

Briefly describe the impact of the FIRST program on team participants, with special emphasis on the current season and the preceding two to five years.

Mechanical Advantage consists of 61 students across 3 FIRST programs, with our FRC team being comprised of 39 students from 5 schools. FRC 6328 has opened many doors for our students, including leadership opportunities and 168 hours of technical training opportunities in the 2018 offseason alone. Our team is open to special needs students, and our mentors work closely with these members to ensure they get the most out of their FIRST experience. FRC 6328 is truly a second family to our members.

Describe the impact of the FIRST program on your community, with special emphasis on the current season and the preceding two to five years.

FRC 6328 has sparked a STEM revolution in our community. Prior to our establishment, STEM opportunities were minimal. We brought 3 FLL teams and 4 FLL Jr. teams to town, as well as 4 FIRST events. We have also attended a total of 73 community events 2016-2018 to spread the FIRST message. These events have included the Best Buddies Friendship Walk and the Rise Against Hunger Food Drive hosted by FRC 2168, where our team members helped 2168 pack over 21,000 meals in an effort to end global hunger.

Describe the team's methods for spreading the FIRST message in ways that are effective, scalable, sustainable, and creative.

In order to reach a diverse audience, our outreach program is split into 5 sections: traditional, team-developed, FLL, FTC and FRC outreach. We have also turned our team workspace into a STEM hub in town, hosting a K-3 STEM event, cub scout robotics elective, as well as 38 FLL meetings and 12 FLL Jr. meetings in 2018 for our teams. Furthermore, we use newspaper articles, Littleton TV segments as well as Youtube videos to spread the FIRST message beyond our community.

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

FRC 6328 members truly embrace our team motto, "good is the enemy of great," striving for excellence in all we do. Our team has made a major splash in our first two seasons as a stand-out team for not only our robot designs, but our extensive outreach and mentoring efforts as well. In addition to the 854 hours of community outreach in 2018, FRC members and alumni also volunteered at FLL events this year, including our FLL Practice Interviews Day, FLL Qualifier and the MA FLL State Championship.

Team's initiatives to help start or form other FIRST Robotics Competition teams

We have been assisting FRC 6731 from Belmont, MA for 2 years with their fundraising efforts and media presence. We are also assisting FRC 6844 from Provo, UT with establishing a community outreach program and new FLL teams for 2019. We created 9 How-To Guides to help FRC Teams with various topics, such as establishing a 501(c)3, team sustainability as well as an FTC versus FRC decision guide, helping new teams pick the right FIRST program for them to ensure long-term sustainability.

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

We started and run the 3 Littleton FLL teams, as well as mentor 4 FLL teams out of Bolton. FRC students and mentors volunteered 993 hours to FLL this season, and were present at every meeting and competition. We also hosted an FLL Jr. Expo and Information Session, which led to the start of 4 FLL Jr. teams, 1 of which is our house team and is mentored by FRC 6328. Furthermore, we started an FLL program in Hyderabad, India, as well as donated a FLL Jr. kit to a Title I school in Spencer.

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

We developed an FLL to FRC transition program, where current 8th grade FLL members in Littleton & Bolton participate in technical training meetings and an offseason competition in the fall leading up to the FRC season. This program helps bridge the gap between FLL & FRC and has brought 20 FLL alumni to our FRC team in only 2 seasons. By hosting FLL Jr. and FLL meetings at the same time, we have extended our feeder to FLL Jr., which has brought 100% of the FLL Jr. grads to FLL for 2019.

Describe how your team works with other FIRST teams to serve as mentors to younger or less experienced FIRST teams (FLL Jr., FLL, FTC)

FRC 6328 members serve as student coaches and mentors-in-training for our FLL teams. Our members work closely with the FLL students, forming strong mentor-mentee bonds that carry through to FRC. We also developed several joint FRC-FLL outreach events, such as Boston Greenfest and RoboExpo, where our FLL members learn the importance of community outreach. We also retain a close relationship with FTC 12897 and host joint demos, such as the FLL Jr. Expo demo and our 2019 Open House.

Describe your Corporate/University sponsors.

Our major sponsors include Patriot Beverages, Bose, ZOLL Medical, Viasat, BAE Systems, Workers Credit Union, Boxboro Regency Hotel & Conference Center and iRobot.

Describe the strength of your partnership with your sponsors with special emphasis on the current season and the preceding two to five years

Our team's top sponsor, Patriot Beverages, donated a 4,200SF workspace to our team, which serves as our FRC/FLL HQ, and the location of multiple FIRST events year-round. We retain strong partnerships with our team sponsors by hosting an annual sponsors open house at the end of build season, where we highlight their contributions to the community. We also featured our sponsor Nashoba Boiler in the Littleton Newspaper to thank them for their donation of a propane boiler to heat our workspace.

For FRC teams older than 5 years, briefly describe your team's broader impact from its inception.

NA

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

FIRST is a mutualistic program where students can both learn from each other and from their mentors. We know that FIRST is not just a STEM program, but a way to strengthen bonds and build relationships, a place to learn more about robots and the world around us, and most importantly, have fun while doing so. It inspires students and mentors alike to reach their fullest human potential, by learning the value of hard work and dedication. FIRST is truly a life-changing experience.

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

A major focus of our outreach program this season was wellness within the FIRST community. We created a wellness area at our workspace where FRC members can unwind during build meetings. We made this wellness area portable, and set it up at our FLL Qualifier and the FLL MA State Championship. In addition, we developed a wellness how-to guide for FIRST Teams, as well as 5-minute relaxation tip cards that we handed out to FLL teams at States, and will be handing out to FRC Teams at competitions.