

The Robette Roundup

January 2020

Weeks 3 & 4 of Build Season



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

Open House

Come tour our work space to see our newly built robot on Sat. Feb. 22 from 10:00 am - 2:00 pm.

Lake Superior Regional

March 5-7, watch us compete for the first time this season in Duluth! Live stream will be available on Twitch.

North Star Regional

March 26-28, join us in-person as we compete at 3M Arena at Mariucci in Minneapolis.

Safety Spotlight: What does it mean to be safe?

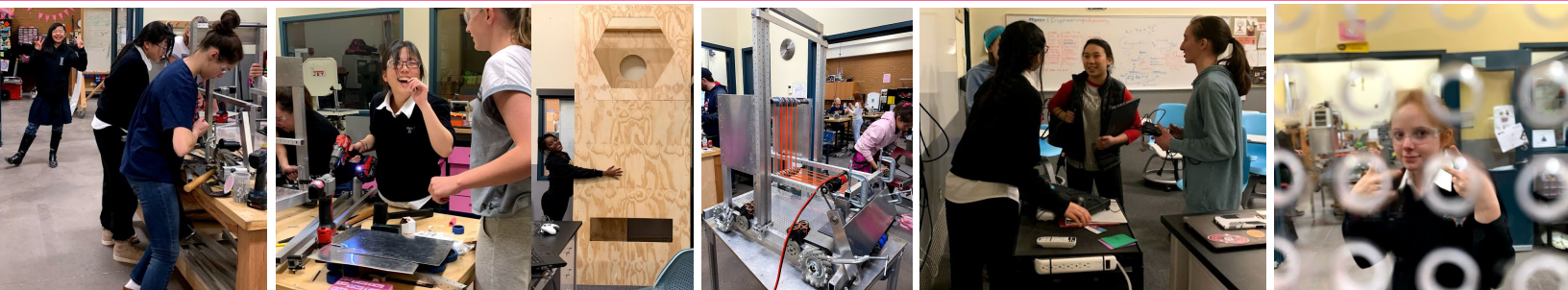
The Robettes work very hard to maintain a safe environment for all team members, visitors, and guests. Strict rules are enforced to ensure the physical well-being of our members.

Every Robette knows, shop safety includes securing long hair above the shoulders. As a safety initiative, spare hair binders are available in the workshop for tying hair back.

All Robettes are told to record their injuries in the Injury Log if they get hurt. This report is not for blaming team members, rather, the Injury Log is used to evaluate risks in the shop and take preventative measures against future injuries.

Shop safety is very important. Before using dangerous tools, team members are taught how to properly handle the tools and work with them. Shop safety also means wearing the proper clothing. Loose clothing, ripped clothing, jewelry, untied hair, drawstrings, and open shoes are all banned from the shop because they pose as a hazard to team members when working with tools.

Finally, "Safety Star of the Week" is awarded to a Robette who demonstrates strong safety habits throughout the week. Previously, members have earned safety stars by writing down injuries in the Injury Log, learning about new safe practices, wearing proper safety equipment, and actively utilizing lessons that they have learned about safety.



Team Website: www.therobettes.com

Team Email: 2177@therobettes.com

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

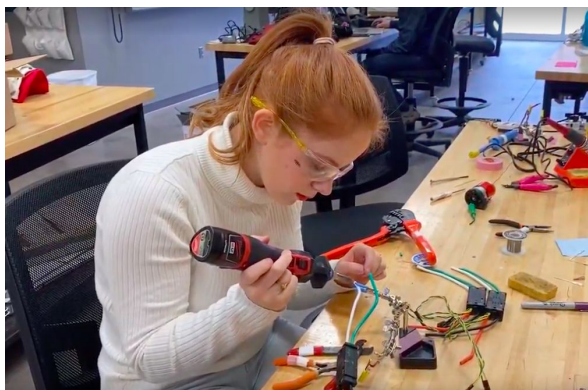


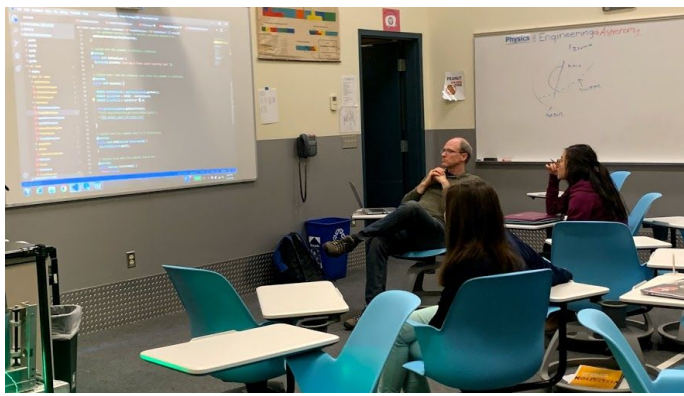
Mechanical Update

This week, the mechanical subteam jumped into the design and build processes, constructing the practice robot from the ground up. First, we finished building the practice drivetrain, a system that allows the robot to move and gives us the foundation for the rest of our mechanisms. Additionally, we continued working with CAD (Computer-Aided Design) to help us conceptualize the interactions of all the mechanisms and specific dimensions for fabrication. Using CAD we finished the shooter and conveyor belts designs. Finally, we are finalizing the design of our robot's climber. Making it work in tandem with our other mechanisms has presented us with a healthy challenge!

Electrical Update

The electrical subteam has been working on the electrical boards for the practice and competition robots, which includes laying out a board to fit the allotted space and attaching it to the robot. We use Lexan with pre-drilled holes which allows us to easily mount components to the boards and route wire effectively. This maximizes our efficiency, as it requires no drilling. Additionally, we have been working with a light sensor that can identify the yellow power cells (dodgeballs) when the robot picks them up through the intake. We are experimenting with putting LED lights on the robot that will indicate the quantity of power cells the robot possesses at a certain time; teams will get a penalty if a robot has more than five power cells at a time during a match.





Programming Update

Over the past few weeks, the programming subteam has accomplished many of our goals. We coded encoders and limit switches, which regulate motor movement. Additionally, the intake control and the turret code (which aligns the shooter to the goal by rotating) have been updated and improved. The intake and conveyors have been combined into one button to load the power cells; this makes driving easier for the drive team during matches. The drive handling of the robot has been smoothed over. Finally, we programmed one button that shoots the power cells at a constant speed, instead of varying speeds, in order to improve accuracy and consistency.

Business Update

Business subteam has been making strides towards meeting our fundraising goal. We are contacting potential sponsors, giving tours of our shop, presenting the mission of our team, and creating thank you notes to show our gratitude to committed sponsors and the family volunteers who help support our team. Additionally, we are working hard on organizing our Open House (Feb. 22), including creating flyers, producing a self-guided tour, and making sure the event runs smoothly. With help from the other subteams, we've been making as many bows as possible to pass out at competition. Finally, we were challenged by another all girls FRC team to post photos on social media demonstrating that *FIRST* is more than robotics but a family.



Core Values

Compassion: Treating others in a caring, inclusive, and Salesian manner

Integrity: Doing what is right, not what is easy

Curiosity: Seeking new ideas and exploring possibilities in STEM and in our lives

Perseverance: Overcoming obstacles to strive for excellence

Confidence: Trusting our abilities and taking pride in our accomplishments



Student Spotlight: Jana '23

Jana is a freshman rookie member of the Mechanical subteam. She has wholeheartedly embraced the team mentality of safety, winning the Safety Star accolade during the fall season for wearing proper ear protection while working with loud tools in the shop. Enthusiastic, hard working, and energetic, she describes herself as the "good kind of crazy." Jana loves being a member of The Robettes because she can be herself. Being a member of the team has taught her a lot, including new techniques and proper names for tools. In addition, Jana highlighted her appreciation for the guidance of Captain Addie. Other team members describe her as "friendly, up beat, happy, funny, and an all around great friend."

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