

## Chairman's Award - Team 2468

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2022 - Team 2468

**Team Number**

2468

**Team Nickname**

Team Appreciate

**Team Location**

Austin, Texas - 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.**

2468 fosters a stimulating environment where students take entrepreneurial initiative to gain a deeper understanding of STEM. Using a collaborative approach of peer-to-peer mentorship, we cultivate technical and interpersonal skills. Our program holds a 100% graduation rate with 98% alumni pursuing STEM majors. Our philosophy continues to resonate with alumni as they volunteer in FIRST, create college alumni groups at Duke and Rice, and pursue careers at companies like Amazon, Meta, and NASA.

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

Austin as a rapidly growing tech hub enables us to collaborate, pitch to, and engage with large tech corporations like Intel, ARM, and Apple. Our proximity to the Texas State Capitol and recent pivot to an online format allows us to advocate for increased STEM education with a record 107 legislator meetings in the last 3 years. To address an increasing demand for FIRST in our area, we helped fund a 2nd full-time teacher and promoted a bond for a new 8500 sq ft building to house our 3 FRC teams.

**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's message creatively and collaboratively: celebrating 3k+ graduating FIRST students through FIRST Signing Day; partnering with sponsors and FIRST teams to host STEMConnect sessions; presenting at the Texas Women & Girls in STEM Summit; inviting FRC teams and STEM industry professionals to share knowledge on our FIRST in Focus speaker series. Through these recurring events, we have impacted 640k people and the strength of our relationships with partner organizations has evolved.

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

We believe in guiding FIRST students to realize their societal voice. Inspired by this, 2468 students took initiative to 3D print and donate 1200 face shields; in SACOT, we recruited 1090+ FRC and FTC students from 3 states and 62 teams to teach advocacy; embracing the FIRST Access program, we immerse 28 special education students in STEM by organizing demos, teaching Lego robotics, and hosting a competition this February; our 3-team model serves as a framework for other teams looking to expand.

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

By establishing a nonprofit, WESTA, and using STEMConnect profits, we were able to sustainably start and fund 50 FRC, FTC, FLL, & FLL Jr. teams. To introduce 84 new students to robotics, we started a 2nd (FRC 2687 in 2019) and 3rd FRC team (FRC 2689 in 2021) at our high school. We spent 192 hours mentoring 8 FTC teams in robot design, programming, and outreach. At FRC competitions, our students have assisted 44 teams in the last 3 years. Overall, we have mentored and assisted 8 *FIRST* teams.

**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?**

We empower youth to pursue a path in STEM. We've held 11 Science Days at our district's 6 elementary schools to teach 2475 pupils how to explore the scientific method and solve engineering challenges. Coordinating with sponsors, we have engaged 577 children through 18 STEMConnect sessions. To champion a new generation of female leaders in STEM fields, we organized events to recruit, inspire, and mentor 342 girls through our STEMGirls initiative, including Night-Ins and Ice Cream Socials.

**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**

We collaborate closely with HQ, creating weekly content for their official TikTok and promoting our annual *FIRST* Signing Day (FSD) event. To host FSD, we contacted our network of *FIRST* volunteers, team alumni, and academic institutions. SACOT coordinates with *FIRST* teams, legislators, and advocacy organizations. We partner with ClubZ, a low-income afterschool program, to engage students in STEM activities. We work with international FRC teams like 4400 Cerbotics to spread STEMConnect globally.

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

We started our EDI initiative to embrace diverse perspectives: we nurture an inclusive mindset via weekly Team Culture Meetings; with Stories in STEM events, we invite industry speakers to facilitate conversations on EDI; on FSD, we featured alternative career paths to college; our Assistive Technology initiative donates modified educational toys to students with learning disabilities; our STEMGirls pipeline has led to a 27% current total female involvement across 3 teams with 22 female leaders.

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

By encouraging students to take ownership within the team through personal investment, we find future leaders to drive our initiatives. Within our team, we sustain initiatives by adapting to virtual formats, growing a pipeline of *FIRST* programs, and retaining institutional knowledge in team meetings. By sharing our initiatives beyond the team, we realized we could have a greater impact. We helped establish 2 other state advocacy organizations in PA & AZ, and HQ partnered with us to spread FSD.

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

We recruited 27 new sponsors and continued partnering with 23 sponsors, raising \$135K via annual pitches. To show gratitude and display the growth enabled by their support, we invited 24 sponsors to an Open House, including a facility tour and mixer with alumni and students from our FRC, FTC, and FLL teams. We coordinated STEMConnect sessions yearly with corporate sponsors, restoring in-person sessions this summer. We have connected 23 students on our team with internships at sponsor companies.

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

With a rapidly growing program, maintaining a cohesive culture and technical capability became a challenge. To overcome communication obstacles and support a unified community, we organize weekly full-team meetings with icebreaker activities and build challenges to facilitate collaboration and discussion among team members. By reinforcing a peer-to-peer mentorship structure between our 3 FRC teams through student-led training, we expand technical knowledge and address limited mentor recruitment.

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

Our goal is to fulfill *FIRST*'s mission by enabling new audiences in STEM and sharing resources. In addition to our established First in Focus initiative, we created FRCinSight, our new 4-week daily livestream initiative where we produce informative and entertaining content: FRC news, team updates, team history, student and mentor interviews. We have shared knowledge through our Virtual Pit, 15 presentations at season Kickoffs and World Champs, and 42 instructional Youtube videos (4055 views).

**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.**

Exemplifying our Coach's famous question "Are we better today than we were yesterday?", 2468's philosophy encourages students to become the best version of themselves on and off the field. While success might be measured by our 25 blue banners, we view success as the number of new students we introduce to FIRST. Once a group of 36 students working in a storage closet, we have grown to a family of 57 FIRST teams districtwide. For us, FIRST is not about winning but a journey of growth and impact.

## Essay

FIRST describes itself as the "ultimate sport for the mind." 2468 embraces this as fully engaged players, wearing our baseball jerseys & centering our initiatives around FIRST values. Whether we're playing "infield" (strengthening FIRST values within our program & with other FIRST students) or "outfield" (providing avenues for underrepresented groups to experience the impact of FIRST), FIRST equips us with the skills to swing for the fences.

INFIELD - Fostering a community of Discovery, Innovation, & Teamwork, both within our program & with other teams.

We've built programs that promote the full FIRST lineup. We expose students to a future in FIRST FLL by hosting annual Science Days at 6 Eanes ISD (EISD) elementary schools. To inspire future All-Stars, we started 50 community teams & directly mentor our 3 FTC teams through weekly training sessions in our shop. Our pipeline creates a robust path for students to join 1 of our 3 high school FRC teams. To support these teams, we promoted a bond for a new facility that quadrupled our workspace & funded a 2nd robotics teacher with an endowment from our program's non-profit, WESTA. FLL program coordinator Emily M. said: "I've personally seen the pipeline transform kids from the child who would stand in the back, whispering, into the child who can do amazing work with confidence."

Beyond our program, we build a resilient FIRST "league" with other teams. The TARP grant allows us to share resources & mentor 6 FRC teams, including 3 Rookie All-Stars so far. Outside of the grant, we've mentored 8 teams. We've shared 25 technical/outreach presentations at 24 Hours of STEM, Cerbotics' FRC Warm Up Conference in Mexico, our local Kickoff, & the FIRST Rio Grande Valley Workshops. Through sessions like these, we help other teams lay their foundation. To further connect with & learn from others, we host "practice nights" on our field with local teams who don't have a home field to use.

The pandemic threw a curveball so we innovated until the last inning. FIRST in Focus, a virtual speaker series, provides a platform for connection & resource-sharing in lieu of the conversations we typically have at competitions. We've held 12 sessions with professional & student speakers, reaching 3194 viewers. To offer a deeper look into FRC life, we started FRCinSight, a daily livestream that has given 330 viewers a peek at what goes on during build season.

Valuing the perspectives of seasoned players, we collaborate with 20+ STEM professionals to foster our program's growth. Along with meaningful conversations & lifelong friendships, our mentors give us the skills to play the game without taking the bat from our hands. We engaged with former players by hosting a Sponsor/Alumni Night with 30 attendees to celebrate the foundation they laid. Working to help other teams create their own foundation, 13 of our alumni mentor other FIRST teams. We're proud that all of these MVPs carry on our team's legacy by wearing our jerseys.

We started FIRST Signing Day in '16 to celebrate graduating seniors moving to the Major Leagues. Impressed by the growth & influence of FSD across the US, FIRST HQ partnered with us in '20 to magnify the global celebration of seniors who were missing Championships due to the pandemic. In '21, the initiative expanded to 5 days of recognition as FIRST Seniors Week. We're honored that FIRST HQ chose to partner with us; together, we increased participation by 2.8x, recognizing 100+ teams & 3K+ students.

After a successful collaboration, FIRST HQ asked our team to create content for its official TikTok, launching Feb. 20 during Engineers Week. Every week, we evaluate current TikTok trends, put a robotics spin on them, & film videos with team members in our shop; our content has reached 8.5K+ views! Our FIRST HQ collaborators on FSD & TikTok, Jenna R. & Haley M., stated: "Thoughtful, creative, & detail-oriented, 2468 works diligently to provide high-quality work under deadlines & always brings new ideas to the table. We can count on the students to bring enthusiasm to each meeting & it shines through in everything that they create."

OUTFIELD - Providing a pathway for those whose participation or input might otherwise be missed.

We strive to make our environment inclusive & reflective by following the guidance of FIRST's EDI resources to grow our EDI Initiative. We hosted 2 Stories in STEM webinars in '21, inviting a diversity consultant & the Senior Advisor of EISD to share how EDI fundamentals can be implemented into our program. We also partnered with Westlake's & Cedar Park's StuCo to benchmark best practices around engaging students in EDI. StuCo Rep. Mia J., who joined the team after speaking at a Stories in STEM event, "was inspired by the clear support of student-driven leadership & an emphasis on equity that [she] had not previously encountered within our school district." On Feb. 22, Mia will be leading our 3rd Stories in STEM event: a panel of industry EDI experts sharing their perspectives on breaking down bias in the workplace. 350+ students have attended these sessions & the recordings are on our YouTube, so others can benefit from our learnings as well. Our EDI initiative was covered by the Austin-American Statesman, recognizing our emphasis on fostering an equitable community.

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We take the lessons we've learned in the outfield & apply them to our team. To ensure we're all aware of the harm that can be caused by unintended bias, we've held 9 "Team Culture" dialogues so far this year, gathering the team to practice healthy collaboration using insight we gained from our Stories in STEM events & FIRST EDI training sessions. One week, we randomly assigned each student a playing card, & each student was treated based on their card's face value. For example, people with kings received compliments, boosting their confidence, while those with jokers were laughed at, making them less willing to communicate with others. This allowed us to examine how assumptions based on appearance can affect communication & perception.

Striving to remove accessibility barriers around robotics, we worked with FIRST Access in '21 to help special needs students explore FIRST, spending a month mentoring 4 students 1-on-1. At the inaugural FIRST Access event at FIRST Texas Cup, 2 teams from our program competed & 1 of them advanced to the semifinals! One of the students, Jaxson N., was so excited, his mother told us "he wore his medal for a week." We're taking another lap around the bases, preparing 6 students for a FIRST Access competition on Feb. 26.

We've built a successful 8-year history with STEMConnect, our collaboration with sponsors to bring week-long STEM camps to their offices. This "take your kid to work" model has helped raise \$500K+ with 1.5K+ participants. We expanded our platform with audiences beyond US borders, creating STEMConnect International. We've taken it to 5 countries so far, working this past year with Cerbotics in Mexico to host local camps.

To find STEMConnect locations & connect with potential sponsors, we pitch to companies & attest to how FIRST has enabled our students to explore STEM. We've pitched to 20 companies, raising \$135K. Scott B. from Berry Consultants was excited to see our team's "dedication to the growth of [our] students." He believes that, "while [we] have great success in competitions, [our] true success will be in the building of future STEM leaders."

We created STEMGirls to bring more female players to the field. We hold annual Ice Cream Socials (students & STEM professionals conversing), STEMGirls Night-In events (introducing girls to robotics), & STEMGirls Summits (featuring 8 speakers & reaching 70 people). We presented 3x to 400+ people at the UT Girls in STEM Summit about our efforts to make STEM inclusive. While STEMGirls is usually "played" by outfielders, we sometimes draw them to the infield; we've seen a 12% increase in female participation in the past 3 years & reached 40% female leadership on our team.

You may be familiar with the STEM Advocacy Conference of Texas's (SACOT) efforts to include student voices in the TX legislative process since '16 via 7 conferences & 1090+ members. Recently, SACOT has focused on improving equity of resources. Through 2 SACOT LAW events, we advocated for & saw HB 244 passed, promoting teacher certification in comp sci & technology courses through a grant, making STEM expertise equally available in all schools. We recognized that membership in SACOT would be a challenge when we were virtual during the pandemic, so we started an "Ask Me Anything" series to highlight professionals' stories, advice, & wishes in everything education & advocacy, reaching 550+ views. To further combat educational disparity, we are kickstarting SACOT Consultations: 1-on-1 meetings with rural/underprivileged teams to support bills that directly affect their areas.

We make STEM fun & accessible to those who otherwise may be unreached. With Club Z, we've helped 80+ underserved children explore STEM through activities like Spheros, EV3 programming, & our low-cost student-developed robotics kit, RoBox, at 15 sessions. Inspired by a request we received to 3D print Braille reading aids, we created Assistive Technology to use our skills to make affordable needs-adapted toys. We partnered with EISD to provide modified toys for students with disabilities.

Even though we feel the past 18 months have been spent in "spring training" as we revitalize our program & its values after returning to in-person learning, we continue to broaden our audience & create accessible resources through advocacy, mentorship, inclusivity, & lifelong learning—both in the infield & outfield—for 14 years & counting. Throughout our team's rich history, we've played every game like it's our last, applying our best effort while helping others step up to the plate. As 2468, we truly appreciate the opportunity to play the game of FIRST.