FIRST Impact Award - Team 6352

2025 - Team 6352

Team Number

6352

Team Nickname

LAUNCH TEAM

Team Location

Surprise, AZ - USA

Describe the impact of the *FIRST* program on team participants within the last 3 years. Think about percentages of those graduating high school, attending college, in STEM careers, leadership skills, and serving as mentors/sponsors in *FIRST* programs.

FRC6352 has a 100% college attendance rate including a doctoral candidate with the vast majority pursuing a STEM career. 100% of FRC6352 participated in STEM outreach and community service with over 450+ hours this year alone and over 1500 hours over the past 3 years. 100% of students report that being a part of FRC6352 has improved both their technical and soft skills. Students on LAUNCH TEAM report that the team has become a very important, beneficial part of their lives.

Describe your community along with its unique opportunities and circumstances. Think about your geographic region, diversity of town/school, language barriers, socioeconomic barriers, and cultural expectations.

FRC6352 is in an isolated corner of Phoenix with the closest community team over an hour away. We have the unique privilege and challenge of pioneering STEM programs in our area. As a community team, we promote robotics through the entire region, as opposed to within the bubble of a school district. Additionally, our team does not charge participation fees and provides lunch at meetings. This along with our gender equity in STEM programs helps our team break socioeconomic and cultural barriers.

Describe the team's methods, with emphasis on the past 3 years, for spreading the *FIRST* Mission in ways that are effective, scalable, sustainable, and creative.

LAUNCH TEAM launches STEM opportunities. We use summer bootcamps to pre-teach programming and building to FLL and FTC students which inspires them to start a team at their school or community. Class packs are shared with teachers at no cost. Our podcast offers topics of interest to students including lessons we have learned. Through our digital platforms, outreach is permanent and passive. These efforts are sustainable and innovative as they continue to grow and inspire students.

Describe your team's goals and the progress you have made towards them to fulfill *FIRST's* Vision.

Our mission as FRC6352 is to “inspire young people within our community to get excited about STEM, by engaging and increasing community awareness of the opportunities available to students through FIRST.” This year we created initiatives that utilize FIRST values and curriculum. These efforts reach from India to The Cook Islands, as well as across our home country and state. Through digital platforms, like our “In Orbit” podcast, we share our FIRST stories even further, reaching thousands.

What impact has your team seen from your efforts described in the above question? How does your team measure impact?

FRC6352 measures impact in 4 main areas. The first is by teams we start, mentor, or assist which is calculated by the number of participants. Community events like scrimmages, festivals, or booths are calculated by attendees. Digital platforms, like our podcast and social media, are tracked in views and likes. Outreach not in these categories is quantified by a method fitting the event, ie. number of plates filled from a food drive. This allows us to see the extensive impact of our outreach.

Please provide specific examples of how your team and team members act as role models within the *FIRST* community with emphasis on the past 3 years. How do you share these best practices with other teams?

FRC6352 students consistently act as role models within the community. In December, we hosted an FLL Regional competition where our students acted as judges and referees, acting as role models of core values and gracious professionalism. We annually send LAUNCH Accelerator packages to rookie FRC teams. These packs share FIRST best practices and include the templates and tools we utilize. Additionally, we have presented our Rainbow Core Values presentation to all of the FLL teams we start/assist.

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

In the past three years, FRC6352 has started an additional 375 teams, mentored 44, assisted 395, and provided published materials to 864, across all levels of FIRST. This year we hosted two months of bootcamps where prospective and rookie teams got to learn basic FIRST skills and values. We also work with teachers and schools to provide FIRST curriculum and start teams in their classrooms. These programs reach globally, spanning from our local school district to India.

What other initiatives have you created, grown, sustained, or participated in (*FIRST* or otherwise) to help inspire young people to be science and technology leaders and innovators? What outcomes have you seen from your efforts in the past 3 years?

Through our bootcamps, we model FIRST values and teach the students STEM skills needed to run their own competition team in their own communities. A brand new project this season was hosting an FLL regional competition and an FLL Explore Expo at Barbara B Robey Elementary School where our own students became leaders. Our other projects, like class pack teams and girl scout programs consistently yield interest from young students and opportunity for our members to exercise leadership.

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

This year our Girl Scouts members were bestowed the Silver Award and lauded by city council members for their efforts to provide STEM opportunities during an official meeting televised on SurpriseTV. FRC6352 is not just known to Surprise, but celebrated. We also have a strong relationship with our new sponsor Discount Tire. After presenting at their tech center, we starred in a company video shared nationwide about our program and encouraging employees to get connected with robotics programs.

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

FRC6352 has students from 12 different schools and 56% are from a demographic underrepresented in STEM. We work to make sure all members have the ability to explore the fields they are interested in. Additionally, we are regional partners for FIRST Ladies and are dedicated to promoting FIRST gender equity. We provide free menstrual products at regional competitions, write guest blogs for FIRST Ladies, host Girl Scout badge nights, and created Brownie and Daisy robotics badge videos and lessons.

Explain how you ensure your team and the initiatives you have created will be sustainable.

We believe our team and mission will continue through 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. Some of our programs include BSA and Girl Scout teams to get their Robotics merit badges. Our unique class pack system utilizes recycled resources and robot kits from previous seasons, encouraging sustainability as materials are used several times.

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

FRC6352 has been working to improve its recruitment of new members. Specifically, we have been working to recruit all year round as opposed to only during the competition season. This has been accomplished by attending and hosting events and boot camps, notably during the summer. This also allows students to experience robotics and want to bring it to their class in the new school year. The fruits of our efforts are clearly visible as we have the largest team in LAUNCH TEAM history this year.

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, particularly noteworthy, or had a large impact.

FRC6352 proudly announces our new FIRST term: OUTREACH ALLIANCE. This is when two FIRST teams join together to impact the community in a spectacular way. Our first OUTREACH ALLIANCE was partnering with FTC10984 BEEP Patrol to make it possible for us to host a West Valley FLL Tournament and start 4 FLL Explore teams. Another OUTREACH ALLIANCE this year was with FRC1165 to start 4 FTC teams in Paradise Valley. Through an OUTREACH ALLIANCE with ASU FIRST Alumni, we built over 100 foam FLL tables.

Judge Feedback

What is the strongest and weakest part of our presentation?

An area the team has an opportunity to improve.

Something that really impressed the judges.

Essay

LAUNCH TEAM 6352 LAUNCHES STEM OPPORTUNITIES! Over the past 3 years we've revamped our outreach to focus on the 3 ways we connect with our community: starting FIRST teams, meeting them digitally, and being active in local events.

LAUNCH focuses on spreading all levels of FIRST with an emphasis on early exposure to ignite students' interest in STEM. FRC6352 lends a "free trial" of FIRST materials to schools. Teachers receive everything needed to run a session. After the season, LAUNCH helps them start their own teams, assist with grant writing or provide additional materials upon request. This process works best when the school integrates it at multiple levels. This year, for the first time in our team's history, we reached all 830+ students at Grande Innovation Academy and their Center for Online Innovative Learning in Casa Grande. This means all 1st-3rd grade students participated in FLL Discover by starting 98 class pack teams and every 4th-8th grade student participated in FLL Challenge through 73 class pack teams. A similar effort was started at Brunson-Lee Elementary in Phoenix this year where we started 6 Discover, 10 Explore and 2 Challenge class pack teams.

This process allows programs to grow with the students' learning. Sky Crossing Elementary graduated from 2 FLL Explore class pack teams last year to 2 FLL Challenge teams this year: FLL67116 and FLL69929. PHX Modern and

Empower College Prep both started with FLL Challenge teams, FLL53597 Neo Mod Squad and FLL59745 Launch Empower respectively. PHX Modern saw such a positive response from the team, the school introduced a brand new STEM pragmatics class for their SPED department in partnership with FRC6352 to teach students social skills with an emphasis on FIRST core values and gracious professionalism. The Empower FLL team was inspired after a field trip to our FRC event, so we helped them take their team to the next level by loaning them a field, robot kits, and starting FTC24154 Empowered Robotics and FTC27398 ECP Squared.

We partnered with Sky Crossing, PHX Modern, Sage Academy, and Scholar's Academy to start 126 FLL Discover class pack teams over the past 3 years. For FLL Explore, we reached out to Barbara B Robey Elementary, Stanfield Elementary, Villago MS, Sun Valley Academy South Mountain, Sky Crossing, Sage Academy, Scholar's Academy, Nadaburg Elementary, and community groups like the Boys and Girls Club Sand's Branch and Robson Branch, for a total of 90 teams started, including 5 competition teams: Alpha Robotics and the R0b3y R4ttl3rs Explore 1-4. Our remote global outreach to India started and mentored 8 teams at the National Institute of Technology in their native language. We celebrate all students' efforts with medals to recognize their hard work and instill an appreciation for the FIRST Core Values.

LAUNCH works to promote FLL Challenge, with 146 class pack teams started at Sage, Scholar's, Villago, Empower, Nadaburg and COIL. At Gavilan Peak in Anthem last year, we partnered with their STEM teacher to develop new STEM lessons through FIRST@Home activities and provided the necessary supplies. By starting 30+ class pack FLL Challenge & Explore teams, we brought robotics to the entire 6th, 7th and 8th grades and upgraded the school's STEM program from a typing class to a project-based engineering experience. This year FRC6352 focused on continuing robotics education during the summer. We hosted a multi-week FLL Explore and Challenge boot camp for local Girl Scout Troops at Asante Library, another at Sunrise Mountain Library for FLL Explore and Challenge, and an FLL Explore camp at Surprise Regional Library. These boot camps helped kickstart the 4 FTC teams we started at Mountain Trail Middle School, giving the rookie teams experience to start from.

LAUNCH is active in the FRC team community, both digitally and physically. Annually, we send AZ rookie teams our "LAUNCH Accelerator" care packages filled with document templates, bumper paint and first aid kits we wish we had our rookie year. We also create digital resources for teams, including videos called One Minute to LAUNCH, explaining fundraising, awards and pit layout. We participate in the Arizona Robotics League in Peoria to show support for robotics events in the West Valley. We are recognized as a regional representative for FIRST Ladies to advocate for gender equality in STEM. Last year, we created our 'In Orbit' podcast targeting audiences that may be unfamiliar with FIRST. Our goal is to share fun, inspirational stories of our teams while providing information. We've released 9 episodes and upload weekly.

Thanks to our sponsors: Discount Tire, General Dynamics, and the City of Surprise, among others. Beyond financial support, they provide knowledge and experience. For example, while presenting at the Discount Tire Technical Facility, we learned about the benchmarking methods used to create their tire recommendation AI. This inspired us to take an engineering approach to our new bumpers in response to the rule change this season. The DT Media team even made a video that was shared throughout the company with how to contact us. Our GD mentor led a team of students on how to conduct an engineering trade study to pick our new motors. The City of Surprise may be our most important team sponsor as the Water Department graciously lets us use their facility for our meetings. LAUNCH has been working with Surprise for many years, participating in events like the SciTech Festival planning committee and attending GAIN (Getting Arizona Involved in Neighborhoods) Night. We presented to the Nevada Governor's Office of Science, Technology and Innovation about Surprise's success in growing their STEM community with our partnership. We expanded our partnership with Surprise and Peoria library districts by developing LEGO Six Brick Activity Kits that can be checked out like a book.

Over 500 STEM Kits were created and delivered to students in the AZ Foster Care program and the Homeward Bound homeless kids shelter. In conjunction with the SciTech Institute, we created 2000+ additional STEM Kits which were distributed across AZ to Little STEM Libraries and at their Signature STEM Events. With ASU West and

SciTech, we presented at their first Global STEM Fair, sponsored by TSMC in honor of 1010 day. At this event, we raised awareness about FIRST Global and recognized the series of Global STEM Corp teams we've mentored, including The Gambia who was competing that same day. The Gambia was especially receptive of our mentorship and has expressed interest in starting an FRC team in their country. This year, we mentored team Cook Islands, who went on to win the FIRST Global championship!

LAUNCH knows that participating in public events creates a spark. We joined the West Valley STEM Hub Steering Committee, presented at the Barrett-Jackson STEM Fest, the Diamondback's Science of Baseball Night, multiple Dbacks STEM Dugout showcases, school stem nights and a new event this year "Sep-STEAM-ber" at the PHX Children's Museum. We shared FIRST info with 700+ families and connected them with opportunities nearby. At this year's SciTech Festival, we hosted the first West Valley FLL Challenge scrimmage, one of two in the entire state! Students presented their project and robot game to receive feedback from FRC6352. 5 teams participated, with 3 traveling over 100 miles to attend and 1 from the Hopi Nation. We increase awareness of STEM through community service. FRC6352 volunteered at Chance Animal Shelter's gala providing technical support for their speakers' presentation. We attended the APS Electric Light Parade with the Maricopa County School Superintendent's Office with our fan-favorite robot Cube-rt and won Best Government Office Float twice. Over the past 3 years we've donated a total of 800+ lbs of food and $300 to Saguaro Jane's Food Bank in Wittmann and St.Mary's Food Bank, which was featured in the Daily Independent newspaper. This year, we donated cases of water and snacks to the 9 fire and police stations in Surprise.

Last year, our new outreach initiative with the Boy and Girl Scouts gave scouts the opportunity to earn robotics merit badges for robotics programming. Troop leaders often don't have the resources for these badges. Our members saw this need and created a digital course for scouts to take, individually or with their troop, to fulfill the three badges for the Daisy and Brownie level Girl Scouts, as well as the BSA Robotics merit badge. Using creative teaching methods for all ages, our curriculum can be used by anyone. Three FRC6352 members were honored with their Girl Scout Silver Awards at a Surprise City council meeting for their work teaching girls STEM in their community.

Why are we so driven to start new teams, spread the word about FIRST and give STEM opportunities to those in need? STEM opportunities are decreasing while the AZ population grows. In Arizona, there are 46 FRC teams registered for 2025. FRC6352 was created because the West Valley lacked STEM opportunities per capita, compared to other areas in Arizona. We don't want to stop at the West Valley. This year, we've forged Outreach Alliances across the state. In partnership with FRC2486 and FRC1165, we started and mentored 4 FTC teams at Mountain Trail MS, after their students were inspired from our summer boot camps. FRC2486 advised us on how to run a successful FLL Challenge event and FTC10984 connected us with Barbara B Robey Elementary to both provide the venue and receive 4 FLL Explore teams we started. We partnered with the ASU FIRST Alumni Organization as part of this Alliance to build over 50 foam FLL Challenge tables to be distributed across Arizona thanks to ASU. With 9 years of experience, we've learned and grown but there is still so much to do. As we plan for the future and continue our outreach, we will continue to uphold the values of FIRST and inspire students whenever and wherever we can.;