

FIRST Tech Challenge

2019-20 Info Sheet



The Girl Scouts of Greater Los Angeles *Robots! Robots! Robots!* Program sponsors all-girl robotics teams to compete in the FIRST Tech Challenge robotics competition.

FIRST Tech Challenge

FIRST Tech Challenge teams (up to 15 members, grades 7-12) are challenged to design, build, program, and operate robots to compete in a head-to-head challenge in an alliance format. Participants call it “the hardest fun you’ll ever have!” Guided by adult Coaches and Mentors, students develop STEM skills and practice engineering principles (like keeping an engineering notebook), while realizing the value of hard work, innovation, and sharing ideas. The robot kit is reusable from year-to-year and can be programmed using a variety of languages, including Java. Teams also must raise funds, design and market their team brand, and do community outreach for which they can win awards. Learn more about FTC at <https://www.firstinspires.org/robotics/ftc>

GSGLA accepts applications to form new sponsored FTC teams each spring. For information about forming a new team, contact the GSGLA STEM Program Specialist at (626) 677-2236 or aleidemeijer@girlscoutsla.org

What Scouts Learn

GSGLA FTC teams are student-led and mentor guided. Scouts develop game strategies, brainstorm and prototype design ideas, create detailed designs using computer models, manufacture custom parts, and construct, program, test, and compete their robots. In addition, they design team logos, shirts, swaps, and materials communicating their design process and robot features, manage a budget and business plan, and prepare formal presentations for judges and other students. No previous experience is required.

Time Commitment

Each team and their mentors determine meeting dates and times. As an example: GSGLA veteran teams meet for approximately 8 hours per week during the competition season and typically require extra meetings prior to tournaments. In addition, student-led community outreach activities may be planned outside regular meeting times.

FTC Season:

Early September: Game challenge revealed

November – January: League play: 4 half-day weekend meets, 1 all-day league tournament

February – April: Post-season championship tournaments, dependent on performance.

April – August: Off-season. Veteran teams use this time for recruitment and technical training

Parent Contribution

GSGLA’s FTC teams are adult-facilitated, student-led endeavors rather than classroom-format activities. Technical mentors volunteer as much time as they are able, and students rely upon parents to meet Girl Scout requirements for chaperones, forms, and travel.

Parents are encouraged to provide scouts with access to a laptop that meets the performance requirements of SolidWorks or a similar platform.

<https://www.solidworks.com/sw/support/systemrequirements.html>

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How to Apply

Submit a GSGLA FIRST Tech Challenge Team Registration or Individual Registration before the deadline printed on the form. Team applications will be accepted through June each year. Individual Registrations will be accepted by April each year to try to place you in a team. Our Veteran teams have limited space, but late individual applications may be considered in May – August if space is available.

Girl Scout membership is not required to **submit** an application. However, if selected, girls **must** register as Girl Scouts to participate.

Need more information?

Contact the GSGLA STEM Program Specialist at (626) 677-2236 or aleidelmeijer@girlscoutsla.org

GSGLA Sponsored Teams

GSGLA's first all-girl FTC team, Rock N' Roll Robots, was founded in 2007. In 2015, to accommodate more scouts, the group formed a second team, Javabots. Rock N' Roll Robots and Javabots operate out of Mayfield Senior School in Pasadena and accept Girl Scouts from anywhere within the Greater Los Angeles region who are able to regularly attend meetings. The teams are led by a dedicated group of mentors, including engineers from NASA's Jet Propulsion Laboratory.

Rock N' Roll Robots & Javabots Meeting Schedule:

Competition Season: Tuesday: 6pm - 8:30pm, Saturday: 10am – 4pm, Thursday: 6pm – 8:30pm if needed to complete late tasks.

Off-Season: Scheduled as needed to support activities. 3-hour Saturday meetings are typical.

Scout Responsibilities

Scouts are expected to attend all team meetings and competitions and for veteran teams, the annual summer camp. Students are expected to respond promptly to team communications, typically via email. Time-consuming computer-based tasks, like CAD modeling, programming, and graphic design, often cannot be completed within meeting time. Students who accept responsibility for at-home tasks are expected to follow through.

Some schedule conflicts can be accommodated, but the experience of our veteran teams has shown that conflicts exceeding 25% of planned meeting time results in students feeling frustrated and disconnected and may prevent eligibility for student leader and competition driver roles. Please note known conflicts on your application if applying for a veteran team.

Team Member Contribution

Rock N' Roll Robots and Javabots team members are asked to participate in team fundraising. They are able to meet this contribution through Girl Scout product sales, by acting as a summer camp leader, or by seeking grants and in-kind donations in collaboration with GSGLA. Each member typically raises \$100 or more. The team uses these funds for costumes, decorations, swaps, special equipment, and other unforeseen expenses not covered by GSGLA.