

We are Thunder

It's one thing for a meteorologist to forecast the storm of the century, it's another for that storm to hit. Woodie Flowers predicted that storm in 2005 when we won International Rookie All-Star. The storm struck in 2007 when 1511 won Chairman's Award at the Finger Lakes Regional; but it didn't end there. We have continued to be and always will be a role model team as we increase our presence in the community. Our outreach has expanded to new schools, sponsors and other countries, spreading word of FIRST. The Thunder keeps getting louder!

Keep the Thunder Rolling

Team 1511 has assisted over 100 teams in 5 years with everything from programming to materials to team structure. On our website, we share past code, engineering notebooks and an activities calendar. Links to our forum and team handbook, along with hours of conversations, helped start FRC 1991 in CT.

We like to help teams overcome obstacles whenever possible. When FRC 73 lost sponsorship, they joined our team to continue to participate in FIRST. They re-obtained their sponsor and competed the next year. We offer our workshop and field to neighboring FRC 1405 students to work on robot parts. This year our team's largest commitment was working with rookie FRC 2999. We met with them 4 times a week to teach and guide them through Build Season, and even helped them finish their robot before ours. Our students and mentors provided tools, knowledge and a crate. Team 1511 recognizes that no team should be left behind.

Our No Robot Left Behind program has helped over 90 teams providing emergency robot assistance since our first year. In 2008 alone, our teammates assisted over 40 teams at competitions. We programmed and repaired robots so they had hybrid modes and ran smoothly. Our LabVIEW scouting system is part of our success on the field; we publish the database and openly share data with teams. We have always shared our knowledge and resources so other teams can be successful in competition.

After competition season, we continue to contribute to the FRC community. Last summer, our team's biweekly LabVIEW seminars assisted local teams in learning how to program the new robot controller. We beta tested the control system with FRC 340, providing mentors, students and LabVIEW expertise. Together we informed the FRC community of our discoveries.

1511 has sponsored 32 FLL teams over 4 years. Nine of our teammates mentored these teams. These children are our future engineers and scientists and keep the FIRST spirit Rolling. Annually

our series of summer camps introduce potential students and mentors to the FLL experience. Coach seminars teach parents how to run teams, program and fundraise. This year, we held 6 camps for over 100 students in the local area!

Twenty-five of our members volunteer annually at the FLL Qualifiers and Championships, and made up the entire referee staff and 2 judges this past year at the FLFLL. Our students raised \$3000 for the 2008 FLFLL winners to attend Championships. Two of our mentors helped run the Clarkson FTC and FLL tournament. We also bought field kits to kick-start 2 Bahamian FLL teams and to promote a competition there next year.

Thunderous Events

Since 1511's creation, our team has hosted 3 annual FRC events. Our biggest event, Rah-Cha-Cha Ruckus, is a Halloween-themed competition. It is free and open to the public. Each year it attracts over 20 teams from as far away as Michigan and Canada. The event was featured in Rochester newspaper, Democrat & Chronicle, and on 4 news channels. Ruckus allows all our students a chance to drive the robot. We also modify old robots to play the current game for rookie teams to compete and get pumped for the upcoming year.

The Rochester Rally is a scrimmage that allows teams to test their robots prior to ship date. If robots are incomplete, teams can receive help and guidance. Sponsors are invited to speak about the importance of technology in today's world. After Rally, we transport over 10 robots to the drayage facility. This year, because the game pieces were discontinued, we handmade 90 balls so Rally could continue. Two rookie teams and a veteran team now have working robots thanks to Rally.

The Rookie Meet and Greet at Championships lets rookie teams share experiences and play games with other teams. In 2008, we gave a rookie team a trackball signed by many teams as an award for winning our games. We will do the same this year with a giant moon rock!

Thunderous Reaction

We start a chain reaction of excitement throughout our community with various events year-round. Our goal is to provide those we meet with an awareness of FIRST, the opportunity to learn more about science & technology and how to join or create a team so that they too may share the Thunder. We reach out to the local community using Thunderbolts, our term for the many ways we spread the word of FIRST.

Demonstrations are vital to our team because they are effective in recruiting new members to the FIRST community. Our team has held over 120 demos at festivals, parades, career fairs, schools and science centers, reaching thousands of people! The 2008 Imagine RIT festival included innovative technology and creative groups, a modern World's Fair, and we were invited to represent FIRST. One of our favorite demos this year was at the Rotary Sunshine Camp for developmentally disabled adults. They asked many excellent questions out of a genuine interest in FIRST!

Community service is important to our team because it allows us to give back and creates well-rounded students. A new project this year was helping the Rochester Small Business Council deliver over 600 Thanksgiving baskets to needy families. We also sort medical supplies for third-world countries at Intervol several times a year, participate in the local animal shelter's annual walk-a-thon and hold biannual blood drives where we show our robot. Our team is always looking for new, exciting ways to spread the Thunder and FIRST awareness.

When Storms Collide

Our main sponsor, Harris RF Communications, provides us with invaluable mentors and support year-round. Mentors allow students to get a preview of the engineering world. They act as a review board in our school's Engineering Design & Development class, where we started 5 FVC teams. They also volunteer in science and Project Lead the Way classes and offer tours of Harris. On school snow days, Harris provides us an area to work using their machines, materials and professionals. We update Harris on our progress, writing biweekly articles in their newsletter. To show our appreciation, our team exhibits the robot in their Year End celebration. Mentors write recommendation letters for college and scholarships as they know the students on a personal level. They also provide homework help because our policy is school comes FIRST.

We receive continuous support from Penfield High School. We are recognized by the Board of Education who also funded CPR training for team mentors. We have access to tech rooms, gyms and our official robotics shop, and half of the school for Rally. Two display cases are devoted to awards and team updates. We wear uniforms to all our events and important school days; our red camo definitely stands out! Late nights working on our robot brought us closer to our school staff members, who love to watch our progress and attend our competitions.

We also invite the community to attend our events. In 3 years, 1511 students have met with over 250 businesses. We have 60

patrons annually and have raised \$27,000. We provide monthly team updates and information about FIRST, and offer demos at their sites. This year, we kicked off an annual Sponsor Picnic to strengthen our relationship with them.

Our strongest partnership is between our team members. In Build Season, parents provide home-cooked meals and mentors bring breakfast that we eat together as a family. Students help each other grow, learn teamwork and build friendships and robots. We play as hard as we work. Each fall, we go to a Corn Maze and go to Connecticut for an off-season event where the pressure of competition is off and the fun is on! We went ice skating this winter to learn the physics of Lunacy. Thousands of event photos are posted on our online gallery.

Thunder Leading the Way

We recognize that FIRST is not only about building a robot, but building future leaders. Student Leader, Rika Lee, said in the Rochester Business Journal, "Growing without being aware of it is what FIRST does best." Our team has had natural leaders and maturing students emerge to develop a student-led team. Open to all, our Leadership Bootcamp includes activities with speeches, presentations, developing our strengths and learning to work with others. Student Team Leaders are selected through interviews, speeches and a team vote, earning positions such as school and public relations, and event or meeting coordinator. Each subteam is led by a student working with a mentor to set preseason goals. During Build Season, subteams collaborate at Integration Meetings where they discuss progress and issues, and come up with solutions and ideas. All progress is documented daily in our online Wiki available to all team members. We promote opportunities for every member to be a leader.

Like Rolling Thunder, our team has a lasting effect on students and mentors alike. All 19 of our alumni have been inspired by our Thunder and attended college. They come back to mentor, giving students pointers on skills needed for college, and travel with us to regionals. To celebrate our 5th anniversary, we will have a summer Alumni Reunion.

The Harris, Penfield High School, Rochester and FIRST communities merge together in an inspirational way to make Team 1511 a fun learning experience for us and everyone we meet. Our team is like Thunder; it doesn't just affect those who hear it, it creates a sound so powerful that it can be felt miles away. The Thunder keeps getting louder!