

Chairman's Award - Team 5016

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2018 - Team 5016

Team Number

5016

Team Name, Corporate/University Sponsors

Dr. Inna Gellerman, DDS/CDFS Law/Palacios Law Group/Atlantic Auto Group/SnakeTray/LuHi Summer Programs/National Grid&Huntington 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

Over 83% of team 5016 alumni are pursuing degrees in STEM related fields, and 100% have gone on to enroll in 4 year colleges. Although STEM-oriented, this team is more than robotics. We provide a place for kids to stay after school where they can be safe while learning at the same time. For those who don't know English, it is a place where they can fit in and have fun at the same time. For those who lack funds to pay for club dues, we provide a great experience; free of charge.

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 share FIRST with our community through outreach events including a Mini Maker Faire and STEM night at a local school. Team members also helped to teach classes and assist with robot construction at a regional STEM summer camp. The impact of the FIRST program in our community goes beyond STEM. We also volunteer at a local homeless shelter packing bagged breakfasts and lunches for the following day. They then served a main course, followed by desserts donated by the team itself.

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

Bilingual team members went to ENL (English as a New Language) classes to speak about robotics. No club in Huntington had ever reached out to these students in their native language. We've been able to integrate many Spanish-speaking members onto our team, translating for them at meetings. We've translated all team documents to reach our school's large Hispanic population: about 40%. Outside of the high school, we've influenced the development of three FLL teams per 5th- and 6th-grade class.

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

Being a role model for other FIRST teams is a value that our team embraces. After losing last year's regional due to a red card, our team was graciously professional in defeat; we congratulated the other alliance on their well deserved win. Equally important, during competition, we allow competitors to borrow tools and batteries. We assist other teams with problems in their pit, and have student ambassadors that assist others in learning what FIRST is all about.

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

Although financial constraints in our district have been a barrier to forming other FRC teams, this has not dissuaded Team 5016 from spreading STEM and the ideals of FIRST throughout our community. For example, our team routinely packs up our robot for hands-on demonstrations both in and out of our area. While our team may not be able to afford to start a program, we have used resources available to us to help inspire others to participate in robotics right here in Huntington.

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

Our team proudly aided the start of the FLL teams at our local STEM school. There are now 3 FLL teams for every 5th and 6th grade classroom in our district. We worked to organize their team, their materials, and helped inspire students to pursue STEM in high school. Additionally, a local private school interested in starting a robotics team in their district reached out to us this year. We were honored they came to us for help, a testament to our successful community outreach.

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

We have consistently volunteered at FLL and FTC events, interacting with over 100 teams through these volunteering ventures. While volunteering, we have helped teams with connection issues, managed the pit, and served as queuers. Also, our team graciously offered the use of our woodshop to another FRC team from Our Lady of Mercy Academy, because they did not have an adequate space or the materials they needed to build their robot.

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 had the benefit of being mentored during our rookie year, so it is an honor to reciprocate and help other robotics teams going through the same process we once went through. We work with students using a hands-on approach. We invite groups to come to our workshop, where they experience our unique team environment. We often share tips and suggestions that help us succeed. We continue to mentor throughout the year by being available to answer questions and provide ongoing support.

Describe your Corporate/University Sponsors

While our community lacks large corporations, we have been working with smaller businesses, including Dr. Inna Gellerman, CDFS Law, LuHi Summer Programs, National Grid, Palacios Law Group and Huntington High School. Our sponsors have generously donated to our team, which has allowed us to thrive. There are many older teams which have already formed long-term relationships with corporate sponsors. We are now forming these relationships, proving a positive influence in the community.

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 have built a positive relationship with our gracious sponsors. They visit our shop, see us work, and are inspired by our efforts. They have supported us by providing us with funds and cheering us on at competitions. Our team has shown gratitude by participating in activities such as a walk to end cancer that is run by one of our sponsors, and our annual appreciation dinners. At these dinners, we acknowledge those who have aided our team, since we know it wouldn't be possible without them.

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

FIRST has created a competition for a new kind of athlete. Students learn about robotics in a sports-like setting; robotics teams have captains, trainers (mentors), and coaches (advisors.) FIRST gives students the opportunity to gain professional leadership, engineering, and business experience regardless of any prior experience. Unlike athletes that may train for years, everyone can learn robotics and continue to apply their knowledge in their everyday lives.

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

The next step of our journey is continue our diversity initiative, specifically focusing on women in STEM. We've formulated a robotics program for Girl Scout troops, which will be launched in the spring of this year. Our goal is to help young women of the community gain an interest in STEM; learning is never an exclusive experience. We also aim to host a Women's Empowerment Symposium, with a goal of providing guidance to women interested in joining the STEM field.

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

Nolan Piccola

Essay

I. "If you can dream it, you can do it." - Walt Disney

Huntington Robotics is more than just a team. We are a collaboration of students, mentors, and advisers committed to providing equal STEM learning opportunities within our diverse district. We cater to the individual needs of all students in order to facilitate the expansion of FIRST principles throughout the Huntington community and beyond.

When two Huntington High School students decided to start a robotics team, they had no idea what a huge impact the program would have. Huntington Robotics quickly proved its merit by advancing to the world championships the team's first year. In five short years, our team has succeeded in spreading the ideals of FIRST to students, teachers, and mentors, growing from 15 students to over 70 members.

Robotics has become more than an extracurricular activity in our district. After team members continuously advocated STEM's importance to our school board, a robotics-focused elective called Computer Integrated Manufacturing (CIM) was approved. Our student body's passion for STEM had grown exponentially: the class had an overflowing wait-list for enrollment. Students study a robotics-centered curriculum, which, upon completion, awards them three credits at the Rochester Institute of Technology. The course teaches the basics of manufacturing, while simultaneously giving participants an understanding of concepts, such as programming and mechanics. The class prepares students for jobs in science and technology with the added benefit of introducing more students in our district to the amazing sport of robotics.

II. "Live what you love." - Jo Deurbrouck

When asked what they love most about robotics, one of our team members replied, "being at events with young children and watching their shy curiosity transform to sheer joy as the robot begins to move." As a team, we're thankful to be able to experience moments like these year-round.

Every year our district hosts Safe Halloween, an extremely popular event that attracts students of all ages. It is designed to create a safe environment for kids to trick-or-treat, and is a perfect way for our team to expose a wide audience to the world of FIRST for the very first time. As soon as the children walk in, they are captivated by our moving robot, their eyes glistening in anticipation for a chance to get their hands on the controllers.

We decided to spread our passion further by introducing elementary-level students and their families to robotics. Team members were excited when they brought our robot to the district's STEM night. With our robot on site, we were able to introduce students and their families to the boundless opportunities available through Huntington Robotics. From these efforts alone, we witnessed even more families opening the door to the world of STEM.

When the local Barnes & Noble holds its annual Mini Maker Faire, Team 5016 has another opportunity to spread STEM. The Faire showcases "local builders of fascinating and impressive projects" and allows our team to feature our robot to children of all ages - and even some adults. This opportunity also allows our team to interact with other makers and share experiences, learn, and be inspired.

While STEM education and awareness is a principal goal of Huntington Robotics, our commitment to the Huntington community goes beyond this. We take great pride in joining together to work with those less-fortunate in our area, including distributing food and clothing at a local homeless shelter. It continues to be a gratifying experience for us as we work toward improving the lives of our neighbors.

Huntington Robotics takes tremendous pride in mentoring new teams in our effort to give back and spread the message of STEM. Recently, we were contacted by a local private school in Huntington. They came to us for help in starting a FIRST robotics program at their school because they saw the impact we have made in our district and our community. We were honored that they reached out to us and have embraced mentoring this team in their journey.

III. "Nothing is an obstacle unless you say it is." -Wally Amos

During the 2016-2017 season, we turned the language barrier within our school into a learning opportunity. Huntington is a diverse district with 54% minority students, 30% of whom are native Spanish speakers, with 45% receiving free or reduced lunch. We broke down this barrier and began to attract members from all socioeconomic backgrounds and diverse cultures, ensuring that participation in a STEM-oriented club is attainable by any student. After all, robotics is a universal language.

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We began our diversity initiative by having an interest meeting in Spanish. We were the first club at Huntington High School to do this. While our interest meeting was a huge success, determining how to effectively communicate with our new Spanish-speaking members posed a challenge. In order to ease the transition, we arranged for bilingual team members to be stationed in each subgroup of the team. A native English speaker translating electrical engineering for a student who moved to the U.S. less than a year ago was an experience that all of our team members were proud to witness, as we realized our diversity initiative was making great progress.

We ended the season with a positive outlook on the future, eager to push further in our efforts of diversity. We had already accomplished so much, and we knew that we could accomplish more in the future...

Until we didn't.

IV. "Success is not final, failure is not fatal: it is the courage to continue that counts." -Winston Churchill

At the start of this school year, our team began our diversity initiative as we had done in the previous year: hosting an interest meeting in Spanish and translating additional team documents.

During the pre-season, we outlined our team goals for the upcoming year. Through discussion, and simply looking around the room, we realized our diversity initiatives weren't as successful as we had hoped. While we had various individual successes with members of our team, Team 5016's demographics still did not adequately represent that of our school, leaving us dissatisfied with our current efforts.

However, we knew that this was not the final outcome for our team, rather a starting point for further growth and success. Dean Kamen and FIRST have taught us that "when you fall down seven times, and stand up eight, you are still a winner." As a team, we have applied these words to our diversity initiative. Inspired by FIRST, we went back to the drawing board, and decided to work towards increasing team diversity from the ground up: with Huntington's younger generation.

V. "Do what you can, with what you have, where you are." -Theodore Roosevelt

Our district's intermediate school was the right place to start our new "ground up" approach. Our initial meeting with the school's principal was received with genuine enthusiasm. We arranged for our team to present the FLL program to all elementary teachers, beginning with the core values and explaining the impact FLL can have both in and outside of the classroom. Team 5016 equipped teachers with online resources and gave them workshops on each aspect of robot construction and the competition. As a result, the teachers began to incorporate the 2017-2018 challenge into classroom lessons related to science and weather, integrating FLL with the classroom experience. Today, FLL is in every 5th and 6th grade classroom in the elementary school.

Included in our effort was a continued commitment to our bilingual initiative. Huntington Robotics supplied the classrooms at the elementary school with a Spanish challenge video and translated documents. Our team continues to mentor these students weekly, and we are proud to witness the passion for STEM that FIRST has instilled in these students.

With an eventual goal of giving all of our district equal STEM opportunities, our local middle school was next on our list. The middle school has a VEX robotics team, and Huntington Robotics has been able to mentor these students from both a technical and business perspective, along with hosting and volunteering at their competition. It may not be FIRST, but it is always our pleasure to help anyone with robotics, no matter who or where they are.

VI. "We are made wise not by the recollection of our past, but by the responsibility for our future." - George Bernard Shaw

Huntington Robotics is more than just a team: we are a force of change within our community. In our fifth year, we continue to expand how we embrace our team motto, "invested in leadership, engineering, and diversity."

The next step of our journey is to continue the team's diversity initiative with an expanded audience, specifically focusing on women in STEM. We have created a multifaceted approach so we can reach women of all ages. Our first step is a robotics program for Girl Scout troops, which will be launched this spring. Next, we are planning a Women's Empowerment Symposium. This event will provide students with guidance regarding being a woman in a male-dominated field, and teaching younger girls the importance of supporting each other in the face of adversity. We hope to inspire young women to join the STEM field through our initiatives.

FIRST continues to be a vehicle of change within our community. Huntington is harnessing its ability to transform and inspire students of all ages. Our new diversity initiative has created an environment where all students are encouraged from young ages to become leaders in science and technology. Huntington has been transformed by a program that was unheard of five years ago. With an appetite for FIRST's vision of a better world, Team 5016 does not intend to stop spreading its "leadership, engineering, and diversity."