Chairman's Award - Team 3015

Print Close

2018 - Team 3015

Team Number

3015

Team Name, Corporate/University Sponsors

Aptiv/Baxter/Xerox Corporation/Leidos/Synaptics&Spencerport High School

Briefly describe the impact of the *FIRST* program on team participants with special emphasis on the 2017/2018 year and the preceding two to five years

Aside from building robots, 3015 builds character; members are filled with knowledge, confidence and real-world experiences. Students explore potential STEM careers with the guidance of mentors. Our progression of programs allows students to participate from kindergarten through grade 12. Students form relationships with mentors and sponsors, leading them to internships and jobs. Students leave 3015 prepared for life beyond the classroom. Our FIRST scholarships total over $850,000.

Describe the impact of the *FIRST* program on your community with special emphasis on the 2017/2018 year and the preceding two to five years

The list and hours of 3015's community events is vast, but we have focused our efforts on several key partnerships including Dreams from Drake, Strong Memorial Hospital, and the Spencerport Community. Our outreach mission is to help those in need, inspire others and give back. From the simplest actions, like donating toys to Operation Holiday Cheer, to the 522 student volunteer hours we have served at every Dreams from Drake event, our efforts have a lasting positive impact on our community.

Team's innovative or creative method to spread the *FIRST* message

To spread our love for STEM and FIRST, we developed and taught hands-on STEM lessons to align with the 4th grade curriculum. For a second year, 10 UPrep urban charter school students have joined 3015. We held summer camps for all grades with 3015 mentors. At worlds, a film crew created a documentary that premiered to the community in our performing arts center. Robopalooza is a community event held to share FIRST. We invite local dignitaries to kickoff, build sessions and our local regional.

Describe examples of how your team members act as role models and inspire other *FIRST* team members to emulate

Ranger Pride shines throughout 3015. GEMS club, Girls Empowered in Math and Science, inspires girls to pursue interests in engineering. Through Slack, students connect and mentor each other. We eagerly help other teams during the offseason and at competition. We complete beta testing and volunteer for FIRST. Through our connection to NYS government, we share our program and STEM initiatives to other districts. 3015 welcomes UPrep students who do not have access to FIRST to join our team.

Describe the team's initiatives to help start or form other FRC teams

We helped start teams 7299 in Mexico 5947, and teams 6490, 6868, 6892, 7251 in NY in the last 3 years. While hosting kickoff events, teams completed rookie and quick builds to gain skills, understanding and leave with a working robot. We provide mentoring and mechanical resources, assist in obtaining sponsors, enlist community support and write grants. Through videoconferences, emails and hands-on build sessions we stay in consistent communication.

Describe the team's initiatives to help start or form other *FIRST* teams (including Jr.FLL, FLL, & FTC)

Along with mentors, sponsors and our community, we are eager to expand our FIRST programs in the Spencerport School District. In the last 3 years, we have expanded from 2 to 20 teams: 10 Jr. FLL, 8 FLL, 1 FTC, and 1 FRC team. Students from 3015 mentor all of these teams, growing a sustainable program. This growth sparked our interest in starting new FIRST teams in our area. We emailed local schools inviting them to our Saturday build sessions to see what FIRST and Ranger Robotics is all about.

Describe the team's initiatives on assisting other *FIRST* teams (including Jr.FLL, FLL, FTC, & FRC) with progressing through the *FIRST* program

3015 actively works to engage teams. By hosting FTC and FRC kickoffs, we created partnerships with teams through workshops, Chairman's Chat and correspondences. We machine parts, help write grants, discuss marketing strategies and give advice to other teams. We invite teams from across NYS to our full practice field, allowing teams to test strategies and robot capabilities in a competitive setting. A lead mentor hosts "FIRST Updates Now," a weekly web show about strategies, regionals and teams.

Describe how your team works with other *FIRST* teams to serve as mentors to younger or less experienced *FIRST* teams (includes Jr.FLL, FLL, FTC, & FRC teams)

Rookie and experienced teams in the area are invited to our shop, where we provide guidance and access to equipment. We develop collaborative relationships, leading to regular correspondence, including Skype and Saturday build sessions. Chairman's Chat is an initiative that gives us the opportunity to share advice with other teams about our experiences. Our members mentor the FTC, FLL, and Jr. FLL teams, synchronizing Spencerport's FIRST programs.

Describe your Corporate/University Sponsors

Each year Ranger Robotics actively pursues new sponsorships. This year we have several new sponsors including Aptiv, Vuzix, Three Design and Gatti Plumbing. Our students have given presentations, brought the robot to show their work and have taken tours at our sponsors. The relationships we create lead to learning interactions, support at competitions and potential internships. We are thankful for Baxter, Xerox, Leidos, PGM, Synaptics and THB that have partnered with us for multiple years.

Describe the strength of your partnership with your sponsors with special emphasis on the 2017/2018 year and the preceding two to five years

We work to strengthen our relationship with our 20+ sponsors. Through videoconferences with Dr. Schopfer, UTC sponsor, we developed a successful integration system. We demoed our robot and shared our program at PGM and Harris for Engineering Week. Weekly tweets and emails keep sponsors up to date with recent events. Our local sponsors mentor us and help machine parts. Xerox and Harris have awarded internships to our students. At our local competition, we hold a sponsor breakfast to show thanks.

Describe how your team would explain what *FIRST* is to someone who has never heard of it

FIRST is the "real deal" - an opportunity to be an engineer, designing and creating a robot to play a competitive game. Engineering engagement against industry-type deadlines brings students as close to the professional world as possible. While working hard, students develop a passion they can't help but share. Community outreach becomes natural. The excitement of being part of a team, while applying classroom and industry knowledge, provides lessons and amazing memories.

Briefly describe other matters of interest to the *FIRST* judges, if any

Ranger Robotics continually strives to extend its impact. Opening our team to UPrep students, starting new teams, growing the Ranger Robotics Program: we want others to have FIRST opportunities. Through relationships we have built with dignitaries, we have been able to share FIRST and STEM initiatives. NY assemblyman Peter Lawrence granted us $2500 to spread STEM programs. Monroe County Legislators recognized 3015, spoke at our kickoff events and attended our build sessions and competitions.

Team Captain/Student Representative that has double-checked this submission.

Declan Revenew

Essay

Ranger Robotics Team 3015 is in its tenth season! We are creating a time capsule to remember our past, celebrate our present and share our hopes for the future.
10 years, 10 mementos…
1. Postcards from each Member
70 students join 35 mentors to form team 3015. Our diversity continues to expand each year; we consistently increase the percentage of female members, reaching over 40%. 3015 members love being a part of the team and want to share their enthusiasm and FIRST experience with others. Each day is viewed as an opportunity to learn and gain practical experience.
Reaching out to those without access to FIRST, we invite students from University Preparatory School, an urban charter school, to our team. U-Prep student Armando shares, "I have been able to learn and use machines I never saw before. Robotics meetings are my favorite part of the day." Driven to team meetings by a generous mentor, the 10 students are thankful for the opportunities provided by our robotics program.
2. 20 Ranger Robotics Team Shirts
It is our goal to continually inspire younger students and give them a chance to experience FIRST. Over the past 3 years, our program has expanded from 3 teams to 10 Jr. FLL, 8 FLL, 1 FTC and 1 FRC team exceeding 225 students. Our newest challenge is finding mentors and sponsors to support the growing number of students who want to be on a team. In the interim, we will be hosting a mini competition to accommodate these students. Thankfully, 91% of 3015's returning members have mentored FIRST teams and camps.
3. A Hovercraft STEM Kit
Teaching hands-on STEM lessons has been a vital part of our program for 5 years. We standardized the experiences so that over 250 fourth graders in the district would be part of multiple experiments that align with their curriculum. This one-on-one interaction erupted a new-found passion for STEM. Each year a senior meets with administrators, aligns lessons with Next Generation Science Standards, trains students to teach and plans each visit. The student takes on a leadership role in inspiring our future scientists. The Assistant Superintendent shares, "Members of 3015 have developed and implemented problem-based learning activities. These efforts serve to offer thought-provoking opportunities for students and reinforce real-world connections...high school students are experts in this work; they own the direction of the learning and solidify their understanding as the teacher."
After seeing the impact that our STEM lessons had on young minds, we started an initiative to encourage young girls to think like engineers. At monthly science club, GEMS (Girls Empowered in Math and Science), participants design and create solutions to engineering challenges. As a team, they work through the design process, create multiple iterations and are eager to share their final products with their female role-models.
During the off-season, we develop our skills and enhance our abilities. Ranger Reboot training sessions give students the opportunity to learn how to use CAD, the machines in the shop, and participate in a mock kickoff. Students interested in joining the team alongside veterans gain skills so they are prepared for build season. 3015 students teach over 100 students of all ages at 7 robotics summer camps.
4. A Map with Red Pins
Thanks to the sustainable robotics program we established in Spencerport, we now have the ability to help others form or improve their team. Schools and non-robotics groups, such as boy scouts, are invited to competitions and Saturday build sessions. Through hosting FRC and FTC kickoffs, rookie build sessions, giving tours at competitions, and direct correspondence, we have helped start team 7299 in Mexico and teams 5947, 6490, 6868, 6892 and 7251 in NY. 3015 shares its passion for assisting teams in NY and beyond by writing NASA grants, providing resources and machinery, offering mentoring assistance, hosting workshops and chairman's chat, and providing a full-field warehouse to practice and interact. At the 2017 NYS Tech Conference, two of our lead teachers inspired educators to explore FIRST as they spoke about how having a robotics program enhances the technology curriculum.
5. A Piece of Chalk
Our community outreach is filled with passion and purpose. To proudly maintain our longstanding alliance with the American Cancer Society (ACS), we began a community event, Light Up the Village. This luminary walk of remembrance was added to Chalk the Walks, where Ranger Robotics comes together to draw inspirational visuals on village sidewalks. Through our efforts, over $6,000 was raised for the ACS. Our relationship with Strong Memorial Hospital started with children in the pediatric unit playing with our robots. Sharing a love for learning with hospitalized children, we developed STEM kits that kids can play with in the hospital. Our team has brought robots to multiple events, including Stroll for Strong Kids where we interact with hundreds of families. We were honored to represent our district at the Wilmot Warrior Walk alongside our Superintendent, celebrating life beyond cancer. This inspired us to make blankets for chemotherapy patients. In support of a young Spencerport student with inoperable brain cancer, we participated and cheered on runners in Miles for Mackenzie. Frequently, we cook meals at the Ronald McDonald House for families with members in the hospital. To fund 6 dialysis treatments for a young girl, we collected 6,273 bottle caps. In conjunction with one of our FLL teams, we produced and sent a water filtration system to Puerto Rico. Partnering with the Dreams from Drake foundation, we annually provide the volunteers for their Winter Gala and Birthday Bash.
6. A Vlog

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Platforms including Twitter, Snapchat, Instagram, Facebook, Slack and our website, help to communicate our message of FIRST. At this year's kickoff, Monroe County Legislator Mike Zale filmed a vlog capturing the event and the attendees anticipating the release of Power Up. Friday Morning Lights, a TV news segment, highlighted 3015 alongside athletic teams. Local news affiliates have come in to spotlight the team on Good Day Rochester, documenting our enthusiasm, work ethic and success. Students were thrilled to have the opportunity to share their excitement and pride being part of team 3015. The past 3 FRC Kickoffs were featured by 2 local news stations. A film crew created a documentary during our 2016 World's experience that premiered to the community in our Performing Arts Center. Democrat & Chronicle Newspaper, The Cornerstone, Suburban News, Spencerport Neighbors, and Health Magazine published articles commending our efforts and contributions to STEM and FIRST. We give biweekly updates in the school's newspaper, The Voice.

The entire Spencerport school district is supportive of Ranger Robotics; this energy fills the stands at our competitions. The collaboration of students and school leaders has made possible events such as Kickoffs and RoboPalooza, attracting over 800 participants each. At our annual board meeting, over 100 robotics members fill the room, and students give an update on our progress. They give the Chairman's presentation and share the impact of being part of 3015. We are proposing plans to build a STEM center to house robotics, school classrooms and labs.

7. A Robopalooza Poster

Robopalooza is one way we engage our community and expand the FIRST culture in Rochester. We hold this annual event in our school gym, inviting the public to come and learn about FIRST. Teams of all levels from across the area join us. We set up full fields and interactive stations to engage participants. Comradery builds among the teams present, and families excited to join FIRST teams can sign up for summer camps.

8. A Monroe County Proclamation

We presented our program and initiatives to the Monroe County Legislature and received an award for our efforts and achievements. We are thankful for lasting partnerships with our local dignitaries; they speak at kickoff each year, attend Saturday build sessions, and have a celebratory sendoff to Worlds. Monroe County Executive Cheryl Dinolfo is always eager to speak about 3015's achievements and her admiration of FIRST. The state government presented the Excellence in Teaching Award to our lead mentor, allocating $5,000 to 3015.

9. Multiple Hats

Our mentors motivate us at each meeting, sharing time, skills and knowledge. Pit admin, committee members, FTC demos, field reset, robot inspection, judging and game announcing are just some of the hats our mentors "wear" at FIRST events. Mentors recognize that lessons learned and skills acquired by students, in addition to the relationships formed, are the true prize. Together, we form an integrated team.

Year-round connections with our generous sponsors fund the program. They foster meaningful communication and engineering, as well as exchange knowledge and real-world experiences. We work with our sponsors to learn integration and engineering design. Additionally, we visit our sponsors to show off the robot and tour their facilities. To raise funds, students contact neighborhood businesses to be part of our discount card. Selling discount cards is a total team blitz, raising over $5,000 in one day.

10. A College Hoodie

Our alumni network has played a key role in creating our robotics culture. Of our graduates, 98% advance to college with 90% continuing into STEM fields. Many of them earn FIRST robotics scholarships, bringing our grand total to over $850,000. Some graduates return to serve as mentors and give back the support they received when they were students. They provide current members with knowledge, advice and lasting friendships. Through the 3015 Alumni Facebook Group, we are able to keep up to date with all of our graduates.

Thankful for the opportunity to celebrate these highlights of our past, we look forward to the next ten years of Ranger Robotics. Get diggin'!