Chairman's Award - Team 6352

Print Close

2021 - Team 6352

Team Number

6352

Team Nickname

LAUNCH TEAM

Team Location

Surprise, Arizona - 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.

Currently, more than 80% of FRC6352 graduated team members are pursuing college degrees in biotechnology and engineering including EE, ME and Aeronautical and 100% are attending college. FIRST and FRC6352's use of formal design, strategy and game-plan documents helped direct these students toward STEM degrees. Current FRC6352 members plan to pursue STEM after they complete high school. Our team founder, Stephen Robertson, is forming a FIRST club at ASU-Tempe with other former teammates.

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

As one of the first west valley FRC teams, FRC6352 received a City of Surprise grant and introduced city leaders to FIRST and showcased STEM through GAIN night, SciTech and Tech the Halls. We held an FLLJr Expo at Ottawa University. We've had tremendous growth expanding FIRST through FLL programs to Dysart, Wickenburg, Paradise Honors, Heritage and Saguaro schools in Surprise, Wickenburg, Glendale, Peoria and Phoenix. We are partnering with the City of Surprise to promote our Awesome Awards.

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?

We spread FIRST by creating opportunities. We have reached over 300 K-12 kids by sharing FIRST's Curriculum in videos and STEM kits and by adapting kits for home instead of classes. Our LEGO Education grant provided FLL Explore and FLL materials we lend to teachers to run a free season and we use this model for FLL Discovery. We provided Heritage Elem free help so they could stop paying an outsider to run their LEGO programs. Everyone returns for kits and they are sending more recruits our way!

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 members act as role models by supporting FIRST. We assist new teams and serve as mentors to FIRST programs. You'll often find us judging at regional qualifiers and state championships. We also inspire fellow students, even if they're not on the team, to volunteer at FIRST events. Our alumni mentors have helped students with college applications, majors and job searches. We inspire others to look beyond borders and mentor FIRST Global teams like we have with Team Malta and Team Venezuela.

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

FRC6352 has started and supported a great many FIRST teams including writing grants and providing resources for FRC8021, FTC14940 and 17469 in partnership with Paradise Honors. We assisted FTC11365, 11794, and 13604 at Sunrise Middle School. In addition, we started and provided resources to FLL40658 and 43764 at Sahuaro Elementary and FLL46894 at Scottsdale Prep. Academy. This is in addition to starting 9 FLL Discovery, 63 FLL Explore, and 4 FLL Challenge class pack teams across the state.

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?

FRC6352 works hard to inspire and encourage. We bring interested students to volunteer at regional events, start teams and provide STEM materials and lessons to K-12 students as well as robotics kits for use at home and in the classroom. FRC62352 proudly gives the Awesome Award to students involved in their community and school endeavors during Covid. Students are working on safety items and mental health for fellow neighbors as well as learning new STEM concepts on their own outside of class.

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

Our strongest partners are those we gain through community outreach. The AZSciTech Institute helped us reach Arizona and other states through our FIRST@Home STEM kits. Ottawa University provided space to host the first ever FLL Expo in Surprise. The City of Surprise allowed us to join their Techcelerator community. Culver's was unique because we partnered in a fundraiser, not for us, but for a fallen officer's family. We're working with FIRST to develop FLL Challenge at Home season materials.

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

Through our fundraising and partnership with our sponsors, we've been able to make FRC6352 inclusive by making it completely free to join and compete. As a community team, we are open to any student that wants to join. Currently 2/3 of our team is demographics underrepresented in STEM. We encourage equity by encouraging students to try everything. Whether it's driving, building, designing or administration, we ask students to try all areas so they find and pursue their interests.

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

We believe our team and mission will continue because of our community outreach. Creating and mentoring teams at every level ensures that students will always have another program to graduate into and additional opportunities to learn new skills. We are excited to expand our outreach beyond the school year by proving programs in the summer via our new virtual platform and possible camps if Covid subsides. Partnerships with Ottawa and the City of Surprise allow us to present at their events.

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

Mentors from our Toyota partnership have instilled an engineering mindset and introduced us to continuous improvement and the Toyota Way. We've presented and demoed the robot at their engineering facility, which brought us additional mentors. We partnered with Toyota for a food drive for Saguaro Jane's Food Bank. Bechtel also supported our FRC and FLL Explore programs through in-kind and monetary donations. We have also demonstrated to Bechtel and have had them join us during the build season.

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

One area we can improve is maintaining our number of students. Last year, we lost several students to graduation and have had difficulty replacing them due to Covid. We are solving this by creating opportunities that increase awareness of FIRST. We are using our sponsorship of younger level robotics teams to recruit for FRC6352. We believe that increasing our exposure in areas that don't have FRC or FIRST teams in general will help us grow our team. We also want a more permanent work space.

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

Our mission as FRC6352 is to "inspire young people within our community to get excited about science, technology, engineering, and mathematics, by both engaging them in and increasing community awareness of the exciting opportunities available to students through FIRST." Our team started in Peoria but as we grew our reach and "community" grew too. We started very small but now our impact reaches as far as California, Utah, and New Mexico, and well as across the Valley.

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.

Though Covid has made competing different and somewhat difficult, it has also given us the chance to be the most impactful. It opened new opportunities for us to give back and inspire an appreciation for STEM. Not only has it inspired the team, it motivated individual members to find new forms of outreach. From acknowledging motivated students in our community to creating resources to help FIRST teams world wide, the work FRC6352 has done will continue to help even after the pandemic has ended.

Essay

"We are LAUNCH TEAM 6352, a community-based FIRST Robotics Competition team in the West Valley". This simple sentence holds more meaning than one might think and represents years of STEM outreach, community involvement and robotics programs all with the purpose of spreading the FIRST message to Phoenix's West Valley and giving students opportunities. Founded in 2016, the team's mission is to inspire young people in our community to get excited about STEM by engaging them in and increasing community awareness of the myriad of opportunities available by FIRST.

Our unique methods for spreading FIRST are early exposure to FLL Explore and Discover programs. We ignite students' interest in STEM at a young age and take advantage of their natural curiosity to ensure a lifelong love of engineering. We were awarded the LEGO Education grant during the 2018-19 school year. We started 35 FLL Explore teams the first year, reaching over 160 students at New World Education Center, Paradise Education Center, Cimarron Springs, Thompson Ranch, Nadaburg and Parkview Elem. Last season we started 18 teams at Phoenix Advantage, Nadaburg, Heritage Elem and Freedom Traditional. We returned this season to Nadaburg and community groups for an additional 10 teams. The key to these programs is bringing materials to the schools as a "free-trial" of FIRST. Teachers and students borrow everything they need to run a season and return it at the end of the session. If they enjoyed it, we help them start their own team with FIRST grants. In addition, we also hosted and ran two FLL Explore Expos during the 2018-19 school year, one at New World Education Center and one on the Ottawa University Surprise campus. Both events included FLL and FRC displays to encourage kids to advance to the next level of FIRST. We awarded students medals and certificates to show their achievement. With the success of this program, we also started an FLL Discovery class pack of 9 teams that reached over 40 students and mentors at Phoenix Advantage, Nadaburg Elem and Heritage Elementary.

Our team also works to spread FLL Challenge in our community. In 2019, we received the FLL Connections Grant for 2 Challenge Class Packs. To date, even at this difficult time we've started 4 teams at Nadaburg, West Point and Phoenix Advantage Schools. Our team members have volunteered at events like the Central Phoenix, N. Phoenix and Tucson Qualifiers, the State Kickoff and State Championship as judges, referees and queuers. Surprisingly, we've helped both rookie and veteran FLL Challenge teams with a very common problem - the game table. Most teams struggle to keep a FLL table setup throughout the entire season as it is heavy, large and difficult to move. We designed a Teacher Friendly FLL Board and raffled 2 at the State Kickoff while also sharing our instructions and published resources to 70 team members and mentors. After the event we also donated 5 boards to FLL teams. FRC6352 started and mentored FLL49866 at Heritage Elementary, introducing them to FIRST through FLL Explore and Discover. We also introduced FLL46894 at Scottsdale Prep. Academy to the program and provided published resources to get them started. In 2018-19, FRC6352 started and assisted FLL40658 and FLL43764 at Sahuaro Elementary.

Continuing through the FIRST progression, FRC6352 was part of several FTC valley teams. We assisted and provided resources for 3 teams at Sunrise MS in Paradise Valley, FTC11365, FTC11794 and FTC13604, for the past four years in partnership with FRC1165 and FRC3019. We also donated the entry fee to the 2019 state championship. These students have now graduated to high school and attend Paradise Valley HS for their FRC team. Since Team Paradise is unable to compete this year due to the pandemic, we invited members from those FTC teams to join us. We also started and provided published resources to FTC14940 and FTC17469 at Paradise Honors MS and funded them through rookie grants and a community grant from the City of Surprise. Lastly, some members have volunteered at FTC events like the West Valley Qualifier as referees and queuers.

Last year, we started and mentored another FRC team in the west valley, FRC8021 at Paradise Honors HS. We've written several grants for them such as NASA, AZFirst, and FIRST rookie. We also provided published resources like a packet with "Everything you need to know about FRC", including information from AndyMark, FIRST Choice and WPILib. We guided them through the basics of how to start a robot build by connecting them with the right tools, drive base and software. We kept in contact in order to collaborate on robot design and award submissions by meeting at least once a week during the 2020 season. After Covid hit, we helped them apply for funding from NASA and FIRST's Wheels on Carpet program, and provide support for the virtual season. They are sustainable since they will gain members from the FTC teams we started at Paradise Honors MS, and through their own FLL program. Another way that we help FRC teams is with our LAUNCH Accelerator Packages. Started in our second year, LAUNCH Accelerator is a startup kit for rookie FRC teams filled with things we could've used during our rookie year: document templates, safety glasses and a first aid kit. Over the past 3 years we've sent packages to 12 different Arizona teams.

As a community based team, we are active members of the community and thank them for their support. We've participated in several STEM based events such as the Surprise SciTech Festival. We were the first FIRST team to attend this event and were on the planning committee the second year. Another Surprise event we attended was Tech the Halls, a holiday themed event held at the AZTechCelerator, showing off local tech firm projects. Additional events included the Microchip Masters event as well as the Diamondback's Science of Baseball event where we demonstrated our robot and shared information about FIRST programs in the West Valley. This year, we also are giving back to students who are helping others and we want to acknowledge them. We created the "Awesome Award" in partnership with the City of Surprise. Each student nominated will be recognized by the team and City of Surprise with a certificate and awarded a fun STEM kit.

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In addition to all of our STEM related outreach, we know it is important to spread the message of FIRST, even at untraditional events. For the past two years, we've attended GAIN Night, a Halloween event hosted by Surprise PD. We displayed our robot while hosting a STEM fishing booth. We also attended the Furry Friends Festival at Toyota of Surprise. We were an award winning entry in the APS Electric Lights Parade in 2019 with other FRC teams and the Maricopa County School Superintendent. This year, we donated food and $400 to St. Mary's food bank as seen in The Daily Independent Newspaper June 17th. Our most impactful outreach activities honor Officer Clayton Townsend, an alum of our fellow students, who was killed by a distracted driver. To help the family, we held a Culver's fundraiser, created a PSA for the Yellow Light Project and spread the acronym F.I.R.S.T "Forget It, Really, Stop Texting" using keychains in exchange for pledges to not text and drive. We dedicated our season to Officer Townsend and were recognized by 12 News for our efforts. This year, we achieved our goal of adopting a Peoria street in his honor. We also provided STEM Christmas presents to his son.

Many organizations financially support us including Bechtel, Toyota, AZFIRST, Triangle Fraternity, Whataburger, ACSS and BNSF. Our sponsors are more than financial support, they represent a partnership we've with our community. Our mentors from Toyota have brought their design philosophies to our team, such as kaizen (continuous improvement) and the Toyota Way. We've toured their test facility and presented our robot to their engineers. Ottawa University and the City of Surprise have partnered with us by providing a space for the FLL Explore Expo, introducing us to grants to fund and sustain new FIRST teams and even take advantage of their engineering program to recruit volunteers for events.

Due to the Pandemic, the 2020 Surprise SciTech Festival was cancelled but our board position allowed us to meet with the Arizona SciTech Institute and develop a new remote format for February. We presented live streamed and pre-recorded STEM presentations through the month. FRC6352 hosted FIRST Fridays every week with the FIRST@Home curriculum and created videos explaining the missions, core values and new vocabulary. We mailed mission materials including Legos, Brain Flakes, crayons and other supplies to over 150 registered families across 3 states.

With these 3 years of activities behind us, it is important to plan for our future and continue growing our efforts to spread FIRST. Prior to the pandemic we were working with Ottawa and the City of Surprise to hold more FIRST events. We would like to hold an FRC event and an FLL Qualifier in the west valley and they have agreed. Finally, we're working with the directors of FIRST Education: Lori Birch, Libby Simpson and Pankey to publish materials we created for FLL Challenge. With so many class pack groups unable to meet due to the pandemic, we designed a way to host a season remotely over Google Classroom and divide the robot game into household kits using modified fields. In this platform, students can still brainstorm, communicate and practice their core values by having fun working collaboratively on the mission. This is our effort to ensure students don't miss out on FIRST. By redesigning the engineering notebook and adjusting team meeting structures, the program also provides a flexible schedule. The pandemic won't last forever, but we know this work will help future students in remote locations for seasons to come and may include homebound students, those at the children's hospital or those without access to a team.