

Chairman's Award - Team 3044

Team Number

3044

Team Name, Corporate/University Sponsors

Ballston Spa National Bank/Bechtel/Malta Business & Professional Association/Stewart's Foundation /General Electric Foundation /Technical Building Services/Specialty Silicone Products/CSArch/Town of Malta GLOBAL FOUNDRIES Community Foundation/Tech Valley FIRST Sponsors&Ballston Spa Senior High School

Briefly describe the impact of the *FIRST* program on team participants with special emphasis on the 2016/2017 year and the preceding two to five years

7 seniors graduate this year and all are going to attend college, pursuing STEM careers. 100% of team members graduate and continue developing skills in college. Overall 95% of alumni pursuing STEM careers with over \$1M in scholarships including FIRST sponsored. 30 alumni return to mentor and 9 out of 10 of graduating seniors return during holiday breaks to mentor. 70% of the 14 returning alumni are female. 10 alumni returned to help host Robot Rumble, the capital district offseason competition.

Describe the impact of the *FIRST* program on your community with special emphasis on the 2016/2017 year and the preceding two to five years

12000+ volunteer hours have been dedicated to community service and outreach. We host camps, school supply drives, and collect food and toiletries for students in need and fundraise to build a bathroom for an orphanage in Haiti. Actively participated in STEAM programs at elementary schools like Code-A-Thon, the elementary science fair and Super Science Saturday. Worked with our school district to expand the available technology to include a plasma cutter, CNC machine and new staff.

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

Participation in the homecoming and holiday parade helps keep us connected with our community while using our team built t-shirt cannon at home football games keeps our community engaged. Each year host an FLL and FTC season kickoff to help encourage new members to BSCSD's various FLL and FTC teams. Driving our robot at The Taste of Malta, The Taste of Ballston Spa, Global Foundries MFG day, FTC kick-off at RPI and the Burnt Hills Jr. FLL Tournament enable us to spread the FIRST message.

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

19 FRC members mentored 7 different FLL teams this year. We have arranged our pit to be near rookie teams to provide guidance, resources and encouragement during competitions. We invited other teams to work in our school workshop, tour our workspace and share our growth plan. We've created a lesson plan to use Scratch which we are testing remotely with an afterschool group in Ireland with the plan to offer this to all interested groups virtually.

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

Attended the Back to School Expo in Albany, our state capital to share all levels of FIRST. Team reached out to nearby schools and encouraged them to start a team with our support Greenwich and Voorheesville. This year Greenwich school started an FRC team and we have fun mentoring the team. This year we built a second robot to use and gave our competition robot to Greenwich to use, a unique learning experience for us all. 3 teams have requested to utilize our specially designed break out board.

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

For 4 years, we have hosted a FLL summer Lego Academy impacting 120 students. We created and sustained 7 FLL teams and 1 FTC team per year. We lead workshops to provide resources to students and new coaches. Helped create a Jr. FLL team in rural Ireland and offering support via lessons plans and calls. We've also reached out to our local community and hope to have a Ballston Spa Jr. FLL team next year.

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

Have hosted an annual FLL Tournament for 3 years and now help other local teams to host FLL and Jr. FLL events. We demoed our robot at these events such as the Burnt Hills Jr. FLL competition to excite kids about their FIRST future. Offseason robotics and LEGO camps inspire young children while fundraising for our FRC and FTC teams (the Lego camp helps fund our teams). Many team members and alumni found FIRST through our camp. Team members ref, score, and judge at our FLL event.

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)

Local veteran FTC build robots in our shops with guidance and equipment. 272+ hours of mentoring have been poured into FLL team mentoring this year. We host preseason workshops for FLL and FRC, as well as an offseason exhibition. We emphasize sustainability by hosting camps, pancake breakfasts, the annual online auction; and other fundraisers to allow the team to support FLL and FTC teams.

Describe your Corporate/University Sponsors

Our Corporate Sponsors are invested and proud to be affiliated with Team 3044. We have a unique partnership with BSCSD. BSCSD has provided financial support, created curriculum, hired teachers, and offered classes that support FIRST. Newly purchased machinery is available for our use after school hours. BSNB has been with us since the beginning, providing financial support. Bechtel, GE, and Global Foundries have provided mentors and internships along with financial support.

Describe the strength of your partnership with your sponsors with special emphasis on the 2016/2017 year and the preceding two to five years

Our sponsors always want to know what we are up to. We attend and demo our robot at special events held by our sponsors. Our sponsors provide meeting space, resources, leadership training, mentors' and internship opportunities. BSNB invests in our future and proudly displays it in their banks and their website. 8 of our alumni have been offered internships and full time employment with our sponsors. Our sponsors also provide mentors. 7 of our mentors are affiliated with our sponsors.

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

FIRST is a program that can change lives and opens-up new doors. There are thousands of jobs that need to be filled and FIRST can give you that opportunity to discover those jobs, put you through college, and get an opportunity that is unique and special. If you want to ensure that you have a bright future, then join a FIRST program because while other programs can show you to get to college, FIRST shows you how to be successful in college.

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

Team does not charge a fee to participate so any student that has an interest can join the team; the lack of financial means will not hamper any students especially as the poverty level in the high school is 27% and in the district overall is 31%. Our team is involved in community service in Haiti and Ireland. Team members earn Varsity letters.

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

John "Brit" Douglas

Essay

It takes a village, a village of friends. Our village, Ballston Spa, has provided Team 3044 with the foundation to grow and serve others, by instilling the values of community, small town spirit, and a passion for helping others. 0xBE4 was founded with the help of our school district and local community sponsors in 2008, with effects of the recession still prevalent in our community. We have been fortunate to retain three original sponsors Ballston Spa National Bank, SSP, and CSArch providing us with significant funding every year since our inception 9 years ago. We also have 7 mentors from sponsors such as GE and Bechtel. Additionally, we participate in sponsor events such as the Global Foundries Manufacturing Day, where we showcase our robot to high school students. Our district has seen an increase in the number of students that qualify for free and reduced lunches from 19% in 2009 to 32% in 2016, showing a rise in local financial difficulties. It is essential that our team remain committed to allowing any interested student to join. In order to ensure that we remain fee-free for our future, our team has developed a sustainability plan that is guiding us to prepare for ensuring stable funding for all of our FIRST programs. The growth of our alumni network has expanded to a total of 60 alumni. We have 30 alumni that return to the team, with 7 long term alumni mentors. Of those returning alumni, 70% are female. Through our dedicated partnership with our alumni and sponsors, 8 alumni have been employed by 4 different sponsors in internship and full time positions. We have 2 alumni that have established their own company together, with one coming back to share his insight with our

business team. Our mentors have been so generous as to create a mentor scholarship, because they recognized the value of FIRST's impacts on our team, and wanted to continue to provide support for our students as they move on to college. Since 2012, they have provided over \$4000 to 11 students.

Our team has developed FLL and FTC programs in our district, sponsoring and mentoring 63 FLL teams over the course of 9 years, and our FTC team System Overload for 4 years. Team 3044 is engaged in assisting FLL and FTC teams throughout the entirety of their seasons. For 7 years, we have hosted an FLL kickoff, inviting teams to discuss the challenge and view the competition table. Our students host workshops on Saturday mornings, which are open to all FLL teams in our district. During these workshops, the teams are taught how to build and program. After these presentations, OxBE4 students then assist the teams in implementing the stages of building and programming that they were taught, and helping teams to test their work on a practice field. During this process, we encourage the different FLL teams to talk to each other and exchange ideas, creating a culture of learning and a more connected FLL network within our district. We are proud to have hosted an FLL tournament for the past three years, where every OxBE4 student volunteers in roles such as referee, and timekeeper. Our student mentors work with the teams they mentored during the season to help them compete, but most importantly have fun no matter what happens during the tournament. In conjunction with RPI we helped to host the FTC kickoff event this year, helping teams to understand their challenge.

This season alone, the 32 members of Team 3044 have performed over 12000 hours of outreach and community service impacting over 10000 people. In 2013, our local firehouse Union Fire Company, donated the proceeds of their Annual Fish Fry to our team in order to help us attend the World Championships. Since that year, we have returned to volunteer, serving and helping to raise money for other charities in the local area. We continue to engage with the local community during homecoming parades and Christmas parades, as we have done for the past 9 years.

For 4 years we have run a 1 week summer Lego camp with 30 attendees each year. Our students teach elementary students to build and program the Lego Mindstorms kit, and host a final showcase so parents can interact with the robots their children have worked on. For 3 years, our students have led a Code-A-Thon for elementary school students with 90 students attending each year. Team 3044 students lead interactive workshops teaching the students how to create characters and mazes in the program Scratch, and helping them to implement the lessons.

We pride ourselves in serving those who have given the ultimate sacrifice by serving in our nation's military. Our team has run a Holiday for Heroes drive, in which items were collected to give to veterans. Team 3044 is also creating the Stars for Heroes program which will honor our servicemen and women, and will collect goods that they are in need of. Our team works to serve as a home to those in the military, with our team having active Navy mentors who are temporarily stationed in the area, as well as students and mentors with active duty and actively deployed military family members.

For 8 years we have demonstrated our robot and engaged with local business and community partners at the Taste of Malta and Taste of Ballston Spa. During one of these events 4 years ago, a local Rotary member was inspired by our team's experience, and decided to work to support FIRST in our area. He worked with his Rotary club to write a grant which created the first offseason Robot Rumble in our area. Team 3044 has hosted the Tech Valley Robot Rumble offseason competition for the past 3 years. Our team volunteers at the event, with 10 alumni volunteering as well as one of our mentors serving as the volunteer coordinator. During the competition, we open our machine shop and fabricate replacement parts for teams in order to help them fix their robots if parts break.

Essay - page 2

OxBE4 has worked to bring FIRST into rural areas with to limited resources. We believe that it is important to provide long lasting support for fellow FRC teams, helping them from the pre-season to competition season. For two years, we have been assisting Team 5964 from Voorheesville, NY. This year we are helping rookie Team 6484 from Greenwich, NY. As hosts of an off-season competition, we wanted to provide 6484 the best learning experience as a pre-rookie team, so we voted to give our competition robot to 6484 for the competition. We invited them to all of our pre-season meetings, teaching them how to drive our robot, and discussing strategy. We have shown both teams our machine shops and all of our promotional materials so that they could take what we have learned over the course of 9 years, and begin implementing it as early as their rookie year. During the season, both teams are invited to use our machine shop for fabricating parts, and any other assistance we can provide.

This year our team started a Jr FLL team in Ballylanders, Ireland. Ballylanders is a rural farming village with a population of 300 people. There are not many activities for young people to be involved in, due to a lack of resources. For that reason, we decided to start a JrFLL team to get students engaged at a very young age, while also assisting the village in creating a program that is economically feasible and sustainable over the long term.

Team 3044 is also extending our reach to address basic needs with two community service projects in Haiti. The first project is in partnership with an organization named Saratoga for Haiti/Keep Kids Klean, created by a former member of one of our FLL teams. We have been holding a drive among team members to donate cloth diapers and history books. The cloth diapers are given to mothers with an instructional guide in order to provide them with a sanitary and reusable option that they can use for their children. History books are provided in order to help teach English. The team is also working with an orphanage in Haiti to raise funds to build a bathroom, as well as providing other necessary supplies for the children.

We have been actively engaged in working with the Wesley Community, an independent living community that provides

care to senior citizens. We have volunteered at the Balloon Walk to help raise money for building renovations. During the holiday season we participated in their Horse Carriage Caroling event, where we help transport residents in wheelchairs outside and sing Christmas carols with them.

This year we attended the inaugural Burnt Hills JrFLL tournament to help promote and grow the FIRST programs in the district. Our students taught the elementary school students to drive our robot, and our robot played catch with them. We engaged with parents and the superintendent of the Burnt Hills School District, explaining the benefits of creating an FRC team, and sharing our excitement about FIRST with them. We plan on continuing to assist them in the creation of an FRC team.

Team 3044 has integrated FIRST in to our high school technology curriculum. Our Principles of Construction course teaches students how to read design prints, with students gaining hands-on experience by learning to read the FRC field elements design prints. Students in our technology courses then build the field elements out of wood, this year donating them to the local practice field for all local teams to use.

Team 3044 has volunteered with the Scotties Closet initiative, which collects gently used clothes to donate to struggling families which can come and choose clothes to bring home for free. Our students donated clothes, set up clothes racks, and folded and organized the clothing supply. The Scotties School Supplies drive was created by one of our students to help collect school supplies to give to students who cannot afford new supplies at the beginning of the school year. Our team supported his efforts by collecting school supplies.