

FIRST Impact Award - Team 537

2025 - Team 537

Team Number

537

Team Nickname

Charger Robotics

Team Location

Sussex, WI - 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 537 has seen a profound impact through FIRST, with a 100% high school graduation rate and 82% of alumni pursuing STEM careers. Our 6 student leads, with 35 years of FIRST experience, help strengthen our leadership pipeline. Alumni, parents, and mentors regularly volunteer at WIMI, and at least 38 alumni have mentored an FRC team. FIRST develops engineering, leadership, and teamwork skills, with alumni excelling in STEM careers and serving as role models for future generations.

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 school spans across 6 individual cities/villages, which are brought together at sporting events, parades, and pep rallies. We showcase our team-built t-shirt cannon, “Sonic Boom”, as an innovative way to introduce STEM and engage crowds. In our community, 13% of our families are classified as economically disadvantaged. To expand STEM accessibility, our team provided 600 team-assembled STEM kits and created engaging STEM activities for over 700 young learners at community events.

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.

Team 537's Impact team organizes year-round events to raise FIRST awareness and provide hands-on STEM experiences. We involve all team members to maximize our reach. By building relationships with alumni and community partners, we creatively showcase STEM through activities like Stretchy demos at the Ronald McDonald House and Brookdale Senior Living. Our Sussex Scrimmage, celebrating 25th years, demonstrates our ability to scale and sustain impactful programs in the community.

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

Our impact goal this season was to provide a hands-on STEM experience for all generations in our community. We achieved this by building “Stretchy,” an FTC-sized demo robot that's user-friendly. Our team took Stretchy to various facilities, engaging individuals 2-107 years old. Additionally, we started three new FLL Explore teams and are working toward our stretch goal of bringing FLL Explore to all four of our elementary schools, broadening STEM opportunities for young learners.

What impact has your team seen from your efforts described in the above question? How does your team measure impact?
Stretchy has interacted with over 150 people over a few months, sparking interest in STEM. At Brookdale Senior Living, a memory care resident later recalled the visit, emphasizing our impact. At the Ronald McDonald House, residents were motivated to join local robotics teams after hands-on experiences. We measure impact by the number of people reached and their feedback. While operating Stretchy, 100% of our community drivers smile, showing the positive response to our efforts.
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?
Charger Robotics leads by hosting collaborative learning sessions on scouting, Dean’s List, and Impact Awards at our 25th Annual Sussex Scrimmage. We promote FIRST core values by offering fun, innovative opportunities at events, like creating and testing sailboats at National Night Out. Additionally, we demonstrate environmental responsibility through the Adopt-a-Highway program and Recycling Drive, setting an example of how teams can positively impact their communities beyond robotics.
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.
Team 537 has started FLL Explore Teams 30865, 32748 and 32376 at local elementary schools, recruiting mentors, providing support, and covering start-up costs to ensure long-term success. We’ve mentored elementary and middle school teams, earning several mentor awards. Additionally, we created an FLL help website with over 2,500 unique viewers across 22 countries, offering support and mentoring teams globally, expanding our impact and commitment to growing FIRST teams.
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?
To increase youth STEM exposure, we created hands-on experiences at our 25th Annual Sussex Scrimmage, featuring free STEM activities and robot viewing areas for kids. Our FRC members mentor elementary and middle school students and encourage them to continue on their FIRST journey. This support contributes to the success of our FLL teams, with all four FLL Challenge teams advancing to Sectionals, two advancing to State, and one advancing to an international post-season competition.
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.
Our partnership with the school district to implement FLL Explore in third and fourth grade classrooms is exciting and could impact over 800 students. Relationships with our sponsors are highly valued, as their generous support helps fund our competitive robot and offset travel costs. In return, we provide sponsor benefits, including robot demos at corporate events, advertisement on our t-shirts and at our Sussex Scrimmage, which reaches over 1,200 people, including State Representatives.
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.
Our team fosters an inclusive environment where all members feel welcome. While we don’t track traditional diversity markers, our student leads organize team-bonding socials, like going to restaurants, to promote acceptance and strengthen relationships. Each team member brings unique perspectives shaped by their upbringing and culture. We ensure that all team members have a voice in decisions, believing that diverse input will lead to a more innovative solution and stronger team dynamics.

Explain how you ensure your team and the initiatives you have created will be sustainable.	
We have a dedicated business team that works year-round to create and maintain relationships with our sponsors to ensure funding sustainability. Our initiative to introduce FLL Explore programs in our elementary schools is greatly supported by Team 537 to ensure team sustainability. We believe the introduction of STEM programs at a younger age, along with motivation from our team, will inspire and encourage kids to continue their journey through FIRST.	
Highlight one area in which your team needs to improve and describe the steps actively being taken to make those improvements.	
We identified the need to prioritize sustainability by focusing on high-impact, low-effort events and increasing mentor involvement. With guidance from the outreach manager at Discovery World, we optimized our event strategies. Through sponsorships and various community events like the 8th Grade Orientation, we actively recruited new mentors and students. These efforts have already enhanced team engagement at events and resulted in the addition of six new mentors to our team.	
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.	
Our team is committed year-round, with experienced members creating training curriculums in areas like mechanical, electrical, coding, and outreach during the summer. These lessons, such as a mechanical training on safely using a bandsaw, were presented to the team. This student-led initiative ensures all members are well-prepared, enhancing efficiency and safety during the competition season. It's an impactful aspect of our team that fosters skill development and teamwork.	
Judge Feedback	
	How can we ensure long-term sustainability and success that is proportionate to our team size? An area the team has an opportunity to improve. Something that really impressed the judges.
Essay	
Team 537 is celebrating 25 years of inspiring the next generation of STEM leaders while creating a lasting impact on our community through hands-on learning, mentorship and outreach. Our team is passionate about offering STEM opportunities and raising FIRST® awareness for people of all ages. This season alone, we reached over 44,000 individuals, ranging from 2-107 years old, through a variety of events and programs. We provided a direct STEM connection for over 1,200 of those individuals by enabling them to operate a robot, complete a STEM activity, or participate in a FIRST program. In addition to our community outreach, we developed technical skills by designing 4 FTC robots and 1 FRC robot, demonstrating our commitment to both education and innovation. Reaching younger generations is critical for fostering future engineers. Research shows that early exposure to STEM increases the likelihood of students pursuing STEM careers (Purdue University, 2019). Our expansion to younger generations is highlighted by starting FIRST LEGO® League (FLL) Explore Team 30865 at Lannon Elementary and Teams 32748 and 32376 at Woodside Elementary. This resulted in an earlier introduction to FIRST for 18 students, improved their preparation for FLL Challenge, and strengthened sustainability for Charger Robotics. Since 2007, we have also supported the district's 7 FLL Explore and Challenge teams with mentorship and resources. To expand STEM experiences, we are working with Ms. Roth, our school district's curriculum director, to explore ways to integrate a FIRST program into the classroom, potentially impacting 800 third and fourth graders. Team 537 actively creates opportunities to engage our community with STEM. We interacted with over 700 elementary-aged learners through	

activity days and showcasing our FRC demo bot, Bolt. Additionally, we distributed over 600 STEM kits—assembled by our team—granting families access to hands-on learning. We also entertained 15 kids at our local library with a robot-themed storytime, sparking curiosity about robotics. To promote Charger Robotics and FIRST, we demonstrated our robots at community events such as the Butler and Menomonee Falls 4th of July Parade, the Sussex Lions Daze Parade, and at the Antique Power Show, which displays early and futuristic machines. Our team led a new, enriching summer STEM series at a neighboring parochial school, featuring a curriculum thoughtfully developed by one of our team members. This curriculum combined hands-on STEM challenges with foundational topics, such as Ancient Civilizations and the use of sundials. Over the course of 7 weeks, 11 team members volunteered a total of 80 hours and connected with 30 students. Additionally, we offered hands-on STEM experience to another 20 students at the BRIO Studios STEAM Theater Camp, which our team has organized since 2022. These summer camps are invaluable for both the students, who gain exposure to engineering concepts, and our team members, who enhance their teaching and leadership skills while making a lasting impact in our community. This summer, our team introduced Stretchy, an FTC-sized robot built from scrap parts by team members, to provide a hands-on, interactive experience for community members. Stretchy's user-friendly interface allowed participants of all ages—from young children to seniors—to engage by controlling its moving tray to deliver treats and smiles. During visits to the Ronald McDonald House and Brookdale Senior Living, we connected with over 150 people, sparking curiosity about robotics and STEM. We plan to further iterate Stretchy, expanding its capabilities and continuing to engage with more community members. A unique way we showcase STEM is through our t-shirt cannon, Sonic Boom, created by our experienced team members in collaboration with the Hamilton Chargers football team. Sonic Boom quickly became a crowd favorite at high school football games, pep rallies, and parades. It generated significant attention, with our team being interviewed by several media outlets, including CBS58, and WSN live (Wisconsin Sports Network), reaching over 28,000 people since its debut in Fall 2023. As a highlight of the games, Sonic Boom adds excitement and adds a fun, engaging way to showcase Charger Robotics while bridging the gap between STEM and athletics. Team 537 works collaboratively in community outreach events, such as our annual Sussex Scrimmage, which we've proudly run for 25 years. Held every February during National Engineering Week, this event entertains over 1,200 people each year, including State Representatives who help support FIRST programs. Featuring 25 FRC teams from across Wisconsin, the Scrimmage gives teams the opportunity to drive their robots, test key attributes, and identify necessary iterations to make their robot competition-ready. We also host impact-related workshops to offer teams relatable support. In addition to promoting STEM, we give back by collecting and donating food items to Sussex Outreach Services, supporting families in need. To assist our community, Team 537 has hosted a biannual recycling drive since 2011, collecting untraditionally recycled products and scrap from local residents. For the past 18 years, we have also maintained an on-going commitment with Adopt-A-Highway, collecting trash to help keep the environment clean. In addition to our environmental efforts, we support other teams by providing practice space for Team 5096, The Teutonic Force, and Team 1259, Paradigm Shift, while their school undergoes renovations. We joined Team 5096, The Teutonic Force, during an FRC season kick-off event for strategy, concept design, and team bonding. Charger Robotics strives to fulfill our mission of succeeding together. Before the FRC season began, 24 students, divided into four teams, competed in FIRST Tech Challenge (FTC). FTC allows us to build technical skills, practice modeling, and test planning, serving as a valuable preparation for FRC. This season, Charger Robotics identified 29 students for our FRC travel competition team. The team is divided into sub-teams, including two build teams—Squid Squad and Narwhal Pod—as well as Mobility, Autonomy, Business and Drive Team. Supporting two build teams, each with a balance of skills, encourages Coopertition® as each team builds and iterates a unique design. To keep our actions and deliverables visible to the team, we use an online project management tool, which improves our ability to meet deadlines more efficiently. We recognize that sustaining our program is just as important as advancing it. Over the past 25 years, we've been dedicated to promoting STEM and empowering future engineers. To ensure continued success, we must adapt to the evolving needs of our team and community. This season, mentor retirements prompted us to reassess our operations and prioritize sustainability. Through personal and sponsor relationships, we recruited 6 new mentors. We also reviewed events, evaluating the effort versus impact. Low-attendance STEM nights, for example, required significant effort but didn't yield strong community engagement. By focusing on high-impact events like our annual Sussex Scrimmage and STEM kit distribution, we maximized our resources for deeper impact. We consulted Darius Johnson, Manager of School and Community Outreach at Discovery World, for guidance. His marketing strategies, including outdoor displays in the Village of

Sussex and promoting events through our school district's newsletters, have significantly increased attendance and improved our reach. Sponsorships are critical to our sustainability, as they fund our projects and help us maintain mentor relationships. Our business team works year-round to foster positive sponsor relations by fulfilling sponsor benefit packages and regularly updating them via social media and newsletters. Some sponsor benefits include robot demonstrations at corporate events and advertisements on our team's t-shirt, robot, and Sussex Scrimmage signage. Every team member contacts at least eight companies in the greater Milwaukee area to secure new sponsors, helping the team gain significant contributions from Lannon Stone and Palermo's Pizza while also allowing each member to practice valuable communication skills. Another crucial relationship Charger Robotics nurtures is with our alumni. We stay connected with over 600 alumni by hosting annual events and through social media platforms such as Facebook, Instagram, and LinkedIn. Over 82% of our alumni have pursued careers in engineering, with many citing Charger Robotics and FIRST as major sources of inspiration. Additionally, 6% of our alumni mentor FIRST teams, giving back to inspire the next generation. Many also volunteer at FIRST events, offer career advice or provide professional mentorship through internships, strengthening our legacy and supporting future engineers. Looking ahead, we plan to expand FLL Explore to additional schools, inspiring even more young learners to pursue STEM fields. We will continue to build strong relationships with potential sponsors by showcasing our ambitious robot designs at community events. Our goal is to win the Engineering Inspiration Award and advance to the FIRST Championship, providing an extraordinary opportunity for our team members to compete at the highest level. Ultimately, Team 537 understands that our program and FIRST is about much more than building robots. The true impact lies in how we shape the future by instilling technical expertise in our members and promoting core values like Coopertition® and Gracious Professionalism®. These values are essential for navigating today's society and will continue to guide our team in creating a lasting impact both within and beyond the competition arena. *Essay content created by Team 537 with proofing/refinement assistance by ChatGPT;

