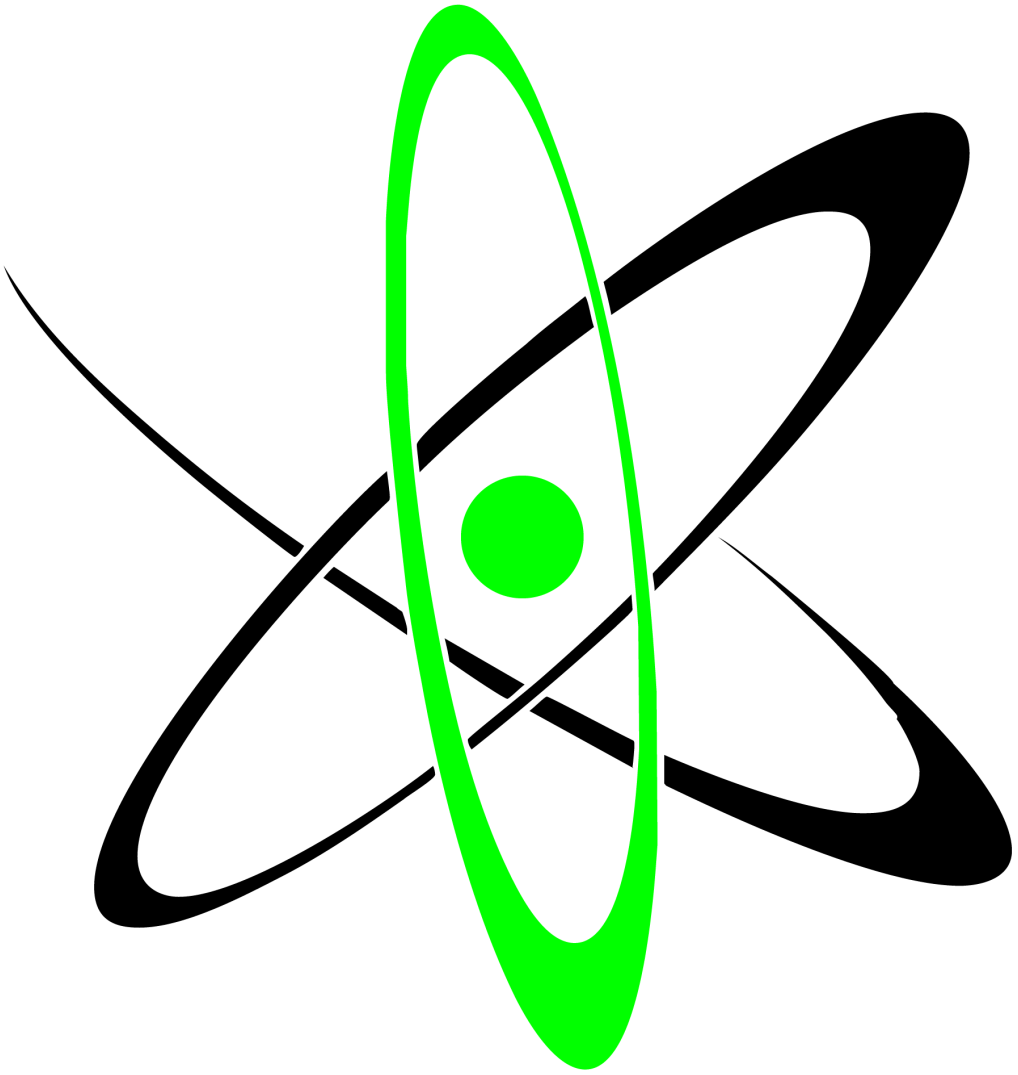
Funding Plan



QUASICS

FRC 2656 / FLL 51258 / FLL 53070

-FIRST Mission Statement-

“To transform our culture by creating a world where science and technology are celebrated and where young people dream of becoming science and technology leaders.”

- Dean Kamen, *FIRST* Founder

-Competition Programs Summary-

FIRST, For Inspiration and Recognition of Science and Technology, was founded in 1989 by Dean Kamen and Woodie Flowers to encourage young people to explore science, technology, and engineering through Robotics competitions. These competitions teach the values of *Gracious Professionalism* and *coopertition.* These ideals entail working to ensure each team’s positive *FIRST* experience.

FIRST Robotics Competition (FRC) allows high school students to experience real world engineering in a competition where they are given strict rules, deadlines, and resources to accomplish a difficult game competing against others.

FIRST LEGO League allows students to understand the basics of STEM and apply their skills in an exciting competition while building habits of learning, confidence, and teamwork skills along the way.

-Team Summary-

Quasics has seen much growth and change in the seasons since its founding. Our size as an organization has varied widely over the years as students have: we began with only a *FIRST* Robotics Competition (FRC) Team in 2008 with a mere 9 members and we’ve had as many as 40 members in some years; in the 2024-2025 season, we had 30 members across both our FRC and FLL competition teams, in addition to more than 90 alumni.

Our diverse team has two major elements: building robots for competitions and community service. We focus on advocating for the team and our objectives throughout the community through actions like hosting STEM events for the community and badge workshops for Girl Scouts.

-What makes Quasics unique?-

Our team strives to do the most we can with the resources we have. Most robotics teams have three times the budget as us as they require every member to pay a large amount of dues to participate, but we aim to “build better humans one robot at a time” and we believe everyone should have an opportunity.

This team has learned how to overcome any issue we face one problem at a time. We have eight coaches who work on both our FLL and FRC teams with the help of select students, who

are leaders in the club, to create a lively work environment. Our mentors stay relatively hands off in our projects, allowing our students to do the most they can. We accept members from all four grades and although we have a small number of members, everyone is dedicated to the team allowing us to compete on the same scale as a larger team. This environment allows us to explore every component necessary to build a robot and allows our students to become closer as long-term partners and more like family than friends.

Even with our small numbers, we do the most we can with the tools given to us. We are constantly promoting the use of STEM in the community. Throughout 2024, we hosted or participated in 34 community events, inspiring 5,717 visitors. The various include a Girls in STEM Workshop at Google Pittsburgh, a Barnes & Noble demonstration, and Monroeville Clean Up Day.

We have also dedicated ourselves to inspiring young women to explore fields in STEM. Not only do we actively recruit young women, but we also inspire local Girl Scout troops by holding demos at their meetings and aiding them in earning merit badges for exploring STEM. In 2019, we formally became Girl Scouts of Western PA Program Partners and specialize in multiple STEM badges. Since the initiative began, we have visited hundreds of local Girl Scouts and have helped them earn 942 badges.

We take action to advocate with our elected leaders to support education, particularly relating to STEM subjects. In 2019, a member of our team served as the representatives for all of Pennsylvania to the National Advocacy Conference in Washington D.C., where we pushed to pass a bill that would help to provide funding to schools and other 21st Century Community Learning Centers to support STEM initiatives, including after-school robotics programs, and to support the Christa McAuliffe Commemorative Coin Act, which would help to fund FIRST directly. We met with the representative for our district (who is the chair of the House Caucus on Robotics) at our workshop in the Fall of 2019 to discuss robotics and STEM education, and have been invited to meet with him again when we return to Washington this summer. We also participated in the National Advocacy Conference virtually in 2021. We have continued to take action to advocate with our elected leaders to support education, particularly relating to STEM subjects. In 2024, a member of our team served as a 1 of 3 representatives for FRC at the PACT conference at Harrisburg, where we pushed to pass bills that would help to provide funding to schools and other 21st Century Community Learning Centers to support STEM initiatives, including after-school robotics programs. We met with Senator Lindsey M. Williams who invited to meet with her again when we return to Washington this summer. We also recently met with Representative Markosek and Senator Pisciottano to advocate for STEM funding.

Through Steel City Robotics Alliance, various workshops have been offered to FRC teams in the Pittsburgh area. These workshops include lessons on the basics of CAD, electrical systems, mechanical systems, FRC judging, and more. A practice field is also open bi-weekly for teams to practice driving, collaborate with other teams, and test mechanisms on their robot with real field elements.

-Impact/Outreach-

In conjunction with Brandeis University, *FIRST* undertook a multi-year longitudinal study, which documented the impact of participation in programs like *FIRST* on young people. Among first-year college students, FIRST alumni:

- Continued to show significantly greater gains on STEM-related attitudes than comparison students.
- Reported significantly higher interest in majoring in computer science, engineering, and robotics.
- Were 2.3 times more likely to take an engineering course in their freshman year; girls are 3.4 times more likely to take engineering courses.
- Were more likely to be engaged in STEM-related activities, including STEM internships, computer and engineering clubs/competitions, having STEM-related summer jobs; and receiving engineering-related grants.

Quasics has taken the lessons from this survey to heart. Along with *FIRST* Robotics Competition and FIRST LEGO League, we complete many hours of community outreach. One special area of our outreach is our Girl Scout Initiative, which was started in 2018. As a Girl Scouts Western PA Program Partner, we host workshops for Girl Scouts of all ages to earn various merit badges by participating in STEM projects like building balloon cars and prototype robots in order to increase girls' interest in STEM. We also host our own "STEM Badge Bash" event where Brownie and Junior Troops could earn two badges per level. We are currently the only robotics team in Western PA to be named a Program Partner and provide Scouts opportunities they might not otherwise have.

Our team takes pride in its participation in community events and volunteering opportunities all over the greater Pittsburgh area. These include Monroeville CommUNITY Day, Healing Hearts and Minds, Pittsburgh Pride Parade, and the Monroeville Public Library Fun Fest.

In a survey of Quasics members who graduated after 2016, at least 75% of our male alumni & 100% of our female alumni are currently enrolled in a higher education working towards a STEM related degree/certification. In addition, 100% of current members plan to further their education in STEM fields after high school, and 100% of these members believe that *FIRST* impacts him/her in a positive way.

-SWOT Analysis-

Quasics performed a SWOT Analysis to evaluate the Strengths, Weaknesses, Opportunities, and Threats to our organization. Strengths and Weaknesses typically refer to internal factors, while Opportunities and Threats are often more external.

Strengths	**Weaknesses**
● CAD software available ● School computer lab available for use ● Work area ● Local teams that we work with ● Dedicated students and coaches ● Creativity ● 3D printer available ● Annual fundraisers ● Community outreach ● School sponsored transportation	● Experienced team members graduating ● Weak parent support ● Lack of recognition in the school ● Organization ● Limited Workshop space
Opportunities	**Threats**
● Business plan ● Marketing team ● Partner with local machine shop ● Fundraising	● Loss of Gateway Staff ● Failure to raise adequate funds ● Lack of corporate sponsors / primary funding from a single source

Projected Program Expenses
(2025-2026 season)

Team Registration Fees	$10,550
FRC	*$9,300*
FLL	*$1,250*
FLL Competition Entry Fees	$885
FRC off-season event Entry Fees	$450
Team Uniforms	$700
Parts/Tools/Supplies/Safety	$4,500
Demonstration Materials	$1000
Total	**$18,085**

EITC [Educational Improvement Tax Credit] donations are accepted

The Gateway Education Foundation has approved Quasics (Gateway High School Robotics Club) as an "Innovative Educational Program". This allows us to accept Educational Improvement Tax Credit (EITC) donations through the GEF. The GEF is an approved Educational Improvement Organization. The PA Department of Community and Economic Development allows for tax credits for eligible businesses contributing to programs like ours. If your business is a participant in the DCED's EITC program, we would appreciate the opportunity to tell you more about our program and discuss how we can work together!

-Sponsor Benefits-

Bronze (under $75)	● Small sponsor name on banner (displayed at tournaments) ● Sponsor name on website sponsorship page ● “Thank You” letter, signed by all club members ● Invitations to our Regional Competition and our end of the year celebration, as well an on-site demonstration at your location by sponsor request
Silver ($75 - $249)	All Bronze level benefits, plus: ● Medium sponsor name on banner (displayed at tournaments) ● Sponsor name on t-shirt
Gold ($250 - $499)	All Silver level benefits, plus: ● Large sponsor name on banner (displayed at tournaments) ● Sponsor name and link on website sponsorship page ● Sponsor name on robot(s)
Platinum ($500 - $999)	All Gold level benefits, plus: ● Prominent sponsor name on banner (displayed at tournaments) ● Sponsor name, logo, and link on website sponsorship page ● Team t-shirt to display
Diamond ($1000+)	All Platinum level benefits, plus: ● Prominent sponsor name and logo on banner (displayed at tournaments) ● Sponsor name, logo, and link on sponsorship page and logo on the front page of the club website ● Prominent sponsor name on t-shirt ● Prominent sponsor name on robot(s)

** **All sponsors will have the opportunity to attend our end of season celebration.** We are also willing to present on your behalf or do a demonstration for you with our robots. **

For more information on Quasics, visit our team’s website at **www.quasics.org**

-Team Fundraising-

In addition to our generous corporate and private sponsors, our primary fundraising effort for the upcoming season is our annual Sarris Candies sale. We intend to sell Sarris candy again this season as the profits made from the sales the past couple of years have been very respectable. We are also planning events with local businesses and plan to explore new avenues to raise funds for our team as the season progresses to help alleviate team costs.

-In Conclusion-

Our diverse and dynamic team seeks to cooperate with businesses, corporations, and our community alike to share and instill positive values such as Gracious Professionalism.

-Team Contact Information-

Website:	www.quasics.org
Team Email:	contact@quasics.org
Head Coach's Email:	coach.seanmcmahon@gmail.com
Facebook:	www.facebook.com/Quasics
Instagram:	@quasicsrc
Twitter:	@quasics
YouTube:	https://www.youtube.com/user/FRC2656
TikTok:	@quasicsrc

Main Contact

Head Coach: Sean McMahon
Employer: Gateway School District
Email: smcmahon@gatewayk12.org
Phone: 412-334-1822

Team Meeting Information

Location: Gateway High School

Dates and times vary depending on the time of year but are generally 6-8:30pm on Wednesdays and Thursdays and 12-5pm on some Saturdays, outside of FRC build season (January through March).

Sponsorship Information and Mailing Address

Checks can be made payable to:

Gateway High School Robotics Team
3000 Gateway Campus Blvd
Monroeville, PA 15146

[Donations may be tax deductible; please contact the team for more information.]