

Chairman's Award-Team 2869

Team Number:

2869

Team Name:

The Regal Eagles

Briefly describe the impact of the FIRST program on team participants with special emphasis on the 2017/2018 season

Team 2869 grooms its students for future success. Our Eagle to Eaglet training has paired 40 rookie members with veterans, passing down technical and non-technical knowledge within our team. Of our 120 alumni, 100% pursue higher education, with 9/10 specializing in STEM; past members have gone on to study STEM at MIT, Cornell, Duke, and Purdue. Alumni stay involved in FIRST. Many are so passionate, they have traveled 4,000 miles for volunteering in key roles like refs and announcers.

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

We've: -spent 200 hours reaching 500,000 people in the past 5 years through demos, -held a Robotics summer camp for K-5, -started 40 classroom FLL teams in our district, -captained a Relay for Life team comprised of 5 Long Island FRC teams who raised \$700+, -created 2 school makerspaces, -formed a championship-bound competition FLL team, -demoed at a fundraiser for mental health awareness, -held robot workshops with girl scout troops, and -brought STEM curriculum to underfunded schools.

Team 2869 partnered with LIU Post to host the Regal Eagle Rampage, New York's only Week 0 event of the Power Up season. The Regal Eagle Rampage was live streamed by FIRST Updates Now, which allowed viewers from around the globe to tune in and watch the event.

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

Our partnership with the media is pivotal to spread the message of FIRST. This year, Team 2869 was interviewed on WUSB 90.1 FM, Stony Brook University's radio station for an hour-long radio show to talk about FRC. Livestreaming the show, we reached thousands of viewers from New York City to Turkey and Mexico. We've been featured in dozens of news articles, local news, and a recent partnership with telecom giant Altice enabled us 3 video diaries of the 2017 season which reached over 10,000 people.

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

We strongly believe everyone should have equal access to STEM education. As such, we don't institute tryouts and members don't have to pay to join. In 2017, we created #STEMPal, an international STEM pen-pal program, which has since turned into a social media movement. Team 2869 also formed the first chapter of #FIRSTLikeAGirl on Long Island. We promote #FIRSTLikeAGirl at FLL, FTC, and FRC events across the region. These movements help inspire people of all backgrounds in STEM.

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

We helped start FRC 7153 the East Catholic Eagles by connecting them with sponsors for half of their registration fees their 2018 year and provided critical mentorship in the pre-season. We also helped start the first pre-rookie team in Greece, FRC 6839 the Terminators. To sustain rookie teams we assisted in the formation of, we provide 24/7 mentorship via Google Hangouts and Slack. Recently, these have included FRC 6746, 6806, and 5202.

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

We created the first 5 pre-rookie FLL teams in Tanzania and India which has impacted hundreds of youth in Dar-Es-Salaam and the village of Panar. Our 2017 Bristlebots outreach has inspired kids in Morocco and Hungary to start their own Jr. FLL teams. Locally, we started and mentor the first FLL team in our community, which qualified for Long Island Championships for the first two years of its existence. In our classrooms, we implemented FLL curriculum to create 40 teams for 300 students.

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

Team 2869 hosted Regal Eagle Roundtables, an FRC workshop with 20 hours of content for FRC teams. We've mentored StuyFusion and LREI Robotics FTC teams 479 and 3744 through a 24/7 Facebook group over the course of 4 months. On our own community FLL team, we have provided 70 hours of mentorship this past year alone. Furthermore, we mentored the Tanzanian FIRST Global team for two years. Our feature

in FIRST Alliances, a Wikipedia for FRC outreach has documented this for the community.

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)

We joined the Rookie Network with Hall of Famers FRC 16, 254, and 3132 to provide assistance for rookies through a 24/7 help hotline. On Chiefdelphi, we've posted 3,000 times; many of the posts are aimed to help rookie teams in need. Our 24/7 online FIRST help platform, F4, has over 1.5 million messages, 100 teams, 5 Dean's List Winners, and 1 Hall of Fame Team to aid rookies in FTC and FRC that need help. Members include a CTRE engineer and Founder of Ozzyboards, an FRC/FTC Supplier

Describe your Corporate/University Sponsors

Team 2869 is sponsored by Bethpage Union Free School District, IBM, Altice, Microsoft, Solidworks, United Technologies, Cord Meyer Development Company, AJG Capital Investments, 80/20 Inc., Atlantic Plywood Corporation, EBT Inc., MSC, Tomco, Kerr Lakeside Inc., Brighton-Best International, Rockford Commercial Warehouse Inc., Lindstrom, S&B Machine Works Inc., CDW, Industrial Rivet & Fastener Co., and The Dent Guy.

Describe the strength of your partnership with your sponsors with special emphasis on the current season and the preceding two to five years

Sponsors are categorized on a graduated fiscal scale through their level of contribution. We provide sponsor dinners, present sponsors trophies, gift them 2869 "swag-bags" filled with promotional items, invite them to our lab, grant them access to our pit, and send them update emails throughout the season. Our sponsors have also given team members summer internship opportunities. We retain 90% of our sponsors, with a 40% increase in sponsors this year alone.

For FIRST Robotics Competition teams older than 5 years, briefly describe your team's broader impact from its inception

In our 10 years of existence, we have:

- sent alumni to study STEM at top universities.

- Inspired our district to expand STEM education via LEGO Mindstorms, Makerspaces, and STEM Labs.
- Introduced robotics to half a million people.
- Connected over 100 FRC teams through our revolutionary F4 platform.
- Worked to bring FIRST teams to 5 different countries.
- Started two active STEM/FRC social media movements.
- Hosted the only Week 0 Event in Long Island/New York City/Hudson Valley.

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

FIRST is a program dedicated to initiating a culture shift in the world of science and technology by promoting mentor-based programs. FIRST students of all ages compete annually with their engineering creations not solely to win, but also to improve communication, diligence, and leadership. FIRST is creating tomorrow's innovators and problem solvers, today.

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

Our recent surge in team success has been largely attributed to a redesign in team structure and strong student leadership. By changing from several president leaders to one captain and a bureaucratic team organization, Team 2869 is now attacking every facet of FRC with efficiency. Our team may have not been successful in the past, but we are well on our way to long-term culture change, starting with ourselves.

Essay (10,000 characters allowed, including spaces and punctuation, or approximately 1500 words): Judges encourage creativity of expression but the essay must clearly deliver information and facts describing what the team is all about. The essay should draw attention to the strengths of the team. This essay, along with the other information, will serve as the basis for the judges to make the decision on which team earns the Chairman's Award.

The Sun

In the Solar System, planets rely on and revolve around the Sun. Without it, the planets would fly off deep into space. In the Solar System of Team 2869, the Sun represents core values of FIRST and the planets are different aspects of the team. While core values of coopertition, gracious professionalism, and culture change are instrumental in FIRST, we strongly believe STEM education should be a universal right.

We've made it our mission to ensure all students have access to STEM and robotics education. We refuse to institute tryouts and fees, allowing any student in Bethpage High School to join. Through our inclusive policies, we maximize the number of students who take part, furthering our core values. 1 of 4 students in the freshman class are on Team 2869, and membership has grown by over 300% in the past year alone. Without core values, the other parts of the Regal Eagles wouldn't be able to follow.

Mercury

Mercury, our mentors, are closest to the Sun because mentorship is key to our success. Our three mentors—including a Woodie Flowers Finalist Award winner—dedicated a combined 2260 hours to the team in the last year alone.

Most alumni on our team become remote mentors after they graduate. Alumni mentors video chat new members to teach them CAD, programming, and mechanical during the offseason. During the build season, they regularly visit us to check-in and assist.

We also have immense support from our administrative mentors. Our Director of Technology joined as a mentor in 2016, and has since brought us to 3 Board Meetings and increased our budgetary funds two-fold. Without our amazing alliance between mentors and students, we wouldn't be nearly as successful as we currently are.

Venus

Inter-team coordination, the Venus to our Solar System, is crucial to 2869's strength. To come closer as a team and family, we host Friendship Fridays, where we talk about our experiences, take part in team bonding exercises, and learn more about each other. Our attention to team bonding makes our team a family.

To bolster technical skills, we've created an Eagle to Eaglet training program. Rookies are paired with veteran students to gain skills in areas of their interest. We've had 40 Eagle to Eaglet pairings in our team's history, with 20 this year.

Earth

Alumni can be likened to Earth. One goal of Team 2869 is to prepare members for college and careers in the STEM field. Of the 120 Bethpage students that have passed

through our doors, 100% of our members pursued higher education and 9/10 members seek STEM degrees. Alumni have grown to attend top universities and become successful in the engineering industry. 80% of Regal Eagle alumni come back to visit the team and help during the season.

Not only do members take away STEM skills, they learn to give back. Alumni have traveled over 4,000 miles to volunteer at FIRST competitions and events.

Mars

As engineers race to form an Earth-Mars alliance, we relate our alliances to Mars. We've established strong networks within the FIRST community. F4, a two-year-old Slack chat, loosely formed around the goals of connecting international FRC members in a student-run manner. It's since blossomed into an unbelievably fruitful platform. Nearly 120 students from over 100 FRC teams and 3 continents have consolidated to provide 22 information-rich, student-produced web shows, over 1.5 million messages, and 3 CADathons with FIRST judges like Andy Baker from AndyMark.

Locally, the Long Island FIRST Alliance (LIFA) was created by Team 2869 to connect local teams. Through LIFA, we held Regal Eagle Roundtables workshops on 5 different topics.

Our alliance with women is critical to our core values. We created the first chapter of #FIRSTLikeAGirl to promote females in FIRST. Our extensive alliances and networks allow us to further the message of FIRST.

Jupiter

Next comes Jupiter, or STEM ed, in our school district. To encourage robotics education locally, we held the first LEGO Robotics summer camp, where we taught elementary students fundamentals of robotics through EV3s.

Annually, we demo our robot at astronomy night, our halloween night, back to school night, parent teacher conference night, school activity fair, and homecoming reaching 2,000 kids this year alone.

We support other organizations within our school to ensure that they are successful. We hold a bake sales for the arts program in our district at our school's Drama Club Productions. Additionally, we created Makerspaces in the middle school and high school libraries. We have been able to introduce FIRST in Bethpage on an unprecedented scale.

Saturn

Community outreach is Saturn. We guest starred on Stony Brook University's radio station, WUSB 90.1 FM, reaching listeners from across New York. Our livestream of the show reached over 150 views from teams as far away as Turkey and Mexico.

We've hosted robotics workshops in our lab with local Girl Scouts troops. The scouts learned how our robot works, toured the lab, and experimented with Snap Circuits. These Snap Circuits allow children to get hands-on STEM experience, so we've done over 40 outreach events using Snap Circuits. Another impactful Snap Circuit outreach event we organized was at Upper Room Christian School, a 100% minority school on Long Island where most students don't have access to STEM education.

There's more. We started and mentored an inner-city Vex-IQ team. Through LIFA, 35 people from 5 teams raised \$700+ for cancer research. To assist local FIRSTers, we mentored Stuyvesant and LREI High School FTC teams. By creating an FLL team in our community, we inspired younger students to join our STEM pipeline. Working with SBPLI, we demoed our robot at the Ronkonkoma Mental Health Chili Cookoff to raise awareness for mental illness.

Most notably, we partnered with LIU Post to host the Regal Eagle Rampage, the only Week 0 in LI/NYC/Hudson Valley. The Regal Eagle Rampage was live streamed by FIRST Updates Now, a verified Twitch channel, which allowed viewers from around the globe to tune in and watch the event.

Uranus

Our outreach extends beyond the community; Uranus represents our global outreach. We reached over 300 international kids alone last year through our Bristlebot camps, and this year turned bristlebots into a whole STEM camp curriculum, adding India to our list of countries involved.

Most recently, we created #STEMPal which connects international students passionate about STEM. STEM Pals started out as a pen-pal program where members emailed international students passionate about STEM. Through the STEM Pals program, our Tanzanian STEM Pals were so inspired by FIRST, they wanted to create the first five pre-registered FLL Teams in Tanzania, so we helped! This turned into something bigger! Through a social media hashtag, #STEMPal, we reached over 100 international STEM students.

This year, we implemented the International Outreach Alphabet, where each letter of the English alphabet stands for an aspect of Team 2869's international outreach. For example, G stands for Greece because we aided the first FRC team in Greece by providing them with our team's marketing resources and helped them raise more than

half of their operating funds. Our alphabet features extensive work with FIRST Global Challenge, and bringing FLL to countries around the world.

While all of our work has been done remotely, this year members have planned a trip to Tanzania and India to cement our international initiatives and programs.

Neptune

Although success at competitions is a motivating factor, Team 2869 doesn't exist solely for winning, which is why it is last in our Solar System. In fact, we haven't started winning awards and competitions until recently. Some of Team 2869's achievements are winning the Rookie Inspiration Award in 2009, Woodie Flowers in 2016, Chairman's in 2017, and the 2017 Hudson Valley Rally Offseason Competition. Due to our team's recent achievements, we built a trophy case in our school with the help of our administration. Our trophy case stands tall as a testament to our core values.

No matter where we go in the Solar System, we will always revolve around our core values.