

FIRST Impact Award - Team 1880

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| 2026 - Team 1880 |
| Team Number |
| 1880 |
| Team Nickname |
| Warriors of East Harlem |
| Team Location |
| New York, NY - USA |
| Describe the impact of the <i>FIRST</i> 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 <i>FIRST</i> programs. |
| Our community-based team empowers 40 underserved students from 12 schools to explore STEAM. With 98% of our students attending college with an average GPA of 3.1 and alumni entering STEM fields, members find a creative sanctuary in Robotics. 65% of FRC members started in FLL, now mentoring younger teams or coaching siblings. This proves our multigenerational reach, turning students into leaders who in turn lift others. |
| 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. |
| East Harlem in New York City faces historical educational divestment. Our community is 65% Latinx, 33% Black, and 94% low-income, our neighbors face reduced STEM interest (science: 0.7%). In a district where 25% drop out and only 40% attend college compared to a 60% city wide, we combat these barriers through free STEAM afterschool education and social-emotional learning. Our team becomes a "third space" for students around the community where they get to explore and discover their genius. |
| Describe the team's methods, with emphasis on the past 3 years, for spreading the <i>FIRST</i> Mission in ways that are effective, scalable, sustainable, and creative. |
| By demonstrating how engineering serves humanity we started various initiatives that create access points to our community members regardless of their level of skills or interest. At the Maker Faires in Coney Island and Stony Brook, we engaged with over 5,000+ attendees and presented, "Playable" our adapted toys for children with a wide range of disabilities. We position FIRST as a vehicle for social good. |
| Describe your team's goals and the progress you have made towards them to fulfill <i>FIRST's</i> Vision. |
| Our goal is to transform 1880 into a sustainable "Manufacturing Hub for Good." We achieved this by opening our robotics lab and equipment to the public, launching our Assistive Tech Farm, and hosting a series of STEAM outreach projects that allow middle school students an opportunity to learn more about |

robotics and engineering. Progress: We secured partnerships with MakeGood Nola, TOM and JPMorgan ensuring we can deliver on our promise indefinitely.

What impact has your team seen from your efforts described in the above question? How does your team measure impact?

We measure impact by lives changed and stories shared. Beyond 98% college acceptance, we now track community accessibility and engagement, we delivered over 200 mobility trainers, over 125 assistive technology devices and over 75 toys adapted about saving families thousands in medical and helping children feel included. We have also expanded our Rocket Science Bootcamp to middle school students in the area, increasing reach by 40%. We are measuring success by the equity we engineer.

Please provide specific examples of how your team and team members act as role models within the *FIRST* community with emphasis on the past 3 years. How do you share these best practices with other teams?

We are "Warriors" for equity. In the last three years, we established a network of STEM Hubs in Harlem and upper Manhattan, delivering books and curated STEM activities to fill educational voids in our community. Our students volunteer for 14 FLL teams and execute logistics for 2 FLL and 2 FTC qualifiers, proving youth can lead. We share this "Student-Led" blueprint guides with other team so we inspire the *FIRST* community to serve as neighborhood sanctuaries.

Describe your team's initiatives to Mentor and/or Start other *FIRST* teams with emphasis on activities within the past 3 years.

We build the pipeline. We created 13 FLL teams (18186, 18183, 18190, 18187, 7611, 28864, 28865, 64044, 64043, 64442, 64441, 64046, 64045). We host qualifying tournaments and provide student mentors who look like the participants, reducing the "imposter syndrome" in STEM. Our "Rocket Science" camp now feeds middle schoolers directly into these *FIRST* programs. During our FTC events we provide teams with space to practice and use our lab equipment.

What other initiatives have you created, grown, sustained, or participated in (*FIRST* 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?

We expanded our "Rocket Science Bootcamp" to middle schoolers, partnering with JPMorgan. This bridge program ensures students enter HS with CAD/physics confidence. We also facilitate "Playable" hackathons, where students adapt toys for kids with a range of disabilities. These initiatives teach students that their technical skills have immediate power to solve real-world inequity.

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.

We redefined our network for "Tech for Good." We partnered with JPMorgan to scale education and collaborated with TOM and MakeGood Nola to launch our Assistive Tech Farm. These partners provided blueprints/funding to print mobility trainers. Collaborating with Stony Brook University for exhibitions expanded our footprint, turning our workspace into a hub connecting global resources to local needs.

Describe your team's efforts in the past 3 years to promote *STEM for Everyone*TM within your team, *FIRST*, and your communities.

Equity means access for all abilities. We launched an Assistive Technology Printing Farm, leveraging 3D printers to manufacture mobility trainers for toddlers unable to afford wheelchairs. By learning to CAD open-source designs, students remove physical barriers for our disabled neighbors. We center our most vulnerable community members in our engineering, proving that STEAM is a tool for radical inclusion.

Explain how you ensure your team and the initiatives you have created will be sustainable.

Sustainability is built on our "Each One, Teach One" model. 65% of members come from our FLL pipeline. Seniors are required to train underclassmen in technical roles before graduating. Financially, our shift to "Tech for Good" has unlocked new grant streams (like JPMorgan, PWC, Charles Hayden Foundation and Pinkerton) that are specifically interested in social impact, diversifying our funding beyond traditional STEM grants.

Highlight one area in which your team needs to improve and describe the steps actively being taken to make those improvements.

To support our Assistive Tech, we needed higher technical precision. Basic CAD was insufficient for customizing medical devices. We overhauled our training, implementing a peer-to-peer "Advanced CAD" curriculum focused on tolerance analysis. This shifted us from simple prototyping to manufacturing medical-grade devices, improving our robot build quality while ensuring community devices are safe.

Briefly describe other matters of interest to the *FIRST* 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.

1880 is a manufacturing hub for accessibility, producing "toddler mobility trainers" with MakeGood Nola and TOM. We also address the urgent needs of East Harlem. We host monthly food pantries, free adult English classes, and distribute hygiene kits to the unhoused. We know students cannot innovate if they are hungry. By securing these basic needs, we provide a holistic sanctuary, proving *FIRST* teams can heal communities while building world-class robots.

Essay

In East Harlem, known locally as El Barrio, resilience is a heritage. For twenty years, Team 1880 has operated as a sanctuary in a zip code often defined by deficit: funding gaps, resource scarcity, and educational divestment. Looking at our community through a lens of lack misses the point. We define our community by its brilliance. Our neighborhood is 65% Latinx, 33% Black, and 94% low-income. It is a place of immense cultural wealth and untapped potential. For two decades, our mission was survival. We struggled to keep recruiting students and make robotics attractive. Today, that mission has evolved. The Warriors are no longer just participating in the STEM conversation; we are leading it. From manufacturing medical devices to advocating for state legislation, Team 1880 has become a civic institution. We are proving that high-level engineering is a tool for liberation, and we are writing the blueprint for how a robotics team can function as a powerhouse for social equity. To change the trajectory of a community, you must first find your "it" factor. Our workshop serves as a critical "Third Space" , a safe haven different from home and school where 40 students from 12 different high schools convene. In a city where educational pathways are often fragmented, we provide continuity so our members can explore skills they didn't know they could obtain. The results are absolute. In a district where the high school dropout rate hovers at 25%, 98% of our alumni attend college while the remaining 2% enter the workforce, maintaining an average GPA of 3.1. However, the most telling metric is retention. Currently, 65% of our FRC students began their journey in our FLL pipeline. These students are the living embodiment of our

program, moving from wide-eyed elementary schoolers to technical leads who now mentor the next generation. This year, we strengthened this pipeline by expanding our "Rocket Science Bootcamp" to include middle schoolers. Through a partnership with JPMorgan's Tech for Good, we provide CAD and physics mentorship to students before they enter high school, ensuring they arrive ready to lead, not just learn. The most significant evolution of Team 1880 this season was our shift from prototyping to production. We recognized a silent crisis in our neighborhood: the lack of access to affordable assistive technology. In East Harlem, a customized wheelchair is often a financial impossibility, leaving families to carry children who have outgrown strollers but cannot access insurance-covered mobility aids. We partnered with Metropolitan Hospital working with their Rehab Medicine, Pediatrics and Ambulatory care staff. In the 2025-2026 season, we launched the Assistive Technology Printing Farm. We partnered with MakeGood Nola and TOM (Tikkun Olam Makers) to secure blueprints for "toddler mobility trainers" cost-effective wheelchairs designed for young children. Using our Markforged printers and the CAD skills honed through years of competition, we now print, assemble, and distribute these trainers free of charge. This initiative demanded a technical overhaul of our team. "Good enough for the field" was no longer the standard when a child's safety was at stake. We implemented a peer-to-peer "Advanced CAD" curriculum, teaching tolerance analysis and organic modeling. Our workshop transformed into a medical manufacturing hub. We are now Warriors for accessibility, using the same motors and wheels intended for competition to give children the gift of independent movement. Playable: Accessibility as Outreach Our commitment to accessibility extends to play. We launched "Playable," an initiative to adapt off-the-shelf toys for children with limited motor function. Standard toys often require fine motor skills that exclude children with cerebral palsy or other disabilities. Our students hack these toys, adding large, accessible external switches that allow anyone to activate them. "Playable" became our primary vehicle for community engagement. At Maker Faire Brooklyn and Stony Brook University, we hosted hackathons where we taught the public how to solder accessible switches. We watched as strangers realized that engineering is an act of compassion. By making play accessible, we bring the FIRST mission to families who never envisioned themselves in a robotics lab, proving that technology belongs to everyone. Civic Engineering: The STEM Hubs & Advocacy We cannot serve only the 40 students in our workshop; we must spread the love. To address the resource gap, we established STEM Hubs in 39 partner schools across Harlem. These hubs are lifelines. Our students curate and deliver STEM reading books, and engineering challenges to schools that lack libraries and labs. We physically place the tools of innovation into the hands of children who have been told they do not belong in science. Beyond direct service, we engage in systemic advocacy. Our students are legislative advocates. Building on our work with NY Senate Bill 379, we continue to meet with state representatives to demand dedicated funding for STEM education for schools. We demand systemic equity, teaching our students that a Warrior fights on the field with a robot and in the capital with a bill. We have transformed our outreach model into a formalized internship program. Our FRC students serve as paid and volunteer interns for the 13 FLL teams we have started and sustained. They serve as technical directors for these younger teams, ensuring knowledge transfer. This year, we took this ownership a step further. We hosted a series of FLL and FTC Qualifiers where the logistics were entirely student-run. From judging deliberations to field management, our students executed the day-of operations. This demonstrates to our community that young people of color are not merely participants in the FIRST ecosystem; they are the leaders running it. There is a saying in educational reform that communities are "waiting for Superman." On Team 1880, we know that no savior is coming. We are the solution we have been waiting for. By combining high-level robotics with high quality education, legislative advocacy, and community literacy, The Warriors of East Harlem have created a new standard for what a FIRST team can achieve. We are printing mobility for our disabled neighbors, legislating funding for the underserved, and engineering a future where every child in EI

Barrio knows they are worthy of their dreams. We are 1880, and we are building a better world, one printed part at a time. ;

