



## Robotics Team Creates Wheelchair for Local Child



By Jody Peters

In many ways, Cillian Jackson is a normal 2-year-old. His parents, Tyler and Krissy Jackson, describe their son as a very curious, social child who is always smiling and laughing.

But Cillian also faces unique challenges, like limited mobility and speech difficulties. His parents have met with geneticists, neurologists and other medical specialists to figure out why, and have discovered that Cillian was born with a chromosome microdeletion.

This affects a specific gene, the NRXN1 gene. Children born with this chromosomal deletion typically exhibit behaviors similar to people on the autism spectrum, his parents said. It typically doesn't affect mobility, so they aren't sure if there are other conditions causing Cillian to have limited mobility.

When looking into resources for their son, Cillian's parents learned of a program called Go Baby Go that provides modified ride-on cars to children with limited mobility.

Unfortunately, the program didn't have a hub in Minnesota. But then Tyler learned that

high school robotics teams had helped with past Go Baby Go projects and decided to reach out to the Farmington team.

The team responded right away, Tyler said, and he and Krissy met with the team at their next meeting. After they showed the team some examples of past Go Baby Go projects and explained Cillian's needs, the team got to work.

About three weeks later, before the high school's winter break, the team presented the Jacksons with a sweet new ride: a modified Power Wheels car, adjusted to fit Cillian and complete with a personalized license plate.

Seeing their son cruise around in his new vehicle was emotional, Tyler and Krissy said.

For Krissy, the moment was particularly poignant because her schedule doesn't allow her to go to Cillian's physical therapy appointments.

"When he's been trialing his electric wheelchair, I haven't seen anything like that. So to see him finally going for the first time

**Continued on Page 4**



## Anoka Middle School Fabric Arts Class Offers New Skills, Lessons In Life And Business

Anoka-Hennepin Schools

Eighth graders at Anoka Middle School for the Arts (AMSA) are learning how to launch their own clothing label, and not only are the garments they're creating one-of-a-kind, but they're going to benefit children in need.

Students in AMSA's fabric arts III class are wrapping up an immersive service learning project this trimester that has had the class work together to learn more about clothing design, from creating a brand and label, to individually sketching unique clothing designs, to manufacturing a final, one-of-a-kind garment. And the end result will have the clothing the students make being donated to a shelter or foundation that provides clothing to children in need.

"It's been a really cool experience," said eighth-grader Olivia Buxton. "Designing the shirt has been a lot of fun. But there are a lot of kids in need, too, and it's super cool that we're doing something like this to help them while we're learning at school."

Each student is making their own garment, and Buxton created a Fourth of July-themed shirt designed specifically for a six- or seven-year-old boy. "We heard that there are typically more donations for girls than boys, so I wanted to make something for boys to wear," she said.

That kind of vision and forward think-



ing has been a part of the project since day one, according to fabric arts teacher Connie Reski.

"The students have been really thoughtful about everything, from the design of the clothing label all the way to the decisions they made about the clothing they created," she said. "I'm so proud of the kids. They've worked so hard and they have such big hearts. It's inspiring."

Reski said the project is totally new to her and her class, and came as the result of a summertime brainstorm session with AMSA curriculum integrator Jolanda Dranchak. The two had gotten feedback from last year's fabric arts III students who suggested a previous version of the project needed to be changed.

"We took the feedback to heart, listened to the students, and then we wondered, 'instead, what if we did a service learning

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### Lemelson-MIT InvenTeam Grant Competition

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**Deadline: April 30, 2019**

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## Jacket Manufacturing Gives PHS Students the Chance to Earn Course Credit, Cash, and Some Serious Job Prospects



By Marie Johnson

A new group of young worker bees is buzzing around Perham High School's Career Tech Center.

The school has started a manufacturing education class that's giving students the chance to learn valuable business skills while earning course credit — and cash. The name of the class, Jacket Manufacturing, is a play on the

school's Yellowjacket mascot.

In collaboration with some of the area's leading manufacturers, the year-long class provides students with hands-on, real-life experiences across various aspects of production work, including finance, marketing, design, welding, machining, maintenance and more.

It's a "win-win" for the students and local manufacturers, Perham-Dent Superintendent

Mitch Anderson said, as the kids develop skills that directly apply to their own career interests while local employers get a larger pool of qualified workers to pick from after graduation. Perham manufacturers have struggled with significant worker shortages in recent years, even as they actively and aggressively recruit.

"Right now, businesses are screaming for employees," said Jon Skow, instructor of the Jacket Manufacturing class. "I think a lot of the students (in the class) will end up staying around here and working for employers that they've already worked with, before they even got out of high school."

"I don't think there's a business around here that isn't hungry for workers," said Anderson. "I think the businesses are licking their chops at kids who are going to have a set of skills that will benefit them."

The kids in Jacket Manufacturing learn not only "hard" skills like machinery and welding, but also the "soft" skills that employers appreciate in their top applicants, like how to dress for an interview and look someone in the eye when shaking hands. Students who complete the class get a certificate showing they've had 10 hours of OSHA (Occupational Safety and Health Administration) online training, giving

them yet another 'leg up' on the competition when it comes time to find a job.

With the skills they learn in Jacket Manufacturing, Skow said, "these kids will be more hireable than those who don't have that experience."

Anderson said Jacket Manufacturing is a sign of the times. For about the past decade, there's been a transition in high school education, he said, with greater emphasis given to creating skill sets in students, especially in those who aren't interested in obtaining a four-year degree after high school.

"We're headed towards a 'pathways approach' in Perham, where kids get more exposure to a variety of electives and they choose a pathway that fits their career interests down the road," Anderson said. "That's not saying they have to pick a career at this age, but kids this age usually know if they might want to do something that Jacket Manufacturing would apply to."

"There's jobs out there waiting for these kids after they graduate," he added of the Jacket Manufacturing crew. "Some will go to a trade or tech school and then come back, others will

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and being independent, that was incredible. And to see all the kids around him, cheering him on, and being so happy with what they did — it was amazing," Krissy said.

### The Device

Many of the modifications to the Power Wheels car were related to Cillian's age. Since the toy is built for slightly older children, the robotics team had to make adjustments for his age and smaller build.

Ninth-grader Alex Treakle worked on the internal wiring of the device. He said the team took out two joysticks and replaced it with one, and added multiple speed options, a smaller seat and pool noodles around the sides to act as bumpers.

Eleventh-grader Reese Kruse, who worked on building the device, said that the team added a harness so Cillian wouldn't fall out, and adjusted the placement of certain features.

"We had to make sure the chair we mounted to it was at the right angle for him so he wouldn't feel uncomfortable," Kruse said. "We had to move the joystick because it was a little too low for him, so we moved it up a little more."

One of the challenges the team faced was time. They had a goal of finishing the device in time for Christmas, so they held some extra meetings and made the meetings longer to get

it done on time.

For Treakle, getting the code to work was challenging. Instead of going in a straight line, the device tended to drift to the side. Eventually they worked out the bug and made adjustable speed controls.

The team expects the device to last at least a couple of years, and it can be modified as Cillian grows.

Currently his parents are working with insurance to get an electric wheelchair, but they said the process can take nine to 12 months before a chair is delivered.

They aren't entirely sure if Cillian will eventually be able to walk independently, or if he will use a walker instead of a wheelchair. And because they live in a split-level home, a wheelchair might not be the best option.

In the meantime, Cillian's new Power Wheels device gives him some independence and is light enough for his parents to carry up and down the stairs, allowing the Jacksons to stay in their Farmington home.

### Effect

Tyler and Krissy say Cillian is already responding positively to his new Power Wheels device.

"When it starts going, his eyes just light up. He loves it so much," Krissy said.

Tyler added that when Cillian uses the device or an electric wheelchair at his physi-

cal therapy appointments, he "can see him looking at the room a little differently than he has before."

"There have been times where he'll be driving along and he'll come close to something and he'll stop. And if he went too far, he'll start backing up. He'll try to get closer so he can interact with it, which isn't something that we see while we're carrying him around or holding him," Tyler said.

For the robotics team, they were able to take what they knew from building competition robots and apply those skills in a different way.

Treakle said they learned new things, too. Personally, he learned how to solder better, and said the team as a whole learned how to work on a smaller scale.

Treakle and Kruse said it was exciting to see the Jacksons' reaction to the device, too.

"It was like our Christmas present to them," Treakle said.

Kruse added, "I thought it was really fun to do something for him, because we didn't do that the past (few) years and we're getting more into stuff like that now."

The Jacksons said they were impressed by how quickly the team worked and how engaged they were with the project.

"You could tell that they were really passionate about helping, and I think they were really excited to see it make a difference in

someone's life," Krissy said.

When the robotics team posted a video of Cillian using the device on its Facebook page, Krissy said it was "overwhelming" to see how much support there was from the community.

"It seems like we have a community that really cares about the development of our children, and they care about making these accessible options for people with different abilities. So as hard as things are, it feels really good to know that (we) live in a community that cares.

"I mean, to see so many people who have never met our son cheering him on and praising the robotics team — it was great," Krissy said.

Tyler and Krissy say that they can't thank the robotics team enough, and they look forward to seeing what the students will accomplish in the future.

"Those kids are just so, so smart, and they're going to do great things," Krissy said.

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## Where Are We Now?

**Three years after showing a renewed commitment to Manufacturing, White Bear Lake Area Schools' Manufacturing Career Pathway and Career Pathways Program continues to grow.**



*Jennifer Moore and Jeremy Kerg, Career Navigators  
White Bear Lake Area High School  
White Bear Lake, Minnesota*

Three years ago, the White Bear Lake Area School (WBLAS) District renewed its

commitment to implementing a Manufacturing Career Pathway and today, White Bear Lake Area High School (WBLAHS) students continue to benefit from the grant received from the Greater Twin Cities United Way, which helped moved the program to where it is today.

In recent years, the Manufacturing Career Pathway has evolved into an all-encompassing Career Pathways program at WBLAHS. There are currently pathways in Manufacturing, Construction, Healthcare, and Information Technology. Students entering into 9th grade through the completion of high school are exposed to many different opportunities to explore and gain an enriched view of a specific industry or industries.

The WBLAS Career Pathways Program and Manufacturing Career Pathway starts with exploration embedded in the curriculum. Exploration includes opportunities such as the Hot Jobs listening series for 9th and 10th graders, National Manufacturing Day field trips and activities, and hosting a variety of guest speakers in the classroom for students to learn from. For instance, Gennifer Heuisler from a precision manufacturing company in St. Paul, Minnesota was able to speak with four groups of students who were in the exploration phase of our Manufacturing Program.

In November, the annual Manufacturing & Engineering Showcase expanded to all four pathways, emerging pathways, and the consolidation of the Transition Resource Fair to offer

the White Bear Lake Career Pathways Expo. More than seventy industry partners joined together to host an estimated 300 guests. The Career Pathways Expo provided an opportunity for students and families to experience all of the opportunities the Manufacturing Career Pathway has to offer, as well as, the other pathways. New in 2019-20 school year, the Career Pathways Expo will be rescheduled to be a part of the school day to ensure all students have access to the variety of opportunities.

Career Coursework has also expanded, with four Manufacturing Pathway courses currently being offered. Students are encouraged to begin with the Manufacturing and Applied Engineering I and II courses and then have the option to complete Precision Machining I and II. All four of these classes are Project Lead the Way courses. Thanks to the Greater Twin Cities United Way Grant, the WBLAS Manufacturing Career Pathway purchased industry-level machines, equipment, and software for the students. What once was a traditional high school woods and metal shop, is now a fully-functional manufacturing

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## Anoka Middle School Fabric Arts Class Offers New Skills, Lessons in Life and Business

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project and donated the final product to children in need?" Dranchak said. "That's how it started."

Ultimately, Reski and Dranchak put together a project that would have the students start a nonprofit clothing label from the ground up. Create a clothing label — name and logo — then design a slew of garments for all different ages, then manufacture them by hand, and finally donate them to children in need.

"It's turned into a pretty amazing project," said Dranchak. "It's been such a wonderful experience for the students."

Eighth-grader Erin Schommer said she has really enjoyed that the project has been both collaborative and independent. "At first we worked together a lot, especially in teams, to create a name for the label," she said. "But then we got to design something we like, and then make it ourselves, so it's been a lot of fun."

Mysja Frolander, also an eighth-grader, said the skills she's learned have her excited about making other things. "It's been a fun experience. It's challenging, but I've learned a lot," she said. "Plus, I have a bunch of little cousins who I can make shirts for now."

When the project kicked off, the students worked together to create a clothing label and brand. "We told the class the clothing label had to be kid-friendly and artsy," Reski joked. "Something that would resonate with customers buying clothes for kids aged two through seven."

The 30-student class split into groups of three or four and brainstormed ideas. The groups picked the best ideas, and then those were put up to a class-wide vote.

That's how 'the little things' was born," Reski said. (Emphasis on lowercase the little things.)

Once the name was settled on, Dranchak went to another eighth-grade class at AMSA — digital productions III — and asked the class to design a logo. "I told them they needed to design a logo for an anonymous nonprofit," she said. "It wasn't until way later that the kids learned they were designing a logo for the fabrics class."

Once the logos were made, the fabric arts class voted on a logo for the little things, and the winner was eighth-grader Mathilda

Kawecki's design.

"The cross-disciplinary part of the project was really unique," Dranchak said. "Having two classes work together on a project like this was great."

With a logo and label name in hand, Reski said the groups then began the process of designing garments and learning how to dye fabrics. Then each group of students were assigned a type of garment to create. While the students each would have their own design, the groups would have to stick to the same kind of garment, and same season, such as a boys Fourth of July T-shirt, or a back-to-school dress for girls.

The projects themselves are nearly done, Reski said, and soon the class will be deciding on a charity or foundation to donate the clothing to, which the students are excited for.

"Usually we make something for ourselves, like a pillowcase, but this is for someone else, and that's cool," Schommer said.

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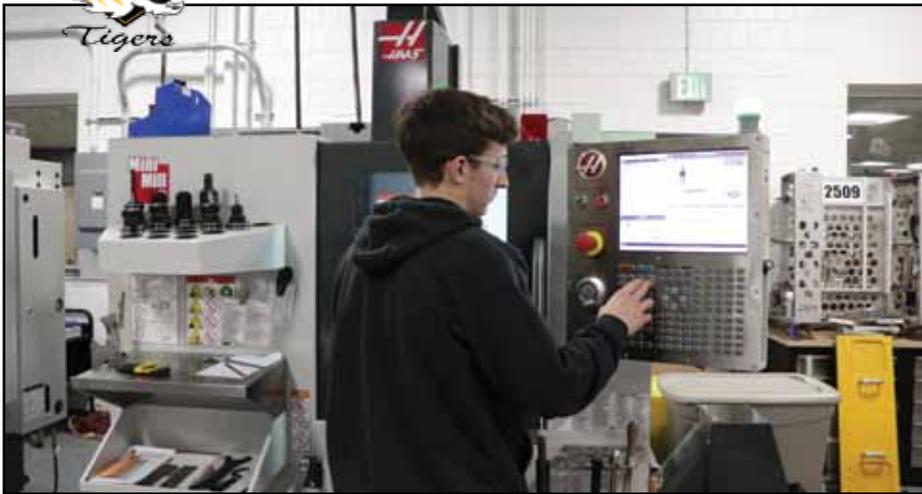
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## The TigerPath Initiative



Visits with Hutchinson manufacturers have revealed a significant and growing shortage of skilled workers. The jobs are there, but no qualified individuals are available to fill them.

Hutchinson is not alone in this: research indicates that more than 12,000 skilled jobs in Minnesota are going unfilled right now owing to a lack of qualified workers. Nationwide that figure is over 600,000. According to an analysis done by Deloitte, between now and 2025 more than 2 million manufacturing jobs will go unfilled. The same situation exists in both the building trades and health care fields.

Between now and 2029, the nation's skilled workforce shortage will worsen significantly as the remaining baby-boomer generation hits retirement age.

Currently about 60% of graduating high school seniors are going to a University to pursue a bachelor's degree, while only 33% of all jobs in the U.S. economy actually require that level of education. The reality is that two-thirds of all jobs in the economy require 2 years or less of education. This education / job market mismatch has resulted in escalating college costs, growing student debt, rising

underemployment of college graduates and a growing shortage of the skilled workers our economy needs. Systemic change is needed.

The solution to all of these challenges can be found in our high schools. It rests with shifting away from the prevailing "college for all" paradigm and helping young people (and their parents) recognize that thousands of high-paying, high-demand career opportunities exist (and can be obtained with a 2-year degree or less) in the technical fields.

### Hutchinson's TigerPath Skilled Workforce Initiative

To address the situation, 28 partners from manufacturing, local government and education have developed the TigerPath Skilled Workforce Initiative. Comprised of six overlapping and mutually supporting strategies, TigerPath takes a comprehensive approach to providing students with the skills they need to be successful in the 21st century and changing the attitudes that led to the existing "college for all" mentality.

The six strategies that make up the TigerPath Initiative are:

**STRATEGY 1:** Realigning high school education by implementing the TigerPath Academies – helping students discover their talents, develop their skills and build

rewarding careers based on their own interests and aptitudes.

**STRATEGY 2:** Build seamless educational pathways between high school and college so that students can earn free college credit and industry-recognized credentials.

**STRATEGY 3:** Change outdated stereotypes about manufacturing through tours of local precision high-tech manufacturers, job shadowing, a dedicated website and other marketing activities.

**STRATEGY 4:** Build school-employer relationships by implementing an internship program for high school students with local manufacturers and other employers, along with other initiatives such as "adopt a class-room."

**STRATEGY 5:** Dramatically upgrade technical education facilities & equipment at the high school to change the stereotype students & parents have of manufacturing, get students inspired and excited about technical education & careers and provide first-class, real-world equipment for students to train on.

**STRATEGY 6:** Launch Tiger Manufacturing – an authentic manufacturing business

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go right into the workforce . . . In Jacket Manufacturing, whether you're a machine operator or a welder, those are good jobs that you can get certified in without the debt (of a four-year college degree), and you're off and running."

### Building the program

This year's class is the first, so this initial crop of students is helping to build the program up — in more ways than one.

The 16 kids in the class are currently constructing a tool crib, lumber rack and other storage spaces for their shop area — features that will be used by future classes for years to come. They've already designed a Jacket Manufacturing logo, and are in the process of designing a website. Informational flyers about Jacket Manufacturing were recently created and distributed around town.

Every day, the kids brainstorm products they can mass produce for sale at the school store and local retail outlets. They're already making custom-engraved cribbage boards, for example, and plan to start making backyard fire rings with custom cut-outs.

They've had donations of materials and machinery from the school district, manufacturers and others, and are accepting new donations all the time. The machining and welding side of Jacket Manufacturing is fully functional, and the kids are now taking orders for customizable work.

They've also been meeting almost weekly with various businesses in the area to collaborate on production projects.

Last Wednesday, for example, the class met with a representative from a company, Dan Flatau, to talk about different products Jacket Manufacturing could produce in partnership with the internationally-known, New York Mills-based boat manufacturer.

A boat-shaped beverage cooler was one idea that got tossed around: the kids could design the cooler, create a mock-up as a sample, and then, using materials provided by the company, assemble the coolers in class. The specialty coolers would be made to look like miniature boats, with the company's logo

on the side, and could be sold to consumers or donated as auction prizes for fundraisers.

If the boat cooler idea evolves beyond the initial concept phase, the planning and production process would be the same as it would be for any other product for the company, except the students would be in charge of it all, from start to finish.

The Jacket Manufacturing class is completely student-run. It operates out of the high school and is led by Skow, but students take the lead in everything. Profits made stay with the class and students, going toward new materials or equipment for the tech center or into students' pockets as a reward for their hard work. Each student has the potential to earn up to \$1,500 a year through profit sharing on the work they do for the class.

The kids in Jacket Manufacturing each have their own niche, but also learn about every possible job. There are welders and machinists, maintenance supervisors and CAD specialists, as well as managers for the office, marketing and communications, production and safety, and transportation, among other roles.

Three students serve as lead instructors, at times working directly with local employers to learn how to use the machinery and other equipment in the tech center; they then share that knowledge with their peers.

There are about 20 different kinds of machines in the center right now, including a CNC (Computer Numerical Controlled) mill, CNC lathe, CNC plasma cutter, laser engraver and 3-D printer, to name a few. Most of the machines are state-of-the-art and brand new, as is the school itself, which just opened last fall.

Anderson said the timing of the school's construction boded well for the creation of the class. While other schools around the region are trying to figure out how to incorporate a class like Jacket Manufacturing into their existing facilities, Perham High School was able to design its new tech center with the specific needs of this class in mind.

"That's been really fortunate for us," he said. "I think we're ahead of the game a little bit. But I think in the next years you're going



to see programs like this popping up more and more."

Anderson could think of only one similar program in Minnesota right now, at the school in Deer River. The Perham class is modeled after a program in the Eleva-Strum School District in Strum, Wisconsin, called Cardinal Manufacturing. Perham school and industry leaders made two separate visits to Cardinal Manufacturing over the past two years to research that program and bring ideas back with them.

### Building life skills

The kids in Jacket Manufacturing are still getting their feet wet in this new class, but from the get-go, they've been liking it.

"It's a lot more hands-on (than other classes), and you learn a lot more of the 'soft skills' of business," said Isaac VanWatermulen, the marketing and financial manager for the class. "You're not learning out of a textbook."

That's something all the students interviewed for this story said they appreciated.

"I'm a hands-on, 'doing stuff' kind of guy," said Dawson Kellogg, a machinist and welder in the class. He, like many others, isn't exactly sure what he wants to do for work after he graduates, but he has enough of an idea to know that the skills he's learning in Jacket Manufacturing will be useful to him in whatever career he ends up choosing.

James Minten, who serves as office manager, said, "I don't know my career goals yet, but record-keeping, time management . . . those are skills I'll definitely use."

"I've thought about...driving machinery, or doing construction work," said Michael Benke, a machinist. "That's pretty fun."

The kids in this year's class were selected by Skow, with this being the first year, but in the future, interested students will need to fill out an application and interview for a spot in the class just like they would for a job. It's expected to be a competitive process, with a lot of kids wanting to get in but only so many spots available.

Skow said he's interested in bringing students on before their junior or senior years, so they can stay with the program if they want to, learning and growing along with it and helping to train in younger newcomers as fresh faces

come in. This year's class is made up of 10th through 12th grade students, and those that continue in the program next year will be some of those lead trainers.

"Most of the kids who start in it will stick with it," predicted Skow. "A lot of these kids will go on to work these kinds of jobs."

Skow said he picked this year's students as much for their behavior and attitude as their shop skills, looking for a well-rounded group that would be able to do the work but could also benefit from getting out of their comfort zones.

"They're handpicked, but they're not perfect," he said. "I didn't necessarily pick the 'best of the best' (of all his shop students). A lot of it has to do with character. I've been teaching 31 years and I'm a pretty good judge of that. I'm trying to do what's best for kids. . . I've got all types working together here, kids who maybe normally wouldn't know each other, and that's what it takes to run a successful business — it takes all types."

Just like basketball players, debaters or any other Perham High School team members, the kids on the Jacket Manufacturing crew are expected to represent their class and school at all times, not just in the tech center. They have matching Jacket Manufacturing polo shirts that they're encouraged to wear when out in public, and business cards they can hand out. Getting into trouble outside of school can have ramifications on their involvement in Jacket Manufacturing, just as it would for any sports or extracurricular activity.

"It's an elite status program, and kids have to continue to earn it to stay in it," said Anderson. "It gives them an upper edge when looking for employment after high school."

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# Centennial High School is Developing Manufacturing Skills



Krista Bergert, Director, Public Information and Community Outreach, Centennial ISD 12

Over the past four years Centennial High School in Circle Pines, Minnesota

has responded to the need to develop highly skilled people in the trades. With manufacturing careers in high demand the decision to offer a high school manufacturing class was a no-brainer. The Centennial School District implemented Project Lead the Way (PLTW) four years ago. PLTW is the leading national STEM program offered at over 500 schools around the nation. Currently Centennial High School offers Introduction to Engineering Design, Principles of Engineering, Civil Engineering and Architecture, and Computer Integrated Manufacturing courses.

Computer Integrated Manufacturing was offered for the first time in the 2017-2018 school year. Students in this course are exposed to key skills needed to enter into manufac-

turing careers. These skills include learning CAD/CAM, G and M code, processes, speeds/feeds, while developing problem solving skills with interactive and hands-on projects.

In the summer prior to the course implementation, teacher Andy Angell applied for a Perkins Innovation Grant in the amount of \$15,000.00 to help fund the purchase of an industry standard HAAS Mini-Mill vertical milling machine. The grant was approved and with additional funds from Centennial School District the mill was purchased in July 2017. Centennial High School took delivery of the machine in October 2017. The decision to purchase a HAAS machine came with input from local manufacturing companies. HAAS is a leading company in manufacturing equipment and their machines can be found many machine shops across the United States.

Having a HAAS Mini-Mill has allowed students to be exposed to the same control panel that machine operators use in industry. Students have learned how to set tool offsets, work offsets, and run their programs. The addition of the CNC mill has allowed students to take ideas in their head, create a dimensioned CAD part on the computer, 3D print a

prototype to make sure of proper fitment, write their CAM strategy using Autodesk HSM, and machine the final product.

The CNC mill has also been a nice addition to our high school FIRST robotics team.

During the course of the robotics six-week build season, students were able to take design ideas and machine parts out of aluminum to use on the team's robot, where in past years this was not possible and required less desirable means to make.

The offering of engineering and manufacturing courses at Centennial has helped prepare students for careers in these fields. The skills gap is a major problem in the United States and the need to expose students early to these fields will help fill jobs and decrease unemployment rates.

The offering of engineering and manufacturing courses at Centennial has helped prepare students for careers in these fields. The skills gap is a major problem in the United States and the need to expose students early to these fields will help fill jobs and decrease unemployment rates.

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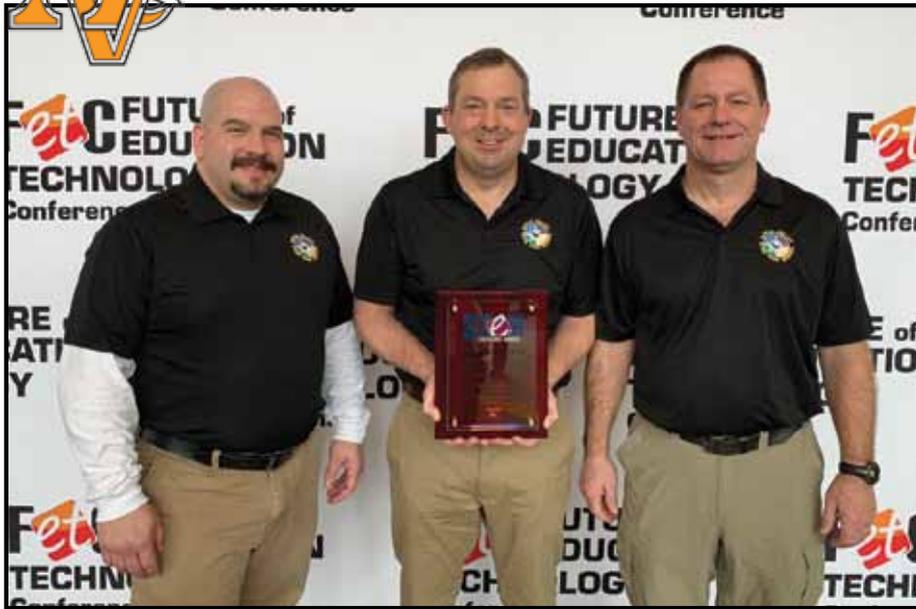
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## Apple Valley High School Wins National STEM Excellence Award



### District 196

Apple Valley High School received the 2019 STEM Excellence Award in the high school category at the national Future of Education Technology Conference in Orlando Jan. 30. The award recognizes schools for their innovative approaches to implementing science, technology, engineering and math education.

“This is tremendous recognition for

our school and our program,” said teacher Jim Lynch, who oversees Apple Valley’s E3 STEM program. “It affirms the work we are doing and the opportunities we are providing students to explore STEM learning and career possibilities.”

In 2014, District 196 received nearly \$3 million through a federal YouthConnect grant from the U.S. departments of education and labor. The grant supported the establishment

of the E3 STEM program, focusing on exploration, education and employment. Through partnerships with businesses and colleges, the program has expanded students’ opportunities for hands-on learning and exposure to career pathways in STEM-related fields. Students are able to earn college credits in some of their coursework and experience real-world learning through internships with business partners.

The grant also funded creation of Apple Valley’s fabrication lab, or “fab lab,” which has equipment and machines that give students the ability to design and make almost anything they can imagine.

“The fab lab has played a key role in helping us establish our ‘STEM for All’ philosophy by integrating its use into an increasing number of our courses,” Lynch said. “Learning becomes so much more authentic when students can design and produce products that can be used by others in the real world.”

The fab lab and the school’s commitment to providing opportunities for all students

were main factors in the judges’ decision to select Apple Valley for the STEM Excellence Award. Over the last four years, Apple Valley has become a thriving STEM-focused school, and with the support of the YouthConnect

grant, has provided access for all students and increased participation in programs that prepare them for success in the 21st-century workplace.

“What E3 STEM helped me and other students achieve is incredible,” said Apple Valley senior Serena Abraham. “The combination of guidance and opportunities to

explore different career fields has made me a more well-rounded student overall. With the support system in place, I can make the transition from high school to college and beyond with confidence.”

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

## Fab Labs at Valley Middle School of STEM



Valley Middle School of STEM is now home to 2 Fab Labs, a Makerspace, and a STEM Applications Lab. VMSS is the first middle school in Minnesota to implement a Fab Lab. This has helped develop a forward-thinking mindset in both our students and staff.

The Fab Lab at Valley Middle is designed to support the school mission (Rigor,

Relevance, Relationships: Educating a Global Community of Innovative Thinkers), providing opportunities for students to solve real-world problems through imagination,

innovation, collaboration, and technology.

Valley Middle School of STEM prides itself on the original, cutting-edge projects its students take part in every day. From designing robotic arms in Engineering and Design classes to creating swim prosthetics in STEM Innovations classes, students are exposed to fun, engaging, and challenging activities that allow them to imagine, design, and create.

There are many aspects that set VMSS apart from other middle schools. Aside from the numerous technology electives (multi-

media design, advanced multimedia design, coding, advanced coding, STEM Innovations, STEM fitness, music technology), one of these unique aspects is providing invitations for all subject areas in the Fab Labs. The school calls these opportunities “push-ins.” The technology teacher collaborates with other subject area teachers to create an authentic “real-world” experience for the students.

Science and math classes have made use of the push-in model. In science, students created biomimicry projects by utilizing 3D

printing. They have also used the Fab Lab to enhance their unit on temperature through 3D printing, vacuum forming, and wax pouring to create candles. 8th grade geometry used the laser during one of their units to create a mini-golf course.

Social Studies classes have enhanced their “Apple Headquarters” assignment by having student teams make “merch” to promote their choice of city. They have also utilized the laser engraver to make dog tags for their World War II unit.

English classes 3D printed monuments representing an immigrant experience. They also used the various equipment to create a footprint or blueprint representing themselves.

Those are just a few examples of how core-content classes have utilized the Fab Labs. Valley Middle School of STEM strives to prepare students for an ever-changing technological landscape by exposing them to the latest software, equipment, and concepts.

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# What Would You Like To Do In Manufacturing?

## Aerospace Engineering Technicians

Operate, install, and maintain equipment that tracks air and space vehicles. (Wages: \$31.31/hour)

## Aircraft Structure and Systems Assemblers

Assemble, fit, and install parts of aircraft. (Wages: \$26.11/hour)

## Biofuels Processing Technicians

Work on various parts of the production of biofuels, such as ethanol. (Wages: \$30.26/hour)

## Biomass Plant Technicians

Monitor the production of energy from biomass sources. (Wages: \$30.26/hour)

## Cabinetmakers and Bench Carpenters

Build wooden objects such as cabinets or furniture. (Wages: \$19.40/hour)

## Chemical Equipment Operators

Operate equipment to control chemical changes or reactions during a production process. (Wages: \$19.31/hour)

## Chemical Plant and System Operators

Control entire chemical processes through a system of machines. (Wages: \$22.73/hour)

## Chemical Technicians

Work in labs and assist with analyzing chemicals and other substances. (Wages: \$23.06/hour)

## Coating, Painting, and Spraying Machine Operators

Operate machines to coat or paint a variety of products. (Wages: \$19.26/hour)

## Computer Numerically Controlled (CNC) Machine Tool Programmers

Develop programs to control the processing of metal or plastic parts by machines. (Wages: \$28.90/hour)

## Computer-Controlled Machine Tool Operators

Operate computer-controlled machines to perform functions on metal or plastic work pieces. (Wages: \$21.51/hour)

## Crushing, Grinding, and Polishing Machine Operators

Operate machines that crush, grind, or polish materials like coal, glass, grain, stone, food, or rubber. (Wages: \$20.03/hour)

## Cutting, Punching, and Press Machine Operators

Operate machines to saw, punch, bend, or straighten metal or plastic material. (Wages: \$18.14/hour)

## Drilling and Boring Machine Operators

Operate machines to drill, bore, ream, mill, or countersink metal or plastic pieces. (Wages: \$16.47/hour)

## Electrical Engineering Technologists

Assist electrical engineers in a variety of activities. (Wages: \$27.47/hour)

## Electrical and Electronic Engineering Technicians

Apply electrical and electronic theory to design or build electrical equipment. (Wages: \$30.42/hour)

## Electrical and Electronics Drafters

Prepare diagrams that are used to create, install, or repair electrical equipment. (Wages: \$28.15/hour)

## Electro-Mechanical Technicians

Combine knowledge of mechanical engineering technology with knowledge of electrical and electronic circuits. (Wages: \$27.08/hour)

## Engine and Other Machine Assemblers

Construct, put together, or rebuild all types of machines. (Wages: \$17.77/hour)

## Extruding and Drawing Machine Operators

Operate machines to push thermoplastic or metal materials into tubes, rods, hoses, or structural shapes. (Wages: \$18.52/hour)

## Fabric and Apparel Patternmakers

Make precision fabric patterns. (Wages: \$26.77/hour)

## Forging Machine Operators

Operate forging machines to shape or form metal or plastic parts. (Wages: \$20.75/hour)

## Furnace, Kiln, Oven, Drier, and Kettle Operators

Operate specialized heating equipment. (Wages: \$19.53/hour)

## Gas Plant Operators

Distribute or process gas for utility companies. (Wages: \$32.27/hour)

## Geothermal Technicians

Install or maintain geothermal (ground source heat) systems. (Wages: \$22.18/hour)

## Hydroelectric Plant Technicians

Monitor activities involved in hydropower generation. (Wages: \$30.26/hour)

## Industrial Engineering Technicians

Help industrial engineers to design processes to make better use of resources at work sites. (Wages: \$24.71/hour)

## Industrial Machinery Mechanics

Repair, install, or adjust manufacturing equipment. (Wages: \$26.12/hour)

## Inspectors, Testers, Sorters, Samplers, and Weighers

Look for defects or problems in raw or manufactured materials. (Wages: \$19.06/hour)

## Jewelers and Precious Stone and Metal Workers

Design, create, or repair jewelry. (Wages: \$18.04/hour)

## Lathe and Turning Machine Operators

Operate lathe and turning machines in production processes. (Wages: \$19.35/hour)

## Machinists

Set up and operate a variety of machine tools to produce precision parts. (Wages: \$23.40/hour)

## Manufacturing Engineering Technologists

Work to ensure effective manufacturing processes. (Wages: \$27.47/hour)

## Mechanical Drafters

Prepare diagrams of machinery and mechanical devices. (Wages: \$27.94/hour)

## Mechanical Engineering Technicians

Apply principles of mechanical engineering to help to develop machinery. (Wages: \$26.44/hour)

## Medical Appliance Technicians

Construct, fit, or repair medical devices such as braces or prosthetics. (Wages: \$16.59/hour)

## Metal and Plastic Layout Workers

Lay out reference points and dimensions on metal or plastic work pieces. (Wages: \$21.29/hour)

## Nanotechnology Engineering Technicians

Operate equipment to produce or test materials at the molecular level. (Wages: \$27.47/hour)

## Non-Destructive Testing Specialists

Test the safety of various types of structures using x-ray, ultrasound, or fiber optic equipment. (Wages: \$27.47/hour)

## Nuclear Power Reactor Operators

Operate or control nuclear reactors. (Wages: \$45.56/hour)

## Packaging and Filling Machine Operators

Operate machines to prepare products for shipment. (Wages: \$15.97/hour)

## Petroleum Pump System and Refinery Operators

Operate systems that refine petroleum. (Wages: \$29.08/hour)

## Photonics Technicians

Build, install, or maintain optical or fiber optic equipment. (Wages: \$27.47/hour)

## Power Plant Operators

Operate machinery to generate electric power. (Wages: \$39.85/hour)

## Production, Planning, and Expediting Clerks

Coordinate the flow of work and materials between departments, following a production schedule. (Wages: \$23.75/hour)

## Purchasing Agents

Purchase all the goods and services that are needed to run an operation. (Wages: \$29.87/hour)

## Radio, Cellular, and Tower Equipment Installers and Repairers

Repair, install, or maintain equipment used in radio transmission or other communications. (Wages: \$32.33/hour)

## Robotics Technicians

Build, install, test, or maintain robotic equipment or related automated production systems. (Wages: \$27.08/hour)

## Semiconductor Processors

Perform a variety of different duties during the production of electronic semiconductors. (Wages: \$18.17/hour)

## Supervisors of Production and Operating Workers

Directly supervise and coordinate the activities of production and operating workers. (Wages: \$29.47/hour)

## Welders, Cutters, Solderers, and Brazers

Weld or join metal pieces together using hand-welding, flame-cutting, or brazing tools. (Wages: \$20.94/hour)

## Welding, Soldering, and Brazing Machine Operators

Operate welding, soldering, or brazing machines or robots. (Wages: \$20.58/hour)

## Woodworking Machine Operators

Operate woodworking machines, such as drill presses, lathes, shapers, sanders, planers, or nailing machines. (Wages: \$16.07/hour)

Source — [www.onetonline.org](http://www.onetonline.org)

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## The TigerPath Initiative Continued from Page 8

based in the high school, run by students, designing and manufacturing real products for real customers. Tiger Manufacturing will add relevance to coursework, provide a realistic work experience, build teamwork & soft skills, foster critical-thinking & problem-solving skills and teach entrepreneurship & business operations.

### Anticipated Outcomes

Successful implementation of the TigerPath Initiative will result in the following outcomes:

- Students utilizing their interests and aptitudes to guide their educational and career choices.
- Changing the college decision-making process from “Where do I want to go?” to “What do I want to be?”
- Students acquiring marketable skills first, then pursuing higher levels of education.
- Reduced student debt and under-employment.
- Students pursue careers that match high-demand, high paying jobs.
- The existing mismatch between student educational choices & the job market is corrected.
- The skilled workforce shortage is meaningfully addressed.

The TigerPath Initiative has attracted considerable (and growing!) interest from around Minnesota. Staff from the Hutchinson School District & Hutchinson Economic Development Authority have made numerous presentations to groups from other communities including Redwood Falls, Red Wing, St. Cloud, Lakeville, Mora, St. Paul, Buffalo and North Branch, along with the Economic Development Association of Minnesota (at their summer conference) and the Minnesota Association of Professional County Economic Developers. The response has been overwhelmingly positive and many communities are taking steps to implement their own version of the TigerPath Initiative.

We feel TigerPath has the potential to become a new national model for better preparing students for their future while meaningfully addressing America’s skilled workforce needs.

[hutchtigerpath.com](http://hutchtigerpath.com)  
[www.isd423.org](http://www.isd423.org)  
 (320) 587-2860

## New at TigerPath

### Youth Skills Training Grant

To help provide funding for the proposed TigerPath Coordinator position, EDA staff spearheaded writing an application to the Minnesota Department of Labor & Industry for their Youth Skills Training (YST) grant. Hutchinson was one of five schools chosen from across Minnesota (out of 25 applicants) to receive funding through the program. \$95,000 was obtained to help fund the TigerPath Coordinator position, the primary function of which is to establish internships with local employers for high school students.

### TigerPath Coordinator

In close collaboration with the school district, EDA staff helped research and develop the job description of the proposed TigerPath Coordinator – with Andrea Moore being hired for the position in late summer of 2018. Job responsibilities of the TigerPath Coordinator are many and varied:

- Implement the YST Grant (employer internships)

- Serve as liaison between area employers and the high school – arranging for internships & job shadowing opportunities, setting up classroom visits, implementing an “adopt-a-classroom” program, etc.
- Coordinating between the high school and the college
- Marketing & promoting the TigerPath initiative in general
- Assisting with implementation of the TigerPath Academies in general

### Applied Engineering Lab

A \$150,000 grant, authored by EDA staff the previous year, was awarded in January. Funds were used by Hutchinson High School to establish an applied engineering lab in the fall of 2018. Over \$153,000 of new equipment was ordered for the new classroom, with classes starting in December, 2018. The new lab makes possible an applied engineering class called “Physical Science: Engineering” featuring classroom trainers made a Festo Didactic, a world-renowned manufacturer of mechatronics and automation training equipment. Initial enrollment in the new class was 120 (with 40 being female) necessitating five sections of the class.

## White Bear Lake Area Schools’ Manufacturing Career Pathway

Continued from Page 6



laboratory housing Haas and Tormach Mills, Bridgeport, Lasers, and 3D printers with the same or similar technology currently used in industry.

Students enrolled in pathway classes have additional opportunities on- and off-campus, which include but are not limited to, field trips, job site tours, paid internships, listening sessions, scholarships, and much more. The WBLAS Manufacturing Career Pathway

partners with a variety of local employers. VHEDC provided scholarships for students to attend Advanced Manufacturing camps. Collaborative and innovative educational opportunities like these, are why White Bear Lake Area Schools Career Pathways is thriving in the local White Bear Lake community.

The WBLAS Manufacturing Career Pathway offers the Gen Z Connections Program as the capstone project for inter-

ested students which is a partnership between Vadnais Heights Economic Development Corporation (VHEDC), White Bear Lake Area Schools, Ramsey County, and the White Bear Lake Area Educational Foundation. This collaborative effort led to VHEDC earning the 2018 Partnership Award from the Economic Development Association of Minnesota. What started as a paid internship for four students with four different manufacturing employers grew to the same opportunity being afforded to eight students with eight industry partners in the summer of 2018. The students also received eight hours of employment readiness, 21st Century Skills Training, and OSHA 10 certification provided by the White Bear Lake Area High School Career Navigators, positions that were created by the White Bear Lake Area School District to provide support to students and other professionals who collaborate in the Career Pathways program. Due to the success of the Gen Z Connections Program, WBL Career Pathways is now expanding to the Automotive Industry and plans to partner with twelve local employers during the 2019 summer season to offer twelve students a paid, experiential internship.

All of the pathways within the WBLAS Career Pathways Program saw major growth

during the last two school years with additions in job shadow opportunities, job site tours, paid internships, apprenticeship readiness opportunities, and much more. By the end of the 2018-2019 school year, an estimated 125+ paid internship opportunities will be offered and/or created for WBLAHS Career Pathway students.

The WBLAS Manufacturing Career Pathway and WBLAS Career Pathways continues to grow into a program for all students regardless of their academic ability. As industry partners continue to create and align educational opportunities with their workforce needs, students make more informed decisions about their career path and WBLAS employees work to understand the reality of the future workforce. The White Bear Lake community proves that working together to shape the future is possible.

[www.whitebear.kk12.mn.us](http://www.whitebear.kk12.mn.us)  
 (651) 407-7500

# Apply for a Grant



## Art Works: Arts Education

The National Endowment for the Arts' (NEA) vision for Arts Education is that every student is engaged and empowered through an excellent arts education. Arts Education funding is focused on students. Projects are for prekindergarten through grade 12 students, the educators and artists who support them, and the schools and communities that serve them.

Awards range from \$10,000 to \$100,000.

**Deadline:** Applications are due July 11, 2019.

**Website:** [www.arts.gov/grants-organizations/art-works/arts-education](http://www.arts.gov/grants-organizations/art-works/arts-education)

## The Harry Chapin Foundation Education Grant

The Harry Chapin Foundation makes grants in the areas of education, arts, agriculture, and the environment. Priority is given to arts-in-education programs and community education.

Grants up to \$10,000 are awarded.

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

**Website:** [harrychapinfoundation.org/apply/](http://harrychapinfoundation.org/apply/)

## Arts in Education and Sapling Grants

The Laird Norton Family Foundation offers Arts in Education and Sapling Grants that focus on children, youth, and education. Funding aims to increase and improve prekindergarten through grade 12 arts learning in US public schools. Programs that enhance students' educational outcomes and integrate the arts within content areas receive priority.

**Deadline:** Information forms are accepted year-round.

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

## Music Education Grants

The Guitar Center offers grants that support music education projects and programs. The company believes that music inspires creativity and personal expression, builds self-esteem, and teaches cooperation and team building from playing music together.

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

**Website:** [www.guitarcenter.com/pages/corporate-giving](http://www.guitarcenter.com/pages/corporate-giving)

## Music Education Grants #2

The Mockingbird Foundation offers grants to public schools and nonprofit organizations to support projects in music education. The

primary focus is students, ages 18 and younger, with particular interest in projects that target underserved children. Grants may be used to obtain instruments, texts, and other materials, and for the support of learning space, practice space, performance space, and instructors or instruction.

Awards range from \$100 to \$10,000.

**Deadline:** Initial inquiries are due August 1, annually.

**Website:** [mbird.org/grants/apply](http://mbird.org/grants/apply)

## SCA Grants

Sony Corporation of American and its operating companies offer funding to programs that support education and creative, artistic, technical, and scientific skills that are necessary for tomorrow's workforce.

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

**Website:** [www.sony.com/en\\_us/SCA/social-responsibility/giving-guidelines.html](http://www.sony.com/en_us/SCA/social-responsibility/giving-guidelines.html)

## Project Produce: Fruit and Veggie Grants for Schools

The purpose of Project Produce is to create planned lunchroom activities to showcase and taste fresh vegetables and fruits. Proposed projects must be planned with the intention of offering activities to all students in the school building. Lunchtime-based projects are preferred because they offer access to all students.

Grants of \$2,500 are awarded.

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

**Website:** [www.chefannfoundation.org/programs-and-grants/project-produce](http://www.chefannfoundation.org/programs-and-grants/project-produce)

## Enhancing Student Mathematics Learning through the Use of Tools and Technology Grants

Enhancing Student Mathematics Learning through the Use of Tools and Technology Grants are awarded to classroom teachers in prekindergarten through grade 12 to encourage innovative use of technology and other tools for effective teaching and meaningful student learning. Eligible grant expenses include materials such as books, calculators, tablets, computers, or related equipment, as well as professional development in the use of the designated tools and technology.

Grants up to \$3,000 are awarded.

**Deadline:** Applications are due May 3, 2019.

**Website:** [www.nctm.org/Grants-and-Awards/Grants/Enhancing-Student-Mathematics-Learning-through-the-Use-of-Tools-and-Technology-Grants-%28Pre-K-12%29](http://www.nctm.org/Grants-and-Awards/Grants/Enhancing-Student-Mathematics-Learning-through-the-Use-of-Tools-and-Technology-Grants-%28Pre-K-12%29)

## Emeril's Culinary Garden and Teaching Kitchen Program

The Emeril Lagasse Foundation works to inspire, mentor, and enable student success by integrating gardening and cooking concepts into school curriculums. Emeril's Culinary Garden and Teaching Kitchen Program partners with qualified elementary and middle schools to inspire appreciation for food sources and understanding of nutrition and healthy eating, promote life skills, and teach culinary skills.

**Deadline:** Letters of Interest are accepted year-round.

**Website:** [emeril.org/emerils-culinary-gardens/schools](http://emeril.org/emerils-culinary-gardens/schools)

## 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 for requests less than \$5,000 are due March 1, June 1, September 1, and December 1, 2019. Requests for grants of \$5,001 and greater are due May 1 and November 1, 2019.

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

## Innovative Technology Experiences for Students and Teachers

The Innovative Technology Experiences for Students and Teachers (ITEST) program promotes prekindergarten through grade 12 students interests and capacities to participate in the science, technology, engineering, and mathematics (STEM) and information and communications technology (ICT) workforce of the future.

Exploratory grants of up to \$400,000 with durations of up to two years. Strategies grants up to \$1.2 million with durations up to three years are awarded. SPrEaD grants up to \$2 million with durations of three to five years are awarded.

**Deadline:** Full proposals are due the second Wednesday in August, annually.

**Website:** [www.nsf.gov/funding/pgm\\_summ.jsp?pims\\_id=5467](http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=5467)

## 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, which are characterized by

the following qualities: imaginative, creative, youthful, scientific, humanistic, and innovative.

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/applying-for-a-grant](http://www.honda.com/community/applying-for-a-grant)

## 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.

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

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

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

## Minigrants for Youth Amateur Radio Groups

The primary focus is to support programs and projects for youth that enrich the experience of radio amateurs under the age of 18. Minigrants are made for the following types of projects: securing equipment for antennas for club stations; purchasing training materials; and local service projects that bring favorable public exposure.

Grants up to \$1,000 are awarded.

**Deadline:** Grant requests are accepted year-round.

**Website:** [www.arrl.org/the-victor-c-clark-youth-incentive-program](http://www.arrl.org/the-victor-c-clark-youth-incentive-program)

## Roads to Reading Literacy Initiative Grants

The Roads to Reading Literacy Initiative (RTRLI) provides grants of new children's books as educational resources to schools, child-care centers, and nonprofit organizations serving children in need from birth to age 16.

**Deadline:** Applications are accepted from April 1 through June 1, annually.

**Website:** [pwirtr.org/register](http://pwirtr.org/register)

## Amber Brown Grant

The Society of Children's Book Writers and Illustrators (SCBWI) offers the Amber Brown Grant to commemorate author Paula Danziger. The grant is awarded annually to one school and includes a visit by a children's book author or illustrator to encourage children and youth to read and connect them with creative influences.

**Deadline:** Applications are accepted November 1 through April 15, annually.

**Website:** [www.scbwi.org/awards/grants/amber-brown-grant](http://www.scbwi.org/awards/grants/amber-brown-grant)

# Student Contests and Awards



## Lemelson-MIT InvenTeam Grant Competition

InvenTeams composed of high school students, teachers and mentors are asked to collaboratively identify a problem that they want to solve, research the problem, and then develop a prototype invention as an in-class or extracurricular project. The maximum grant award is \$10,000. InvenTeam projects span many fields from assistive devices to environmental technologies and consumer goods. Applicants are encouraged to consider needs of the world's poorest people (those earning \$2/day) when brainstorming invention ideas.

**Deadline:** Apply by April 8, 2019.

**Website:** [lemelson.mit.edu/inventeams](http://lemelson.mit.edu/inventeams)

## The Paradigm Challenge

The Paradigm Challenge is an annual competition developed by Project Paradigm and the American Red Cross. The challenge is intended to inspire youth to use science, technology, engineering, and mathematics (STEM) skills and kindness, creativity, and collaboration to help solve real-life problems and make a difference. This year's challenge brings back the first three challenge projects, reducing

injuries and fatalities from home fires; helping the environment through the reduction of waste; and improving personal health through wellness and healing; and adds a new project, the security of global food system.

One grand prize of \$100,000; first-place prizes of \$10,000; second-place prizes of \$2,000; third-place prizes of \$1,000; and finalist prizes of \$200 are awarded.

**Deadline:** Entries are due May 1, 2019.

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

## Poetry Out Loud National Recitation Contest

The National Poetry Out Loud Competition invites high school students in grades 9 through 12, as well as eighth graders that participate in high school-level classes, to compete in local, state, and national finals in the recitation of poetry. Prizes are awarded to winning students and their schools at the state and national levels.

States hold their competitions by mid-March (see <http://www.poetryoutloud.org/competition/state-finals> for more information). Following the state finals, the National Finals are held in Washington, DC at the end of April, annually.

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

## American Association of Physics Teachers High School Physics Photo Contest

For many years, the American Association of Physics Teachers (AAPT) High School Physics Photo Contest has provided teachers and students an opportunity to learn about the physics behind natural and contrived situations by creating visual and written illustrations of various physical concepts. Students compete in an international arena with more than 1,000 of their peers for recognition and prizes.

**Deadline:** Entries are accepted March 1 through May 15, annually.

**Website:** [aapt.org/Programs/photocontest/index.cfm](http://aapt.org/Programs/photocontest/index.cfm)

## Junior Duck Stamp Art Contest

The Junior Duck Stamp Conservation and Design Program is an integrated art and science curriculum developed to teach young people environmental science, habitat conservation and a greater awareness of our nation's natural resources. For the contest, artwork is accepted from K-12 students in public, private and home schools.

**Deadline:** Entries for most states due March 15, 2019.

**Website:** [www.fws.gov/birds/education/junior-duck-stamp-conservation-program/junior-duck-stamp-contest-information.php](http://www.fws.gov/birds/education/junior-duck-stamp-conservation-program/junior-duck-stamp-contest-information.php)

## Science Without Borders Art Challenge

This year's Science Without Borders Challenge from the Khaled bin Sultan Living Oceans Foundation asks students ages 11-19 to enter artwork on the theme, "Connected Ocean: No Barriers, No Boundaries, and No Borders." The contest is designed to get students and teachers more involved and interested in ocean conservation through various forms of art.

**Deadline:** Submissions due April 22, 2019.

**Website:** [www.livingoceansfoundation.org/education/science-without-borders-challenge](http://www.livingoceansfoundation.org/education/science-without-borders-challenge)



## Summer Research Education Experience Program

The purpose of the National Institutes of Health (NIH) Summer Research Education Experience Program is to provide a high-quality research experience for high school and college students and for science teachers during the summer academic break. The overarching goals of the program are to support education activities that foster a better understanding of biomedical, behavioral, and clinical research and its implications.

Support for science teachers at the kindergarten through grade 12 and college level is limited to those programs with a clear plan for how teachers will utilize their summer experience in their teaching during the school year.

Grants up to \$100,000 in direct costs per year are awarded.

Optional Letters of Intent are due 30 days before the deadline. Applications are due January 25, May 25 and September 25, annually.

For questions regarding application instructions and process:

Phone: 301.945.7573

Email: [grantsinfo@nih.gov](mailto:grantsinfo@nih.gov)

**To submit optional Letter of Intent:**

Abraham Bautista, Ph.D.

Phone: 301.443.9737

Fax: 301.443.9737

Email: [Abraham.bautista@nih.gov](mailto:Abraham.bautista@nih.gov)

## Artists Inspire Astronauts

Space for Space Art in Kennedy Space Center's Astronaut Crew Quarters

The goal of this challenge is to create an inspiring environment for astronauts before they head out on space missions. NASA's Kennedy Space Center is seeking submissions for original artwork to be displayed on a wall within the Astronaut Crew Quarters. The area is one of the last places astronauts will spend time before heading for the launch pad. Artwork on display may be visible during NASA video coverage of crew departure.

**Deadline:** April 30, 2019

**Website:** [challenge.gov/a/buzz/challenge/998/ideas/top](http://challenge.gov/a/buzz/challenge/998/ideas/top)

## NPR Student Podcast Challenge

NRP has launched the first-ever NPR Student Podcast Challenge. It's a chance for teachers and students in grades five through 12 to turn their classrooms into production studios, their assignments into scripts and their ideas into sound. Here's how it works: You'll

produce a podcast, three to 12 minutes long. You don't need a lot of fancy equipment or a studio — you should be able to do this with just a smartphone and a computer, with easily available software. And you don't need to be an expert in radio production: We'll offer lots of help for students and teachers along the way.

**Deadline:** The contest opened up to entries from teachers on Jan. 1, 2019, and will close them on March 31.

**Website:** [tinyurl.com/y84ujs2w](http://tinyurl.com/y84ujs2w)

## Siemens Possibility Grant

Enter the Possibility Grant Sweepstakes daily for your chance to win \$10,000 for STEM at your K-12 school! "Fab" your lab with the latest and greatest gadgets, or purchase top-tier technology and supplies for STEM students.

**Deadline:** Contest closes 5 p.m. April 27, 2019.

**Website:** [www.siemensstemday.com/sweepstakes](http://www.siemensstemday.com/sweepstakes)

## Outstanding Earth Science Teacher Awards

The National Association of Geoscience Teachers (NAGT) presents the Outstanding Earth Science Teacher Awards to K-12 educators who have made exceptional contributions to the stimulation of interest in the earth sciences. Ten national finalists are selected, one from each NAGT regional section.

**Deadline:** Nominations can be submitted by May 1, 2019.

**Website:** [nagt.org/nagt/awards/oest.html](http://nagt.org/nagt/awards/oest.html)

## Gloria Barron Prize for Young Heroes

Each year, the Gloria Barron Prize recognizes young people ages 8 to 18 who have made a significant positive difference to people and our environment. The 25 winners each receive a \$10,000 cash award to support their service work or higher education.

**Deadline:** Nominations due by 5 p.m. MST April 15, 2019.

**Website:** [barronprize.org/apply](http://barronprize.org/apply)

## Craig Tufts Environmental Education Scholarship Award

The Craig Tufts Educational Scholarship Award is given annually to a young person between the ages of 8 and 18 to attend a week-long, summer outdoor educational adventure camp. The scholarship includes travel, room and board, and program fees for the award winner and an accompanying parent or guardian.

**Deadline:** Apply by 5 p.m. EST March 22, 2019.

**Website:** [www.nwf.org/Educational-Resources/Education-Program/Craig-Tufts-Educational-Scholarship](http://www.nwf.org/Educational-Resources/Education-Program/Craig-Tufts-Educational-Scholarship)

# What are the Benefits of Being an NBCT in MN?



## Financial Incentives

Many states and local districts offer bonuses for candidates who complete National Board Certification. We encourage you to partner with us and become an advocate in your state so NBCTs receive the financial awards they deserve.

## State Recognition

Minnesota recognizes pursuing National Board Certification as fulfilling all clock hour renewal requirements for a continuing license, whether or not the teacher achieves certification. A teacher who holds a valid certificate from the National Board

fulfills all clock hour requirements during the life of the certificate.

## Educational Credits

Universities frequently provide graduate credit to teachers pursuing National Board Certification. Check with your local university to see if graduate credit is a possibility for you.

## Leadership Opportunities

Board certification can enable teachers to take on leadership roles—such as mentoring, leading professional development efforts, and advocating for policy changes—that allow them to advance their careers while staying in the classroom.

According to the NBPTS (National Board for Professional Teaching Standards), research from across the country over the past decade confirms that students taught by board-certified teachers learn more than students taught by other teachers. The increased learning is estimated to be one to two months of instruction with even greater positive impact for low-income students. Most recently, a 2017 Mississippi State University study shows that, on average, kindergarten and third-grade students with a national board certified reading teacher

perform at a significantly higher level on literacy assessments than their peers.

Nationwide, 3,907 teachers achieved national board certification and another 4,446 board-certified teachers successfully renewed their credential, bringing the total number of board-certified teachers to 122,155. National board certification is a performance-based, peer-reviewed process

that requires teachers to demonstrate advanced knowledge, skills, and practice in their subject area through three portfolio entries and a computer-based assessment. The certification process, created by teachers for teachers, is based on the Five Core Propositions and Standards for teaching. Certification is available in 25 areas across 16 subjects and four developmental levels.

## Congratulations to these National Board Certified Teachers!

### White Bear Lake School District

Kathryn Anderson — *Literacy: Reading-Language Arts/Early and Middle Childhood*  
Jane Briggs — *Generalist/Early Childhood*  
Evan Weissman — *Generalist/Middle Childhood*

### St Paul Public Schools

Benjamin Lathrop — *English Language Arts/Adolescence and Young Adulthood*

### South St. Paul Public Schools

Ian Burk — *Science/Early Adolescence*

### North St. Paul-Maplewood-Oakdale School District

Marta Stoeckel-Rogers — *Science/Adolescence and Young Adulthood*

### Minnetonka Public Schools

Cheryl Duncan — *Social Studies-History/Adolescence and Young Adulthood*

Monica Hahn — *Music/Early and Middle Childhood*

Sean Holmes — *Science/Adolescence and Young Adulthood*

Ursula Speedling — *Generalist/Early Childhood*

### Alexandria Public Schools

Kari Gilbertson — *Literacy: Reading-Language Arts/Early and Middle Childhood*

### Forest Lake Public School District

Amy Huset — *Literacy: Reading-Language Arts/Early and Middle Childhood*

Katie Lorenz — *Literacy: Reading-Language Arts/Early and Middle Childhood*

### Saudi Aramco Expatriate Schools

#### Minnesota

Mark Jackson — *Social Studies-History/Adolescence and Young Adulthood*

### Elk River Independent School District 728

Mary Kage — *Science/Adolescence and Young Adulthood*

### Big Lake School District 727

Ann Katorosz — *Generalist/Early Childhood*

### Roseville Area School District 623

Stephen Pawelski — *Mathematics/Adolescence and Young Adulthood*

### Rochester School District 535

Jessica Seefeldt — *Generalist/Middle Childhood*

### Columbia Heights Public Schools

Katherine Smead — *Literacy: Reading-Language Arts/Early and Middle Childhood*

### Edina Public Schools

Katrina Stern — *Science/Adolescence and Young Adulthood*

*Source — National Board for Professional Teaching Standards*

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## National Board for Professional Teaching Standards Five Core Propositions

- Teachers are committed to students and their learning
- Teachers know the subjects they teach and how to teach those subjects to students
- Teachers are responsible for managing and monitoring student learning
- Teachers think systematically about their practice and learn from experience
- Teachers are members of learning communities

For more information go to: [www.nbpts.org/national-board-certification](http://www.nbpts.org/national-board-certification)



## Horizon East Health Teacher Named Moorhead Teacher of the Year

Brian Meyer is proud to come from a family of educators.

"My parents, brother and sister have all been in an educational setting in one form or another," Meyer said. "It really felt natural going into education as a career."

Meyer, a health education teacher at Horizon Middle School East Campus for nine years, has been named the 2019 Moorhead Teacher of the Year.

A teacher for Moorhead Area Public Schools for 25 years, Meyer previously taught physical education at Robert Asp, Edison Elementary and Moorhead High and health and technology at Moorhead Junior High.

"I was fortunate to get a job as a physical education at Robert Asp, then a school for grades 5-6," Meyer said.

One of the first things he did was to give the kickballs away to the teachers for their playground supply bins — moving away from a model of just having the students play a game like kickball to using curriculum. According to Meyer, he found, wrote and modified curriculum and made the department accountable.

"My passion continues to this day," Meyer said.

Rather than using formal textbooks, his

Horizon East students now have seven packets to use during their nine weeks in the healthy lifestyles class. The packets include viable up-to-date curriculum that is interesting, educational and necessary, Meyer said.

"I will bring in guest speakers ranging from law enforcement officers to recovering addicts for students to learn and see firsthand the lessons I am trying to instill," he said.

Meyer takes pride in making sure the topics in his classroom are about the stressors and pressures students face now or will be facing in the near future.

"We practice and implement coping skills and refusal skills — healthy ways students can stay drug free and make healthier choices," Meyer said. "I work hard on trying to make my class pertain to all students. Not until they feel that rapport and connection to my class, can education truly take place."

Since 2017, Meyer has been a mentor for Check and Connect, where mentors check in with students and provide supports to increase student engagement at school and with learning.

According to Dr. Jeremy Larson, principal at Horizon East, Meyer understands the importance of the social and emotional component for students and strives to ensure that all students have an adult advocate.

"He not only has become an advocate for his students through the Check and Connect

program, but he also helps me to create an atmosphere and culture where all students feel valued," Larson said. "As principal, I look to him to give me a pulse on what is happening in the classroom and appreciate getting his feedback on what I can do to improve our school environment."

Besides teaching, Meyer has coached boys and girls basketball, boys tennis, boys and girls cross country, and football. He has been an after-school gym instructor and an AVID teacher, and he announces at Horizon East and Moorhead High athletic events.

The Education Moorhead Communications Committee, which selected Meyer as the 2019 Moorhead Teacher of the Year, was impressed with the many titles he wears: health education teacher, coach, "the voice of Horizon Middle School East," "the voice of Moorhead football," and mentor with Check and Connect program.

"Mr. Meyer is a dedicated and passionate teacher who truly cares about students in the Moorhead School District and truly makes a dif-



ference in his many roles," the committee said in a statement.

"I truly love my job and look forward to it every day," Meyer said. "I am surrounded by great educators and even better friends."

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## Teachers Earn LEEA Honors

Paul Downer, Communications Coordinator  
Superintendent/School Board Assistant  
Delano Public Schools

A quartet of Delano teachers have received honors as Leaders in Educational Excellence.

The four included second-grade teacher Nate Uselding, DIS speech clinician Mary Somers, DHS School Within A School instructor Shallyn Tordeur, and DHS social worker Marie Techam, who attended as Delano's 2017-18 Teacher of the Year.

Their Leadership in Educational Excellence Awards were distributed at the 27th annual Award and Recognition Ceremony.

### Nate Uselding

Whether helping to create innovative learning spaces like the Imaginarium at Delano Elementary, goading students and staff members with his Wisconsin sports preferences, or bringing an infectious enthu-



siasm to the classroom, second-grade teacher Nate Uselding has made his mark in Delano.

This year co-workers have rewarded him by nominating him for a Leadership in Educational Excellence Award.

"I was blown away when I learned that my peers nominated me for this award and I want to thank them for helping me be successful in teaching," Uselding said. "Receiving the LEEA Award is a great honor, and I'll continue to represent leadership to our school community in the future."

A nomination statement submitted to the district's Staff Development Committee cited Uselding's work on behalf of both his students and his peers.

"Nate is a strong advocate for all of his students. He enjoys implementing the latest strategies in the classroom and is often a (resource) to others in his building," said the nomination. "He has created technology opportunities in a variety of ways and has been an integral player as the elementary moves forward to add a maker space to the building."

Uselding is in his fifth year at Delano.

"This is a second career for me, as my first degree was soil science and I worked in the turf industry as a superintendent," said Uselding. "After having kids, I stopped working to stay home with them. This turned out to be the best decision of my life because I realized that

I needed to do this for a living."

Uselding prides himself on making strong connections with students and fellow teachers.

"You'll always catch me with a smile on my face, and my goal is to make learning fun," he said. "I believe in developing young citizens by building their confidence, improving self-esteem, and allowing time for self-reflection. Ultimately, I want students to love learning as much as I embrace teaching."

### Mary Somers

A nomination submitted to the district's Staff Development Committee said in part that Somers is a key member of the special education team.

"She is always prepared, organized, professional, kind, and supportive," said the nomination. "I think her work with our students is often overlooked, or not always understood, but incredibly important."

Somers marks her 30th year with Delano Public Schools in January, and said her work has been fulfilling from the beginning.

"I became a speech-language pathologist because I wanted to help others and make a difference in their lives," she said. "I really enjoy getting to know my students and watching them develop new skills that help them to express themselves. Because I often teach students for more than one year, I have the unique opportunity to see them grow and change in a way that general education teachers don't have the chance to experience."

The nomination noted that Somers' input is particularly valued in evaluation meetings or individual education plan conferences.

"Being nominated for the LEEA was such a surprise," said Somers. "This is an honor that all of my colleagues deserve for their hard work and dedication. I deeply appreciated the opportunity and privilege to represent Delano at the awards ceremony."

### Shallyn Tordeur

As the School Within A School instructor and COMPASS program leader at Delano High School, Tordeur has an opportunity to make a big difference in the lives of those she teaches.

It is a challenge she embraces.

"Shallyn works tirelessly to help students within our school who need it the most. She is an amazing advocate for all students and has made a difference in the lives of so many," said an anonymous nomination from a fellow



staff member that led to Tordeur's Leadership in Educational Excellence Award this fall.

"I truly feel that without the wonderful colleagues that I have I would not be able to do my job, so this honor is truly the work of many people who help me be the best each day," said Tordeur.

Tordeur has worked in education for 15 years, including 12 in Delano.

"I went into education because I found myself consistently pursuing jobs that were helping kids," she said.

The nominating document said Tordeur is a reliable mentor and colleague.

"Her students always know they can count on her to give a helping hand or a listening ear. She is a wonderful person to work with, always willing to go the extra mile to help her coworkers," it said. "Her commitment to meeting the needs of all students and teaching with the whole child in mind is outstanding. She is passionate about her job as an educator and respected by students and staff."

Tordeur said the variety of duties inherent in her work is what she enjoys most.

"I have the privilege of working each day with some of the most unique and creative kids," she said. "My job is never dull and I couldn't see myself doing anything different."

### Marie Techam

Techam has been a school social worker for 19 years, including 12 in Delano.

"Receiving the LEEA Award is a big honor," she said. "Since moving to Delano,

working here and having my kids go to school here, I have been truly amazed by the excellent teaching staff and support personnel we have.

"Our district employees overall are so dedicated to helping students and go above and beyond to give students a quality education. To be a school social worker getting this honor, it truly is a testament to the teachers and how much they value all areas of helping students."

Techam said she pursued her career as a way to help children, to give them a listening ear for issues they might be facing.

"Every student should feel a sense of belonging when they walk into school each day. Our students are faced with so many challenges, many that we aren't even aware of, and it is our job to help them come to a place in which they feel they are supported and are able to work through anything that may be getting in the way of their learning," she said. "Each student has something unique and valuable to offer and as educators we can find that quality within each of them."



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## 2018 Farmington Teacher of the Year: Erica Winters



*Farmington Area Public Schools*

Every year teachers in District 192 take a vote for who should be the Farmington Teacher of the Year. This teacher is always someone passionate about teaching and dedicated to serving students, a person who stands out to colleagues as going above and beyond. The 2018 Farmington Teacher of the Year is Erica Winters!

Ms. Winters has been a teacher for 17 years and spent the last 16 of those years teaching music at Meadowview Elementary. She wanted to become a teacher because of her own love of school, a love that doesn't seem to have diminished: "As a student, I loved everything about school, even though I was quite shy.... I am grateful for the high standard of excellence that was expected, and the confidence I gained by perhaps being excessively involved in every possible school activity! My dad once told me that he believed singing in front of an audience changed me. He was right. I wanted everyone to have the opportunity to feel the joy music gave me growing up," said Ms. Winters.

In addition to teaching general music classes, Ms. Winters regularly collaborates with colleagues across the district preparing and directing yearly 4th and 5th grade honor choirs and facilitating multiple artist-in-residence programs including African Drumming, Folk Dancing, Dulcimer Building, and Science of Sound Exploration. One of her most recent projects was introducing ukuleles, which were

purchased with a grant, to her students at Meadowview. "When thinking back on all the grade level programs and musical performances, I feel so fortunate to have had the opportunity to work with so many wonderful students and staff over the years," she said.

As much as Ms. Winters loves music, she sees being a teacher as a greater calling. "I truly believe the work that happens inside the music room goes far beyond teaching and learning the fundamentals of music. I am thrilled to see the joy students share with each other as they learn and accomplish new musical skills -- but I love my profession most because engaging in music offers many social opportunities, which are invaluable for our students. The music room is a place of expectation, laughter and inclusion. Students who struggle in other areas throughout the school find success in my classroom," she said.

Ms. Winters' dedication to her students is especially impressive to those who know some of the challenges she and her family have faced outside the classroom. "The biggest challenge in my career is continuing to find a balance between teaching and the demands of our everyday home life," she said. "While she loves to spend time camping and being outdoors with her husband and two children, her time away from school is also filled with doctor's appointments and medical procedures.

"Our oldest son was born early 11 years ago weighing 15 oz. with a complex heart defect. He's had over 40 surgeries and procedures, and he has been cancer free for 10 years! A true miracle," said Ms. Winters, "Carson has taught me more about life than anyone I know. He has forever changed who I am in and out of the classroom. With little sleep under my belt and 700 students waiting for me at school, my son has taught me to never underestimate a child or the power of music. I truly have the best job in the world."

[www.farmington.k12.mn.us](http://www.farmington.k12.mn.us)  
(651) 463-5000

## Teachers Earn LEEA Honors

Continued from Page 21

Techam said the most gratifying aspect of her job is seeing change within students as they learn strategies to work through challenging situations, adding that her passion is mental health awareness and suicide prevention.

Because she works with high schoolers, Techam said the process often involves helping them take control of important areas of their lives and gaining the confidence they need to act with their own best interests in mind.

"I have witnessed firsthand the weight that is lifted off of a student's shoulders when

they simply are able to talk about some of the problems they are experiencing with a trusted adult," said Techam. "Simply by listening to students I am able to give them a voice to start to process through difficult issues."

[www.delano.k12.mn.us](http://www.delano.k12.mn.us)  
(763) 972-3365

# 2019 Minnesota TEACHER of the YEAR 55th Anniversary

## A Near-Record 168 Teachers are Candidates for Minnesota Teacher of the Year

The 2019 Minnesota Teacher of the Year will be chosen from a field of 168 candidates. These candidates have accepted their nominations and completed the required materials to become eligible for the honor. The number of candidates this year is the third-most in the 55-year history of the award.

This year's program will name the 55th Minnesota Teacher of the Year, celebrating the tradition of excellence in teaching in Minnesota. Candidates include pre-kindergarten through 12th-grade and Adult Basic Education teachers, from public or private schools.

The 2019 Minnesota Teacher of the Year will be announced Sunday, May 5, at the Saint Paul RiverCentre. Over the coming weeks, a 25-member panel of community leaders will name a group of semifinalists and finalists.

The candidates for 2019 Minnesota Teacher of the Year, listed by their school districts, are:

Kristen Seeger, *Albert Lea Area Schools*  
Erica Ableiter, *Anoka-Hennepin Schools*  
Jessica Bomstad Young, *Anoka-Hennepin Schools*  
David Christensen, *Anoka-Hennepin Schools*  
Lynn Florman, *Anoka-Hennepin Schools*  
Cindy Houle, *Anoka-Hennepin Schools*  
Stacy Johnson, *Anoka-Hennepin Schools*  
Adriann Kell, *Anoka-Hennepin Schools*  
Amy Kinney, *Anoka-Hennepin Schools*  
Taylor Melius-Polzin, *Anoka-Hennepin Schools*  
Jaclyn Mingo, *Anoka-Hennepin Schools*  
Chelsea Regan, *Anoka-Hennepin Schools*  
Timothy Riordan, *Anoka-Hennepin Schools*  
Brett Theisen, *Anoka-Hennepin Schools*  
Justine Wewers, *Anoka-Hennepin Schools*  
Alisha Galle, *Austin Public Schools*  
Karen Solum, *Barnesville Public Schools*  
Carin Hagemeyer, *Belgrade-Brooten-Elrosa Public Schools*

Kari Slindee, *Blackduck Public Schools*  
Joshua Coval, *Bloomington Public Schools*  
Kris Goodwin, *Bloomington Public Schools*  
Katie Juul, *Bloomington Public Schools*  
Lisa Leary, *Bloomington Public Schools*  
Cory Wade, *Bloomington Public Schools*  
June Dahlgren, *Brainerd Public Schools*  
Nicole Meints, *Buffalo-Hanover-Montrose Schools*  
Elizabeth Davidson, *Burnsville-Eagan-Savage School District*  
Erin Huber, *Burnsville-Eagan-Savage School District*  
Amy Smalley, *Burnsville-Eagan-Savage School District*  
Tina Fruechte, *Caledonia Area Public Schools*  
Megan Fritz, *Centennial Schools*  
Rachel Sandquist, *Central Public Schools*  
Jennifer Schneider, *Central Public Schools*  
Julie Frawley, *Chisago Lakes Schools*  
Pam Myers, *Columbia Heights Public Schools*  
Kim Davidson, *Crookston Public Schools*  
Marita Kendig, *Crookston Public Schools*  
Erica Uttermark, *Crookston Public Schools*  
John Fitzer, *Delano Public Schools District*  
Kristin Bergerson, *Duluth Public Schools*  
Jane Juten, *Duluth Public Schools*  
Diane Mozol, *Duluth Public Schools*  
Anna Edlund, *Eastern Carver County Schools*  
Pat Benincasa, *Performing Institute of MN Arts High School, Eden Prairie*  
Deanne Herz, *Eden Prairie Schools*  
Penny Jeurissen, *Eden Prairie Schools*  
Lindsay Klaverkamp, *Eden Prairie Schools*  
Debra Larsson, *Eden Prairie Schools*

Continued on Page 23

## Minnesota Teacher of the Year Candidates Continued from Page 22

Stacy Marek, *Eden Prairie Schools*  
 Marcela Roos, *Eden Prairie Schools*  
 Kathy Vehmeier, *Eden Prairie Schools*  
 Geneva Fitzsimonds, *Edina Public Schools*  
 Jill Uecker, *Edina Public Schools*  
 Janel Weiland, *Edina Public Schools*  
 Chelsie Cabak, *Elk River Schools ISD 728*  
 Lauren Generous, *Elk River Schools ISD 728*  
 Katie Johnson, *Elk River Schools ISD 728*  
 Sara Klingelhofer, *Elk River Schools ISD 728*  
 Heather Mortinson, *Elk River Schools ISD 728*  
 Tony Wolverson, *Elk River Schools ISD 728*  
 Missy Aukes, *Fairmont Area Schools*  
 Jennifer Bartsch, *Floodwood School District*  
 Betsy Saurdiff, *Goodridge School District*  
 Stacy Dahl, *Greenbush-Middle River School District*  
 Robyn Creary, *DaVinci Academy of Arts and Science, Ham Lake*  
 Joe Beattie, *Hastings Public Schools*  
 Jessica Hiedeman, *Herman Norcross School District*  
 Kathryn Enselein, *Intermediate District 287*  
 Kelly Darrow, *Inver Grove Heights Schools*

Deana Walsh, *Inver Grove Heights Schools*  
 Briana Novak, *Isle Public Schools*  
 Stephanie Olstad, *Jordan Public Schools*  
 Brent Stinson, *Kingsland Public Schools*  
 Tammy Teach, *Lake Park-Audubon Schools*  
 Phillip Lalim, *Lakeview Public Schools*  
 Chad Bieniek, *Lakeview Public Schools*  
 Ryan Rapacz, *Lakeview Public Schools*  
 Jodie Sheets, *Lakeview Public Schools*  
 Stephen Booth, *Laporte Public School District*  
 Katie Lieser, *Long Prairie-Grey Eagle Public Schools*  
 Michlyn Newman, *Mahtomedi Public Schools*  
 Emily Seppmann, *Mankato Area Public Schools*  
 Laurie Jensen, *Martin County West Schools*  
 Michelle Breuer Vitt, *Minnehaha Academy, Minneapolis*  
 Emily Firkus, *Minnehaha Academy, Minneapolis*  
 Jessie Damsgard, *Hiawatha Leadership Academy – Northrop, Minneapolis*  
 L. Jenifer Bates, *Minneapolis Public Schools*  
 Donna Biggar, *Minneapolis Public Schools*  
 Michelle Cauley, *Minneapolis Public Schools*

Sharon DeLisle, *Minneapolis Public Schools*  
 Vicki Lambert, *Minnesota Correctional Facility – Stillwater*  
 Kelly Fisher, *Minnetonka Public Schools*  
 Brian Meyer, *Moorhead Area Public Schools*  
 Jacob Hairrell, *Mounds View Public Schools*  
 Bill Sucha, *Mounds View Public Schools*  
 Kirstin Perales, *North Branch Area Public Schools*  
 Peter Burnham, *North St. Paul-Maplewood-Oakdale School District*  
 Christa Edlund, *North St. Paul-Maplewood-Oakdale School District*  
 Jana Hedlund, *North St. Paul-Maplewood-Oakdale School District*  
 Dana Pederson, *North St. Paul-Maplewood-Oakdale School District*  
 Renee Holt, *Northeast Metro 916 Intermediate School District*  
 Betsy Eernisse, *Osseo Area Schools*  
 Lucas Staker, *Osseo Area Schools*  
 Noël Nivala, *Kaleidoscope Charter School, Otsego*  
 Lori Peglow, *Owatonna Public Schools*  
 Mary Schroepfer, *Owatonna Public Schools*  
 Jory Magel, *Pine City Public Schools*  
 Jaime Danks, *Pipestone Area Schools*  
 Jamie Fenicle, *Pipestone Area Schools*  
 Nancy Siebenahler, *Pipestone Area Schools*  
 Susan Meyer, *Plainview-Elgin-Millville Community Schools*  
 Molly Kalina, *Prior Lake-Savage Area Schools*  
 Jesse Smith, *Proctor Public Schools*  
 Jordan Snesrud, *Randolph Public Schools*  
 Colleen Crossley, *Robbinsdale Area Schools*  
 Wilbur Winkelman, *Robbinsdale Area Schools*  
 Deborah Roberge, *Rochester Public Schools*  
 Lynette Faber, *ROCORI Area Schools*  
 Julie Urness, *Roseau School District*  
 Laurie Herman, *Rosemount-Apple Valley-Eagan Schools*  
 Tamara Morett, *Rosemount-Apple Valley-Eagan Schools*  
 Myriam Castro-Franco, *Roseville Area Schools*  
 Jeffrey Davies, *Roseville Area Schools*  
 Markie Crosby, *Saint Paul Public Schools*  
 Eric Erickson, *Saint Paul Public Schools*  
 Bernetta Green, *Saint Paul Public Schools*  
 Sara Johnson, *Saint Paul Public Schools*  
 Molly Keenan, *Saint Paul Public Schools*  
 Benjamin Lathrop, *Saint Paul Public Schools*  
 Janet Manor, *Saint Paul Public Schools*

Paul Nelson, *Saint Paul Public Schools*  
 Shannon Pettipiece, *Saint Paul Public Schools*  
 Eugenia Popa, *Saint Paul Public Schools*  
 Shari Roach, *Saint Paul Public Schools*  
 Mark Westpfahl, *Saint Paul Public Schools*  
 Lori Uphoff, *Sauk Centre Public Schools*  
 Shelby Chollett, *Sauk Rapids-Rice Public Schools*  
 Nancy Davis, *Sauk Rapids-Rice Public Schools*  
 Tania Drexler-Gutierrez, *Shakopee Public Schools*  
 Jessica Davis, *South St. Paul Public Schools*  
 Luke Olson, *South St. Paul Public Schools*  
 Kristen Spanjers, *South St. Paul Public Schools*  
 Jessica Splittstoesser, *South St. Paul Public Schools*  
 Scott Alton, *South Washington County Schools*  
 Linnea Balderrama, *South Washington County Schools*  
 Karen Buckeye, *South Washington County Schools*  
 Linnea Gamache, *South Washington County Schools*  
 Tark Katzenmeyer, *South Washington County Schools*  
 Andrea Kleoppel, *South Washington County Schools*  
 Anna Ohlsen, *South Washington County Schools*  
 Kaarin Schumacher, *South Washington County Schools*  
 Nora Nutt, *SouthWest Metro Intermediate District 288*  
 Chris Ann Johnson, *St. Cloud Area School District*  
 Steve Schmitz, *St. Louis Park Public Schools*  
 Katie Macrafic, *Triton Public Schools*  
 Laura Nelson, *AFSA High School, Vadnais Heights*  
 Mandy Gallant, *Wadena-Deer Creek Public Schools*  
 Julie Kirchner, *Wayzata Public Schools*  
 Pat Merrick, *Westbrook Walnut Grove Schools*  
 Annemarie Brockopp, *Westonka Public Schools*  
 Deb Castner, *Westonka Public Schools*  
 Laura Hensley, *Westonka Public Schools*  
 Scott Lhotka, *Westonka Public Schools*  
 Theresa Schmidt, *Westonka Public Schools*  
 Maggie Clark, *White Bear Lake Area Schools*  
 Mary Maloy, *White Bear Lake Area Schools*  
 Dawn Maple, *White Bear Lake Area Schools*  
 Theresa Pearson, *Winona Area Public Schools*  
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