

FIRST Impact Award - Team 4

2025 - Team 4

Team Number

4

Team Nickname

Team 4 ELEMENT

Team Location

Van Nuys, 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.

Team 4's robotics program has proven to be a secure and supportive environment. It becomes a second home where students form lifelong bonds. With a 100% high school graduation rate, 85% of members pursue a degree in a STEAM field. Many alumni return as mentors and volunteers in our community. After attending our 20th year reunion, over 50 alumni, some dating back to 2016, mentioned how FIRST helped them transition into their field of work; they're forever grateful for being part of the program.

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.

Our small high school, High Tech LA, is centrally located within the San Fernando Valley, connecting to and involving us with our local community and teams in further regions. With the goal of sharing the wealth of our machine shop, it is open to all teams in need of part fabrication or assistance in robot assembly. In addition, we started, mentor, and house Armenian FRC teams 9772 and 10147, providing a collaborative space and the needed materials, giving them access to equitable resources.

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.

Striving to further the reach of our children's book, we are working on publishing a sequel to the journey of Felix and Phoebe. During this process, we aim to reflect on and revise our mistakes from the first book. With a complete storyline and in-progress illustrations, we plan on reaching out to a print house and hiring a literary agent. Partnering with a publishing company will allow us to distribute our book nationally, reaching a wider audience and invoking a passion for STEAM in youth.

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

Team 4's mission is to share the STEAM opportunities we gain through FIRST, providing all with a chance to showcase their knowledge. With the growing number of FRC teams, we plan to co-host an FRC Regional with teams 696 and 1148 in Glendale, CA. Team 4 annually hosts FLL Qualifiers and is partnering with team 980 to host an FLL Regional, assisting with event organization and execution. Our commitment in making FIRST accessible to untapped communities, has led us to bringing FRC to Armenia.

What impact has your team seen from your efforts described in the above question? How does your team measure impact?
Team 4 has dreamed of bringing FIRST to Armenia, giving youth the equitable chance to gain a passion for FIRST and its values. We started team 9772, Titans Robotics, the first-ever team at an Armenian school. After their rookie season, we partnered with Armath Labs to start a local team in Glendale, team 10147, ArmBots. Finally, this year, we registered Armenia's first team, team 10698, Armathronics 15, marking an exciting step toward our goal of hosting a regional competition in the country.
Please provide specific examples of how your team and team members act as role models within the <i>FIRST</i> community with emphasis on the past 3 years. How do you share these best practices with other teams?
Team 4 never misses an opportunity to help out. We volunteer at every FIRST event we attend, assisting with field setup and takedown, filling ambassador roles, and supporting rookie teams. Last year, we graciously stepped up to aid Team 9635 Cyber Rabbits from China, sharing our practice space and supplies. Throughout 2024 we participated in outreach events like media campaigns and fairs, serving as representatives for FIRST and displaying our robot, networking with various technology companies.
Describe your team's initiatives to Assist, Mentor, and/or Start other <i>FIRST</i> teams with emphasis on activities within the past 3 years.
As prolific team starters, we've founded many local teams: FLL teams 56069, 11995, 67480, 67482, 67483, FTC teams 21341 and 26836, and FRC team 8060. In addition, we started Armenian FRC teams 9772, 10174, and 10698. Moreover, we helped build, and code Team 7422's robot during the Las Vegas Regional. For seven years, we've run an internship program mentoring these teams twice a week. With FTC and FLL teams under our wing, we take pride in teaching code, design, and most importantly, teamwork.
What other initiatives have you created, grown, sustained, or participated in (<i>FIRST</i> 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?
Team 4 published a children's book, Felix and Phoebe's Robot, to introduce children to STEAM. We host book readings and robot demonstrations in LA Public Libraries and elementary schools. One of the schools, AGBU, adopted our book into their curriculum. Additionally, we created plushies of the main characters and donated them to local foster homes with every book sold last year, spreading the joy of FIRST to underprivileged kids. We are thrilled to be making a sequel to this exciting journey!
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.
Team 4 has formed many vital connections, one taking us to Gyumri, Armenia. We partnered with a non-profit organization, Freedom Loving Youth (FLY), which is building a school for underprivileged children in Gyumri. Through our fundraising efforts, securing \$20,000, they will dedicate a robotics room to support a future FRC team. Moreover, to aid the LA fire relief, we partnered with other clubs at our school to supply and support necessities for the affected in a fundraising drive.
Describe your team's efforts in the past 3 years to promote equity, diversity, and inclusion within your team, <i>FIRST</i>, and your communities.
Team 4 is dedicated to promoting diversity, inclusion, and equity. Challenging the underrepresentation of women in STEAM, our team has a higher percentage of girls relative to our school's student-gender ratio. Team 4 has participated in the FIRST for All Fellowship for two years straight, sharing the values learned with the team and further fostering a welcoming environment. To advocate for underclassmen participation, we created FTC Team 21341, empowering freshmen to embrace leadership roles.

Explain how you ensure your team and the initiatives you have created will be sustainable.	
To ensure the sustainability of Team 4, a manual called “The Leaf” was created to detail the workings of every department. Each year, the graduates combine their knowledge and experiences to build on past documentation. Before the build season, upperclassmen hold a summarizing session that explains the contents of “The Leaf” enriching their understanding of the department they are working in and familiarizing them with the complex inner workings of Team 4.	
Highlight one area in which your team needs to improve and describe the steps actively being taken to make those improvements.	
Team 4 has faced challenges in acquiring full-time mentors, leading to fewer sustainable learning opportunities in creating well-rounded members. As a result, students are limited to a single area of robotics. This encouraged upperclassmen to step up by not only learning themselves but also teaching others. We require leads to upload new knowledge on The Leaf for sustainability. After our 20th reunion, we inspired the alumni to reconnect with the program and come back to mentor the new members.	
Briefly describe other matters of interest to the <i>FIRST</i> 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.	
For the past 7 years, Team 4 has promoted STEAM values to kids through our summer camp. They participate in FLL and FTC challenges, bottle rocket launches, and egg drops. This inspires attendees to join our school later on and be part of our team. Even the younger participants want to be more involved in robotics, inviting us to perform robot demos for their communities. To expand our reach, we started a mobile summer camp initiative where we offer our services to local schools.	
Judge Feedback	
	Our current team motto is “Reach. Inspire. Transform.” Based on everything you have learned about us, have we lived up to these values, and which of the three should we improve on more? An area the team has an opportunity to improve. Something that really impressed the judges.
Essay	
Team 4 ELEMENT rose from the ashes 20 years ago, built on the core values of Engineering, Leadership, Entrepreneurship, Mentorship, Education, Networking, and Teamwork. In 2023, the subtle yet impactful adjustment of swapping the Entrepreneurship value with Equity created the foundation for our future ambitions of turning borders into bridges through the universal language of STEAM. Our team believes opportunities for collaboration, innovation, and problem-solving—values that FIRST fosters—should be accessible to all, regardless of age, gender, or location. This motivation has helped us reach libraries, inspire students, and transform communities overseas. In an effort to make STEAM education accessible and engaging for children, we published a picture book, Felix and Phoebe's Robot, in 2022. Following our two titular phoenixes, readers are introduced to the Engineering Design Process in a comprehensible way. Felix and Phoebe are constantly making new friends, as they travel through the Los Angeles Public Library system. To provide kids with a memorable experience, we visit local libraries, hosting public book readings and robot demonstrations. There, we give out stickers and coloring pages, offering engaging activities to inspire kids to interact with the characters while bringing out their creativity. To take their initial step in forging a deeper connection with FIRST, we offer and encourage children to operate our robot after the demonstration. Additionally, we donated the book and hand-sewn plushies of the characters to foster children, gifting them a friend with whom to share the STEAM journey. To promote equity, not only have we published the book in Spanish,	

targeting the Latin-American demographic of Los Angeles, but we also incorporated it into the curriculum of an elementary school, AGBU Manoogian-Demirdjian School. Since its publication, hundreds of copies have been distributed, sparking a growing interest in robotics among young readers. This motivated us to continue developing Woody's story—the toast-making robot inspired by Woodie Flowers—by publishing a second book: Felix and Phoebe Go to a Competition. In this book Woody, Felix, and Phoebe go to a competition where they meet and help other teams, while teaching young readers the values of Gracious Professionalism and Coopertition. We acknowledge that the first book did not meet our distribution expectations. However, this did not diminish our motivation to introduce STEAM to children. Learning from the challenges faced during the development and publication of the first book, we are pursuing the creation of the second installment through a more traditional route. Our plan is to secure a literary agent to help market the book and connect us with a publishing company capable of distributing it to bookstores nationwide. The goal of publishing the book series has never been to make money; instead, we have always used the profits to further distribute the book and spread our love for STEAM across the country. Driven by a passion to inspire students, we strive to increase the number of STEAM experiences in our local community by consistently hosting events and forming new teams. For the past seven years, we have hosted a summer camp introducing children to robotics through hands-on STEAM activities, such as FLL, FTC, CADing, and bottle rocket launches. During the FLL season, we annually host Qualifying Tournaments, giving youth the opportunity to showcase their newly acquired knowledge. This year, we established a partnership with FRC Team 980 to host an FLL Regional Tournament for the 2026 season. Through these projects, we help students explore engineering design processes and problem-solving, fostering creativity and a passion for science in a fun, collaborative environment. As a small high school, we have faced challenges not only in recruiting consistent members but also in finding long-term mentors. To address the limited availability of mentors, we created lead positions filled by passionate students in their respective fields. These leaders guide by example, assisting members with associated tasks and sustaining our knowledge. They encourage all to participate in various areas of robotics, creating a student-led collaborative environment in which we take pride. In turn, our seniors have the experience to guide the FLL and FTC teams we start through our school's internship program. Additionally, we have taken steps to promote inclusivity and help freshmen adjust to our family by creating FTC team 21341, Team Fenix, operated by our 9th graders. Since then, we have seen an increase in underclassmen involvement. Furthermore, Team 4 is committed to overcoming stereotypes by encouraging young women to pursue STEAM. To support this initiative, we have sent members to participate in the FIRST for All Fellowship Program over the past two years. In this program, they are taught by STEAM industry professionals about the importance of being unbiased, understanding, and open-minded, which they, in turn, share with the rest of the team. Incorporating the methods learned in the Fellowship, we have promoted and observed increased involvement of young women in leadership roles such as machining, CADing, and programming. Now, students are more eager to join our team, drawn to the inclusive and welcoming environment. However, we are breaking not only age and gender barriers, but also those that extend beyond our local community. Though FIRST has over 110 countries participating in its programs, many remain underrepresented due to a lack of resources, knowledge, and opportunities to engage with the initiatives. With a large Armenian population on our team, we took the first steps toward providing their community with equitable opportunities. Tapping into the previously unexplored demographic, we started and mentored the first FRC Armenian community team, Team 7517, Massis Robotics, in 2018. As with all great plans, this was the spark that ignited the flame. In 2022, Team 4 partnered with the non-profit organization Freedom Loving Youth (FLY), which is constructing a school in Gyumri, Armenia. This school is designed to provide educational opportunities to underprivileged children, creating a space where they can access resources and programs that might otherwise be out of reach. To officially launch FIRST in Armenia, we raised \$20,000 in funds for the construction of a robotics room within the school. The school in Gyumri is set to open in September 2025, marking a significant milestone as we prepare to launch a new FRC team with support from our on-site ambassador. As progress is being made on the development of the school, we have shifted our current focus to our local Armenian communities. We started FRC team 9772, Titans Robotics, and FRC team 10147, ArmBots, mentoring and housing them at our school through the on and off-season. Titans Robotics is a team based out of AGBU Manoogian-Demirdjian School, an institution dedicated to preserving Armenian heritage while promoting academic excellence. Similarly, ArmBots is a team based out of Armath Laboratories, an engineering makerspace that provides classes, competitions, and camps to teach students ages 10-18 essential STEAM skills, fostering innovation and supporting global growth trends. Under our wing, we have helped these teams learn skills in coding,

designing, machining, mechanics, public relations, outreach, and most importantly, teamwork. The new relationships we have built within the Armenian community have brought our long-held dream to life. The beginning of 2025 marks a groundbreaking achievement for Team 4, the FIRST community, and Armenia itself—the official creation of the country's first-ever FRC team. Team 4 ELEMENT is proud to announce our partnership with Armath's Armenian branch to launch FRC Team 10698, Armathronics 15, marking the country's debut in the FRC program. Rather than following an existing path, we chose to create our own, leaving behind a trail that future teams can follow, innovate upon, and expand. From this effort, a new robotics community is rising in Armenia—a testament to our resilience and ambition. We mentor their 15 dedicated members twice a week over Zoom, providing guidance, encouraging collaboration, and answering their questions. Despite this being their rookie year, the students are passionate about the program, the opportunities it offers, and the prospect of something more. To support their journey, we secured the registration fees for their participation in the Ventura County Regional, sent them a Kit of Parts to jumpstart their build season, and even arranged to house the team members in our homes during their visit. The excitement extends beyond our team—the Armenian community is eagerly anticipating their arrival, with local newspapers and TV outlets already notified to celebrate this historic occasion. Their contagious eagerness motivates us to pursue our long-term goal of establishing more teams and eventually hosting an FRC Regional in Armenia. This will create equitable opportunities for local teams to compete without the burden of international travel. This moment is more than just a beginning; it is the foundation of a legacy that will empower generations of dreamers to come. Team 4 wants to continue growing its family by reaching, inspiring, and transforming for years to come. During this process, we aim to provide all teams with an equitable environment and equal opportunities. From inspiring young minds with Felix and Phoebe's Robot to forming and supporting FIRST teams in underrepresented communities, Team 4 has consistently broken barriers and turned borders into bridges. As we prepare for new milestones, such as opening a robotics room in Gyumri and starting Armenian-based teams, Team 4 hopes to leave behind a legacy of opportunity, leadership, and innovation. Together, we will rise, reach, and inspire, shaping a brighter future.;

