

When faced with a new opportunity that's within our resources, our motto is "Why Not?" It leads us to amazing opportunities, enabling 1511 to grow and improve. COVID-19 affected us all, but we met the challenge head on. We never stopped meeting, adjusting our methods to keep students connected virtually and focused on our mental health. We're proud that our core values flourished: advocating for change, promoting FIRST, developing leaders and supporting our community.

ADVOCATING FOR CHANGE

1511 advocates for legislation that supports programs like FIRST. We speak to all levels of government to educate them about FIRST, from NY to DC! We're on the coordinating committee of the National Advocacy Conference (NAC), attending since its creation. Our presentations at NAC & Detroit Champs showed teams how to lobby for change in their communities. This year, we presented to 457 attendees at virtual NAC! We also safely met with 3 state representatives which led to co-sponsorship of a bill to fund NY FIRST teams. A new effort this year is joining the Student Association for STEM Advocacy (SASA) as a charter team. Through SASA we continue NAC's efforts year-round, making advocacy training accessible to all.

We've learned in the past 6 years advocacy takes persistence! Our efforts led to the passage of multiple bills including the Perkins Act in 2018, which set a precedent for funding programs like FIRST. Our success with advocacy led us to start the NY Advocacy Conference in 2019, where we trained 8 teams on how to lobby for a bill to provide funding for NY FIRST teams. Over 30 teams joined our email campaign to advocate for the same bill! Our reputation as an advocacy leader has led to cross-country connections. We were invited to speak at the 2020 State Advocacy Summit in TX to represent a model for state-level advocacy.

PROMOTING FIRST IN A BIG WAY

During Lockdown, we kept the community engaged in FIRST by producing a 7-part video YouTube series called "We Can Robot," with topics on programming, simple machines, advocacy and more. There were over 1000 views and it was shared by FIRST! We've run Rah Cha Cha Ruckus for 16 years, the first NY offseason event, where teams recruit and test new pit crews/drive teams. We hold this event at the beginning of the school year to give 44 teams, some from Canada and China, their first competition experience. Teams used it as a model for STEMley Cup and Robot Rumble offseasons. This year, we held Ruckus Reloaded, an online viewing/chat party of 2019's event reaching viewers in 15 countries.

We reach thousands of people by running 20+ demos each year to promote FIRST. The NY State Fair, our largest demo, reaches over 260,000 people annually! The Girls in STEM Fair engages grades 5-12. We dove into the Maker movement 6 years ago at the Rochester Maker Faire,

organizing a large-scale exhibit featuring all levels of FIRST. This year, we were the only FRC team at the Empire State Maker Faire, a merging of all the NY Maker Faires, presenting and answering questions about FIRST.

We hold 6 FLL, FTC and FRC events every year. Prior to Lockdown, we held our 16th Rally, a Week 0 scrimmage where we built a full competition field, and hosted 14 FRC teams. Our FLL offseason event and FTC & FLL qualifiers give teams chances to compete. The All-Rookie Meet & Greet at Champs helps rookies network; we give them fundraising tips and leadership materials. Cage Match, a new event, where school faculty competed in a modified version of 2019's FRC game. After driving our robots, our Superintendent tweeted how his team had a new appreciation for robotics.

We always find new ways to share FIRST with a wider audience. One is streaming our events on Roku, Apple TV, Spectrum TV, Penfield TV, Twitch and YouTube. Since 2018, we've reached 5000+ people from 27 countries. We have over 4000 followers on social media and the press cover our major events with team interviews, which helps us show our community what FIRST is all about. Last year, mixing rock and robots became a new way to promote FIRST. By starting the Grateful Red Music Fest, we used our love of music to show our love of FIRST. We hosted local bands and food trucks to join our robot demo at the town amphitheater and raised \$620 for AutismUp. It gave a new audience a firsthand look at what we do and was covered on local TV news. The next one is in the works! Our fun, innovative events have built a community that embraces FIRST.

We started 52 FLL/FLL Jr teams, and awarded over \$13000 in grants in the last 3 years. Through a partnership with Penfield Recreation, we mentored 3 of the FLL Jr teams for 11 weeks, ending with an expo to celebrate their efforts. We've organized the Penfield FLL qualifier for 6 years. We're counted on to staff all the local events. Our 4 low-cost FLL summer camps for 50+ kids annually, on both sides of Rochester, make FIRST more accessible for our underserved communities. We started our middle school's FTC team 7 years ago and still mentor them. Last year, we helped them organize the first Penfield FTC Qualifier. 81% of our FTC students move on to 1511, fulfilling our goal to retain kids through all levels of FIRST.

A broader 1511 goal is to get FIRST in all NY schools. Our first step is to create awareness. We presented to over 2000 leaders at NY education conferences and demoed our robot to over 900 3rd-8th graders at the Rochester STEAM Fest.

Strong bonds retain 1511 members beyond FRC. One in five of our alumni stay in FIRST as mentors. Two alumni are FRC lead mentors; 2 run and mentor FLL teams. Many volunteer at FIRST and 1511 events. In the last 3 years, 13 of our alumni came back to mentor 1511. 90% of

alumni from the last 3 years are pursuing STEM careers. In memory of an amazing 1511 alum, we created the Tommy Murphy Scholarship in 2019, benefitting 6 students!

1511's CORE

By empowering us as leaders, we become more invested in our team and excited about FIRST, resulting in students leading technical subteams, fundraisers and our 60+ events per year. Our Leadership Boot Camp teaches us skills like public speaking and time management, fulfilling FIRST's mission to foster life skills. Our elected leadership subteam has roles based on interest and team needs including coordinators for advocacy, FLL/FTC and communication. We reserve a role for a new student so they can learn from our other student leaders. Our Leadership team creates a preseason curriculum with activities that teach the Engineering Design Process. We apply our leadership skills in real-world, effective ways at Board of Ed. presentations, Champs conferences and advocacy. Three students also lead on our Representative Board of Robotics, working with teachers, mentors and parents to enact team policies. Students can earn team roles at any grade level; we value and reward hard work and dedication over seniority. Our 8 Dean's List Finalists are evidence of our success in developing leaders. For the first time in team history our team captain is a junior, and she earned it!

1511 creates an inclusive environment where we discover our passions and utilize our strengths with mentor guidance. In 2021, we developed and ran a robotics merit badge program for a new student's all-girl Boy Scout troop, which was a goal of hers for 3 years. With mentor support, a student designed and ran an advanced course to refine and build CAD skills last year. Our artistic students used their skills to draft a children's book about STEAM superheroes to engage a younger audience. A student-initiated summer project was to design and build a swerve drivebase, getting the whole team involved.

Much of our sustainability is due to students running multiple fundraisers as part of our Student Achievements System. We raise an average of \$11k each year in our Patron Drive where students visit businesses to promote FIRST, and gain sponsorship. We improve our communication skills by learning how to talk to people in positions of power. 1511's fundraiser model is featured in the FIRST Fundraising Toolkit and many teams have used it.

IMPACTING OUR COMMUNITY

We find unique opportunities to integrate FIRST into our community service. As a Giving Partner with Bombas Socks we've created a big impact over the last 2 years with 4000 pairs of socks donated to a local homeless shelter. Along with the socks, we promoted FIRST by making 1074 STEM Kits with info on FIRST to Rochester city youth. While at the shelter, we made lunch, stocked their pantry and donated over 1200 toiletries.

We have a long-term commitment to service: donating to food shelves, raising funds for personal causes like Leukemia & Lymphoma Society and Ronald McDonald House, and welcoming home veterans at Honor Flight. Our longest running service project is the FIRST MegaDrive at our offseason event, Ruckus, where teams donate kids' books, toys, food and school supplies. We donate over 3000 items to our community a year. Because of all this, 1511 is visible in our community.

Our philosophy of supporting others didn't stop with COVID. We saw an immediate need in our community and knew we could fill it. Team members took our 3D printers home and printed 255 face shields that went to 3 hospitals, 2 nursing homes and others who needed one!

We modified our annual Trivia Night team fundraiser to support front-line workers instead. We purchased hundreds of meals from our financially struggling sponsors to give back to them and delivered them to 3 hospitals, a nursing home and an urgent care center. We also organized a community drive and partnered with 3 local businesses and delivered 9 carloads of coffee, apples and snacks to 1000+ workers. We're proud that our community can depend on us during difficult times!

1511 is a safe place where team members feel welcome. 1511 is inclusive, helpful and dedicated to creating future STEAM leaders who understand the importance of changing our world. **THE THUNDER KEEPS GETTING LOUDER!**