

# The Robette Roundup

March 2022



**Our mission is to inspire girls of all ages to incorporate STEM into their lives and to revolutionize the perception of women in STEM.**

## Upcoming Events

### **MS STEAM Day**

We'll be teaching middle schoolers about electricity and circuits.

### **North Star Regional**

Competition at 3M Arena at Mariucci in Minneapolis  
April 7th - 9th  
Free to attend, spectators more than welcome!

### **School Visit**

We'll be visiting the STEM club at **Community of Saints** Middle School soon!

**The Robettes are back!** After nearly two years, we were able to go back to in-person competition at the Northern Lights Regional in Duluth, MN. And we couldn't have been more excited!

For more than half of our team, Northern Lights was their first ever robotics competition. Everyone was enthusiastic about trying new things, meeting other people who love robots, and working as a team. Our robot performed well and did not require any major repairs. We also had a ton of fun getting to know our teammates better!

Thanks to everyone's hard work and dedication, The Robettes had many successes in Duluth. With time to refine code, improve mechanisms, and practice driving, we expect to do even better at our home competition. Make sure to catch our matches!



*A Special Thanks to our Sponsors:*

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Team Twitter: [@therobettes](https://twitter.com/therobettes)

## What is **FIRST: RAPID REACT**?

Remember back at the beginning of January at Kick-Off? Teams around the world learned about RAPID REACT!

In this year's game, two alliances must prepare cargo for transport! Each alliance, composed of three robots, must collect & shoot cargo (oversized tennis balls) into a high or low goal. At the beginning of a match, human players can also attempt to shoot cargo. Another challenge for robots is to climb on four bars of various heights up to nearly 8 ft. Since robots cannot extend mechanisms above five and a half feet, they must traverse across the rungs to get to the highest one.

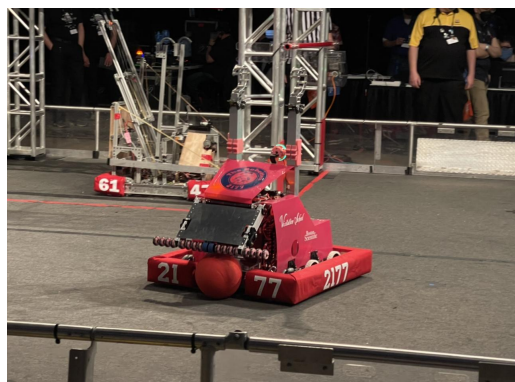
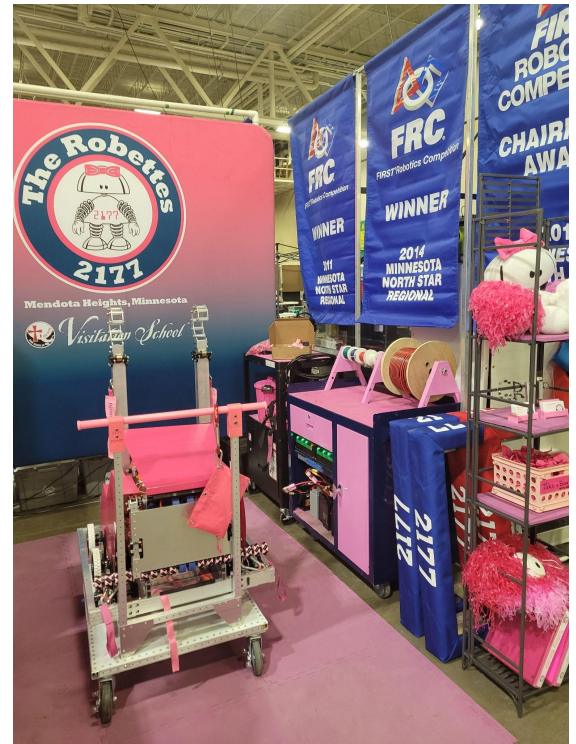
## Student Spotlight: Jana C. '23

Hello, I'm Jana and I am a Junior on the electrical subteam. I am the Human Player for our team. I loved the fast pace of the competition and the quick thinking required. Making friends with students on the other teams was a good experience for me.



## Our strategy going into build & competition:

This year, we decided to focus on shooting cargo and climbing on the second rung. Our robot has a hooded shooter, enabling us to shoot either high for more points or low for greater consistency. We decided on a 2nd level climb since this rung was lower than the robot height limit, and we have a team history of successful climbs. This would help us achieve a hangar ranking point without taking too much time to build and program before competition..



*"What's your favorite thing about competition?"*

*"I loved making new friends and seeing our robot work at a competitive level" - RJ*

*"Getting to see all our robot friends!" - Sydney, mentor*

*"You don't just win or lose, you learn and grow." - Rory*



## Thursday Summary

We passed inspection pretty quickly and without major issue - shout out to the robot inspectors who ensure we follow the construction rules that keep us safe! Our drive team participated in a record 8 practice matches (3 scheduled, 5 bonus as a "fill-in" robot). Also, everyone learned how to scout - watch & record other teams' robot performance.

## Friday Summary

We competed in our first 7 qualification matches. The climbing mechanism worked almost perfectly, with a 2nd level climb time of ~5 seconds. We began the day shooting into the high hub goal, but found it was only ~20% reliable since balls kept bouncing out. We switched our strategy to aiming for the low hub goal. We had a much more reliable low shot (~90%), so we went with that strategy for the rest of our matches. At the end of the day, we were ranked 16th out of 53 teams.

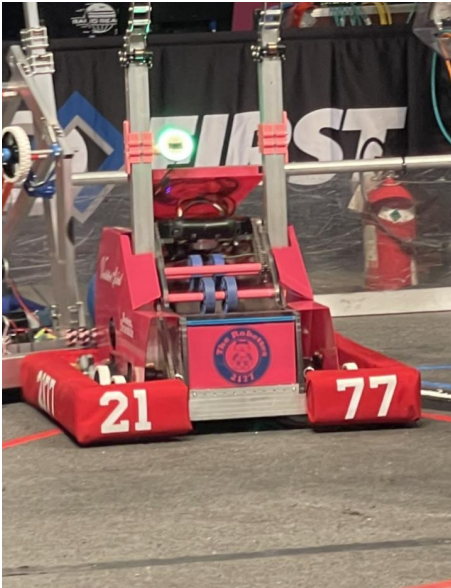
## Saturday Summary

We finished our last 2 official qualification matches, although one had to be replayed due to a field fault. Our climber had some problems, but our low shooting continued to be consistent. Shout out to our human player, Jana, for scoring 3 high cargo during auto!

By the time alliance selection rolled around, we were ranked 25th. Though we were not picked for an alliance, we did well enough to be in line to compete as a back-up robot! In the afternoon, we watched playoff matches and made improvements to our driving speed.



# Industrial Design Award!



## More Than Robots

Robotics is an activity of many facets. In addition to the robot play on the field, there are many ways to be recognised by *FIRST*.

Normally, judges visit with teams during the event to discuss all aspects of their team. This year, judging took place online. Awards are based on both the technical aspects of robots and non-technical aspects of a team's operations (including culture, business plans, team inspiration, outreach, imagery, and more)

At the Northern Lights Regional, The Robettes received our first robot-related award since 2014, The Industrial Design Award.

*FIRST* describes the team who receives this award:

- A team must be able to describe how their robot is elegant, efficient (simple/executable), and practical.
- The entire machine design, or the detailed process used to develop the design, is worthy of this recognition, and not just a single component.
- The robot distinguishes itself from others by its aesthetic and functional design.

The judges at competition announced “*The Industrial Design Award, sponsored by General Motors, celebrates the team that demonstrates industrial design principles, striking a balance between form, function, and aesthetics.*”

