

When faced with a new opportunity that's within our resources, 1511 asks "Why Not?" It opens us up to new ideas that lead to amazing opportunities, enabling 1511 to grow and improve. This year we started the NY Advocacy Conference (NYAC) and a rockin' music fest; built excitement with teachers & admins about FIRST at the NYS School Boards Association (NYSSBA) & Science Teachers Association of NYS (STANYS) conferences and at our new Robot Cage Match; hosted the first FTC Qualifier & expanded FLL Jr in Penfield; streamed our events on TV; demoed at an all-girls STEM Fair, ComiCon & FIRST Night at the Ballpark; joined the LGBTQ+ of FIRST Alliance; donated 1,511 socks to a local shelter; drafted a kid's STEAM book & helped a Brownie Troop get a robotics badge. In addition, we've sustained events over the years to expand FIRST in our community to an estimated 3 MILLION PEOPLE!

#### ADVOCATING FOR CHANGE

1511 creates change by advocating for legislation that supports programs like FIRST. Every year, we speak to all levels of government to educate them about FIRST, from Governor Cuomo's office to Betsy DeVos! We're on the National Advocacy Conference (NAC) committee, attending since 2014. Our presentations at NAC & Detroit Champs encouraged more teams to lobby for change.

This led us to start NYAC. We invited Steve Hyer from NAC and the NY Deputy Secretary of Education to teach attendees how to advocate effectively. 8 teams attended and advocated for a bill that would provide funds for new NY teams. The 2nd annual NYAC is in the works!

Our advocacy efforts contributed directly to the passage of the Every Student Succeeds & Perkins Acts, which provide equal opportunity for students in special education and increased funding for technical education, respectively. These acts set the precedent for funding programs

like FIRST. Our reputation as an advocacy leader has led to cross-country connections with other teams, such as being invited to participate in the STEM Advocacy Conference of TX!

#### PROMOTING FIRST IN A BIG WAY

Part of developing motivated students is hooking them prior to Build Season. Since 2005 we've run Rah Cha Cha Ruckus, the first NY offseason event, which teams use to recruit and test new pit crews/drive teams. We've improved it every year, now holding it in a large concert venue for 44 teams, some from Canada and China. Teams used it as a model for STEMley Cup and Robot Rumble offseasons.

Rumble, our FLL offseason, gives teams another chance to compete. The All-Rookie Meet & Greet at Champs helps rookies network; we give them fundraising tips and leadership materials.

We build the actual field for our week 0 scrimmage, Rally, where teams can test their robots. A new way we share FIRST with a wider audience is by streaming all our events on Roku, Apple TV & Spectrum TV, including Twitch & YouTube. Since 2018, 5,000+ people from 27 countries have watched. We also have over 4,000 followers on social media and invite the press to all events.

This year we took it up a notch, mixing rock and robots by starting the Grateful Red Music Fest. We invited local bands and food trucks to join our robot demo at the Town Hall Amphitheater, and raised money for AutismUp. It gave a new audience a firsthand look at what we do and was covered on local TV news, accessing more people. The next one is in the works! Our fun & innovative events have built a community that embraces FIRST.

#### IMPACTING OUR COMMUNITY

Our robot brings smiles to people at 20+ demos a year. We dove into the Maker movement 5 years ago when the Rochester Maker Faire started, organizing a large-scale exhibit featuring all levels of FIRST. It's so popular that the Maker Faire expanded our space to fit half a FRC field, FTC space & FLL/FLL Jr tables, helping us reach many of the 4,500 attendees.

This was our 10th year running a 2-day demo at the NYS Fair, introducing FIRST to a broader audience and encouraging more NY teams. We talked for hours to a potential 266,000 in attendance that weekend who came by our booths in 2 different buildings.

A 1511 goal is to get FIRST in all NY schools. We shared our passion for FIRST by presenting at NYSBBA, attended by 2,000+ education leaders, and showed off our bot at STANYS and to 900+ students at STEAM Fest.

Our annual Trivia Night fundraiser was created last year as an innovative way to engage the community. In its 2nd year, we more than doubled the revenue and attendance, with over 100 participants.

We remain visible in the community by lending a helping hand. We applied to be a Giving Partner with Bombas Socks and donated 1,511 pairs of socks to a local shelter to support the Rochester homeless community. While there, we made lunch and stocked their food pantry. Supporting personal causes, like the Leukemia & Lymphoma Society and the Ronald McDonald House, we've raised over \$27K. Our longest running service project is the FIRST MegaDrive. In 5 years, we've donated over 14,000 kids' books, toys, food items and school supplies to our community.

#### PROMOTING FIRST IN PENFIELD

Recruiting and retaining students from FLL Jr through FRC is a goal, so we incorporated FIRST programs into every Penfield school. We achieved this by working with our District to fund teacher stipends & LEGO kits, and we provided funds & mentorship to start teams. 85% of our FTC students move on to 1511. We excite kids about FIRST by showing off our robots every year at Penfield school events, Cobbles Elementary Science Night, Indian Landing Carnival, FIRST Expo at Bay Trail, Cobbles Ice Cream Social & the Penfield STEAM Fair.

Due to 1511's initiative, 160 Penfield District students are currently in all levels of FIRST. In 2013, we started and mentor FTC6996 and help them fundraise. New this year, we assisted them in organizing the first Penfield FTC Qualifier. This year, we started 8 new FLL Jr teams, mentoring 3 teams weekly for 11 weeks through a partnership with the Penfield Recreation Department, & held an expo for them! We started 16 FLL teams, mentoring 12 this year at 1511 Help Sessions.

We've awarded over \$21,000 in FLL grants in the past 5 years to start and sustain FLL teams,

especially teams in underserved communities. Last year, we participated in RIT's STEP program aimed to get rural and urban FLL teams started. We've organized the Penfield FLL qualifier for 6 years & volunteer at the local FLL Champs every year. Our 4 low-cost FLL summer camps, in 2 towns, for 100+ kids in Rochester, makes FIRST accessible to all. Strong bonds retain 1511 members beyond FRC. 1 in 5 of our alumni stay in FIRST as mentors. 22 of our alumni have mentored 1511 in the last 5 years; 5 currently. 4 of our alumni are FRC lead mentors; 2 run and mentor FLL teams. Many of our alumni volunteer at FIRST events. 98% of alumni from the last 5 years have gone into STEM careers. In memory of an amazing 1511 alum, we created the Tommy Murphy Scholarship, and awarded it to our first 2 students last year.

Cage Match was our NEWEST event this year where school faculty went head to head driving our robots in a modified version of Destination: Deep Space to deepen their understanding of FIRST. They loved it! Our Superintendent tweeted about how he and his team (which included our Principal) had a new appreciation for robotics.

#### 1511's CORE

We realize that investing in teammates is important because it creates enthusiastic students who are excited to introduce FIRST to a variety of audiences. By empowering students with leadership roles, they become more invested in our team. Our leadership subteam has 11 roles chosen by students based on interest and team needs (i.e. Student Coordinator to help retain members). We also reserve a role for new students to apply for leadership so they can learn from our other student leaders and grow as a leader. In addition to running our year-round meetings and approving our events, they run long term projects to teach the Engineering Design

Process before Build Season, like making tennis ball launchers and competing with them during our holiday party. Each subteam is led by a mentor and one or two students. Three students also lead on the Robotics Board of Representatives, working with teachers, mentors and

parents to develop team policies. Students can earn team roles at any grade level; we value and reward hard work and dedication over seniority.

Mentors guide students to discover their passion and utilize their strengths to meet team goals.

Our Mechanical Subteam student leader ran a preseason Advanced CAD Class every Friday night with mentor guidance. Our artistic students used their skills to draft a children's book about

STEAM superheroes to engage a younger audience. Last summer, we built a swerve drivebase; and as a plus, new students joined the project and made friendships with returning students.

Students run fundraisers as part of our Student Achievements System. Patron Drive, our largest fundraiser, helps to train us in communication skills. We gain financial support while learning how to interact with people in positions of power. We raised 60% more funds than last year after

meeting with 400+ businesses & community members. 1511's model is featured in the FIRST Fundraising Toolkit and many teams have used it.

1511 provides other ways to lead year-round through student-run activities, 63 this year.

Students also participate in event planning for our major events. Our Leadership Boot Camp is an all-day intensive training where students develop skills like public speaking and time management. We apply our skills in real-world, effective ways at Board of Ed. presentations, Champs Conferences and Advocacy. Our 8 Dean's List Finalists are evidence of our team's success in developing leaders.

**THE THUNDER KEEPS GETTING LOUDER!**

Our team is inclusive, helpful, responsive & dedicated to creating future STEM leaders who understand the importance of giving back to the world around them.