses, Nestrud said. What's more — while schools will first recoup the cost of any materials that were purchased to build the playhouses, all remaining proceeds generated in the auctions will go to Habitat for Humanity.

"It's exciting," Nestrud said.

All told, 11 schools across the state are participating, Nestrud said, including six from Anoka-Hennepin — the district's five traditional high schools plus STEP. Also participating are schools from all over the state, including metro-area schools like Apple Valley, and outstate

schools like Osakis.

At Anoka High School (AHS), they're actually building two playhouses. Dave Grider, a technical education and construction teacher at AHS, said he wanted to make two playhouses to showcase different construction methods — one will be outfitted with knotty pine siding, and the other with plywood.

"This is a good idea — a good project," Grider said. "Kids are learning and they're engaged."

Nestrud said the playhouses are small — just a four-foot by eight-foot footprint, and they're to be made for small children. Schools are to keep a record of costs and blueprints, and that will be factored into the judging process, along with workmanship and design. And while schools are responsible for getting the final playhouses to the Home and Garden Show in February, the convention has lined up transportation for those who win the silent auctions.

"I've seen a couple of the ones our schools



are building (in Anoka-Hennepin) — and they're pretty cool," he said. "And that's the thing — each school and each playhouse will be different. Some may be traditional, others whimsical. So it's going to be fun to see them all on display."

[www.ahschools.us](http://www.ahschools.us)  
(763) 506-1000





# You Belong Here

At M State, we work closely with business and industry partners to ensure you're learning the skills that will get you hired. Check out these [engineering, manufacturing and technology programs](#):

- Architectural Drafting and Design
- Automotive Service Technology
- Civil Engineering Technology
- Commercial Refrigeration
- Construction Management
- Diesel Equipment Technology
- Drafting and 3D Technologies
- Electrical Lineworker Technology
- Electrical Technology
- Engineering
- Heating, Ventilation and Air Conditioning/Refrigeration
- Plumbing Technology
- PowerSports Technology
- Survey Technician






## Osseo's Senior High Health Science Magnet Program



*Elise Bengston  
Curriculum Integration Coordinator  
Osseo Senior High School  
Osseo Area Schools, ISD 279*

Osseo's Health Science Magnet program has been in action for about 10 years. We offer programming to build skills and launch students into their future career paths in the medical field. Our program is designed to build medical skills while also working to help students build strong resumes and applications to ensure they are stand out candidates in a competitive field.

We have 265 students currently in our program. About 125 of those students are bussed to OSH to participate in the health science program. These students come to use from 7 surrounding districts through the Northwest Suburban Integration School District Consortium.

Students have the opportunity to build their medical knowledge through their health science courses. We offer medically themed science curriculum along with elective options. Our Health Science Physics First, Health Science Chemistry, and Health Science Biology courses cover the same state standards as the general science classes, but are taught through more of a medical lens. The class

notes have medical knowledge folded in, the class labs and projects are medically themed. Students have the opportunity to also build health science electives into their schedule, such as Medical Terminology, Exploring Health Careers, Nursing Assistant, Opportunities in Emergency Care, Pharmacy Technician, Exercise Science, Healthcare Internship, Psychology, and Sociology.

Throughout our program courses, students have the opportunity to earn professional certifications. Most often people earn these certifications in college or afterward. Our high school students show their drive, and dedication by working to earn them while still in high school. These certifications are state sanctioned and allow students to begin working in the medical field. This is a huge benefit as they are able to start getting medical experience at a young age as well. The certifications include: First Aide, CPR, CPR Instructor, Emergency Medical Responder, Emergency Medical Technician, and Nursing Assistant.

Many of our course are college level rigor, and so also have articulated college credits available to our students if they complete their coursework at a B level or better. We offer 30 articulated credits

throughout our course offerings. This can help students save money, and also gives them a head start of their college and career path.

We are partnered with local medical facilities to ensure that our course content is industry aligned and up to date. Both partner locations have opened their doors to work with our students through internship opportunities. Their investment in the future of medical careers is fantastic. Our students gain hands on perspective of their future careers while also building relationships with professionals in the field. It is beyond valuable.

*"Being in the health science program has not only broadened my passion to work in healthcare but has given me the opportunity to take classes and have experiences that put me right on the forefront of my passion. I not only get to talk about what I'm learning I also have the ability to apply that knowledge in real health care settings which not many schools offer. I will always be grateful to the teachers and guides of the health science program that have led me to be successful and have ignited my passion time and time again."*

—Chante Johnson, 12th grade

**Continued on Page 16**

For more than half a century, Minnesota State Community and Technical College has been educating workers for the health care industry.

Our health care programs include:

- Biology Transfer Pathway
- Cardiovascular Technology - Invasive
- Child and Adolescent Therapeutic Behavioral Health
- Dental Assisting
- Dental Hygiene
- Health Information Technology/Coding
- Limited Scope Radiography
- Medical Administrative Assistant
- Medical Assistant
- Medical Coding And Insurance
- Medical Laboratory Technology
- Medical Office Assistant
- Medical Receptionist
- Nursing
- Phlebotomy Technician
- Radiologic Technology
- Surgical Technology

Learn more about health care and engineering, manufacturing and technology programs offered at M State by visiting [minnesota.edu/programs](http://minnesota.edu/programs).

Go to [minnesota.edu/visit](http://minnesota.edu/visit) to schedule a campus visit or contact our Support Center at 877.450.3322 for more information. We look forward to showing you all we have to offer!



**Minnesota State**  
Community and Technical College



MINNESOTA STATE

Minnesota State Community and Technical College, A member of the Minnesota State system, is an affirmative action, equal opportunity educator and employer.



## Coon Rapids High School Senior Biomed Students Get a Head Start on Research Projects



### Anoka-Hennepin School District

A month isn't a long time for a science research project, but it is helping seniors enrolled in the biomedical sciences program at Coon Rapids High School (CRHS) set a solid foundation for the school year. A senior-level physiology of the human body class had the task of researching a topic, conducting tests, and presenting their findings, giving them a glimpse of what it will take to complete a senior capstone project at the end of their senior year.

Seniors presented their findings to other first hour science students, teachers, and administrators in the new flexible learning spaces made available by the Fit for the Future construction.

"This event really allows the students to showcase where they are at in terms of different types of skills — such as setting up and presenting experiments," said Luke Gliddon, physical science teacher at CRHS. "It offers really practical experiences that the students will use during larger projects throughout the course of the school year."

Projects focused on how the human body works and how the body reacts to different types of stimuli.

Experiments ranged from the effect of liquids on tooth enamel, to how emotions can affect the cardiovascular system, or how popular energy drinks affect heart rate, something that is likely relevant to most high school students.

"This self-directed research experience, that for most people only comes in undergrad, and many more in graduate school," Gliddon said. "It's really an awesome experience to have at the high school level to show yourself off and gain confidence speaking in front of others."

Kaitlin Golmen and Nicole Bisset teamed up on a project that tested the effect of Red Bull on heart rate and both relished the opportunity to choose their own topic and see it through from development to presenting their findings.

"This was the first experiment where we were able to choose what we wanted to do and run it ourselves," Golmen said. "It makes us proud to present to our class and peers, because this was our work."

Bisset agreed, adding that having the opportunity to be exposed to college-level type experiences gives her and her peers an advantage when they get into postsecondary settings, but it also prepares them for so much more



because of the skills learned, such as social skills, presentation skills, skills that will help them succeed in life.

This was just the first of many opportunities CRHS biomed students will have to present projects this year. Last year, seniors presented their research projects to Medtronic employees and researchers, who then picked projects which were presented at the CRHS senior capstone event in May.

[www.ahschools.us](http://www.ahschools.us)  
(763) 506-1000



## A GREAT future in healthcare begins with a bachelor's degree from Bellin College.

Nursing • Radiologic Sciences • Diagnostic Medical Imaging



### Why choose Bellin College?

- **Direct entry programs.** Once you're accepted to Bellin College you are accepted into your program. *No waiting to see if you get in!*
- We offer degrees for **careers** that are in **high demand.**
- **Experienced,** knowledgeable faculty.
- A variety of **clinical and hands-on experiences** to ensure that you have the knowledge and skills to be confident and successful in your career.
- Licensure **pass rates exceed national averages.**
- **Transfer courses accepted** from accredited two and four-year colleges.

### Would you like to learn more?

Visit our campus today.  
[www.bellincollege.edu/visit](http://www.bellincollege.edu/visit)

**Bellin College**



## Careers in Nursing

CNAS will be in greater demand, and the job outlook is projected to increase 11% from 2016 to 2026. The median CNA salary is \$27,510, and certified nurse assistants employed by the government earn \$32,860 a year or more on average.

### Clinical Nurse Specialist (CNS)

A clinical nurse specialist (CNS) is an advanced practice nursing professional who has trained extensively in a specialty practice area. These specialty areas are based on specific patient populations, treatment modalities, or diagnoses. Some of the more popular CNS credentials include women's health, emergency, oncology, or pain management. You must earn an MS in nursing (MSN) to obtain these advanced credentials; many CNS practitioners subsequently earn a doctor of nursing practice (DNP).

The U.S. Bureau of Labor Statistics projects that employment of registered nurses, including clinical nurse specialists, will increase by 15% between 2016 and 2026.

### Labor and Delivery Nurse

Labor and delivery nurses assist pregnant women throughout the childbirth experience, from early labor through delivery and

the immediate postpartum period. Labor and delivery nurses coach mothers through difficult contractions, offering encouragement and advice on pain management. They also monitor both the baby and the mother's tolerance for labor, and stay alert for any potential medical complications that can occur. Labor and delivery nurses administer medications, including epidurals, and assist physicians or midwives with the actual delivery. Following the birth, their care extends to the newborn and mother's needs.

### Nurse Anesthetist (CRNA)

Nurse anesthetists are advanced practice registered nurses (APRNs) responsible for administering anesthesia to patients. This practice specialty is unique among nursing careers, as the advanced training required for the job puts nurse anesthetists on a level similar to physicians. Nurse anesthetists work independently, often serving as the sole anesthetist within a practice or facility. To become a nurse anesthetist, nursing professionals must earn a baccalaureate degree, a Master of Science in Nursing (MSN) degree and Certified Registered Nurse Anesthetist (CRNA) credentials. Training requirements also call for a minimum of one year of experience in an acute care or ICU setting.

### Nurse Practitioner

Nurse practitioners (NPs) are advanced practice nursing professionals (APRNs) who occupy a space between physicians and staff nurses. They assess patients, perform basic diagnostic testing and initiate treatment plans. Nurse practitioners bring a holistic approach to patient care by evaluating all factors that impact a person's health. This wider perspective allows NPs to identify lifestyle choices and disease management steps for patients to improve their health.

### School Nurse

A school nurse works with children from preschool through high school. They are responsible for keeping children healthy and promoting wellness, disease management and hygienic health practices. Once limited to bandaging skinned knees and taking temperatures, today's school nurses handle a complex set of responsibilities designed to sustain a healthy learning environment.

The nursing profession is projected to grow significantly over the next decade. The U.S. Bureau of Labor Statistics anticipates a 15% increase in the number of available nursing jobs between 2016 and 2026.

Source – *Nursing.org*

CENTURY  
COLLEGE



## Launch Your Nursing Career at Century College



**Century College**, a community and technical college located in White Bear Lake, MN, offers a Bachelor of Science in Nursing curriculum, with an Associate of Science in Nursing awarded part way through the program. This program is designed as four years of full-time study, with the first two semesters devoted to prerequisite/preparatory courses required for admission to the nursing program.

### Students in our program will:

- ▶ Work as a key member of the professional health-care team to provide quality patient care in a variety of fast-paced health care facilities.
- ▶ Experience interactive simulated labs and actual clinical rotations in a variety of healthcare settings.
- ▶ Deliver safe, caring, competent, holistic nursing care to patients from infants to the elderly patient populations.



3300 Century Ave N  
White Bear Lake, MN 55110  
800-228-1978

[admissions@century.edu](mailto:admissions@century.edu)

**LEARN MORE AT**  
[www.century.edu/  
programs/nursing](http://www.century.edu/programs/nursing)



## Minnetonka Research



### Minnetonka Public Schools

2018–19 was year three of Minnetonka Research, MHS's thriving inquiry-based collaborative research program, and students continue to give it rave reviews. The program grew from 47 students to 62, with 12 students returning for a second year of pursuing their own original research questions and interests.

In this program, students develop their questions, find experts in their field of study who serve as mentors to them, and learn various aspects of quantitative and qualitative research they can use to pursue their questions.

"I'm inspired in the lab each and every day," says Kim Hoehne, director of Minnetonka Research. "Students' successes are amazing

but so too is it amazing to see their growth and maturity in tackling problems and setbacks and persisting through those challenges."

Students set their own pace in executing the various steps in their research, and at the end of the year, they write academic articles summarizing their findings for the Journal of Minnetonka Research. They also present a scientific poster at the Minnetonka Research Symposium in May, an event at MHS that is open to the public. Many students go on to compete in regional, national and international competitions.

Frank Isaacson, a senior and second year Minnetonka Research student, says, "I love the pace. I can work at my own speed and take on a research question that means something to me.

Last year, I studied how to predict the spread of a virus. This year, I'm studying skin cells — from my own skin — and investigating how these cells can be used to heal various conditions in the body."

Over time, the program has broadened to include subjects in addition to the hard sciences. Hoehne says, "It's opening doors for students who otherwise may not have ever thought they might want to do research like this. We have students studying questions in many fields — psychology, for example. And, as we've become more academically diverse as a program, it's been a great opportunity to on-ramp students into this program who may not otherwise have ever even tried research."

Olivia Graupmann, a senior and second year Minnetonka Research student, is studying injuries in female athletes and whether some hormones contribute to the prevalence of injuries. She says, "After doing research here, I know I want to do more research in the future. I've become more comfortable in a lab setting. I think that's important. It can be really intimidating, and this program helps you through any fears you might have about whether you are capable of really doing research."

Both Isaacson and Graupmann say they are grateful for the experience.

Isaacson says, "We wouldn't have this

awesome program without help from our mentors, who are experts in their fields and from companies that donated equipment to make this a great lab. We have better equipment

than some university labs I've seen! Thank you to the school for giving us this opportunity and our teachers for helping us through the whole experience."

Graupmann says, "We don't know who all supports this program. Equipment and materials magically show up for us. So, if I can, I want to

give a huge thank you to those out there who are supporting this program. It has been amazing."

Hoehne agrees. She says, "I don't think anyone realizes how many doors a program like this is opening for our students. It's making a difference in the coursework they may choose in college, in the fields they decide to pursue for their careers, and in the connections they make and the perseverance, patience and confidence they've gained, which all set students up to be successful in their future endeavors."

[minnetonkaschools.org](http://minnetonkaschools.org)  
(952) 401-5000

## Osseo's Senior High Health Science Magnet Program Continued from Page 13



*"The Health Science Program has helped me immensely on my path towards a medical career. It has helped me find my passion in health science and has guided me through every step of my journey. By requiring me to take many health science classes, I have found classes that I really enjoy and want to possibly study more in college. I love being in a community that supports me throughout this path and knows how to help students find their interests and potential careers."*

—Jasmine Choi, 12th grade

For Additional program information please visit:

**Health Science Program Website:**  
[sites.google.com/apps.district279.org/osseohealthscience](http://sites.google.com/apps.district279.org/osseohealthscience)

[www.district279.org](http://www.district279.org)  
(763) 391-8530

### Core Values

We will demonstrate a belief in providing a personalized learning environment that values Rigor, Relevance, and Relationships by:

- ✓ Developing academic and technical competencies in our learners that will prepare them for educational success and advance in health science professions.
- ✓ Establishing a community of diverse learners who desire a relevant way of learning in an area of strong interest.
- ✓ Providing students with a chance to explore pathways to success in career fields that are in demand.
- ✓ Using effective systems within the program that promote lifelong learning.
- ✓ Developing partnerships that will establish positive, mutual relationships between the school and the community.
- ✓ Inspiring students to contribute to community by providing multiple opportunities for related volunteer service.
- ✓ Helping students to identify the habits of mind, and the importance of the role of a multidisciplinary team in providing quality health care.

## Eastview Coach Pushes Student Rider in Twin Cities Marathon Continued from Page 1

would have a blast.”

Klein was paired with recent Apple Valley High School graduate Kyle Jackson. Heavy rain and thunderstorms earlier in the weekend delayed some events, but that didn't dampen the excitement for Sunday's race. Ryan's parents, his brother and sister, friends and fellow classmates all lined the race route to cheer him on.

“It started out as a very chilly morning,” said Ryan's mom, Sue Costley, “but around mile marker 14 the day started to warm up. Ryan told me that Mr. Sharp knew a lot of people along the way. Ryan saw his longtime friend Evan, some high school teachers, and even the Eastview girls' track team.”

The pair fielded high-fives and cheers the entire race. Shortly after mile 20, Sharp said fatigue started to kick in, but he only had one goal: getting Ryan a finisher's medal. Four hours and 42 minutes after they began, Sharp and Ryan, with arms in the air, crossed the finish line in front of the Capitol.

“Now Ryan has this incredible experience

of being part of our running community,” Sharp said. “And why shouldn't he have this experience? I'm just the power behind the wheelchair.”

As part of their participation, they raised funds for Special Olympics and Harvey's Harriers, in honor of Sharp's father. Sharp is already prepping for the 2020 Twin Cities Marathon and has hinted that he might once again need a rider.

“We are still in awe of the dedication it took to train for this,” Sue Costley said. “We can't imagine running for 26 miles and pushing a 125-pound person who, without him, would never get the chance to experience something like this. Mr. Sharp is like a real-life superhero. He has a superhuman heart with superhuman strength and endurance.”

[www.district196.org](http://www.district196.org)  
(651) 423-7700

## Scott Zachmann Uses Neckties to Engage with Students Continued from Page 1

students, and it's unique enough that students will carry the positive memory with them for years.

“The tie thing has been fun for me, because they have a memory of their elementary days that sticks with them,” he said. “I have kids all the time who come back and say they remember picking the ties.”

The neckties are just part of Zachmann's high-energy classroom, which he said also features a lot of dancing, cheering and positivity.

“It's all about making school fun,” he said. “We always ask students to be their own individual — to be comfortable in their own skin. So I do that, too. I've always had that

energy,” he said. “So when kids do something really great in class, I'll have them come to the front and take a bow. We're always high-fiving. I dance on desks. I have a lot of fun being a teacher.”

To get a flavor of Zachmann's daily ties, check out the hashtag [#IPickedMrZsTie](https://twitter.com/IPickedMrZsTie) on Twitter.

[www.ahschools.us](http://www.ahschools.us)  
(763) 506-1000

**TEACHING TODAY MN™**

PUBLISHER/EDITOR: Renee Feight

EDITOR: Andria Reinke

PAGE COMPOSITION: Andrew Clausen

WEBMASTER: Scott Bayerl

SPECIAL ASSISTANT: Allie Zacharias

Please direct articles, advertising, questions or comments to:

*Teaching Today MN™*  
PO Box 1704  
Eau Claire, WI 54702  
Phone/Fax 715-839-7074  
[www.teachingtodaymn.com](http://www.teachingtodaymn.com)

Please direct all inquiries to:  
[renee@teachingtodaymn.com](mailto:renee@teachingtodaymn.com)

**Teaching Today™ is an independent publication for educators.**

The opinions expressed in *Teaching Today™* are not necessarily the opinions of *Teaching Today™*. We reserve the right to edit any and all materials submitted due to grammar, content and space allowances. Articles, photos and artwork submitted to *Teaching Today™* are assumed to be released by the submitter for publication.

**Teaching Today™**  
**Transportation Today™**  
**Manufacturing Today™**

## Apply for a Grant



### ecoTech Grants

The Captain Planet Foundation (CPF) is offering grants to support inquiry-based projects in science, technology, engineering, and mathematics (STEM) fields that leverage technology or use nature-based designs to address environmental problems in local communities.

Grants up to \$2,500 are awarded.

**Deadline:** Applications are accepted July 16 through January 15 and January 16 through July 15, annually.

**Website:** [captainplanetfoundation.org/grants/ecotech](http://captainplanetfoundation.org/grants/ecotech)

### ecoSolution Grants

The Captain Planet Foundation (CPF) awards ecoSolution Grants to support solution-oriented, youth-led projects that result in real environmental outcomes. Projects must be solution-oriented, project-based, performed by youth, and have real environmental outcomes.

Awards range from \$500 to \$2,500.

**Deadline:** Applications are accepted July 16 through January 15 and January 16 through July 15, annually.

**Website:** [captainplanetfoundation.org/grants/ecosolution](http://captainplanetfoundation.org/grants/ecosolution)

### Youth Garden Grant

To be eligible, schools or organizations must plan a new garden or expand an established one that serves at least 15 children aged 3 to 18 involved in the project. The selection of winners is based on the demonstrated program impact and sustainability. Applications must be submitted online.

The top five programs receive garden award packages valued at \$2,100. Twenty programs receive garden award packages valued at \$500.

**Deadline:** Applications due Dec. 16, 2019.

**Website:** [kidsgardening.org/garden-grants](http://kidsgardening.org/garden-grants)

### Emeril Lagasse Foundation Grants

The Emeril Lagasse Foundation works to inspire, mentor, and enable student success by integrating gardening and cooking concepts into school curriculums. The foundation makes Small Grants to support schools, and community organizations partnering with schools, that have an existing school garden or a culinary education program.

Grants up to \$10,000 are awarded.

**Concept Paper Deadline:** February 1/August 1

**Application Deadline:** March 1/September 1 (invitation only)

**Website:** [emeril.org/small-grants](http://emeril.org/small-grants)

### American Honda Foundation Education Grants

The American Honda Foundation supports education with a specific focus on the areas of science, technology, engineering, and mathematics (STEM); the environment; job training; and literacy. It engages in grant making that reflects the basic tenets, beliefs, and philosophies of Honda companies.

Awards range from \$20,000 to \$75,000 over a one-year period.

**Deadline:** For new applicants, applications are due February 1 and August 1, annually.

For returning applicants, applications are due May 1, annually.

**Website:** [www.honda.com/community/apply-ing-for-a-grant](http://www.honda.com/community/apply-ing-for-a-grant)

### Toshiba America Grant Program for 6-12 Science and Mathematics Educators

Toshiba America Foundation accepts applications from teachers who are passionate about making science and mathematics more engaging for their students. The foundation seeks to support teachers by providing funds to support classroom projects. The foundation strongly encourages projects planned and led by individual teachers or teams of teachers for their own classrooms.

**Deadline:** Applications are accepted year-round for requests less than \$5,000.

Requests for grants of more than \$5,000 are due June 1 and November 1, annually.

**Website:** [www.toshiba.com/taf/612.jsp](http://www.toshiba.com/taf/612.jsp)

### Saxena Family Foundation Grants

The Saxena Family Foundation has a particular focus on initiatives that promote US science, technology, engineering, and mathematics (STEM) education and the empowerment of girls, female children, and young women so that they have equal rights later in life. The foundation focuses on empowerment programs to include economic, educational, and political empowerment of women through literacy programs, jobs, and life-skills training.

Most awards range from \$5,000 to \$50,000.

**Deadline:** Applications are accepted year-round.

**Website:** [saxenafoundation.com](http://saxenafoundation.com)



## Buffalo Educator Named Recipient of \$15,000 Award for Excellence



Melanie Olson, a teacher at Parkside Elementary School in the Buffalo-Hanover-Montrose Schools, was surprised May 3 with the news that she is a recipient of a 2019 WEM Outstanding Educator Award for Teacher Achievement, an honor that is accompanied by a \$15,000 award.

Olson is one of six educators being honored by the WEM Foundation and Synergy & Leadership Exchange for outstanding accomplishments and contributions to student learning. She is one of two recipients of the Teacher Achievement Award, which recog-

nizes exemplary teachers who support, inspire and assist students to attain greater learning as evidenced by student achievement.

Olson has been teaching for 13 years and currently teaches grades 2-4 in a multi-age classroom. Additionally, she has served four years on the board of directors for the Minnesota Educators of the Gifted and Talented. Olson manages the MEGT social media and serves as a conference committee co-chair.

“Mrs. Olson’s classroom consists of highly gifted students who are accelerated at least one grade level in mathematics, and who read well above their age grade level,” said Principal Michelle Robinson. “Her students’ high level of achievement does not deter her in any way from fostering ongoing growth and development in her students — both academically and social-emotionally.”

Eager to give her students more and

intentionally integrate active, hands-on learning opportunities for students, Olson created a Makerspace. The Makerspace inspires students to learn about electrical systems, woodworking, needlework, knitting, cross stitch, sewing, soldering, jewelry making, and book arts, while using tools like, hand drills, soldering irons, screwdrivers, wrenches, hot glue guns, wire strippers, saws and metal stamping kits.

Another practice Olson encourages is for students to aspire to give back by connecting their learning to their daily lives as well as their local and global

community. Through project based learning, students are asked to create a positive change in their community. Many community leaders volunteered to speak directly with her students about how individuals can be catalysts for change and what it takes to make a change in your community or local government. The

community was then invited into the school for a student showcase, celebrating student achievement. A number of projects had an impact that has lasted for years.

“Mrs. Olson is committed to the whole student,” shared a colleague. “In her multi-age classroom, individual student needs are met through strategic differentiation. Students are actively engaged and challenged in learning that has been targeted for their needs in all content areas. She does this so masterfully.”

*Synergy & Leadership Exchange is a non-profit organization dedicated to fostering collaboration to advance the development of ethical citizens, providing educational resources, and celebrating achievement and best practices in Minnesota schools, businesses and communities. For more information on the WEM Outstanding Educator Awards Program and Synergy & Leadership Exchange, visit: [www.synergyexchange.org](http://www.synergyexchange.org).*

**“Mrs. Olson is committed to the whole student, shared a colleague. In her multi-age classroom, individual student needs are met through strategic differentiation. Students are actively engaged and challenged in learning that has been targeted for their needs in all content areas. She does this so masterfully.”**

[www.bhmschools.org](http://www.bhmschools.org)

(763) 682-8700



**M****GT** MINNESOTA EDUCATORS  
OF THE  
GIFTED & TALENTED

Mid-Winter Conference, January 26–28, 2020

**Cragun's**  
RESORT ON GULL LAKE

Brainerd, Minnesota



*A Clear Vision of Gifted Education*

Conference Details and Registration at: [www.mnegt.org](http://www.mnegt.org)

Follow us on Twitter: @MEGT\_MNGifted • #MNGifted

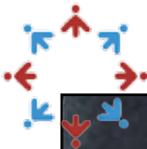
Keynote Speaker  
**Marc Smolowitz**



Director/Producer  
of the forthcoming  
feature documentary

THE **G**WORD

Now in post-production



## Lakeville Teacher Named Honoree in Outstanding Educator Program



Brandi Gordon, a teacher at Kenwood Trail Middle School in the Lakeville Area Schools was surprised April 10 with news that she is a recipient of a 2019 WEM Outstanding Educator Award as an Academic Challenge Coach, an honor that is accompanied by a \$15,000 award.

Gordon is being honored with an Academic Challenge Coach Award, which recognizes teachers who are exemplary coaches of student teams that participate and compete in academic challenges approved by the Minnesota Academic League Council.

Gordon has been teaching and coaching for 22 years and currently teaches Earth and space science. In addition to teaching, Gordon coaches Science Olympiad. Gordon feels it is important her competition students understand the behavior philosophy that they are not only rated by their official achievement at competitions, but also by the observations and opinions of our competitors. This guiding principle which began with her team has now been adopted statewide as the Science Olympiad code of ethics that all teams in the state must follow.

“Whether we win a trophy or not, our team is expected to be equally gracious in their winning as they are for not winning,” Gordon shared.

“At an age where we were constantly doubting ourselves, the transition between

a carefree child and a stress-ridden teenager being a difficult one for many, every member of the Science Olympiad team walked through the hallways with confidence, with pride,

because we all knew that we were important, that we mattered,” said a student. “Mrs. Gordon did that.”

In addition to teaching and coaching, Gordon has also served as the Minnesota state director for the Middle School Science Olympiad, running the state tournament and representing Minnesota at the national tournament.

“Mrs. Gordon accepts and welcomes every student who shows up at her door asking to be part of the team,” shared a colleague. “No prerequisites are expected by Ms. Gordon because her overall goal is to promote a love of science for every student

**“Mrs. Gordon accepts and welcomes every student who shows up at her door asking to be part of the team, shared a colleague. No prerequisites are expected by Ms. Gordon because her overall goal is to promote a love of science for every student through their participation on the team. Because of her approach, the students on our Science Olympiad team view themselves as successful scientists who always have more to learn.”**

through their participation on the team. Because of her approach, the students on our Science Olympiad team view themselves as successful scientists who always have more to learn.”

*Synergy & Leadership Exchange is a non-profit organization dedicated to fostering collaboration to advance the development of ethical citizens, providing educational resources, and celebrating achievement and best practices in Minnesota schools, businesses and communities. For more information on the WEM Outstanding Educator Awards Program and Synergy & Leadership Exchange, visit: [www.synergyexchange.org](http://www.synergyexchange.org).*

[www.isd194.org](http://www.isd194.org)  
(952) 232-2000



**UNIVERSITY OF WISCONSIN** **River Falls**  
CONTINUING EDUCATION

**Take your teaching to the next level with a master's degree.**

- Affordable
- Convenient schedule: evening and weekend classes with online coursework
  - Classes meet in Hudson, just 30 minutes from St. Paul
  - Choose your class meeting dates
- Collaborative and supportive cohort model

**Apply now, start spring 2020.**  
[choose.uwrf.edu/pdtt](http://choose.uwrf.edu/pdtt)

# Presidential Awards for Excellence in Mathematics and Science Teaching



The Presidential Awards for Excellence in Mathematics and Science Teaching (PAEMST) are the highest honors bestowed

by the United States government specifically for K-12 science, technology, engineering, mathematics, and/or computer science teaching. The Awards were established by Congress in 1983. The President may recognize up to 108 exemplary teachers each year.

Awards are given to science, technology, engineering, mathematics, and/or computer science teachers from each of the 50 states, the District of Columbia, the Commonwealth of Puerto Rico, the Department of Defense Education Activity schools, or the U.S. territories as a group (American Samoa, Guam, the Commonwealth of the Northern Mariana Islands, and U.S. Virgin Islands).

The award recognizes those teachers have both deep content knowledge of the subjects they teach and the ability to motivate and enable students to be successful in those areas. Since the program's inception, more than 4,800 teachers have been recognized for their contributions in the classroom and to their profession.

Awardees reflect the expertise and dedication of the Nation's teaching corps, and they demonstrate the positive impact of excellent teachers on student achievement. The National Science Foundation administers PAEMST on behalf of The White House Office of Science and Technology Policy.

Recipients of the award receive the following:

- A certificate signed by the President of the United States.
- A paid trip to Washington, D.C., to attend a series of recognition events and professional development opportunities.
- A \$10,000 award from the National Science Foundation.
- An opportunity to build lasting partnerships with colleagues across the nation.

## Minnesota's 2019 Awardees Congratulations!



**Michael Larson 7–12, Mathematics**  
**Irondale High School**  
**Mounds View Public Schools**

"This award is an honor and validates the work I have put into creating a classroom environment grounded in fundamental principles, yet integrated with critical 21st-century skills. Joining this community of excellence and tradition provides a network with which to actively engage for the remainder of my career. In addition, it is a tribute to the efficacy of the administrative leaders and coaches who have molded me as an educator and helped to implement STEAM opportunities in education."

Michael Larson is an 11-year educator and serves as a mathematics teacher at Irondale High School. He taught Pre-Algebra, Algebra, and Geometry for seven years at Chippewa Middle School and three years at Mary D. Bradford High School in Wisconsin. He also spent one year at Western Center academy teaching 10-12th-grade Advanced Placement (AP) Statistics, Advanced Algebra, Advanced Makerspace, and Financial.

Michael engages his students in STEAM integration with a focus on Desmos, Geometry, and digital fabrication software. His students find their agency through projects and

labs, shifting their role from consumption to creation.

Awarded as a 2016 TIES Exceptional Teacher, Michael introduced transformational learning into the mathematics curriculum, organized Chippewa Middle School's first coding club, co-founded a computer science and mathematics lesson resource at CSandMath.org, and designed a new integrated mathematics course for eighth-graders using Python and Raspberry Pi. He has spoken at local and national conferences and is committed to training teachers in appropriate pedagogy and tools to foster interdisciplinary learning.

Michael earned a B.A. in secondary mathematics education from the University of Wisconsin River-Falls and a M.S. in integrating technology in the classroom from Walden University. He is certified in middle and high school mathematics education.

[moundsviewschools.org](http://moundsviewschools.org)  
 (651) 621-6000



**Stacy Bartlett 7–12, Science**  
**Stillwater Area High School**  
**Stillwater Area School District**

"Receiving the Presidential Award marks the pinnacle of my career; there is no

greater honor. This humbling recognition not only affirms the enthusiasm, perseverance, and creativity I have poured into my life's passion, but reflects my own education and the strong support of my students, parents, colleagues, and family. The continued privilege to engage new students in science combined with the amazing honor of this award have energized and strengthened my commitment to quality science education."

Stacy Bartlett has been a teacher for 24 years, currently serving as a biology and computer science instructor at Stillwater Area High School since 2012 where she

teaches 9-12th-grade Biology and Advanced Placement Computer Science Principles. Previously, Stacy taught at the Math and Science Academy in Woodbury, MN for 13 years.

At her school, Stacy has served on the Curriculum Advisory Council and Building Leadership Team, mentored new teachers, and implemented four new coding courses to increase opportunities and equity in computer science. She is dedicated to creating science experiences that are easy and fun, accessible, ah-ha-invoking, and convey the

**Continued on Page 21**

## Become a More Impactful Educator

100% online advanced education that will impact your classroom.

- **Master of Education**
- **Graduate Special Education Licensure**
- **Graduate Certificates**
  - Culturally Responsive Practice
  - Computer Science Education
  - Educational Technology
  - Literacy Instruction

[css.edu/Teacher](http://css.edu/Teacher)



The College of  
**St. Scholastica**

# Presidential Awards for Excellence in Mathematics and Science Teaching

Continued from Page 20

nature of science as it applies to everyone's everyday life.

Stacy has professionally written numerous state and national curricula and assessments, presented at conferences, and acted as Minnesota Science Teacher Association Biology Director and a Wartburg College NSF STEM grant Advisory Board Member. In 1999, Stacy co-founded the Math and Science Academy and built the science department from the ground up.

Stacy earned a B.A. in biology and secondary science education from Wartburg College, a M.Ed. in teacher leadership from the University of Minnesota, and a graduate certificate from St. Mary's University. She is certified in 7–12 life science, 7–12 computers and related technology, and fifth through eighth-grade general science.



**Patricia Haugh K–6, Mathematics**  
Wildwood Elementary School  
Mahtomedi Public Schools

“Winning the Presidential Award leaves me feeling unbelievably grateful to be placed in the company of such highly acclaimed educators. This award acknowledges the need for high-quality mathematics instruction at the primary level for all students. Just as importantly, it supports my belief that the teachers at Wildwood Elementary School—and the students with whom they work—were amazingly dedicated and talented.”

Patricia “Trish” Haugh believes that every child can and should love mathematics. That belief is evident every day in her classroom at Wildwood Elementary School. During her 30 years as a teacher, all spent at Wildwood, Trish has taught first and second graders, created standards-based mathematics assessments, designed digital mathematics lessons for her team, and coached teachers on the use of Complex Instruction. She currently teaches all subjects to her second-grade class.

Trish researches and implements best practices, recently focusing on student equity within the elementary classroom. She believes that every student deserves to be challenged and to make progress throughout the school year. She provides support to teachers to meet this need and is regarded as a trusted resource by her colleagues.

Trish has served as a facilitator for several professional learning communities and has been a lead teacher on her building and district math curriculum committees. Trish was a co-presenter on the use of Complex Instruction in the primary level classroom at the 2019 National Council of Teachers of Mathematics (NCTM) Conference.

Trish earned a B.S. in elementary education and a M.Ed. in teacher leadership, both from the University of Minnesota. She is a certified elementary educator and is a member of NCTM and the Minnesota Council of Teachers of Mathematics.

It pushed me to think carefully about everything I do in the classroom: my goals, skill sets, strengths, weaknesses, and overall effectiveness as a teacher. At the end, there is no doubt I came out a better teacher from all the effort.”

David McGill has been an educator since 1999 and began his career as a gifted and talented instructor. Since 2010, he has been employed as the Elementary Science Specialist at Capitol Hill Gifted and Talented School, and teaches first through fifth grade science and sixth grade STEM. He previously served as a Technology Integration Specialist at St. Paul Public Schools for 11 years.

David is the Twin Cities Metropolitan District Director for the Minnesota Science Teachers Association (MnSTA). He was a three-year fellow with Engineering to Transform the Education of Analysis, Measurement, and Science (EngrTEAMS). He coauthored a curriculum unit on fourth grade engineering standards. He is an active member of the Geological Society of Minnesota, the MnSTA, and the National Science Teachers Association.

He was awarded two science fellowships by the Fund for Teachers, one to Greece to study Eratosthenes' method for measuring the circumference of the Earth and another to Egypt to study the Antikythera Mechanism. He has been a fellow in the Mississippi River Institute, a Wind Ambassador for KidWind, and a NOAA Climate Steward.

David holds a Bachelor of General Studies degree from the University of Minnesota, a M.A. in leadership from Augsburg College, and an Elementary Teaching License from the University of St. Thomas. He is certified in elementary education.

[stillwaterschools.org](http://stillwaterschools.org)  
(651) 351-8340

## The Nation's Highest Honors for Teachers of Science, Technology, Engineering, and Mathematics (STEM, including Computer Science)

**Applications are now being accepted!**

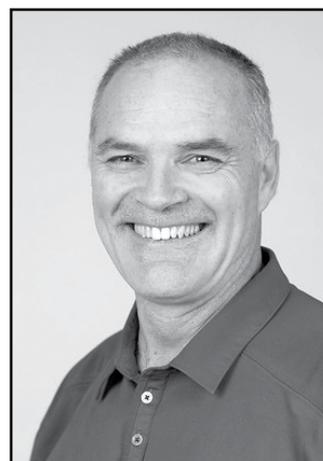
**Nominate:** This year's awards will honor science, technology, engineering, mathematics, and/or computer science teachers working in grades K–6. *Nominations close on March 1, 2020.*

**Apply:** Applications for teachers of grades K–6 are now open. Applications must be completed by May 1, 2020.

**Website:** [www.paemst.org](http://www.paemst.org)



[mahtomedi.k12.mn.us](http://mahtomedi.k12.mn.us)  
(651) 407-2000



**David McGill K–6, Science**  
Capitol Hill Gifted and Talented School  
Saint Paul Public Schools

“To me, receiving the Presidential Award has been an opportunity to challenge myself in all aspects of my practice.

[www.spps.org](http://www.spps.org)  
(651) 767-8100

Source — The National Science Foundation  
[www.paemst.org/home/view](http://www.paemst.org/home/view)

### Contact:

**Ms. Susan Ingvalson**  
Minnesota Department of Education  
1500 Highway 36 West  
Roseville, MN 55113  
Email: [susan.ingvalson@state.mn.us](mailto:susan.ingvalson@state.mn.us)  
Phone: 651-582-8581  
Areas of Expertise:  
K-6 Science  
K-6 Mathematics

**John Olson**  
Minnesota Department of Education  
1500 Hwy 36 West  
Roseville, MN 55113  
Email: [john.c.olson@state.mn.us](mailto:john.c.olson@state.mn.us)  
Phone: 6515828673  
Areas of Expertise:  
K-6 Science

## Pang Yang named Minnesota Teacher of the Year



Osseo Area Schools ISD 279

Pang Yang, a Hmong for Native Speakers teacher at Park Center Senior High, received the Minnesota Teacher of the Year award from the Minnesota Council on the Teaching of Languages and Cultures last weekend. This award recognizes Yang for the outstanding instruction, leadership and advocacy she has provided her district, community and profession.

Three years ago, Yang was a leader in creating the Hmong for Native Speakers program, which has grown to more than 300 participants at Park Center and Osseo senior high schools. Yang has spent nearly 20 years teaching English as a second language and saw an opportunity to infuse Hmong culture and language into a stand-alone course. By creating a classroom where Hmong culture is central to the learning, Yang makes the material more relevant to her students.

“I am so humbled to receive this honor,” Pang Yang said. “This award recognizes the hard work and passion of my students who inspire me every single day.”

Yang received the award at the 2019 Minnesota Council on Teaching of Languages and Cultures conference on Oct. 26. After earning this honor, Yang is now eligible to participate in other national awards

through the American Council of Teachers of Languages and Cultures.

Yang was instrumental in securing funding, inviting speakers, recruiting participants and organizing the National Hmong Language Teacher Coalition, which was part

of the Minnesota Council on Teaching of Languages and Cultures conference. The National Hmong Language Teacher Coalition welcomed 35 educators from Minnesota, Wisconsin and California to learn and grow together in this professional development opportunity. Yang

also led a session on how to motivate students and keep them engaged in their learning. Conference participants heard from numerous speakers who provided tips and support on teaching the sounds of Hmong, learning opportunities to dig deeper into Hmong (specifically learning about riddles and proverbs), and new learning on Hmong

dialects. In the bottom left photo, educators from Fresno, California, stand outside of Park Center Senior High after a private tour with Pang Yang in her classroom on Oct. 27 where Yang shared resources, strategies and ideas for strong programming.

The learning culminated in a final event where Hmong authors from across the country read their works to students, families and educators. In the bottom middle photo, author Ya Po Cha stands proudly with his books and shares his stories with the community. Representative Samantha Vang and Brooklyn Center Mayor Mike Elliott attended the event and spoke to the audience. This evening event was designed to embrace Hmong writers, help inspire young people to write and add their story to the growing library of works written in Hmong. Park Center Senior High student Rocky Lo is pictured in the bottom right photo on stage. Rocky was a contributing author to the “Dear My Teacher” book released in 2019.

**“Yang has spent nearly 20 years teaching English as a second language and saw an opportunity to infuse Hmong culture and language into a stand-alone course. By creating a classroom where Hmong culture is central to the learning, Yang makes the material more relevant to her students.”**

[www.district279.org](http://www.district279.org)

(763) 391-7000



## BECOME A TRANSFORMATIVE TEACHER AND LEADER

Get a Master of Arts in Education at Augsburg University.

- Start in fall or summer.
- Earn your lane change in less than two years.
- Deepen your understanding of local schools, communities, and education power structures.
- Create change across educational settings.
- Study issues of equity and justice, culturally responsive pedagogy, and real-world dilemmas in complex social environments.

Learn more and sign up for an information session at [augsborg.edu/gpe](http://augsborg.edu/gpe).



Congratulations to Augsburg graduate **Kelly D. Holstine '11 MAE** who was named the **2018 Minnesota Teacher of the Year** by Education Minnesota.

**AUGSBURG**  
UNIVERSITY.

Contact Graduate Admissions  
612-330-1101  
[gradinfo@augsborg.edu](mailto:gradinfo@augsborg.edu)



Abdul Wright '16 MA-Education, 2016 Minnesota Teacher of the Year

# We take the lead

## Educating for a changing world.

At Hamline University School of Education, we prepare educators to be practitioners, researchers, and leader-advocates. In fact, our alumni have been named Minnesota Teacher of the Year three of the past five years. Let Hamline's wide array of graduate offerings empower you to take the lead in transforming your classroom and your community.

Explore our programs:

- **Doctorate of Education**
- **Administrative licensure**
- **Master's degrees:** education, literacy education, natural science and environmental education, teaching, and teaching English to speakers of other languages
- **Additional licenses and certificates** in areas such as autism spectrum disorder, bullying prevention, ESL, and reading
- **Continuing studies courses:** more than 40 offerings each term



**HAMLIN**  
UNIVERSITY

Find out how you can take the lead with your students at [hamline.edu/teachtoday](https://www.hamline.edu/teachtoday).



**VITERBO**UNIVERSITY

**TAKE YOUR TALENTS  
TO THE NEXT LEVEL**



**GRADUATE PROGRAMS IN EDUCATION:**

- Masters of Arts in Education
- Educational Leadership Licenses:
  - Principal
  - Director of Instruction
  - Special Education and Pupil Services
  - School Business Administrator
  - Superintendent
- Reading Teacher 316 and Reading Specialist 17 Licenses
- Cross-categorical Special Education 801 License
- Innovative Teacher Leadership and Instructional Coaching Certificate

**POST-BACCALAUREATE INITIAL TEACHER  
LICENSURE PROGRAM:**

- Elementary Education
- Cross-categorical Special Education 801
- Content Area Licensure Programs

Learn more at [www.viterbo.edu/teachingtoday](http://www.viterbo.edu/teachingtoday)