

Chairman's Award - Team 2485

[Print](#)[Close](#)

2018 - Team 2485

Team Number

2485

Team Name, Corporate/University Sponsors

Qualcomm/TE Connectivity/WowWee/DoD STEM/Trestle Energy/Rhodes River Ranch/Evolution Projects/New Blue, Inc./Paper Clip Engineering/Medtronic/General Dynamics NASSCO/Cooler Master/Miramar Water Jet/Community Werks/MakerPlace/Environmental Lights/SolidProfessor/SolidWorks/GitHub&Francis Parker

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

On Team 2485, we dedicate ourselves to support and train our newer team members with our Domain Certification program, which includes 32 courses ranging from Electrical 101 to Graphic Design 103. We offer members a platform to explore their interest in STEM by providing internships with sponsors like NewBlue, Inc., who offers a dedicated Team 2485 internship program. Alumni have studied STEM at schools including MIT and UC Berkeley, and apply their skills at companies such as SpaceX and Google.

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

Every family deserves a home. That's why our team helped build 11 houses in Tijuana, Mexico over the past 5 years. 50+ Southern California students have attended our annual Hackathon, a 12-hour coding competition. Although major construction prevented us hosting it in 2017, we've hosted Battle of the Border (BatB), the largest and longest-running off-season event in Southern California, for 7 years. BatB introduces new members to FIRST and strengthens interteam relations in our community.

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

5 years ago, we founded WOW to empower girls on our team. This year, with a \$10,000 grant from Qualcomm, we expanded nationwide with Teams 16, 1538, 111, and 341. We created 3 OrionEd courses in 2016 (OrionEd.org): Hands-On Robotics introduces elementary schoolers to the world of STEM; How to be a STEMinist, in partnership with WOW, helps middle school girls gain confidence; The Secret to a Better Robot has helped 50+ FIRST teams work together through improv-based team building.

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

We annually host FTC league meets and qualifying events. Our team members have volunteered at 15 competitions in 5 states. In 2016, we hosted a two-day team exchange program with FRC 3309 to learn from each other's programs. Our Domain Certification videos and programming tutorials are open to the public and have been viewed over 13,000 times. We hosted our OrionED: The Secret to a Better Robot workshop, which features team building activities, at Houston Championships 2017.

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

In 2012, we started FRC 3925, Circuit of Life, from Ventura, California, and helped them with design, code, and fabrication. They won the Rookie All-Star Award in their first year of competition and continue to succeed in FIRST. In 2015, we started FRC 5482. We have mentored FRC 5883, the only team in Poland, from their inception. This year, we will travel to South Africa to kickstart a comprehensive robotics program, which we hope will develop into the country's first FRC teams.

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

We mentor 3 FLL teams in our middle school. We mentor and host an FLL team from Links to STEM, a community-based organization dedicated to bringing underrepresented minorities into STEM. We started, host, and mentor FTC Team 10092, the Green Griffins. We work with them to represent FIRST in the community at expos and events. Working with FRC Team 5883, we have started 12 new Jr.FLL and FLL teams in Poland and Ukraine.

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

Our team has made it our mission to empower as many other FIRST teams as possible. In the past few years alone, we've assisted 75 teams. We help them by lending tools, knowledge, and use of our mini machine shop that we bring to competitions. Plus, we've helped over 50 teams develop team cohesion with our OrionEd: The Secret to a Better Robot program. And, our students also regularly reach out to other teams to teach Domain Certification programs remotely through Skype.

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)

In just the past two years, we have assisted 13 first, second, and third-year teams through our OrionEd program and through remote assistance. We incorporate rookie teams at competition into our scouting alliance, giving them access to data they would otherwise not be able to collect due to their small size. Our Battle at the Border off-season event is the perfect opportunity for new teams to experience a regional competition atmosphere without the pressures.

Describe your Corporate/University Sponsors

Our students reach out to potential sponsors and share their experiences in FIRST. We have secured sponsorship from multinational corporations such as Qualcomm, as well as local companies including NewBlue and MakerPlace. We receive in-kind donations from enterprises including BRECOflex and SolidWorks. While many of our sponsors, like GitHub and SolidProfessor, are STEM-based, many are not, such as Rhodes River Ranch. We have introduced 10 of our current sponsors to FIRST.

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 thank each sponsor in our Sponsor Blogs, which display our gratitude and helps our sponsors gain recognition in the community. For the past 5 years, we have worked with sponsor NewBlue, Inc. to provide 8 paid internships to our students. Some are even hired full-time as a "gap year" experience. These students have logged more than 5000 paid hours with NewBlue. We also partner with our sponsor Cooler Master to provide scholarships for 3 financially unable students to attend our Robo.Camp.

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

FIRST is so much more than a robotics competition: It's a launchpad for students to gain experience in a range of areas, from design to business. It's a community of passionate innovators who go out of their way to help, give valuable advice, or just be your friend. It's a family, from the youngest students in Jr. FLL to the veteran high schoolers in FRC. It's a global experience, a way for students to become more knowledgeable about the world. Most importantly, FIRST is our home.

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

Our team has a tradition: every last Thursday of the month is 'Thank You Thursday', where we publicly express gratitude for one another in our Slack communication system. It's an opportunity for younger members to thank their 'Bigs' as part of our 'Bigs and Littles' program, and for our veteran students to thank the mentors that have shaped their lives. Although this isn't Slack and you might not be reading this on a Thursday, we wanted to thank YOU for lending your time to support FIRST.

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

Liam Fay

Essay

If you open the doors to the shop that belongs to FRC Team 2485 - the W.A.R. Lords, you will find more than just tools and robots. You will meet some of the 224 students that have traveled the STEM world while enriching communities, honing their skills and character, and leaving their mark on others along the way. Now we open our doors to you as we journey together on the Road to Community, the Road to FIRST, and the Road to Change.

-OUR ROAD TO COMMUNITY-

On Team 2485, our students have worked tirelessly to forge paths throughout our community. Since 2010, we have worked with FRC Team 1538 to host Battle at the Border, Southern California's longest-running off-season competition with 30 teams competing each year. Though school construction prevented the event from occurring in 2017, we plan to bring this signature event back next year and for many seasons to come.

Every summer, we partner with Hall of Fame Team 987, the High Rollers, to host robo.camp, a STEM-based summer camp, at our school. In the past four years, we have guided more than 120 elementary and middle schoolers learn invaluable engineering, design, and innovation skills. And recognizing that everyone should have the opportunity to explore robotics, we partner with our sponsor Cooler Master to offer the 'Cooler Master Robo.camp Scholarship' to 2-3 students who would otherwise not have the financial means to attend our summer camp.

As W.A.R. Lords, we believe in making our experiences, resources, and skills available to everyone. That is why we created our OrionEd: Hands-On Robotics program. We designed this comprehensive educational outreach program to inspire local elementary and middle schoolers to pursue STEM. Over the past 5 years, we have hosted demos and interactive stations at 16 elementary schools and community centers and have reached more than 2400 students. We love seeing the look on their faces as we unpack a robot and know that we are delivering knowledge and skills in an exciting, engaging way, one we want to them carry with them on their personal journeys.

Since 2015, our annual Hackathon has brought together more than 30 students from throughout Southern California to compete in a programming competition. When we challenge our competitors to create an app to help students learn an 8-bit game just for fun, our participants learn plenty and walk away with valuable prizes generously donated by our sponsors.

Though we are based in San Diego County, our Road to Community extends past county limits and national borders. For the past 5 years, we have traveled to Tijuana, where our students use the robotics skills they have learned in our 32 Domain Certification training programs to build houses for families in need. We have built 11 houses so far, and cannot wait to return next year to build even more.

-OUR ROAD TO FIRST-

Our Road to FIRST begins in the middle school with our 3 FLL teams. Mentored by W.A.R. Lords, these programs prepare younger students for successful careers in STEM and provide students eager to continue in FIRST as high school students.

We have hosted and mentored FTC Team 10092, the Green Griffins since we started them in 2015. Through our mentorship and guidance, we are proud to say that they have won 7 awards at the FTC Qualifier, Regional, and Super-regional levels. In addition, two W.A.R. Lords members have joined the Green Griffins, bringing our Roads to FIRST even closer together.

Of course, our involvement in FIRST extends beyond our mentorship. In the past two years alone, we have assisted over 60 teams across all four FIRST programs. Our assistance ranges from helping rookie teams develop business plans to lending the mini-machine shop we bring to competitions to dozens of other teams. Our students have taken this ethos to support others to heart and many will actively support other teams in their free time through remote assistance.

Along our journey, we are committed to being the best stewards of FIRST, and of STEM, as possible. As such, we have represented FIRST Robotics at 18 events across San Diego county, including the NDIA Gold Coast Conference and PETCO Park's EXPO Day. These events serve two purposes. First, they serve as a valuable opportunity for students to apply the skills they learned in our Business 101 Domain Certification class in a real-world networking context. Second, they allow W.A.R. Lords to spread the FIRST message in the great community.

Our students also volunteer their time at FIRST events. In just the past three seasons, W.A.R. Lords have volunteered at 15 different FIRST competitions across 5 states. Each W.A.R. Lords is passionate about giving back, whether they are queuing teams, serving as VIP ambassadors, or refereeing.

Essay - page 2

Recognizing the struggles that all teams face dealing with cohesion and cooperation, we developed our OrionEd: The Secret to a Better Robot program, an interactive improv-based, team building workshop. Through this program, we have assisted more than 50 teams in 11 states and 4 countries. We presented this program to the larger FIRST community at the 2017 Houston Championships, which allowed us to impact even more domestic and international teams.

On Team 2485 we are committed to extending our roads of change to communities outside of Southern California, too. We mentor FRC Team 5883, the first and only team in Poland. Members of our team spent the summers of 2016 and 2017 working with 5883, provided guidance in creating a business presentation and building a successful robot, and helped them start 12 FLL and FLL Jr. programs. During the build season, we remained in contact to assist them in strategizing, translating rules, and solving problems. And at the inaugural FIRST Global Competition in Washington D.C., one of our team members joined forces with 5883 to lead the Polish national team to a second place global finish.

-OUR ROAD TO CHANGE-

As we enter our second decade as Team 2485, we are dedicated to making positive change for our team, our community, and, in turn, global change. Our Bigs and Littles program provides a positive impact and strong connection between both rookies and veteran members. Plus, we provide every member with the opportunity to take any of our 32 Domain Certification courses. Taught by students during the pre-season, the Domain Certification courses give new W.A.R. Lords the skills they need to succeed in the build season and beyond. Thanks to Team 2485, our school now offers 7 robotics classes in our K-12th grade school. We also work with a community-based organization, Links to STEM, which we host on our school's campus. This nonprofit organization helps bridge the socioeconomic and gender gaps in our community and foster a love of learning and passion for STEM within diverse youth.

We strive to provide students with real-world experience in STEM, too. That is why, for the past 4 years, we have partnered with sponsor NewBlue Inc. to create the W.A.R. Lords internship program. NewBlue actively seeks our students and alumni for full-time paid internships in programming, marketing, or graphic design. To date, 8 W.A.R. Lords have worked for NewBlue for a cumulative total of 122 weeks.

STEM is often filled with obstacles for women. Our WOW program for girls challenges the status quo by encouraging female participation in STEM and enforcing positive changes for women in these fields. Through WOW, we share articles and internship opportunities and facilitate discussions about important events concerning equality in STEM fields. Recognizing how daunting it can be for rookie girls to take their first steps into engineering, we hold WOW Shop Nights. These events give female W.A.R. Lords a chance to learn the layout of our shop and how to use key machines in a no-pressure, supportive environment.

Through WOW, we host two discussion lunches a month: "Top Hat" lunches, where a mentor reads student-submitted questions regarding their experiences in robotics and "Fail Fearlessly" lunches, where a female guest speaker from STEM fields shares her experience and gives advice. These lunches provide an invaluable opportunity for team members to build the confidence necessary to succeed. WOW has increased female membership from 29% to 41% in just the past 5 years; what's more, 93% of the young women that graduate Team 2485 go into STEM fields.

Buoyed by our success, we're proud to expand WOW into 5 pilot chapters across the nation. With a \$10,000 special grant from Qualcomm, we are guiding these teams into incorporating a full WOW curriculum by funding these team's lunches, aiding in promotional efforts, and helping them find speakers. We connect all WOW chapters through Slack and LinkedIn, which creates a network of confident, successful women in STEM that will help students long past their high school careers.

On our Roads to Community, FIRST, and Change, the W.A.R. Lords have created a sustainable, measurable impact in the world of STEM and beyond. The roads our students travel take them to many unexpected places, whether inside of a house in Tijuana, Mexico, the FLL classroom of a small elementary school in Poland; or right back at home, leading dozens of FIRST teams in team building workshops. No matter what roads we take, they all begin and end with FIRST and Team 2485 - the W.A.R. Lords.