

Chairman's Award - Team 1730

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2022 - Team 1730

Team Number

1730

Team Nickname

Team Driven

Team Location

Lees Summit, Missouri - USA

Describe the impact of the *FIRST* program on team participants within the last 3 years. This can include but is not limited to percentages of those graduating high school, attending college, in STEM careers, and in *FIRST* programs as mentors/sponsors.

Throughout the last 3 years, 100% of Team Driven's students have graduated high school; 83% of those students are pursuing higher education, and 58% have a college degree in STEM. Through Team Driven, alumni are equipped with tools to help manage their life due to the collaborative and complex critical thinking nature of the FIRST program. Participants learn skills in presenting, designing, programming, and machining, which help with classes, interviews, internships, and future jobs.

Describe your community along with how your team addresses its unique opportunities and circumstances.

Lee's Summit is a growing community, in which Team Driven has built a reputation. Our relationship with the community led the Mayor to reach out to Team Driven when the Mayor's Annual Tree Lighting Ceremony couldn't happen in 2020 due to COVID. The mayor asked us to create a one-of-a-kind light display to make up for the tree lighting ceremony. We continued this tradition in 2021, by growing the light display and programming it to music.

Describe the team's methods, with emphasis on the past 3 years, for spreading the FIRST message in ways that are effective, scalable, sustainable, and creative. How does your team measure results?

Through our outreach, our team fuels interest in FIRST within the next generation. We create and run many programs for all ages. We offer three levels of summer camps for students in grades 4th-8th as well as a LEGO-based camp for students grades K-3rd. We have started 2 FTC teams at our feeder middle school in the last 3 years, making a total of 3 teams we continue to mentor and support. We measure our results by sustaining enrollment in our off-season programs, as well as our FTC programs.

Please provide specific examples of how your team members act as role models within the FIRST community with emphasis on the past 3 years.

Team Driven takes pride in reflecting the core values of FIRST in everything we do. For each regional, we budget \$1000 for extra parts to give out to teams in need. Every Thursday of competitions we send team members out to help teams. We have helped teams whose robots got broken in transport, taken apart by customs, or just needed a helping hand; we call these "Miracle Thursdays." Additionally, we bring small machines for other teams to use in our pit without having to wait in the machine shop.

Describe your team's initiatives to Assist, Mentor, and/or Start other *FIRST* teams with emphasis on activities within the past 3 years.

Team Driven started our second and third FTC team, (13435, and 18245) at our feeder middle school because of the overwhelming interest we received the first year. Additionally, we provide mentorship and workspace for all three of our FTC teams at our shop. We also host two meets for FTC teams to compete in our local area. Team members also volunteered at an FLL event this year. At regionals, we bring \$1,000 worth of extra parts to give out to other teams, and our team members are ready to help.

Beyond starting teams, what initiatives have you done to help inspire young people to be science and technology leaders and innovators? What results have you seen from your efforts in the past 3 years?

Each year since 2008 we have designed a new game for our Junior Robotics League (JRL) as well as for our summer camp programs since 2006. There are two types of summer camps: Bricks to Bots started in 2016 for K-3rd grade and Robotics Summer Camps for 4-8th. JRL is for students K-8th, where everything from the game to the awards is modeled after our FRC season. JRL students are challenged to create an FTC-style robot. Participants of these programs often continue to take part in FIRST programs.

Describe the partnerships you've created with other organizations (teams, sponsors, educational institutions, philanthropic entities, etc.) and what you have accomplished together with emphasis on the past 3 years

Team Driven is a part of the R-7 alliance. This includes the other FRC teams in our school district: Team Titanium, 1986; and Broncobots, 1987. We work with these teams to put on week zero, a practice event before competition season starts. The R-7 alliance works together to collect donations for a local domestic violence shelter. We work with our school district to ensure that all three teams have the space to work. We partner with Cerner to host another offseason regional, Cow Town Throwdown.

Describe your team's efforts in the past 3 years to promote equity, diversity, and inclusion within your team, *FIRST*, and your communities.

Team Driven is a team everyone can participate in; there are no applications, try-outs, or grade-level requirements to be on the team. We have an open-door policy where everyone is welcome. Team Driven started a program this year called CAD-etts, led by girls on our team to teach CAD to 4-8th grade girls. We created this club to increase the number of women in STEM. In 2019, we held a summer camp at the Whatsoever Community Center that hosted around 30 predominantly marginalized youth.

Explain how you ensure your team and the initiatives you have created will continue to run effectively for the foreseeable future

Team Driven is designed on sustainability in our team and outreach programs. The leads teach inexperienced team members how to guide the subteam or outreach program that they are associated with so in future years the team will still be able to flourish. All of our outreach programs are also self-sustainable; Junior Robotics League (JRL) funds itself while creating a profit for our season. Summer camps reuse materials from JRL to create a new, innovative game with 3 different levels.

Describe your team's innovative strategies to recruit, retain, and engage your sponsors within the past 3 years

Team Driven invites current and potential sponsors to an open house event every year at our shop, to see the benefits of FRC. We also present to local businesses at the Lee's Summit Rotary Club to reach out to potential sponsors. To retain and engage sponsors we display their logos on our t-shirts, robot, and the team website, as well as our pit book and posters. Through partnerships with local businesses we create and sell a discount card. This allows us to get our name out in the community.

Highlight one area in which your team needs to improve and describe the steps actively being taken to make those improvements.

Something we noticed we struggle with is project management skills. For example, builders get behind, not giving programmers enough time with the robot. To improve this, we set strict deadlines that ensure everyone is given the time they need with the robot. We use a communication app to keep members informed and do pre-season training so we are prepared for the season. Our shop flow system tracks progress for each part of the manufacturing process. This helps us meet our deadlines.

Describe your team's goals to fulfill the mission of *FIRST* and the progress you have made towards those goals.

Team Driven is a student-led organization that inspires the next generation of leaders. With the help of our mentors, students learn how to build a robot, as well as take on leadership roles in outreach activities that help spread the word of FIRST. We have started 3 FTC teams in the last 5 years. Team Driven students take an active mentorship role in our FTC teams and inspire them to continue on to FRC. Overall, we have seen an increase in FRC participation since the start of our FTC teams.

Briefly describe other matters of interest to the *FIRST* Judges, including items that may not fit into the above topics. The judges are interested in learning about aspects of your team that may be unique or particularly noteworthy.

Team Driven is unique in the fact that we are student-led, mentor supported, and are focused on more than just building robots. We have several all-year-round programs that showcase our entrepreneurship, teamwork, and leadership. Through these STEM opportunities, we supply team members with skills that will serve them throughout life. As a way to expand their skills, team members are encouraged to work on multiple subteams that fit their interests.

Essay

Team Driven, since its formation in 2005, has continued to foster a passion for STEM in our community. We pride ourselves on creating a welcoming environment, working to nurture STEM and FIRST. We start by building a solid team. Next, we fuel the community by spreading our enthusiasm and resources and supporting those around us. Finally, Team Driven accelerates FIRST, providing many with outlets to experience its programs. This progression is what drives our team to succeed.

Building Our Team

Our team's foundation is sustainability. We continue to bring new members into our team and provide them with the support they need to be successful. Our outreach programs, whether they're brand new or we've done them for years, get the word out about Team Driven. It all starts with building our team.

At the end of every school year, Team Driven visits different schools to inspire enthusiasm for robotics in younger students. Each year we conduct presentations and demos at 8 elementary and 1 middle school, where the kids are invited to drive the robot and learn about FIRST. In total, we present to about 5,000 kids.

Further, we introduce children to robotics through Scouting BSA and Girl Scouts. In 2019, Team Driven scheduled and planned 4 sessions to help Scouts earn their robotics-related badges. By the end, 14 boys and 13 girls earned their badges.

This year, we started a new club for young girls in 4th-8th grade called CAD-ettes. The group of girls meets twice a month. They are taught by our female members how to CAD through multiple projects.

To show students and our community what we do, we host an annual open house event with the R-7 alliance. The R-7 alliance is an alliance made up of FRC teams in our school district (Team Titanium, 1986; Broncobots, 1987; and us).

Together, we help our community get a first-hand account of what FRC is about.

As of right now, we have 41 team members and 17 mentors. To ensure our season runs smoothly, we teach new members all the ins and outs before kickoff. Throughout December, we train people on CAD, machining, programming, and strategy. There isn't a formal structure of the team; instead, multiple different sub-groups collaborate. Due to no grade level being required to have leadership roles, all students are free to take charge. We help foster a love of STEM in new members even if they have no previous robotics knowledge because sustainability is vital to us to ensure that our team will continue to prosper.

Fueling Our Community

Team Driven aims to instill a passion for STEM in the next generation of FIRST. Several of our programs are meant to introduce and teach younger children about robotics. We show our community that we care and fuel them with a passion for STEM.

One way we do this is through our Junior Robotics League (JRL). JRL starts with team members creating a game in the summer; we brainstorm ideas, then build a game and field designed for FTC-style robots built by students in K-8th grade. Then, just like FIRST, we will create a reveal video and rule manuals for the game. During the six-week build season, we will host build and programming nights to make sure the teams are reaching their full potential through our mentorship. During the last weeks of the build season, we host scrimmages so teams can have practice matches.

At the end of the season, we host a two-day competition at our high school for teams to experience the excitement of a robotics competition. This year we had 20 JRL teams, our 2019 total was 48 teams. Similar to a FIRST event, teams are judged for awards based on how they helped their community, gracious professionalism, and safety. One award teams can win is the Food Driven Award, which goes to the team that can collect the most canned goods for a local food pantry. To support this effort, Team Driven students also Trick-Or-Treat for canned goods instead of candy on Halloween. This year we collected 100+ items.

To keep students involved in STEM all year round, we also run and host summer camp programs. Bricks to Bots is a program for students in K-3rd grade. In this camp, students learn how to program using LEGO WeDo drag and drop code, build LEGO robots, and do daily science experiments. This year we had 42 campers over 5 weeks.

The Team Driven Robotics Camps are for students in 4th-8th grade, who build FTC-style robots to compete in a game. The games are different each year and are designed and built by team members. There are 3 levels of the camp; as the level increases so does the difficulty. The varying types of camps help to match the students' knowledge about robotics since the camp lasts only one week; this year we had 82 campers over 6 weeks. These programs not only impact our school, but schools around our area. Our JRL and summer camp programs have impacted students from 7 different cities in Missouri.

During the fall, Team Driven runs and works our Fall Lawn Rescue. This is a fundraiser for the team where we verticut and aerate customers' yards. Team members are trained on how to manage customer service, schedule appointments, and work shifts. This year we worked 92 yards; in 2019 we worked 100.

We continue to connect with our community through our holiday lights display. In 2020, the Mayor of Lee's Summit reached out to Team Driven asking us if we could create a light display since the annual Mayor's Tree lighting ceremony was canceled. Our team avidly gathered students together to assemble and program the lights in a festive display. The mayor loved the display so much, he asked us to change it to be Chiefs themed to support them in the playoffs. Of course, we seized the opportunity to bring team spirit to Lee's Summit.

This year, the mayor asked us to make an even bigger display, and we were ready for the challenge. We expanded our show by adding almost double the display elements and programming the lights to 7 holiday songs. In total, we had 11,899 lights.

To further spread the word of FIRST and STEM, Team Driven has worked with media outlets in the Kansas City Metro Area that covers 14 MO and KS counties. In the past, we have done interviews with 3 local news stations, 2 newspapers, and made 3 appearances on the Sonic Locker Room radio show to discuss our latest outreach events. We have even made presentations in front of the Lee's Summit Rotary Club, which hosts local business owners and community leaders. Contributing to our community is something we are incredibly passionate about. Because of this, we have made 3 major donations. To help combat the COVID pandemic, Team Driven 3D printed and donated 500 safety glasses and 1000 headbands to our local hospitals. Likewise, we donated 315 handmade dog toys to Lee's Summit Animal Control Shelter. We also annually collect items for Hope House, a shelter for domestic abuse victims; in 2019, we donated a total of 1078 items.

Through donations and outreach programs, we show our community that we care, and help them discover a passion for STEM. By fueling this passion, we can take FIRST programs to the next level.

Accelerating FIRST

Team Driven aspires to spread the message of FIRST in every way we can. We have started and mentored 3 FTC teams, as well as hosted regional events, in order to accelerate FIRST.

Cow Town Throwdown (CTTD) is a local off-season event we host every year using the previous year's game. The event's goal is to help new members get to know how a FIRST regional event goes, and to show our community a real FRC competition. The event isn't just for FRC though; FLL teams also have a competition there. This year we had 7 FLL teams and 36 FRC teams. In 2019, we had 18 FLL teams and 52 FRC teams.

During the 2-day event, we reach out to rookie teams and invite them early, ensuring they can come to CTTD. We also hold conferences where we teach newer teams how to become sustainable and give ideas for outreach programs. For example, in 2018 we helped the rookie team 6817 by donating spare aluminum and motors, helping with their electronics, and giving advice to ensure future success. CTTD is a good experience for rookie teams since they build a robot and experience a regional competition before their first season starts. In addition to CTTD, we do another pre-competition season event, using a mockup of the current game. Week Zero, as we call this, is an event we host and assemble with the R-7 alliance. Although we had 15 teams participate in 2020, we normally average 25.

When the competition season begins, we don't stop assisting other teams. Each year, we lend tools and machines—drill presses, vertical band saws, and a variety of hand tools—to the regionals we attended. On Thursdays, we send our team members out to help teams who need more assistance to ensure they are competition-ready by the next day. We have helped teams whose robots had been taken apart by customs or got broken in transport. Along with that, we bring \$1000 worth of spare parts to give away, i.e spare motors, batteries, Lexan, aluminum, and spare wiring. This is a tradition we call Miracle Thursdays.

For us, it doesn't end at helping FRC teams. 5 years ago we started an FTC team at our feeder middle school, which has grown to 3 teams due to a high level of interest. We have a total of 36 middle schoolers we mentor and sponsor. We host these teams at our shop, creating an educational environment for them as they learn from us. Team Driven has also assisted an FLL qualifier and 3 years ago we hosted 2 FTC double meets at our high school.

Team Driven is proud to have developed a supportive STEM community, a place where FIRST thrives. After building this strong foundation, we focused our attention on fueling our community and continuing to provide the resources it needs to support STEM. To accelerate FIRST, we inspire young minds with interactive and engaging experiences open to all.

Team Driven is a student-led engine, sparking a passion for STEM and FIRST into those around us.