We have built robots, a strong reputation, community relationships, and newfound passions. Despite the ever-changing circumstances that come with each year, one thing has remained constant: our resolve to spread the influence of STEM in our community and beyond.

We are based in Gateway High School, located in Monroeville, PA. Our school is unique amongst its counterparts in the eastern suburbs of Western PA. Monroeville is an economically and racially diverse community. Our team's composition reflects the diversity of our community and we bring many different perspectives to the table.

Unfortunately, our district has had less enrollment since Quasics' first year in 2008. Recruitment and engagement have become critical for us. Our team size is on the rise, but we have 23 students and a limited number of coaches. We created a varsity letter program to reward motivated students. To earn a varsity letter, members must complete requirements, such as community service, maintaining good attendance, and participating in competitions. In an effort to avoid hindering participation in FIRST due to a financial barrier, we have stopped collecting team dues.

To create more FIRST opportunities and a pipeline to our FRC team, we started an FLL program at our middle school for 8th graders, which has been running for four years now. We added a team for the 21-22 season. These teams have been successful and have inspired over half of their members to join our FRC team. Four of our FRC members volunteered as FLL coaches this season, sharing their experience and knowledge as they were inspired by their own FLL coaches. To increase our impact, we opened up our program to 7th grade students. 60% of our FLL students are 7th graders who joined via this expansion.

In an effort to strengthen our sponsor relationships, we invited them to the 2024 Regional. Three of our sponsors were in attendance. Amongst those 3, the Pittsburgh site lead for Google came, which opened the door for a return to one of our favorite events: presenting to Google Pittsburgh, one of our biggest sponsors. We gave employees a presentation on FIRST and demonstrated our competition robot alongside FRC team 117. After this presentation, we proposed the idea of donating Gladys, our 2023 robot, to the Google Pittsburgh office, which they have graciously accepted. As a primary sponsor since 2015, and with an office full of amazing local memorabilia, having our sole championship FRC robot moving to Google Pittsburgh is a perfect retirement!

In 2024, we were lucky enough to return to Google Pittsburgh for an event run by FIRST where we helped introduce 70+ young girls in the area to FIRST LEGO League Challenge. This was done through a hands-on delve into the Superpowered game! We were selected along with just two other Pittsburgh teams to help run this event, and we had students and mentors assisting with four out of the five stations. Tom Zawislak from PA FTC had the following to say, "...they not only provided the guidance and demonstrated skills necessary for learning success, but became role models to the younger girls. As a result, the participants came away with a new vision for what they could achieve in STEM related fields or beyond. This could not have been achieved without the one-on-one interactions of Quasics students and adult volunteers and others from the FIRST and Google volunteer community."

Beyond robots, we work with the American Foundation for Suicide Prevention. We invite representatives from the Western PA Chapter for a mental health presentation for our students, coaches, and families. These presentations break down barriers to allow for stigma-free mental health discussions for our team members. Students learn what signs of mental health struggles to look for within themselves and others, and where to go for help if needed. We have also participated in their Out of the Darkness community walks for several years.

Despite our small size and limited resources, within our district, we volunteer at Camp Invention, Open House, Homecoming Carnival, and events at our elementary schools. Camp Invention is a summer camp for students in grades K-6 that promotes STEM-related activities. We brought an FRC robot to the camp to demonstrate, promote, and encourage the kids to join FIRST. To deepen the ties to our district, we are currently working on a new STEM Club at an elementary school.

We often partner with the library for our outreach, and Rose Shirer, Office Manager of Monroeville Public Library, had the following to say about Quasics, “Monroeville Public Library has been delighted to have Quasics as a community partner for our programming. It’s been a wonderful opportunity to give everyone the chance to experience STEM in action, bringing robotics up close and hands-on to community members of all ages. We’re grateful to Quasics for helping us to fulfill our mission of connecting our community to new opportunities to learn and be Inspired.” An example of our community service was a demonstration at Fun Fest, held at our Public Library. Another example, some of our students volunteered their time running the library’s robot petting zoo: introducing children to STEM principles through toy robots. Our newest demonstration in partnership with the library is their Noon Year’s Eve Ball Drop for young kids.

Our team demonstrates at events held by Monroeville Recreation & Parks including Light up the Night, Trail of Treats, Monroeville 4th of July Parade, Monroeville Night Out, and the annual Jack Sedlak Monroeville Clean-Up Day. Monroeville Recreation and Parks Program and Event Coordinator, Danielle Cole, had the following to say about her experience working with us: “Quasics Robotics Club has been a staple at Monroeville Recreation & Parks Events, from providing a demo of their awesome Robots at Trail of Treats to helping keep our community beautiful on our annual Sedlak Clean Up Day, Quasics members are always enthusiastic participants. Their presence and positive, hardworking attitudes are integral parts of our community initiatives!” Throughout our efforts to impact our own community at various events, we are often requested!

In Monroeville, we have also demonstrated at Barnes and Noble, LEGO Brick Fest, and International Day of Peace. We also help our community in other ways such as Paws for a Cause, a pet supply drive to benefit the Monroeville Animal Shelter.

Our community service does not stop at our town’s borders. At the Mars New Year event in Mars, PA, all divisions of FIRST were there demonstrating. This year, through Discord, Quasics organized teams 3260 and 3504 to march for equality at the Pittsburgh Pride Parade, as a part of the Steel City Robotics Alliance.

Our most unique and impactful community outreach initiative is our partnership with Girl Scouts Western PA. After a few months of workshops in 2018, GSWPA reached out to us to become Program Partners in 2019. We hold STEM badge workshops throughout the year, which are all organized and run by our coaches and team members. These workshops are free to the Troops. We travel to the Troops' regular meetings, pay for the badges, and distribute them after they have completed the workshop. To reach more local Girl Scouts, we have hosted and organized an annual STEM "Badge Bash" at our school since 2019. During these events, Scouts earned two badges, had lunch, and saw a demonstration of our FRC robot. Our team's total is now up to 874 badges awarded. We have worked with Troop 16361 four times, beginning in 2021. Our team has had the pleasure of seeing this Troop grow throughout their Girl Scouts journey, bridging from Brownies to Juniors. Empowering girls in STEM is very important to us; as of 2024, we are a FIRST Ladies Regional Partner.

Despite our smaller size, our community impact is vast. In the past 3 years, we have participated in 89 events, inspiring over 17,000 visitors. This includes over 1,300 student hours volunteered and 360 Girl Scout badges awarded. On multiple occasions, we volunteered at 2 different events simultaneously. Within Quasics, outreach takes priority over anything. We use robots as a tool, not as the end goal.

At the 2023 Greater Pittsburgh Regional, Quasics was drafted with the final pick into the #1 seed alliance. Our group went 5-0 in the elimination rounds, resulting in our first Regional win, and our first time qualifying for the FIRST Championship in Houston. Our strategy to build within our limits and act as a partner robot was effective. Our bot was small and low scoring, which partnered well with bigger, high level scoring bots in order to maximize points and ranking points. At the regional, one of our students volunteered as a Student Ambassador. He was so inspired by his time as an ambassador at GPR, he decided to volunteer again at the World Championship. Our win was a unique experience that has created a sense of inspiration throughout our team, and shed more light on our program within our school district and community.

Our closest ally, on the map and at events, is Team 4150 from Franklin Regional High School. We meet up annually the day after Kickoff to discuss the game and strategize. We review the rules, scoring, designs, and bounce ideas off each other before we head into the frenzy of build season. This year, we got to share ideas with roughly 200 students and mentors at our local kickoff event, held at Carnegie Mellon University.

Inspired by our team motto, "building better humans, one robot at a time," we use robots to teach engineering, design, and technical skills to curious minds, while the sharing of those robots with our community teaches compassion. Like the atom that adorns our uniforms, our team is small, but our ability to lead by example and be a force for change in our region is boundless.