Chairman's Award - Team 2341

Print Close

2020 - Team 2341

Team Number

2341

Team Name, Corporate/University Sponsors

The Boeing Company/Singletrack Integration/Enviro Systems Inc./HAAS Foundation/Team Tinker - Tinker OC-ALC/Citizen Potawatomi Nation/OG&E/Northrop Grumman/Mid First Bank/Canadian Valley Electric COOP&Gordon Cooper Technology Center

Briefly describe the impact of the *FIRST* program on team participants within the last five years.

Alumni have earned $83,000 in FIRST scholarships and pursued engineering because of FIRST training. 90% of our members attend college, 66% graduating with STEM degrees. FIRST connects team members to STEM professionals and businesses, helping with jobs and internships. 2341 approached the Career Tech Board of Education to create a path for FIRST members to receive 1 elective high school credit per year. Now all Oklahoma team members can include FIRST in achieving graduation from high school.

Describe the impact of the *FIRST* program on your community within the last five years.

This is the 9th year for our Le' go Your LEGO Drive, donating over 2500 LEGO kits to 13 hospitals in 7 states. We host 28 STEM events each year impacting 26 districts, including Mother/Daughter STEM Night and SOAR3 STEM camp. We participate in community events like the Family Promise Walk and Cancer Bowl-a-Thon. We volunteer at the OKC Regional Food Bank and Community Renewal events. After spreading FIRST, about 200 students in our community are FIRST members being led to STEM careers.

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

Our STEM on Wheels program takes robotics, nutrition and STEM careers to areas where poverty is prevalent. The Avedis Foundation gave us $15,000 so we could write lessons and fund this camp for all 26 of our districts in our STEM on Wheels trailer. Last year the Tinker AFB STEM Coordinator asked us to put together STEM City at the Star-Spangled Salute Air Show, drawing 285,000 people with whom we shared FIRST. He asked us to help plan the next STEM City at the Tinker Air Show in 2021.

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

2341 puts the Core Values of FIRST…first! Yearly, we raise over $40,000. About $600 is spent on other FIRST teams, $25,000 is spent on STEM, and the remainder is spent on our team. We share our practice field with about 10 teams per year, manufacture robot parts for teams with our water jet(12 so far), and strengthen FIRST by running events such as Robot Rampage, Brainstorm Night and Robot Showcase(last big practice), setting the tone for Coopertition. Our mission is to grow FIRST in Oklahoma.

Describe the team's initiatives to help start or form other FRC teams

Team 2341 shares FIRST at the Governor's STEM Summit, STEM and Aerospace Day, and the OKACTE educators' conference. The past 3 years, we started and led Teams 6464, 6891, 6900, and 7473 through their rookie years. This year we have done the same for Teams 8086 and 8074. The Anadarko school superintendent asked us last year to help them form their team for this season. We help rookie teams build and program, and create safety and Chairman's programs. We give support to them throughout the year.

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

We have started 32 FLL Jr. teams and 51 FLL teams. We provide robot kits, registration fees, t-shirts, promotional materials, and workspaces to those teams. We have started 3 FTC teams seeking school board approval and found coaches and mentors for them. To help start those 32 Jr. FLL teams, we provided information about FIRST, registration help, advice on LEGOs to purchase, how to make posters and publications for the teams. and the season requirements in a summer training course.

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

Team members trained 25 FLL Jr. coaches, mentoring them their rookie year. We have a Sprocket In Training program, inviting the teams we mentor to visit our practices and attend our Oklahoma Regional competition with us. 2341 assistant coaches and mentors 5 FLL teams, going to their practices and competitions up to the world level. 7 of our 23 members are from those FLL teams. Team members mentor other FIRST teams, letting them tour our facility, drive our robot, and take our safety classes.

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

Our team has partnered with the 2 FTC teams at our school to mentor FLL teams in our area, such as the NERDs and Team X. We collaborate with Team 5578 to host Robot Rampage and Showcase so that struggling teams get needed help from our more experienced teams. This year, our scouting team is partnering with Metal Mayhem at the Oklahoma and Tulsa Regionals to help build and strengthen their scouting program. Our team hosts CAD and LabView classes in the fall open to all teams in our area.

Describe your Corporate/University Sponsors

Our sponsors provide financial support, mentors, and volunteers at FIRST events each year. Beyond this, they also actively recruit team members for internships and jobs. Our sponsors include the AVEDIS Foundation, Boeing, EnviroSystems, Gene Haas Foundation, Northrup Grumman, OG&E, SingleTrack Integration, Gordon Cooper Technology Center, Tinker ALC-AFB, and many more. We are very grateful for all of our sponsors and advertise them on our shirts, robot, and banners.

Describe the strength of your partnership with your sponsors within the last five years.

Building and maintaining relationships with our sponsors is an important aspect of our team. Many of our sponsors attend both our practices and competitions. One of our sponsors, OSU, gives us $700 to build a full practice field so we may invite other teams to practice. In return, we manufacture parts for their Baja racing team. A huge connection with our sponsors is their support for our Le'go Your LEGO Drive. The Sprockets believe that the more exposure we provide, the more FIRST will grow.

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

On the outside, the focus of FIRST is building and competing with robots, but its impact and motivation go deeper. It gives students technical and soft skills and connects members to scholarships for furthering STEM and engineering interests. Experts in STEM fields help us brainstorm and build throughout the season. The competition allows students ages 6-18 to compete in a unique challenge, which changes every year, and to win awards and make connections in many areas for their hard work.

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

Extending our reach to young children became important after meeting 3-year-old Maggie by chance. We invited Maggie's family to a Regional, which started her on the path to loving robots. Because of our impact, her mother is now starting an FLL Jr. team. To help reach young minds, we founded LEGOs for Little Ones. This program introduces STEM and LEGOs to kids in hospitals and clinics. The Sprockets believe that when children are put on the path to STEM early, their level of potential soars.

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

In the past 13 years, 2341 has worked to strengthen the FIRST and STEM communities by mentoring and assisting 100+ teams, bringing LEGOs to sick children, participating in 53 different community events, and introducing STEM to young students in poverty. We work to accomplish our mission of spreading FIRST by reaching 18,000+ people each year through outreach events and social media. The next generation of innovators and engineers are right in front of you. You just have to open the door.

Team Captain/Student Representative that has double-checked this submission.

Laura Farris

Essay

Life is fragile and precious. The death of our beloved founder, Woodie Flowers, taught us that. His passing has spurred our team to focus on the important things in life, the things that bring us closer to our community, our government, our FIRST family and most importantly, our team. As Charlie Brown stated, "You've heard it said that you only live once. That's not true. We only die once, but we live every day." Our team has chosen to live every day spreading our love for others, sharing our resources and knowledge of FIRST and STEM, and learning from the experts in their fields that we call our mentors.

Our team has strengthened our program by bonding with our members. We have spent our off-season time not only on outreach but also having fun together as a team. We have become closer by going to movies and having game nights so that we work well together when the season begins. Gaining this appreciation for each other has helped our rookies feel like part of our Sprocket family and confidently move into their roles on the team. We are not a team because we work together but because we respect and care for each other. We are more than just a group of students that build a robot. We're family.

Our mentors are vital in helping us achieve our goals in and out of FIRST. 7 of our team members began in FLL with our mentors. They have guided us through the progression of programs and continue guidance after we leave FRC. Our mentors attend our awards ceremonies, sporting events, and graduations. They invest in who we are as people and become like a second set of parents to us. Because they want to enrich our lives, our mentors help us discover college majors, give us career counseling, tutor us and make donations to our team. They help us write scholarship applications and assist us in finding jobs and internships. Being on the Sprockets provides a life safety net that keeps us on track.

Our team is united with our community because of the local events we host and participate in. Since becoming a team, we have participated in 54 separate community events. This is the 9th year for our Le'Go Your LEGO Drive, in which we collect new LEGO kits and donate them to children's hospitals in cities where we compete. Our goal this year is to collect over 250 kits for donation in Oklahoma City, Tulsa, Chicago, Houston and Detroit. This will bring our total donated kits to 2500 at 13 different hospitals in 7 states. Our team receives kits from community members, local businesses, and other FIRST teams. Hospital representatives told us that LEGOs are the most requested toy by children and are often used for therapy. In addition to the LEGO Drive, we participate and run dozens of events each year including Mother/Daughter STEM Night, SOAR3 STEM Camp, and Boy and Girl Scout Badge Workshops. A new event that our team participated in this year is the Worth It Conference. At this event, girls in our area were invited to listen to guest speakers, participate in leadership activities, and become aware of career opportunities. We were asked to set up a booth and show the girls that robots are not just for men. Many of the young women we spoke with were impressed that our team is almost 50% female.

STEM is more than a set of skills or a career choice, it's a lifestyle. Each year, we host 28 different STEM events for our community. One of our summer programs that impacts over 900 children every year, SOAR3, allows kids to attend a low-cost camp where they can learn about STEM careers through activities. Team members are also members of the Gordon Cooper Regional STEM Alliance, connecting STEM to business leaders, higher education, and politicians. We attend quarterly meetings to make decisions about improving STEM in our community.

Last summer, our team members wrote a grant for $15,000 to the AVEDIS Foundation to fund our new program, STEM on Wheels. This program is designed to provide STEM lessons associated with health and nutrition to kids ages 7-11. Team members wrote 100% of the curriculum that is being taught at each of 26 schools. Our camp is run by team members completely free of charge. By eliminating the need for money and transportation, students that cannot normally attend other STEM camps are able to take part in ours. We realize that it isn't enough for us to only spread STEM in our community. That's why we developed our new 2020 program, Sprockets International, which is designed to take STEM into communities worldwide. We have contacted 50 different FRC teams all over the world, asking them to join our initiative. We share our lessons with the other teams via the Internet. The curriculum is being translated to the required languages for each of those countries. The lessons, along with literature about STEM career pathways, are free to everyone. Our total impact in STEM each year is over 380,000 people.

Our team has started 6 FRC teams, 3 FTC teams, 51 FLL teams, and 32 FLL Jr. teams. This year a team member started an FLL Jr. team through a local Cub Scout group. Team members attended every practice, guiding the rookie coaches along the way. By doing things like this, we learn leadership skills and make ties within our community. Seeing the impact of STEM and FIRST on elementary students makes it worthwhile.

In addition to the teams we have started, we attend events where we share FIRST with an average of over 163,000 people each year. We were asked by Lieutenant General Donald Kirkland's publicist to help organize the STEM City hangar at the Star-Spangled Salute Air Show at Tinker Air Force Base this past summer. We invited other FRC, FTC and FLL teams to come share FIRST with us. We brought a full field and had robots playing the Deep Space game so the community could see what we do in FIRST. A total of 285,000 people attended that event last summer.

Essay - page 2

The Sprockets consider outreach within FIRST to be a key building block of a successful team. Our total FIRST teams started, mentored, and assisted is 143. We have trained 25 FLL Jr. coaches and helped them find funding for their teams. 3 of our team members actively coach/mentor 4 local FLL teams, helping with building, programming, presentations, and competitions. The past 2 years, we have co-hosted the FLL State Championship. Members raised $10,000 to run each event and helped plan the competition, judge, emcee, and reset the fields. We have started 2 FTC teams at our school and assist them through the season. We annually host an FLL Regional Qualifier and FTC Qualifying Event. The past three years, we have led 6 FRC teams through rookie seasons and have even helped them qualify for the World Championship. For example, we aided the Asher Indians, leading them to win the Rookie All-Star award at the Oklahoma Regional. Each year, we build a full practice field for local teams to practice on. In addition, we allow them access to our machine shop and water jet. This season we have given the Commando Bots a tour of our machine shop and cut parts for their robot. This past year, the superintendent from Anadarko asked us to help them start a team. We are now guiding them through their rookie season.

Our team continues to grow relationships with the government to increase awareness for robotics. We have attended the Governor's STEM Summit, Aerospace Day, and STEM Day at the Capitol. We talk with legislators each year about funding for STEM and robotics. This past year, our team accomplished the goal of getting elective credit for every Oklahoma FRC participant. Team members gained support from State Senators, the State Superintendent, and the Lieutenant Governor. In addition, our team visited the Oklahoma Career Tech Board of Education. Because of this, robotics team members can get up to 3 credit hours towards graduation. One of our team members partnered with the Oklahoma Department of Education to create a video about mentoring. The goal of the video was to get a stranger to mentor her on the spot, unaware of hidden security cameras. She was successful and the video can now be viewed on the Department of Education's website.

Our team has influenced over 1,183 people in our community through our safety programs. Each year we visit 26 schools in our area to teach them about various safety precautions. This year we are doing an Environmental Safety program in the hope of educating young children about their environment and how to sustain our planet's resources. In addition, our mentors are 100% ALICE certified in case of an intruder situation. 100% of our team members are certified in FirstAid and CPR. In our efforts to make our communities safe, we have won 5 Industrial Safety awards and 5 Safety Hard Hats.

As students from our team transition out of FRC, 90% go on to college and 66% pursue STEM careers. One of our alumni is currently in his sophomore year and pursuing a paid internship with Lockheed Martin after receiving a FIRST scholarship to attend Oklahoma State University. Our alumni have gotten jobs at Boeing, EnviroSystems, and Tinker. Team members have received a total of $83,000 in FIRST scholarships. We maintain strong relationships with our alumni who attend our practices and competitions, and help us make career choices. One recent alumni helped a current senior on our team receive a $19,000 scholarship by teaching interview skills. Our alumni continue to uphold the Sprockets mindset by supporting the team's mission of spreading FIRST and STEM.

George Bernard Shaw stated, "Life isn't about finding yourself. Life is about creating yourself." Through the love of our parents, mentors and teammates, we are finding out who we are. We are discovering our strengths, learning to love others, and finding our lifelong careers. FIRST is and always will be our foundation for seeking STEM careers. We embrace the opportunities we have been given by being a member of the Sprockets, Team 2341, and they will create in us a lifelong love of engineering.