

Chairman's Award - Team 3015

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2022 - Team 3015

Team Number

3015

Team Nickname

Ranger Robotics

Team Location

Spencerport, New York - USA

Describe the impact of the FIRST program on team participants within the last 3 years. This can include but is not limited to percentages of those graduating high school, attending college, in STEM careers, and in FIRST programs as mentors/sponsors.

In the past 3 years 100% of our members graduated high school, 97% go on to higher education; 81% in STEM fields. 100% of members mentor students in younger FIRST programs. Team members develop real world skills that they apply outside of robotics. Ranger Robotics provided the support our students and mentors needed during the pandemic. From offering a safe space to gather, to zooms which keep us connected; our relationships support our mental health.

Describe your community along with how your team addresses its unique opportunities and circumstances.

Whether it is at the Spencerport Parade or robotics halftime show at a basketball game, our community always shows up to support us. Our logo can be seen all over town. Support is shown through sponsoring, mentoring, cheering us on, and buying our fundraising card. Volunteering over 350 hours at Dreams from Drake and Chalk the Walk, we enjoy giving back to our community. We gathered goggles from local schools, created and delivered stem kits and made blankets for 2 local hospitals.

Describe the team's methods, with emphasis on the past 3 years, for spreading the FIRST message in ways that are effective, scalable, sustainable, and creative. How does your team measure results?

We host an annual Robopolooza event where 600+ community members learn about FIRST. It's so cool to see the interest grow. We shared FIRST robotics at the NYS School Board Association Conference, reaching 1500+ attendees: inspiring them to start FIRST teams in their schools. Offered online Lego challenges during the pandemic. Started 7 new FLL teams this year. Plan to start more FLL Jr teams due to increased robotics summer camp participation.

Please provide specific examples of how your team members act as role models within the FIRST community with emphasis on the past 3 years.

Kayla, Zach, Colleen and Madison took the initiative to prepare and run all four elementary school STEAM days this year. They planned the days and designed the experiments. All HS team members support the FIRST community by sharing expertise and knowledge with FLL and FLL Jr teams as mentors. They get kids excited to learn what FIRST is all about. Our team organizes and runs an FLL qualifier. Students ensure all kids and mentors have a great experience by fulfilling many roles at the event.

Describe your team's initiatives to Assist, Mentor, and/or Start other *FIRST* teams with emphasis on activities within the past 3 years.

One goal is to continually start and mentor Ranger Robotics teams: 17 FLL Jr, 8 FLL and 1 FRC in 2019, 7 FLL in 2021. Another goal is to mentor and assist teams. We mentor Team 7299 from Monterey, Mexico. We assist Teams 1591, 340 and 6868, from Rochester, NY. We assist teams which come to our WAREhouse to practice, improve their robots and have parts designed and built by us. As the hosts of our local kickoff, we held workshops for participants to learn specific skills and make connections.

Beyond starting teams, what initiatives have you done to help inspire young people to be science and technology leaders and innovators? What results have you seen from your efforts in the past 3 years?

We organize district wide STEM initiatives for our younger generation. Through STEAM day and GEMS club we are increasing the numbers of students excited to join and participate in our progression of programs. Our female members have expanded GEMS club this year to more elementary schools, increasing opportunities for girls to learn about basic engineering concepts. Efforts are coming to fruition students who participated in FLL teams in elementary/middle school are now on 3015!

Describe the partnerships you've created with other organizations (teams, sponsors, educational institutions, philanthropic entities, etc.) and what you have accomplished together with emphasis on the past 3 years

We created a unique partnership with 2 local teams and created a space called the WAREhouse. Our schools rent the space, share work space and we invite other teams to practice with us. To reach kids outside of our district, we sent 30+ STEM kits to teachers across the US. This led us to a partnership with Teacher Geek; creating different STEM kits to reach more kids. Creating a partnership with our local hospital; we donate STEM kits and blankets to ensure kids there can experience STEM.

Describe your team's efforts in the past 3 years to promote equity, diversity, and inclusion within your team, *FIRST*, and your communities.

We are proud to say that over the years we have worked to recruit and maintain female participation. In 2019 we thought we hit an all time high of 54% female students. Despite the pandemic this year we have increased to 61% "Together we are stronger" All students on team 3015 have an equal opportunity to be a leader or play a vital role. From sub team leaders to student leadership every student can voice their opinion. It is encouraged for all students to be involved in all sub-teams.

Explain how you ensure your team and the initiatives you have created will continue to run effectively for the foreseeable future

We created a series of classes called Ranger Reboot to ensure every student joining 3015 is equipped with the skills needed for the upcoming build season. At each session they learn about topics such as CAD, marketing and scouting. In our district "FIRST is the thing to do". FIRST programs are available at every grade level. As kids move through each program they build upon their skills, knowledge and learn about FIRST's values. Despite the pandemic, students are ready to be a part of 3015!

Describe your team's innovative strategies to recruit, retain, and engage your sponsors within the past 3 years

In appreciation of our sponsors generosity, we invite them to a recognition brunch and students share how they were impacted by FIRST. We invite our sponsors to attend Saturday build sessions, as well as gatherings at WAREhouse. Skype calls are made weekly with non-local sponsors to keep them up to date. Thank you notes, twitter and Instagram shout outs and photo gifts are just some fun ways to show our appreciation.

Highlight one area in which your team needs to improve and describe the steps actively being taken to make those improvements.

Over the past two years we have lost a significant number of sponsors. In response to this we noticed that we needed to make changes to our business plan, how our statistics are recorded, and documenting our team history. Our hope is to share this with potential sponsors to encourage their financial support. Before the pandemic we were able to visit and give presentations to prospective sponsors; we would like to do this again.

Describe your team's goals to fulfill the mission of *FIRST* and the progress you have made towards those goals.

Our team embraces the motto "All of our kids can go pro". This statement reinforces FIRST's mission of inspiring the next generation of STEM leaders. Our students use what they are learning in classes in a practical and fun way. They learn effective communication and become confident creative problem solvers. Our students explore potential career paths, continue their interest in STEM fields long after high school and seek mentorship and internships with robotics sponsors.

Briefly describe other matters of interest to the *FIRST* Judges, including items that may not fit into the above topics. The judges are interested in learning about aspects of your team that may be unique or particularly noteworthy.

Due to the pandemic, we may have fewer members, mentors, sponsors and teams, but we still have the same spirit and drive. When we were given the green light, we held STEAM Day, GEMS club, FLL teams, and WAREhouse. Robotics has been a welcome diversion to hard times we have experienced. Our marketing team has worked hard to develop our brand and

have a distinct social media presence. We use posts to spread information, thank mentors and sponsors, highlight alumni, and showcase seniors.

Essay

I'd like to tell you my Ranger Robotics Story.

I remember in first grade, the Ranger Robotics team brought their robot, Brodie, to my school. It shot a frisbee all the way across the gym and into the basketball net! It was so much fun, and this is where my curiosity began.

A few months later, they came to my elementary school for STEAM days (two days of enrichment for all 1,551 elementary students in the district). Our challenge was building a tower. I remember my group failed over and over, but the high schoolers kept encouraging us. They reminded us that the engineering process is about learning and making iterations.

In third grade, I had the opportunity to participate in GEMS (Girls Empowered in Math and Science): a club the robotics team started to engage girls in engineering challenges. My friends who were unable to speak up during STEAM days were more comfortable sharing their ideas and participating there. We worked together to build a raft that could hold pennies. I really like how we brainstormed to solve the problem; it was inspiring.

After all of the excitement, I saw a poster at my school for Robopalooza. This annual event was a chance for the community to experience Ranger Robotics firsthand. I eagerly arrived at the gym and was stunned to see a full-sized field where guests were driving the robot. I had my Robopalooza Passport, which was stamped after completing all 8 interactive stations. I made a flashlight, a fidget spinner, and at the FLL station, I signed up for summer camp!

To satisfy my interest in robotics, I joined one of the FLL teams in fifth grade. I finally got the chance to build and code a robot with my teammates. At first, I was intimidated being the only girl on the team, but my GEMS experience gave me confidence. I knew I had the skills necessary to be a valuable member. Not only did being on the team prepare me and provide a track for continued robotics involvement, but it also connected me with older, experienced robotics students who were my mentors. The FLL qualifier was my first time competing and meeting other teams from across Rochester who loved building robots just like me. It was hosted and run by 3015. I was on the FLL team throughout middle school, learning new things each year and encouraging my friends to join.

Every June I go to the Spencerport Fireman's Parade; the whole village does. My first time in the parade, I was on a float with my middle school FLL team. We had floats with all 20 teams in the Ranger Robotics program from FLL Jr to FRC. My favorite part was hearing people say, "Oh look, here comes the robot!" Our program values the support we receive from the community.

In eighth grade I was so excited to be on 2716, Ranger Robotics' new FRC team, Ranger Force. After years of 3015 having 100+ members, a second FRC team was created so younger students would have more hands-on experience. I was invited to First Year Fridays, where rookie students meet with mentors to learn about subteams, game strategy, and scouting. I was surrounded by other first years who, just like me, didn't understand the FRC experience. However, through meetings, I grew confidence and gained knowledge for the upcoming season, allowing me to better contribute to the team.

The official kickoff was larger than I ever imagined. Our auditorium was filled with students from teams all over Rochester. I had no idea so many people loved FIRST like we do. I took a workshop on programming, building a competitive robot, and Chairman's presentations. Then Monroe County executive, Cheryl Dinolfo came, and she knew so many of my teammates. She talked about how she has been to our Saturday build sessions and the local regional. I appreciated our team's approach to the post kickoff strategy discussion. Every student has "a seat at the table". Starting with one partner, we combine our discussions into larger and larger groups, finally having a united team discussion. We believe that the more ideas we generate, the closer we are to success.

In the postseason, there was exciting news; we joined with 2 other schools to create our own practice space, the WAREhouse (Western NY Area Robotics Experience). After giving a presentation to our school board, we received the financial support necessary to rent a facility. The WAREhouse became an integral part of our program, a place for teams to meet, share ideas, test prototypes, host practice sessions, and improve cooperation amongst teams across the region. The WAREhouse is for more than building robots; I remember going to ice cream socials and watching the Super Bowl there.

I was really excited to move up and be a part of 3015. I now get to participate on the same team that originally sparked my interest in robotics. I am most excited about Saturday meetings. These days are special because they include Feed the Team, a delicious, homemade lunch in each other's company, followed by a team game. Filled with laughter and fun, these lunch sessions are dedicated to team bonding. I loved when the students challenged the mentors in a game of trivia; we won of course! I have made so many friends I never would have made if not through robotics. We are a family, and these Saturdays build tightly knit relationships that our team thrives on. It is also thrilling how many girls have become involved - 3015 is now 61% girls! Through the welcoming nature of our team, we continue to gain members and sustain involvement.

No matter the team, one strength has held constant - relationships. Those I have made with my peers and mentors mean the most. Our mentors are the backbone of our team and I know I could go to them at any time. They not only teach us practical skills at robotics sessions multiple days a week, but they also really care about us. I love now being able to mentor a FLL team, summer camp, and GEMS. Being a role model and someone the younger kids can look up to is really important to me; it reminds me of how I got started years ago.

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Our team has sustained meaningful connections with FRC 7299, a team we started in 2017 from Monterrey, Mexico. We hosted their students and mentors for a week and competed alongside them at the Finger Lakes Regional. I was so excited to take part in planning for our guests. The week we shared consisted of a welcome dinner, bowling, a day together in school, practicing at the WAREhouse, and showing them snow for the first time. This connection became so much more than robots. The ability to bond with students from another country firsthand was something I will never forget. The best part of their stay was gathering during third period to share stories; I learned so much about their school, how they build their robot and the ways their daily life is different from ours. Since then, we have kept in contact through Slack, social media, and FaceTime training sessions. We not only started a robotics partnership, but also many meaningful friendships.

Looking to make more connections closer to home, we assisted Greece Gladiators FRC team 1591. Their lead mentor student taught at Spencerport, so our mentors began assisting through weekly emails. As the season progressed, our team was able to help with design assistance, building parts, donating materials, machinery use, and advice. Once their robot was ready, they joined us at the WAREhouse for last minute changes and practice.

Volunteering within our community is an integral part of Ranger Robotics. Chalk the Walks is an annual one-day event we host in Spencerport by chalking the sidewalks with inspirational messages and drawings, uplifting those who walk by. The community joins us for a luminary walk in honor and memory of those who have battled cancer.

Dreams from Drake is a local organization that holds a special place in my heart. It was created in memory of our classmate's brother to help families grieve loss. Every February, the Dreams from Drake organization hosts a Gala, and in June, they host a Birthday Bash. Since their inception, our team has provided all of the volunteers for both events.

From tigers to butterflies, every child that came to my face painting booth left with a smile.

At the end of the school year I was asked to visit one of our sponsors, L3Harris. This experience gave me insight into engineering as a career. We gave a demonstration of our robot, and then they gave us a tour of their company. I was able to meet two 3015 alumni who interned and now work there. Our sponsor connections provide us with mentors and financial support as well as career opportunities.

As a senior, I help promote STEM outreach. Our vision of spreading STEM is to reach evermore students and teachers. STEM kits designed by students with supplies and directions were sent to teachers in 14 states and in Makhanda, South Africa. It was cool to see our kits being used by students. Pictures of smiling kids with their thumbs up next to their completed experiments encouraged us to expand our efforts. We are now in a partnership with a local company, Teacher Geek, to create a STEM challenge combined with a unique kit designed by 3015.

We met with a 3015 alumna and found out over the past two years the students in Makhanda enjoyed the STEM lessons so much that they have repeated them multiple times. This led us to the realization that we take access to supplies for granted. We are currently working on new lessons for her to bring when she returns to teach summer camp there.

As I look back at my FIRST robotics story, I am appreciative for all the lessons I have acquired over the years. The balance of fun and productivity, combined with public speaking, skill development, and working well with others has prepared me for the next chapter of my life. I am excited to go to college with a FIRST scholarship just like so many other 3015 alumni have done before me. Being a part of Team 3015 has given me the skills to take on the real world. Now I realize that as a result of my robotics experience, I can "go pro".