

2017 CHAIRMAN'S SHORT ANSWERS

Briefly describe the impact of the FIRST program on team participants with special emphasis on the current season and the preceding 2-5 years.

Our supportive environment enables all Space Cookies to develop strong technical and leadership skills. We offer 35 student-led workshops, teaching skills from programming to prototyping to public speaking. All girls develop the confidence to explain FIRST robotics and STEM concepts through broad community outreach and leadership opportunities. 100% of alumnae have attended college and over 90% have pursued STEM majors, receiving \$900,000 in scholarships and pursuing 32 STEM internships.

Describe the impact of the FIRST program on your community with special emphasis on the 2015/2016 year and the preceding two to five years.

In the last 3 years, we have reached 350,000+ people in our local community. Through 30+ outreach events and 2000+ community service hours each year, Space Cookies appear at numerous STEM-related events such as the Bay Area Science Festival, Silicon Valley FOAM, and the San Francisco Zoofest. Last spring, we organized the entire FRC presence at the flagship Maker Faire Bay Area. We also demo our robot at numerous schools, summer camps, community venues, and corporate events.

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

We spread FIRST's message of STEM inclusiveness through many channels, including books, badges, and creative projects. Enthusiastic response to our first children's book inspired us to publish another—"P is for Prototype"—in which a young girl impresses her class by building a working robot. We created 5 STEM Girl Scout badges, host frequent hands-on workshops, and have made our badges available nationwide. We have revamped our online presence, gaining 700+ Instagram followers in a year.

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

Our members are role models beyond our FIRST engagement. We are known for our Public Servant position at competitions; in the spirit of Gracious Professionalism, we welcome rookie teams to FIRST and offer technical and business support. We are proud to have been awarded 1 Woodie Flowers Finalist, 4 Dean's List Finalists, and 1 Dean's List Winner. Outside our team, Space Cookies are journalists, musicians, peer tutors, student government leaders, club officers, and sports team captains.

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

We have started 4 FRC teams, 3 of which are international. The Space Stars in Bogotá was the first FRC team in Colombia and the first all-girls FRC team in South America. We worked with them closely, hosting them in our lab and homes, and then helped them create Wolf Team Robotics in Cundinamarca. We also helped form Mars Style, one of the first FRC teams in Beijing. We helped a former Cookie start Carrillo Cybernetics at her new school by registering them and providing training in our lab.

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

We have started 2 Jr. FLL, 8 FLL, and 2 FTC teams, many of which are in under-resourced communities or Title I schools. The Golden Surfers, an FLL team we started and have mentored for 7 years, won the Judges Award at their regional. The Emanuele Tigers, another team we started and mentor, advanced to regionals and won the Judges Award at the NorCal FLL Championships. This year, we started a Space Cookies FTC team, giving many more girls the opportunity to participate in FIRST.

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

This year, we have 6 initiatives. With a sponsor, we provide free videoconferencing to all FRC teams. We hosted an award submissions webinar and opened our lab to less experienced teams, offering technical help and a practice field. We are helping teams practice presentations as part of the CocoNuts Chairman's Exchange. We contacted 45 international rookie teams through our Cookie Helpline program. Every year we host 2 FLL tournaments, encouraging 32 teams to continue with FIRST.

Describe how your team works with other FIRST teams to serve as mentors to younger or less experienced FIRST teams

Our team mentors 5 FRC teams, 3 FTC teams, 6 FLL and 2 Jr. FLL teams. We ran two comprehensive workshops covering mechanical, electrical, programming, and business topics for FRC teams 6036 and 5940. We mentored FRC 5737 in China and FRC 5871 in Idaho via email and video chat. Each year, we teach CAD, public relations, programming, pneumatics, and finance for other FRC teams at workshop days hosted by WRRF.

Describe your Corporate/University Sponsors

Our 17 sponsors help us empower girls to become STEM leaders through generous financial and in-kind support. NASA and Girl Scouts have sponsored us since our founding and NASA provides our lab at Ames Research Center. Other multi-year sponsors include Intuitive Surgical, St. Jude Medical, NVIDIA, the Brin Wojcicki Foundation, Qualcomm, Cooler Master, and numerous local welders and fabricators. Their generosity helps cover the cost of robot builds, outreach, competition fees, and travel.

Describe the strength of your partnership with your sponsors with special emphasis on the 2015/2016 year and the preceding two to five years

We are proud representatives of our sponsors' STEM education programs. You can find us at nearly every major Girl Scout STEM event and we are regulars at NASA's Take Your Kid to Work Day, annual holiday parties, and the Ames Open House. We also demo our robots and give talks at company picnics, open houses, and formal corporate events. Last summer, we were one of two teams to participate in Cooler Master's DREAM challenge. We are excited to be featured in NVIDIA's FIRST partnership videos.

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

With a mission to inspire students to become engaged in STEM, FIRST is an international robotics competition in which teams design and build complex robots working under extreme time pressure. Guided by mentors, student-led teams learn technical and leadership skills while practicing Gracious Professionalism. Teams also participate in year-round local and global outreach to demonstrate student capabilities and inspire others to get involved in FIRST as mentors and participants.

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

As a Girl Scout troop and FRC team, we have a unique opportunity to spread FIRST's message of STEM inclusiveness beyond our community. We have developed 5 STEM badges and have made them available nationwide, allowing us to reach more than 2 million girls. Many Space Cookies have earned the Gold Award—the most prestigious award in Girl Scouts—demonstrating extraordinary leadership by running STEM camps, introducing robotics in under-resourced communities, and mentoring FLL teams.

For FRC teams older than 5 years, briefly describe your team's broader impact from its inception.

In 11 years, our team has grown from 12 to 85 members, drawing from 31 Bay Area high schools, with 30,000 hours of outreach engaging 1 million people. We've started FRC teams in Colombia and China, and we assist numerous other teams that reach out to us for advice. Our focus on outreach and inclusion lets us serve as role models for youth traditionally underrepresented in STEM fields—we reach our community and far beyond, increasing engagement in FIRST, Girl Scouts, and STEM programs.