

# Team 5172: Bringing Their News to You

## **FIRST and STEM in Our Schools**

- 53% of our team are females with 8 holding leadership positions
- STEM curriculum in our schools – 3 STEAM courses with one junior, one senior, one 8<sup>th</sup> robotics and 1 Digital Art course
- LEGO Robotics “Hatchlings”
  - 13 possible future FRC members
  - Core Values activities
- CAD interest expanding
- Safety coloring books shared with the elementary in the Greenbush Building



## **Our Community Impact**

- Greenbush Race Park 50/50
- 4<sup>th</sup> of July and Goose Fest Parade Floats
- Greenbush Halloween Party volunteers for set-up, games, and clean-up
- 4<sup>th</sup> of July Demonstration to community
- Girl Scout robotics night including making Tin Can Robots as part of earning their STEM badge



## **Community Pride**

- First State Championship in Greenbush/Middle River history
- Escorts by Middle River and Greenbush Fire Departments on return trips from regionals and state
- Bringing two communities together
- Increased small town community involvement in STEM
  - Willingness to help and easy to access it
  - Wide variety of possible talents for mentors
  - Everyone knows everyone
- Sponsorship from over 85% of local businesses either in-kind or monetary



## **FIRST Beyond Our Communities**

- Rookie All-Star award to Co-Hosting the Great Northern Regional
- Collaborating with teams
  - Badger, Green Machine of Edina, Stephen/Argyle, and Warroad
  - Swamp Machine Summer retreat including Edina, Greenbush/Middle River, and Badger
- Creating relationships
  - University of Minnesota Dean Kaveh
  - Laurie and Yoji Shimizu
  - Mana with from Houston, Texas

From Rookies to State Champions and now Regional Hosts. The sounds of Gator chomps are echoing through the swamp, Alerus Center, and beyond.

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Meet Fezzick, Team 5172's robot for the 2018 FRC robotics season! We've decided to name our robot this because of the unique "iron cross" that adorns our chassis.

Beyond the "iron cross" we also have dual stabilizers on either side of our robot to hold it in place as the "iron cross" descends and our teammates drive onto our frame. From there we proceed to lift all three robots one foot off the ground to "defeat the boss."

One of the challenge that we experienced in the six week build season included weight due to the limit set of 120 lbs. We have needed to drill many holes and vigilantly watch what parts to change, such as switching our 32 metal bearings in our elevator system to 32 nylon bearings.

The team's hope for the robot is to go above and beyond what we imagine to be possible. The build team has put many hours of blood, sweat, and tears into Fezzick, anxious for the stop build day on February 20<sup>th</sup>. No matter the outcomes of either regional that we travel to, Team 5172 will be proud of the robot that we have made – that will hopefully tip the scales and elevate us to the top.

## The Latest on Sponsorship

Team 5172 has been busy going around to our local businesses telling them about the 2018 game, *FIRST* Power Up, and giving them the latest updates on our robot, "Fezzick."

Here's a list of our current sponsors.

### Golden Gator

Greenbush American Legion Post 88  
University of Minnesota  
Polaris  
Central Boiler  
Altoz  
Hlucny Repair  
DRB Fabrication

### Silver Swamp Eater

Greenbush Veterinary Clinic  
Border State Bank

### Green Machine

Roseau County Cooperation Association  
T. G. Design  
Greenbush Ace Hardware  
Premier Ag  
Greenbush Race Park  
Wahl Bros  
Karlstad Insurance Ag

### Robo Nation

Farmers Cooperation Ag  
Greenbush Pharmacy  
Life care Medical Center  
Top Notch Heating and Cooling

### Swamp Sponsor

Butler  
Titan Machinery  
Wagon Wheel of Middle River  
Kathy Kaml  
Northern Valley Machine

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## Great Northern Regional Press Release

### Forty-seven robotics teams to compete at inaugural FIRST Great Northern Regional at Alerus Center

(GRAND FORKS, N.D., February 13, 2018)-- While some may have migrated south for the winter, FIRST® robotics team from across the Midwest will migrate to the frozen tundra for the inaugural Great Northern Regional at the Alerus Center, March 1-3, hosted by the Great Northern Regional Planning Committee with mentors from Team 5172, Team 876, and Team 4818.

"We (team #5172) are excited to be a part of the planning committee who are bringing FIRST Robotics to the area," said Mary Anderson, Team #5172 Coach.

"With Grand Forks being a destination city for northwest Minnesota and eastern North Dakota, we hope that it will offer the opportunity for team sponsors and community members to see what FIRST is all about. We encourage you to come to this free event with your children, grandchildren, or area friends to experience a FIRST robotics event."

At this regional event, high school robotics teams will have the opportunity to showcase their hard work after six intense weeks of designing and building an original robot in this FIRST® Robotics Competition

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

At the Alerus Center, 47 teams of students and engineering and technical mentors, from Minnesota, North Dakota, Iowa, Wisconsin, and Missouri, will demonstrate their skill for science, mathematics, and technology. They will compete for honors and recognition that reward design excellence, competitive play, sportsmanship, and high-impact partnerships between schools, businesses, and communities. Founded by inventor Dean Kamen, who introduced the Slingshot™ water purification system and the "Luke" robotic prosthetic arm, FIRST (For Inspiration and Recognition of Science and Technology) was created to inspire an appreciation of science and technology in young people, their schools, and their communities.

"FIRST robotics is much more than a robot. It give students the opportunity to be a part of a small business," Anderson said. "It builds a team from a group of students of many interests and strengths, encouraging them to work with mentors to grow as young adults in all areas of STEM (science, technology, engineering, and math) while being a gracious professional."



Gracious Professionalism® is a way of doing things that encourages high-quality work, emphasizes the value of others, and respects individuals and the community. The FIRST Robotics Competition anticipates 3,650 teams in the U.S. and 26 other countries worldwide to compete in 63 Regional Events, 85 District Events, and 10 District Championships. The 47 teams at the Alerus Center are competing to earn a spot at the international FIRST® Championship, scheduled for April 18-21 at the George R. Brown Convention Center in Houston, Texas, and April 25-28 at the Cobo Center in Detroit, Michigan. FIRST Power Up <sup>SM</sup>, the 2018 FIRST Robotics Competition game, finds teams trapped in an 8-bit video game. Each three-team alliance has three ways to help defeat the boss: Tipping the scale or alliance's switch in their favor to earn points, exchanging power cubes for power ups (force, boost, and levitate) to gain a timed temporary advantage during the match, and climbing the scale tower to face the boss. The alliance with the highest score at the end of the match, which includes autonomous and teleoperated periods, defeats the boss and wins the game.

Over the six-week timeframe, students work with professional engineering mentors to design a robot that solves a problem using a Kit of Parts and a standard set of rules. Once these young inventors create the robot,



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their teams participate in regional competitions that measure the effectiveness of each robot, the power of collaboration, and the determination of students. FIRST fosters more than a competitive spirit within the students and mentors and between the teams. "It (FIRST) also involves a team who works on the basis of 'co-opertition,' building relationships between other teams as well as competing against them at the same time," Anderson said. "It works to push all mentors and students to be the best they can be."

As Anderson explained, this regional would not be possible without the 150 plus volunteers and judges, the students and mentors, and the support of area sponsors. FIRST Robotics Great Northern Regional sponsors and volunteers come from some of the most highly regarded organizations in the area. These sponsors provide resources, including time and talent from professional mentors, services, equipment, financial contributions, and volunteers. The Great Northern Regional sponsors are designated into different groups. The UND Center For Innovation, and Marvin Windows and Doors are the "Leaders in Technology" sponsors. Andeavor, Digi-Key Corporation, Polaris, and John Deere are the "Captains in Innovation" sponsors. The Grand Forks Visitors Bureau is the "Friend of the Future" sponsor.

Robotics teams are "powering up" their robots in the frozen tundra this March for the FIRST Great Northern Regional. Migrate to the Alerus Center to check it out.



Team 5172 was honored to host Laurie and Yoji Shimizu. They are shown here with alumni and current mentors of the team at Hlucny Repair.

### Great Northern Regional Schedule Set

Team 5172 along with Team 876 and Team 4818 have had the privileged opportunity to be on the planning committee for the inaugural regional. One thing they worked on and have completed is the schedule, one they hope many teams enjoy.

#### Thursday, March 1, 2018

7:00 AM: 5 Team Reps to Load In  
8:30 AM: Pits, Machine Shop, Registration and Inspection Open  
9:00 AM – 11:00 AM: Driver's Meeting, Field Open for Measurement and Calibration  
11:00 AM – 12:00 AM: Lunch  
12:00 AM – 6:30 PM: Practice Matches  
1:00 PM – 3:00 PM: Team Workshops  
1:00 PM – 4:00 PM: Scholarship Row  
8:00 PM: Pits and Machine Shop Close

#### Friday, March 2, 2018

8:00 AM: Pits and Machine Shop Open  
8:30 AM – 9:00 AM: Opening Ceremonies  
9:00 AM – 12:00 PM: Qualification Matches  
9:00 AM – 4:00 PM: Scholarship Row  
10:00 AM – 4:00 PM: FIRST LEGO League Jr., FIRST LEGO League, FIRST Tech Challenge Demonstration  
12:00 AM – 1:00 PM: Lunch  
12:00 AM – 1:00 PM: Invited Guest Lunch  
1:00 PM – 5:45 PM: Qualification Matches  
5:45 PM – 6:15 PM: Awards Ceremony  
6:30 PM: Pits and Machine Shop Close immediately following Awards Ceremony

#### Saturday, March 3, 2018

8:00 AM: Pits and Machine Shop Open  
8:30 AM – 9:00 AM: Opening Ceremonies  
9:00 AM – 12:15 PM: Qualification Matches  
9:00 AM – 1:00 PM: FIRST LEGO League Jr., FIRST LEGO League, FIRST Tech Challenge Demonstrations  
9:00 AM – 1:00 PM: Scholarship Row  
12:15 PM – 12:30 PM: Alliance Selections  
12:30 PM – 1:30 PM: Lunch  
1:30 PM – 4:30 PM: Playoff Matches  
4:30 PM – 6:00 PM: Awards Ceremony  
6:30 PM: Pits Close

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### Bag and Tag Fundraiser

Team 5172 is selling 6 cards for \$5 with themes of birthdays, all occasion, graduation, and mom/dad days as well as a mega pack including 7 gift bags, 12 all occasion greeting cards and envelopes, and 18 sheets of tissue paper for only \$20.

Contact Jorden Hendrickson at (218) 452-0812 for questions or purchase details.

Don't forget the bag to your tag before they are all sold out!

### 2018 Great Northern Railcar Competition

Team 5172 challenged other robotics teams to create a railcar to bring with to the Great Northern Regional that tells their team story while representing *FIRST* Robotics. We are excited to show off the engine that we have built.



### Presentation of Colors

Team 5172 will be honored on March 1<sup>st</sup> at the Great Northern Regional when the Color Guard from the American Legion Post 88 will present the colors at the opening ceremonies as the Northwood School Choir sings the National Anthem.



Thank you legionnaires for your service, your willingness to attend the Great Northern Regional, and your continued support of Team 5172. We truly do appreciate each and every one of you.

### Friendship for Life



Yoji and Laurie Shimizu have made a lasting impact on many people throughout the world of FIRST Robotics including many members of Team 5172 whether it is students or mentors. They truly will be a friend to many of us for life. Thanks Yoji and Laurie!