

Chairman's Award - Team 1796

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2018 - Team 1796

Team Number

1796

Team Name, Corporate/University Sponsors

Bloomberg/ConEdison/Pershing Square Foundation/The BnG Foundation/LittleBits/RoboTigers Alumni Association&Queens Vocational and Technical 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

The message that the FIRST program stands for has had a significant impact on our members. A testament to this is that 95% of our mentors are alumni. 40% of our mentors are pursuing careers in the teaching profession. The other 58% are or have pursued careers within STEAM fields. FIRST has introduced opportunities for our students. We found out that 84% of us have not been introduced to the idea of pursuing a career within the STEAM field. FIRST has made the difference for these students.

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

FIRST has provided an opportunity for us to get more involved with our community. We previously found it very difficult to participate and contribute to our community. That is no longer an issue. FIRST has led us to create many partnerships that provide us with community outreach events such as Makers Faire, Discovery Day, and so many more events! Through demonstrating our robot, we have been able to visit and connect with all five boroughs of NYC.

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

Throughout the last five years, our team has been active at local and private events. In the 21st century, the majority of our population utilizes social media. We wanted to find a way to incorporate social media in our plan to introduce STEAM accessibility to everyone. We developed a campaign called Humans of Stem (HOS). HOS is a way to highlight people who are involved in STEAM while also introducing and inspiring others to get involved in STEAM.

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

Our team is run by students and they are the ones that inspire other FIRST members by showing that academic success does not have to correlate with success in Robotics. We live in communities that don't understand what FIRST Robotics is. As you probably have heard, FIRST is more than robots. FIRST offers so much more and we have grown in areas we never thought possible. We believe that if we can do FIRST robotics then anyone can.

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

In NYC there are only 63 frc teams,with a high school population of 1.1 million students. Our goal is to expose STEAM to as many people as possible, that is why we do so many events and have an active role in our community. The truth is that the United States is not one of the top countries when it comes to STEAM, so by spreading STEAM, starting and forming new teams we are giving back to our country and bringing us one step closer to higher academic proficiency.

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

Many of us wish that we were introduced to STEAM and FIRST at a young age, that is what drives us to start FIRST LEGO League Jr, FIRST LEGO League and FIRST Tech Challenge teams. If we had been introduced to STEAM at a young age, we would know more, have more opportunities, and generally have a stronger STEAM portfolio. Although we didn't get this opportunity we would like to give back and introduce it to younger students.

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

We assist teams in many ways. For some teams, we are able to go into their classrooms/work and physically help them out at least twice a week. For other teams who we can not meet with, we do skype calls to them offering assistance with anything from uniform design, registration, to editing their grant applications. Our aim is to give the students the most valuable experience: a passion for STEAM through FIRST.

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)

Along with mentoring 12 other FIRST teams, our members created a group known as R-TESS. R-TESS stands for RoboTiger emergency service squad. The goal is to help other teams within regionals pass inspection, fix their robot and just have fun! Not only do we help these teams but we actually guide and teach important lessons about Robot maintenance. On average R-TESS assists at least ? of the robots at each regional we attend.

Describe your Corporate/University Sponsors

We have several sponsors but a few stand out as prominent role models in our efforts to spread STEAM awareness. Con Edison has supported us from the start, since 2006. littleBits support us because they want to make STEAM fun and accessible as well. Bloomberg has provided us with a network of other FIRST teams as well as events that we can volunteer at. Our school and the NYC DOE are also our sponsors because they've done nothing but support us.

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 try to develop strong partnerships with our sponsors, and not just ask for funds. For example, Bloomberg has offered us community outreach opportunities such as bike building and physical resources such as two mentors. Con Edison has offered us internships. In return we give our partners a tour of our school facilities and we do demonstrations at their facilities and their events.

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

In 2006 our team consisted of 6 students, most of which had no experience with coding, electronics, or even tools. The event that made both members and mentors realize that there was a chance at competing at a higher level was the 2009 regional which was our first win. We later began to understand that FIRST is more than just robots and winning. We never envisioned that we would be able to have such a strong impact in our school, community, FIRST and NYC in general.

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

1796 has created a reputation with FIRST over the last 10 years. Our team is not a 6 week build team. We are a 52 week summer included type of team. We are always thinking of ways to spread the message of FIRST with the limited resources we have. The team has taken the lead of webcasting and archiving the NYC regional for all teams since 2012. It is a big task that is taken very seriously. 1796 is more than just a team number it's who we are. Our mission is to pass on our passion of STEAM.

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

Aggelos Varvatsoulis

Essay

As Queens Vocational and Technical students we are proud to be members of FRC team 1796, the RoboTigers located in Long Island City, NY. Our mission is to introduce STEAM and it's community to everyone in NYC. We believe that everyone regardless of culture, religion, or sexual orientation deserves to be exposed to STEAM fields and the opportunities that those fields yield. Our team has become a beacon for the urban youth of New York City and our members are proud symbols of aspiration for youth that grew up in hardship, broken homes, and unsafe communities. We conducted a survey to measure our impact and team demographics. Our survey concluded that 90% of RoboTigers live in minority-populated areas, 48% of the team lives in single parent households, 55% of our parents don't know how to help us when it comes to college, 90% of our parents don't know what STEAM is, 84% of us didn't know what STEAM was before joining this team. With our intervention, 98% of our alumni pursue a career within the STEAM field. Of those alumni almost all of them had joined the team not wanting to pursue a STEAM field. FIRST has altered our lives for the better, and we want to share that opportunity with others.

We see Chairman's as the "role model" award of FIRST. Our approach to being a role model team is through showing other teams and people accessible achievements. Many teams worry about making their presence known overseas and helping teams in other countries. However, right now we are focusing solely on NYC. There are many underfunded and underdeveloped teams within NYC that need help. Dozens of teams are started every year but very few of them get the chance to succeed or compete with long-standing teams. One of our goals is to cultivate existing rookie teams into higher quality teams. We are not worried about spreading STEAM on a country-to-country basis because NYC's population is made up of over 8 million people. Our team alone consists of students from countries like Mexico, Ecuador, Poland, Nigeria, Egypt, China, and India. We have decided as a team that we will move on to reach other countries when we have first reached everyone in our city, and state. In NYC there are only 65 FRC teams. We believe these teams can be expanded and improve. If our team can go from a ragtag group of 6 kids to an established community figure then we believe anyone can. The way we see it, students that we reach out to will inform their family about the exciting STEAM programs. Their family will inform can inform their friends and so on until their community and perhaps culture is made aware of FIRST and STEAM.

We believe our actions should speak louder than our words. This is why Team 1796 takes part in a multitude of endeavors to make STEAM education fun, easily accessible, and recognized. Over the 2017 summer, we did over 20 private demonstrations in a variety of educational institutions from free summer camps to public museums throughout the five boroughs of NYC. We typically had 4 members present a two hour-long interactive demonstration of the robot to an audience of 12-75 students. After that we hosted STEAM activities such as catapult building. Our mentors would show us how to reach out and email businesses or schools to plan demos. The mentors would also help us out with transportation but the presentations and events would be up to us. The events that we scheduled were structured and planned beforehand. First, we would explain what FIRST is, the different types of programs offered, and the program that we are in. Next, we broke down the different parts of our 2017 robot such as the drivetrain, electronics system, shooter, and climber. Kids were usually amazed by many aspects of the robot however a common trend we noticed was how much they marveled at the size of the battery. They would often say "That doesn't look that heavy! I can carry that, no problem," and then we would let them, while carefully caressing our hand underneath to catch it in case it drops. They would realize how heavy it actually was and their minds would be blown. After explaining the robot components we played games that we developed which allowed them to become more familiar with our mechanisms and feel more comfortable around our robot and technology in general. Our closing activities consisted of STEAM crafts that were based on grade levels. We would base these crafts on mechanisms in our robot and the concepts that we just taught them such as ping pong shooters, pom pom launchers, catapults, and basic pulley systems.

Over the past five years we have taken part in over 30 events excluding the private and community events of 2017. We have partnered with institutions such as the Queens Public Library and New York Hall of Science to do public demonstrations. At these events we demo our robot in an open setting where anyone come up to us whenever they like. We also had stations where we would teach a few kids to operate the robot, play STEAM games, host STEAM craft workshops, demo STEAM education toys such as Snap On Circuits or Lego Mindstorms, and most importantly share our stories regarding FIRST and STEAM. We always enjoy doing public events because the people who attend usually have never heard about accessible STEAM education. We talk to everyone that passes by usually we start the conversation by asking them if they like our robot. Then we get into the real deal, asking them if they know about the STEAM community. We hope to inspire excited individuals to start a team of their own or invite us to help with the initial steps of becoming a team. If a person is serious about starting a team we get their emails and let them know that we are there for them if they need help with anything. If there is a NYC FIRST representative present, we introduce the individual. We want to share our knowledge. 27 teams were created as a result of this. Our influence has gotten stronger in the NYC STEAM community and we have gotten the opportunity to take part in events such as Makers Faire, Intrepid Space Week, and Discovery Day for several years.

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There are other methods besides robot demos that we use to lead our communities to STEAM programs and fields. We've been active in our communities in a multitude of efforts that are not always STEAM related. We have served soup, collected cans for food harvests, built free bikes for kids, rallied up toys for tots, participated in breast cancer, juvenile diabetes and aids walks, planted trees in our local parks, and donated blood. We have also taken part in campaigns and events to support our communities such as helping the Orange Project break a Guinness World Record: the largest collection of handwritten notes to raise awareness about suicide prevention in your people. We also participated alongside our school in events such as QV Anti-Bullying Day and volunteering as mentors in Adult Computer classes where we taught adults how to navigate through a GUI and various Microsoft products. We strive to give back to our home that is New York City and make it a better place. We did not do all this alone, the sponsors that we reach out to help us through times of guidance. Bloomberg provides us with various outreach opportunities, littleBits aids us with a platform for growth, Con Edison has been an amiable partnership and has offered our students internships. We value their dedication to increase STEAM accessibility and we see companies that take part in outreach like this as our role models.

We believe doing private, public and community events to be worthwhile because the impact is visible. According to the FIRST chairman's guidelines we have officially started 6 FTC teams, 12 FLL Jr. Teams and 2 FLL teams. We also officially assisted 4 FRC teams. The majority of the teams that we started happened via. outreach events. When starting/assisting other teams we offer services such as grant writing, grant editing, equipment, tools, and most importantly guidance and friendship. We typically support them physically in our shop, take the guidance to them, or virtually through skype, email and facetime. During the build season, we would help our competitors (team competing in the same competition as us) by inviting them to our workspace and helping them with their robot design . A few of the teams that we are involved with are 5891, 53574, 13634, 13635, 13636, 13637, 13652, 31797,11978.

We decided to use social media as an outlet to spread STEAM. Since our instagram page is very developed with a few hundred followers (@robotigers1796), we decided to focus on the idea of creating an Instagram campaign called Humans of Steam (HOS). HOS is a way to highlight people who are involved in STEAM while also introducing and inspiring others to get involved in STEAM. People such as kids, CEOs, Entrepreneurs, Teachers, Makers and everyone else who has a burning desire within STEAM fields. We go around New York City looking for individuals currently in a STEAM field and we interview them and feature them on our campaign. We believe STEAM impacts every person in some way and everyone can be a human of STEAM.

Everything we do is to ignite the STEAM communities outreach, we want STEAM to be more accessible regardless of income, immigration status, race, area code, or school. Being able to have that exposure and opportunities and informing people about STEAM and robotics can be life changing. We believe our outreach can help by giving people a helping hand to achieve new heights . We are the RoboTigers Team 1796 and our mission is to spread STEAM to everyone in NYC regardless of who they are or what they look like. FIRST and STEAM has altered our lives for the better and we would like to do our part in altering other people's lives as well.