

# FIRST Impact Award - Team 1868

**2025 - Team 1868**

**Team Number**

1868

**Team Nickname**

Space Cookies

**Team Location**

Mountain View, CA - 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.**

We are a team of 57 girls from 24 high schools across 17 Bay Area cities. In the past 3 years, 100% of our 35 seniors have pursued higher education, with 94% choosing STEM majors. Many serve in leadership positions for student organizations in college and continue to participate actively in community outreach and FIRST. Our alumni include pilots, artists, scientists, engineers, researchers, and physicians. Seven have returned as Space Cookies mentors, including three with us this year.

**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.**

In our neighboring city of East Palo Alto, per capita income is just 37% of nearby Bay Area cities and STEM opportunities for youth are limited. Our FIRST Cornerstone program bridges this gap. 17 years ago, we started an FLL program at a Title 1 school and every season since, we fully fund and spend 200+ hours mentoring our teams. To allow EPA students to continue with FIRST, we started the Churrobots Team 8048 in 2019; we continue to support them through financial assistance and mentorship.

**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.**

Since 2018, we've hosted competition tours to introduce Girl Scouts and other youth to FRC. We created the Take a Kid to FIRST Kit, featuring a "backstage" scavenger hunt, to get other teams involved; 12 teams used it this season. Over the last 2 years, our Cookie Helpline has provided 200 hours of assistance to 136 FRC teams, primarily rookies, through virtual meetings. We helped create new resources like TagalongLib and Robot Builder—custom libraries that streamline coding for teams worldwide.

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

One major goal is to introduce kids to FIRST. Some examples: 1) We just published our 4th children's book, complete with a hands-on astrolabe activity. We donate our books to schools/libraries and participate in story times and workshops (e.g., Robotics Day at RWC Library). 2) We piloted Cookie Catalyst this fall to teach Girl Scout leaders how to start FLL teams within their troop. 3) We run summer workshops at our lab, introducing 104 girls in grades 9-10 to FIRST in the last 3 years.

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

1) We now develop and host bi-monthly workshops at the RWC Library, creating a permanent STEM program. 2) An FLL team started through the Cookie Catalyst pilot qualified for district championships, sharing, “your support this season was instrumental to getting our team started.” Since the pilot, we trained 14 more Girl Scout troop leaders at the GS NorCal Discoveree. 3) 92% of girls who attended our summer sessions expressed interest in joining our team!

**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?**

Sally Ride famously said, “you can’t be what you can’t see.” This drives us to make our team visible, especially to young girls, so they feel energized, inspired and hopeful—even when we make mistakes. *FIRST* amplified this mission when they featured us in a Teen Vogue article about girls in FRC. Similarly, NPR highlighted us in an article on FRC, and we were showcased at the NYC 2024 Photoville Festival. We also present at conferences, reaching 150 people last year.

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

We mentor 6 FRC teams: FRC 233 and 122 through weekly meetings with the Pink-Knight-Cookie Alliance, 8048, 5805, 5199, and 3020. Our Cookie Jar program has provided batteries and materials to 140 teams over the past 3 years, and we share our scouting app. Last year, we partnered with 9 teams to create our community’s first shared practice field—Bloomhouse Field—and host international teams to help them prepare for competition.

**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?**

In the past 3 years, we’ve run robot demos and STEM activities at 36 community outreach events, totaling 2000 hours volunteered and 4220 people reached. Project Trefoil, our Girl Scout outreach program, has engaged more than 800 girls via badge workshops, day camps, and FLL events. We just released our “Cookbook,” a compilation of the various STEM activity kits we use in our outreach; this is available as a published resource to help other teams create a menu of options for their own events.

**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.**

For the past 3 years, we have partnered with Team 4400 and Team 1156 to host the annual FRC Warm Up, a virtual conference held just before build season; together, we’ve grown the event from 325 registrants in 2023 to 782 in 2025. Our relationship with NASA strengthens every year; this summer we hosted a lab open house, introducing 55 employees to *FIRST*. 68 Space Cookies have participated in leadership training throughout our 6-year partnership with Stanford University’s Seeds of Change program.

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

Our core EDI program, m.e. *FIRST*, provides free pads and tampons at FRC events and has grown from 82 events (42% coverage) in 2022 to 160 (94%) in 2024 thanks to our 105 ambassador teams; we expect 100% coverage in 2025. A strong partnership with Aunt Flow provides product discounts to all *FIRST* teams and bulk products at championships. This season, we are expanding the program in our own community, donating 750 pads and tampons to families staying at our local Ronald McDonald House.

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

We are working to simplify m.e. FIRST as it grows. After a successful pilot, we launched a district coordinator program, selecting one team in each of 12 districts to recruit ambassadors. We are using a similar approach to expand to FTC this year, recruiting 11 regional coordinators; we have already covered 93 competitions. Internally, our Rookie Cookie program pairs every new girl with a veteran for smooth onboarding, and we host 45 fall workshops to ensure sustainable knowledge transfer.

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

A lack of socioeconomic diversity is a weak point for our team, so we have developed a strategy to address it. We believe financial status should never preclude participation, so we conduct targeted fundraising to provide generous scholarships to families in need. For the last three years, we worked with Girl Scouts of Northern California on targeted outreach to diverse communities and reserved rookie slots for interested girls; 50% of our new team members resulted from this effort.

**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.**

The Gold Award, the highest honor in Girl Scouting, is awarded to girls who make a lasting impact. This year, one Space Cookie developed a STEM curriculum and ran free weekly after-school classes for girls at Tice Creek School. She hosted 3 pilot classes with 40 attendees. TCS's PTA has committed to offer this 5-week course every trimester for the next 3 years. We are proud that Space Cookies earn the Gold Award at a rate 3x the national average.

**Judge Feedback**

**Can you suggest any changes we can make to our presentation to better showcase our outreach and communicate our message?**

**An area the team has an opportunity to improve.**

**Something that really impressed the judges.**

**Essay**

We are the Space Cookies Team 1868, a team of 57 girls from 17 Bay Area cities. For the past 20 years, we have championed the belief that everyone has the power to break barriers and change the world with STEM. We are Girl Scouts. Engineers. Trailblazers. Changemakers.

\*INCLUDE: Making FIRST More Welcoming\*

At the 2019 FIRST Championships, a girl approached one of our members in tears. Her period had started unexpectedly, and in a venue with 48 restrooms, not one had pads or tampons. Everyone on our team experiences periods, so we understood this wasn't just an inconvenience—it was a moment that could ruin the competition for her. This chance encounter inspired our award-winning 2021 Innovation Challenge project, focused on providing affordable and accessible period products and destigmatizing conversations about menstruation. This became the catalyst for m.e. FIRST, a global initiative to ensure that no FIRST student ever faces this situation.

At the heart of m.e. FIRST is our ambassador program, which mobilizes teams around the world to provide free pads and tampons at competitions. We equip ambassadors with the m.e. FIRST Toolkit, which includes product quantity calculators, signage, collateral, and discounts from our corporate partner, Aunt Flow. Teams can also request free

buttons and laptop stickers to proudly share their team's support for menstrual equity.

In just four years, the program has expanded from 56 ambassador teams at 82 FRC events to 105 ambassador teams at 160 events, providing tens of thousands of period products worldwide. Last year, we covered 94% of FRC competitions, including 100% of regionals. We are on track to reach every competition this year.

But this isn't just about numbers; it's about ensuring that students can fully participate in competitions without being excluded, embarrassed, or unsafe because they don't have the products they need. Many teams have shared how venues with thousands of attendees had no menstrual products available—except for those provided by m.e. FIRST ambassadors. Others have sent us photos of heartfelt thank-you notes left in restrooms, proving just how much this effort matters. These stories drive us forward, reminding us that while we've made significant progress, there is still work to do.

To ensure m.e. FIRST is sustainable beyond our team, we piloted a district coordinator program last year. By involving other teams in ambassador recruitment, we are building a lasting network, making the program scalable and self-sustaining. This has also freed up resources for our next expansion: bringing menstrual equity to FTC. In its first year, m.e. FIRST in FTC provided period products at 93 competitions.

We are proud to have created a program that touches every student in FRC.

*\*INSPIRE: Building a FIRST Cornerstone in East Palo Alto\**

Our outreach mission is rooted in expanding STEM access, ensuring that students in neighboring communities have the opportunity to explore robotics. Just a few miles from our lab, East Palo Alto faces systemic barriers—economic constraints and limited resources—that make participation in STEM and FIRST programs challenging.

17 years ago, we started the Golden Surfers FLL team at East Palo Alto Charter, a Title 1 school, and have funded and mentored the team ever since. Space Cookies travel to EPA twice a week each fall, teaching everything from mechanism design and block programming to teamwork skills and real-world STEM applications. While many FLL teams come and go, the Golden Surfers are a core part of the city's after school programming and EPA families know their kids will always have an opportunity to participate in robotics.

With the success of our FLL team, we wanted to establish a similarly enduring robotics program for high school students. In 2019, we started East Palo Alto's first FRC team—Team 8048, the Churrobots. We have funded and mentored the team ever since and were delighted when they qualified for Championships for the first time last year!

Our commitment to East Palo Alto goes beyond seasonal outreach; it is a long-term investment in the future of its students, ensuring that STEM education and robotics remain accessible, sustainable, and transformative.

*\*IMPACT: Supporting FIRST Teams Around the World\**

We support other FIRST teams through four signature programs.

**FRC Warm Up:** We work with Cerbotics Team 4400 in Mexico and Under Control Team 1156 in Brazil to make build season less intimidating by planning and hosting the FRC Warm Up, a 2-day virtual conference held just before kickoff. Now in its third year, the event has grown into a global resource. This year's conference set records with 782 registrants from 250 teams across 12 countries. Featuring 14 sessions in English, Spanish, and Portuguese, FRC Warm Up prepares teams to hit the ground running.

**Cookie Helpline:** After kickoff, we pivot to helping FRC teams—especially rookies—via our Cookie Helpline, which provides advice on all aspects of navigating an FRC season. The typical Helpline session is 1-2 hours and provides

advice and assistance on a wide range of programming, mechanical, business, and outreach topics. With demand skyrocketing, we have provided over 200 hours of assistance to 136 teams in the last two years. After spending three hours helping a team restructure their sensor and mechanism code, we developed TagalongLib and Tagalong RobotBuilder, custom libraries that are now available on GitHub, streamlining coding for teams worldwide.

Cookie Jar: Traveling teams are often unable to bring key tools and equipment, such as batteries, to competitions. Our Cookie Jar program matches traveling teams with local teams who lend them tools, parts, scouting support, and even mentors, ensuring no team competes at a disadvantage.

Practice Fields: Since many teams lack access to a field for practice, we host teams at our lab, where we welcomed 14 teams last year. We are also a founding member of the Bloomhouse Field, the only full-size community field on the San Francisco peninsula. We work with Team 8048 and eight other teams to construct the field each season, allowing teams across the Bay Area and visitors from out of town to practice at all hours.

#### \*IGNITE: Sparking STEM Engagement in Girl Scouts\*

The STEM gender gap is undeniable: Forbes notes that only 25% of engineers and 11% of tech executives are women. Research shows that engaging girls in STEM programs early and giving them strong role models encourages them to pursue STEM. These are the drivers behind our core Girl Scout initiatives, Project Trefoil and Cookie Catalyst.

Project Trefoil is our initiative designed to spark and hold Girl Scouts' interest in STEM through hands-on activities. In the past 3 years, we have represented FIRST at 10 Bay Area Girl Scout events, including council programs, camps, and workshops. Over the past year, we have helped 300 Girl Scouts complete STEM badge requirements through hands-on workshops, robot demos, and lab tours.

We want girls to begin FIRST at an early age. So, last summer we started Cookie Catalyst, a virtual mentorship program to help Girl Scout troop leaders start FLL Challenge teams. The curriculum covers everything from the registration process and the innovation project to strategy and programming. For our pilot last summer, we hosted weekly troop leader training and mock judging sessions to prepare teams for competition. Our first Cookie Catalyst team, the CookieBots, won the Robot Design Award at their competition, qualifying for the district championship! To continue inspiring Girl Scout troop leaders to participate in FIRST, we presented "You Bot This!" at Girl Scout Discoveree, an annual troop leader training event where we introduced FLL to 14 troop leaders.

#### \*INNOVATE: Creating STEM Opportunities for Our Community\*

Engaging kids in STEM requires fun and accessible activities. Our community outreach programs capture kids' attention and illustrate the possibilities of science and engineering.

STEM Through Storytelling: We believe storytelling is a powerful tool for STEM education. That's why we recently published our fourth children's book, "Olivia and Liam's Time Travel Tales," where two kids journey to Ancient Egypt to meet Hypatia, a pioneering female astronomer. Our books do more than entertain—they inspire future scientists by incorporating interactive STEM activities, like building a DIY astrolabe, that connect directly to the story.

Library STEM Programs: We also use our books in library programs. Last fall, we partnered with the Redwood City Library to host a Robotics Day. After a robot demo, kids enjoyed a book reading and created their own light-up greeting cards in a hands-on workshop. The event was such a success that we now run bi-monthly workshops at the library, introducing kids to a variety of STEM concepts. We also organize activities at other libraries, such as a circuit workshop at the Central Park Library. This past year, 220 kids have attended our workshops!

Take A Kid to FIRST (TKF): Seeing how excited kids get when watching robots in action, we launched Take A Kid to

FIRST (TKF)—a program designed to introduce young students to robotics by bringing them to FRC competitions. Originally created to help Girl Scouts earn STEM badges, TKF quickly grew into a broader initiative open to all kids. As other teams expressed interest, we developed the TKF Kit, a resource that helps teams engage local youth groups through scavenger hunts and interactive activities during guided competition tours. This year alone, 12 teams have used the TKF Kit to bring FIRST to new audiences.

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We are Girl Scouts, breaking barriers for girls in STEM.

We are Engineers, designing and competing with award-winning robots at the highest level.

We are Trailblazers, creating and sustaining STEM opportunities for all.

We are Changemakers, shaping a more inclusive future in STEM.

We #BakeAnImpact. ;

