

Chairman's Award - Team 6413

[Print](#)[Close](#)

2019 - Team 6413

Team Number

6413

Team Name, Corporate/University Sponsors

Si Se Puede Foundation/General Motors/Maricopa County Attorney's Office/Chandler Unified School District/State Farm/Phoenix community Development and Investment Corporation/Frontera Funds/Solidworks&Family/Community

Briefly describe the impact of the *FIRST* program on team participants with special emphasis on the 2018/2019 year and the preceding two to five years

100% of Degrees of Freedom (DOF) alumni have gone to college majoring in STEM fields, as well as 100% of current members having an interest in going to college. As a result of being on the team, students have reported an improvement in confidence, academic motivation, and technical skills. Students have graduated our program with experience in organizing outreach events, working with industry professionals, mentoring young engineers, and collectively completing 6000+ hours of community service.

Describe the impact of the *FIRST* program on your community with special emphasis on the 2018/2019 year and the preceding two to five years

DOF focuses on reaching underrepresented demographics, including the elderly, at-risk youth, and people with disabilities. DOF emulates the *FIRST* core value of inclusion through our outreach to all ages. DOF volunteers at an elderly home, Solterra, by holding tech seminars. In the summer, we host Destination College, holding daily STEM experiments, building FLL robots, and having FRC info sessions. We also visited ACCEL, a school for students with disabilities, and adapted 2 SeaPerch robots.

Team's innovative or creative method to spread the *FIRST* message

For 3 years, DOF's summers have been dedicated to planning and running camps for 300+ elementary students. The team incorporates all aspects of *FIRST* into these camps from robots to instilling Core Values. ~50% of the students join one of DOF's FLL teams. Many students who have participated in these camps go on to join DOF in running them when they get older. We also host Train the Trainer, incorporating teachers into the camps by teaching them how they can start their own *FIRST* teams.

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

All year long, and even during build season there isn't a week that goes by where DOF is not acting as a role model and inspiring others. Since many of our team members have previously participated in FLL, they pay it forward by becoming mentors for these teams in hopes of being an amazing role model for the next generation of engineers. DOF recognizes how important it is for young engineers to have female role models by making sure that all 6 of our FLL teams have female mentors.

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

DOF leveraged a connection with one of our mentors to get in touch with a pre-rookie team, 6833, from Phoenix Coding Academy in 2017. We visited their school and taught everything they needed to know to be a successful team. We also invited them to 3 outreach events before kickoff so that they could observe how to run their own outreach events. When they competed alongside us at AZ West, we assisted them with pit judging and are proud that they won the Rookie Inspiration Award.

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

DOF partners with the Si Se Puede Foundation (SSPF) to start and actively mentor 6 FLL teams. Each team has 2 student mentors and the whole team works to support the collective FLL program. After spending the entire season applying Core Values during meetings, one of our teams, 8th Wonder of the World (8WOW), won the Core Values Award and advanced to the State Competition. DOF volunteered at this competition to support Arizona FLL and cheer on 8WOW.

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

DOF hosted our third annual Train the Trainer initiative where we educated teachers from 5 schools about FLL, including how to build robots, what to expect at competitions, team logistics, and other FIRST programs. Educating these teachers about DOF will help them guide their students to other levels of FIRST after FLL. We also assist the FLL community by volunteering at 3 competitions annually and by volunteering we are demonstrating gracious professionalism across all levels of FIRST.

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)

DOF has worked closely with Binary Bots (BB) in both mentoring and community outreach. BB has partnered with DOF to help mentor 3 SSPF FLL teams. We also work cooperatively to host our annual Destination College and Train the Trainer initiative. This fall DOF and BB coordinated a trip to a low income area in Phoenix to hold a 2 day long STEM camp. This past summer, DOF invited Plasma Robotics to a back to school STEM fair in Phoenix where we got to demo our FRC robots for the community.

Describe your Corporate/University Sponsors

Our parent sponsor is the SSPF, a non-profit organization and our main source of funding and logistics. They provide a lot of opportunities, such as the Scholars Program, a college-prep program that is a direct funnel of new students to DOF. SSPF has also introduced us to many sponsors, including State Farm, GM, and the Latina Giving Circle (LGC). In addition to financial support, GM has provided 50% of our mentors, and LGC allowed us to attend a business etiquette dinner.

Describe the strength of your partnership with your sponsors with special emphasis on the 2018/2019 year and the preceding two to five years

City-wide events such as the Chandler Chamber of Commerce Mayor's Night, helped us built a strong relationship with our sponsor the City of Chandler. As a community team, the city honors our service as we continue to leave a positive impact on its young residents. Just as we help promote the spirit of STEM in the community, they help us in our times of need. Last season we lost our buildspace and the City of Chandler connected us with Gangplank, a collaborative makerspace in our community.

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

F-FAMILY: FIRST is a like second family which cannot be replaced; I-INCLUSION: including people of all ages, ethnicities, and abilities in the spirit of STEM; R-RELATIONSHIPS; Students learn to establish relationships with industry professionals and sponsors; S-SELF CONFIDENCE; FIRST supplies the tools necessary to improve students confidence that they can change the world; T-TRANSFORMING; FIRST transforms the lives of nearly half a million people worldwide;

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

This year, DOF continued to spread the FIRST message through a coordinated social media campaign. On Takeover Tuesday, students share what they do at meetings on our Instagram story. We appreciate our female role models in STEM on Woman Crush Wednesday. DOF takes a blast to the past on Throwback Thursday and shouts out our FLL teams on FLL Friday. We promote safety in the FIRST community with Safety Saturday and also develop a stronger relationship with our sponsors with Sponsorship Sunday.

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

Camila Trevino

Essay

Degrees of Freedom 6413 (DOF) was founded with 9 members and in 2 short years, our team has doubled in size. We are a femme student led team focused on empowering everyone in our community - no matter the gender identity, race, creed, national origin, age, sexual orientation, or disability - through the use of STEM education and opportunities. In preparation to blast off, we will walk you through some of our achievements! T-minus 10 minutes to launch, Team Demographics, ready!

DOF is an all female team and we are proud of our diverse backgrounds, which include 16.6% asian, 16.6% white, and 66.8% hispanic or latin american. We also take pride in the fact that 100% of DOF's alumna have gone to college. Our empowered teammates successfully balance school and robotics with an average weighted GPA on DOF is 3.40 weighted. For the students who have taken the SAT, scores average 1357 compared to the national average of 1060. Before joining DOF, 53% of members participated in FLL/ Jr.FLL, and 78% of DOF currently mentors FLL Jr./FLL. Only 52% of team members were interested in STEM prior to joining DOF, which has increased to 99% after they joined. Of these girls, 59% of them will be the first in their family to pursue a STEM career and 71% will be first generation college students. T-minus 9 minutes to launch, Mentoring, ready!

DOF gives to FIRST by serving as youth mentors. We partnered with our parent sponsor, Si Se Puede Foundation (SSPF), to start and mentor 6 to 8 FLL teams every year. For the past 3 years, we have been mentoring these teams alongside our brother team, Binary Bots 5465. These FLL teams is mentored by 2 DOF team members who teach them everything about FIRST, from core values to programming. We also teach them about FRC to sustain their involvement in FIRST as they get older and transition into DOF. Beyond mentoring these six teams, we also run a Train the Trainer initiative. Through this program, teachers from 5 schools learn about how to start their own FLL teams, including how to build robots, what to expect at competitions, and team logistics. T-minus 8 minutes to launch, Assisting Fellow Teams, ready!

Last year, we assisted two FRC rookie teams: Team 6871 and 6833. After 2018 Kickoff, we visited each team at their schools and discussed everything from team structure to organization. We then shared build and strategy ideas followed with an outline of the following season. After that, we kept in contact by answering their questions throughout the season. We continued to assist both teams at the AZ West Regional by checking in at their pit, going over judges questions, and reviewing 6833's Chairman's presentation. We were the first ones to cheer when 6833 won Rookie Inspiration and Rookie All-Star last year. 6871 also won the Rookie All Star and Highest Seeded Rookie twice. We stay in touch with these teams through social media and volunteering at FIRST community events. T-minus 7 minutes to launch, Community Outreach, ready!

DOF attends various outreach events to spread the spirit of FIRST into our community and beyond. We participated in the city of Chandler's annual STEM day in 2017 and 2018, which was attended by over 5,000 people. Here, we set up a booth and did a demo of our FRC and Mindstorms to spread recognition of FIRST. We were also invited to the State Farm ASU Tailgate where we set up one booth for a robot demo and another to educate the 50,000 attendees on the opportunities FIRST has to offer. In 2018, team members attended a Girl Scout Lock in at ASU, where we gave a 20 min presentation about how to get involved with FIRST and what it has to offer for Girl Scouts. Due to our friendship and shared values with the Latina Giving Circle, we were invited to a business etiquette class and got a chance to speak about FIRST to program participants. During the fall, we also held a 2 day STEM camp at a Title 1 housing community in Phoenix. Here, we engaged 40 kids in an FRC robot demo, Mindstorms, and multiple science experiments. T-minus 6 minutes to launch, Even More Outreach, ready!

To represent our community to the fullest, we strive to reach underrepresented groups. This entails our work with Solterra, ACCEL, and Destination College. At Solterra, an assisted living home, we teach the elderly them how to use their technology, from how to check the latest Chicago Cubs scores to Skyping a loved one. We visited Arizona's Center for Comprehensive Education and Life Skills (ACCEL), a school for students with special needs, to help us better understand how we could get the students be more involved in STEM. After this, we built and adapted 2 robot submarines for the school to help students gain cause and effect comprehension, which would ultimately prepare the students to learn life skills such as how to drive their powered wheelchair.

For the past 3 years, DOF has hosted Destination College, a 2 week summer workshop for students who live in low-income families. During these workshops, we perform science experiments, and introduce FLL by having the students design, build, program, and test FLL robots on a mock course. On the last day of the camp, we hold an FRC day where we invited other FRC teams(2403, 4183, 842) to demo their robots for the students. T-minus 5 minutes to launch, SciGirls, ready!

Essay - page 2

In 2017, team members were featured in Emmy nominated SciGirls, a PBS Kids TV show that promotes STEM to young girls. We starred in the bilingual SciGirls bilingual episode, "Mejorando Procesos" and worked closely with Intel Engineer, Orietta Verdugo. Following the broadcast of SciGirls, when our team heard that P.K. Yonge Developmental Research School from Gainesville, FL watched the episode of SciGirls that our team was featured in, we decided to give them a surprise that they would never forget! They wrote letters to the team, asking us all about STEM and we made a response video to show them just how accessible their role models are. They were so overwhelmed with happiness they sent back a student made response video thanking the SciGirls for inspiring them. In doing this, we take being the SciGirls farther than a 30 minute episode and we make it apart of our identity. We were also invited by Arizona FIRST to attend the annual National Council De La Raza Expo. At this event we were recognized by the National Council and got to speak to them and their sponsors about FIRST Robotics. At this event we were able engage 17,000 people by demoing our FRC robot and educating the public on FIRST. T-minus 4 minutes to launch, Social Media, ready!

This past fall, DOF expanded our social media following by doing weekly posts across all social media platforms. During National Mentorship Month, we posted about our mentors and their constant support. This is followed by Take-Over Tuesdays, where a DOF member takes over different accounts to share what they do on the team. On Women Crush Wednesdays, we recognize famous women in STEM. Throwback Thursday posts include a photo of us from our rookie year. And on FLL Friday, we feature our FLL students on our social media platforms. On Safety Saturdays we highlight a FIRST safety rule. Finally, Sponsorship Sunday posts are dedicated to our sponsors and the support they give to us throughout the season. Due to these efforts, our content has been viewed 80,000+ times in 89 countries, and our social media following have doubled in size. T-minus 3 minutes to launch, Volunteering, ready!

The team has proudly volunteered 6000+ hours in the last 3 years. On average, returning members complete 150+ volunteer hours a year. This year, we have completed 2100+ hours so far, and are on pace for 2400. As a team we have completed the equivalent of 100 days of service. 1200+ of these hours are dedicated specifically to FIRST programs. In addition to mentoring FLL and FLL Jr. teams, we also volunteers at various FIRST competitions. We have volunteered at the AZ FRC Championship and 8 FLL competitions, 3 this year alone. We also volunteer by mentoring our FLL students on SeaPerch teams to maintain STEM engagement year round. T-minus 2 minutes to launch, Team FRC Achievements, ready!

In 2017, we were awarded the Rookie All Star Award. This highlighted our achievements as a new FRC team. The following year we received the Engineering Inspiration award, as a two year team this was a huge deal, teaching us that no matter how young of a team we are, that the hard work pays off and used this as motivation to strive to do more. This is all thanks to our mentors and sponsors. T-minus 1 minutes to launch, Sponsors, ready!

We greatly appreciate all the help we get from our community and sponsors in sustaining our team. Our gracious sponsors include; Si Se Puede Foundation (SSPF), General Motors (GM), Latina Giving Circle (LGC), State Farm, ASU, NASA, the City of Chandler, Olive Garden, and Kagen Photography. Our parent sponsor, the SPPF, a non-profit organization that provides our funding and logistics. SSPF also provides DOF with many opportunities, like scholarships, and college preparatory programs. Another sponsor, GM has provided us with mentors and financial support. LGC has also offered financial support and multiple opportunities, like business etiquette classes. We maintain these relationships by giving back to our sponsors through different sponsorship levels and inviting sponsors to meetings. T-minus 0 minutes to launch, Degrees Of Freedom, ready!

The purpose of our team is to use STEM to empower any person, no matter gender, race, creed, sexual orientation, nationality, age, or ability. Through STEM and FIRST we have successfully cultivated a community of young engineers and FIRST enthusiasts, be they FLL students, parents, sponsors, the elderly, those with disabilities, and everyday people. Our biggest accomplishment has been to pass along our knowledge of STEM to future generations and leave an everlasting, positive impact on those around our team and beyond.