

FIRST Impact Award - Team 564

2025 - Team 564
Team Number
564
Team Nickname
Longwood RoboLions
Team Location
Middle Island, 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.
The impact of the FIRST program on participants over the last three years has been significant. 100% of our FIRST participants have graduated and have gone on to attend college, military, or trade/certificate programs. 87% of our participants have pursued a STEM field in some capacity: Presidential Scholarship winner for STEM field, technical volunteer for FIRST, FIRST mentor, and engineering intern to TTM technologies.
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.
Longwood Central School District is the ninth most diverse school district in New York state covering 53 square miles in central Brookhaven Town, Suffolk County, New York, Long Island. It contains 7 schools (4 elementary schools, 1 middle school, 1 junior high school and 1 high school) and 8,947 students. The district's minority enrollment is 60%. Also, 31.4% of students are economically disadvantaged.
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.
Over the past three years our team's methods for spreading the FIRST Mission are community outreach, school outreach, digital outreach, social media presence, corporate sponsorships, targeted outreach to underrepresented groups, alumni networking, public demonstrations, innovative fundraising, and robotics parts donation.
Describe your team's goals and the progress you have made towards them to fulfill <i>FIRST's</i> Vision.
The most obvious progress we have made to fulfill FIRST's Vision is a structure change to our Robotics program from a four month program to year round program going from 100 hours season to a 500 hour season. This has enabled us to focus on engineering, manufacturing and computer science education.
What impact has your team seen from your efforts described in the above question? How does your team measure impact?
We have seen an increase in membership especially in underrepresented groups, deeper learning experience, increasing skill development(i.e. CAD), broadening outreach initiative, increased visibility through new social media outlets and collaboration with CNC and metal manufacturers. Our team measures impact by self satisfaction, achieving team goals set by the team and numerically by our team demographics matching our district demographics, scholarship awards, and time spent collaborating.

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?
We've shared our best practices through teamwork, community involvement, mentorship, and outreach. Some specific examples include mentoring two FTC teams (Bayport/Blue Point and Longwood Jr High), presenting at Regal Eagle Roundtable, podcasting, presenting at LITES conference, speaking with local and state officials, and sharing a scouting app with all FIRST teams using Zebra Motion Works technology.
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.
Our team has been deeply committed to assisting, mentoring, and starting new FIRST teams. We have worked to revive the Jr FLL program that had been dormant for several years. We established a two year FTC program vs one year of FLL and one year of FTC in our junior high school 7 & 8 grade program. We played a pivotal role in expanding Bayport Blue Point FIRST involvement.
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?
We partnered with the coding club to host both an hour of code and a Hackathon, booked several Technology showcases and demonstrations in several different communities both inside and out of our district. We partnered with a local unified basketball team that inspired us to begin creating a local unified robotics team. This enables students with and without disabilities the same opportunity to work on a robot. We created a new full year curriculum for coding in the district.
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.
The NAVY has not only sponsored the “RoboLions,” but have worked closely with us to achieve our school’s mission “every one, every day.” They’ve presented at our school, acted as judges for our Hackathon, got their hands dirty helping with our robot and redesign of our new work space. We have begun a 3 year project to design a fully state of the art manufacturing lab. We will have teamed up with Allendale Machinery(HAAS) to help bring this plan to life.
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.
Longwood Robolions tried something new this year in hopes to promote equity, diversity, and inclusion. We hosted a “bring a friend day” to our meeting. This resulted in an increased number of members from underrepresented communities, and our team is a true representation of our district diversity. We are currently working closely with the Unified Sports program and Best Buddy as a result of this tactic to create our own Unified Robotics team.
Explain how you ensure your team and the initiatives you have created will be sustainable.
Our business plan speaks directly to sustainability and the importance of embedding a culture of continuous improvement, critical thinking, measurable goals, adaptability, and peer mentoring providing necessary training and support. We have developed a full year structure with no limitation to enable members to follow their dreams and interests. For example, we share several members with other extracurricular activities such as sports, drama club, Longwood travels, and best buddies.
Highlight one area in which your team needs to improve and describe the steps actively being taken to make those improvements.
One area we need to improve is efficiency. Some steps we are actively taking to improve our efficiency are better communication, tutorials, and different levels of membership. Goals and expectations need to be clear and properly

shared with all members whether verbally or through digital means - we are now using SLACK. We want to include anyone that wants to be included so we have developed different levels of membership including competition member, club member, and drive team member.

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.

Our sponsors are listed on the back of our team shirts, in our pits, on social media, and in our school. One sponsor is in loving memory of Nolan, a sophomore student who lost his battle to a rare form of brain cancer on November 30, 2024. As you could imagine the traumatic experience and deeply emotional impact this had been on all the students and staff at the school. Although Nolan was not a RoboLions member, he was a dear friend us and will be sorely missed.

Judge Feedback

	Should we be valuing self sustainability over program expansion or vise versa? An area the team has an opportunity to improve. Something that really impressed the judges.
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Essay

In a society that is filled with complexity and exclusion, Team 564 gives people a chance to come together and be the catalyst for inclusion and diversity. Our team is composed of many students with different stories. Some of us are athletes, some are musicians, some are boy scouts or girl scouts, some are artists, actors, and actresses. Some of us are older than others and more popular than others. Some of us excel in places where others don't. But, on our team, the only thing that truly matters is your passion for robotics and the person we strive to be. We have all found common ground where everyone is valued and built a community through FIRST. A community that will one day unite all kinds of people. A community that recognizes our efforts to change and impact individuals, places, groups, and FIRST. A community where everyone feels safe, accepted, and valued. We have gone to many locations to spread our message of inclusivity and diversity and our school's motto, "Every One...Every Day." We've traveled near and far to enhance and mentor FIRST programs, presented at multiple schools to spread the word of FIRST, and built a robot to help a physically impaired individual score his first points for his basketball team! We, like other teams, have visited several places to share our unique view of robotics and the FIRST program with others. We have used our robot to entertain, educate, inspire, enlighten, and draw out interest individuals may not even know they had. Friendships, knowledge, passions, and joy have been by-products of these ventures. We've been to Longwood Middle School, where we held demonstrations of both the FRC and FTC robots for the middle schoolers (1,279 students) as they began to be exposed to STEAM-related clubs. We gave the students opportunities to get hands-on experiences with robots. We visited Ridge Elementary School (720 students) for their "STEAM Day" event so they could have similar experiences as those at the middle school. People won't know anything about FIRST Robotics or get interested in it until they get to experience the program and find out how amazing it actually is, no matter how short that experience may be. All it takes is one idea to lead you to accomplish exceptional things, and our team guides those students in the right direction with every visit. At our high school we participated and hosted events such as the Hackathon (324 students), Tech Expo (694 students), Longwood Day (532 community members), Hour of Code (213 students), Club Fair, Safe Halloween (3,105 community members), and our community BBQ (2,341 community members). We had the privilege of holding a demonstration for Joe Destefano, a New York State Assemblyman. All of these showcases were very successful and gave several students and community members of all ages a glimpse into the world of engineering and robotics. A world they may have never known they would love. None compare to the most memorable moments for our team, even surpassing a News 12 feature. Nick Meyer, a

physically disabled whose dream was to score a point for his unified basketball team, but due to his physical limitation he was deemed one of the coaches for the team. With empathy for Nick, Mark Gordon, special education teacher and unified basketball coach, wanted to make this dream a reality and tried several approaches including a slingshot. Through word of mouth, Nick's story inspired us to build one of our most impactful innovations, a robot that would allow him to score his first-ever points in basketball. Nick now became one of the players on the team and at the start of the game a teammate passed the ball to Nick's robot for him to shoot and score a basket for his team. Everyone present for the game cried with joy for this young man. It was a life-changing experience that will never be forgotten. We can honestly say that our joy for him can not be described in words. This inspired our team to begin the process of creating our own unified robotics team, which is still in the works with an expected start date September 2025. We didn't know it was a dream until he inspired us to make it one. Although as a group we have impacted many, there are some members of team 564 that significantly influenced the world of FIRST and STEAM. Gregory Cohen, the valedictorian of Longwood High School class of 2024, created a software empowering teams worldwide with real-time data and analytics on every match played that features match predictions, as well as comprehensive statistics on a robot's speed and movement dynamics. The software offers a myriad of features organized into categories such as Team-Performance-Stats, Charge-Data, Motion-Stats, Robot-Stats, Cycle-Data, Match-Videos, Event-Stats, and Match-Predictions. From event-specific performance metrics to predictive match outcomes, it provides a comprehensive suite of tools for teams to analyze and strategize effectively. This scouting application has a primary focus on harnessing Zebra MotionWorks data through the Blue Alliance API, offering teams access to the latest technology provided by FIRST. This data facilitates the creation of heat maps and comprehensive tracking of each robot's performance during matches, replacing the laborious task of manual note-taking. Notably, this advanced data analytics is available to all teams at their competition events, significantly elevating the scouting game in the FRC community. The most remarkable aspect of this endeavor is its commitment to openness and accessibility. All the data is freely available for teams worldwide at Longwood Robotics' website, ensuring that every FRC team can harness these tools and insights to elevate their game. This scouting application represents a groundbreaking contribution to the world of FRC, showcasing what is achievable with the latest technology and data-driven insights. In doing so, it sets the stage for a new era in scouting and information processing at FRC competitions, with the ultimate goal of making this valuable resource available to teams at every competition.

Ryan Pfister, graduate of 2023, another member of team 564, is a ProBoard nationally certified volunteer firefighter and Emergency Medical technician, POS Systems Consultant, Public Safety Officer, and a Cybersecurity college student. His various responsibilities include emergency and safety responses, implementing, updating, and supporting hardware remotely and in-person, collaborating with town and local law enforcement, and designing and maintaining websites. In the world of FIRST, Ryan is a technical volunteer who oversees scoring, live video webcast, audience audio, visual displays, and wireless network management, ensuring smooth operations throughout all FIRST Robotics competitions on Long Island. Additionally, he manages setup and takedown of technical equipment at these events and was awarded volunteer of the year. Petty officer Daniel Walter, nuclear program coordinator for New York State, was present at the Long Island regional in Hofstra last year. During the event, he came to the pits to speak with our coaches, to complement our team's professionalism and persuasiveness. Our team greeted all the vendors at the event, striking conversations and answering questions about future goals, the FIRST program, and aspirational innovative technologies. This helped foster a relationship we are very proud of and now we can call the US NAVY a sponsor. We have been in contact with several officers throughout the country, have had the NAVY speak in depth about engineering at the high school, and welcomed several officials to our daily meetings. During one of our many visits, Officer Walter described the specialty group he recruits for with an engineer (electrical and nuclear) emphasis and commented that at network events "I would find one in a thousand qualified candidates," but at the FIRST event "I found only one in a thousand isn't qualified." Contacting groups is vital to spreading FIRST's ideas and getting more people involved in the world of FIRST. A lot of members of our robotics team are busy trying to balance their lives with other clubs, hobbies, and responsibilities with robotics, whether it's babysitting or playing a role in the school theater. Our team understands that some people have different priorities and don't judge those who can't attend every day. Therefore, we created different levels of membership that is a friendly environment for all. Robotics is a place where none of your differences make you feel like you don't belong. It is a place where everyone

is reminded of our shared humanity and prompts that hope and unity is the key to a unified team and society. If FIRST robotics didn't exist, where would the world be right now? Sulking at home doing nothing that they enjoy, feeling that they are missing out on something? Being involved with the wrong kinds of people? Our team impacted each individual who joined in some sort of way, bringing a sense of belonging and purpose to everyone. FIRST Robotics has brought happiness to each of its members, inspiring others to strive for even greater things. Not everyone before robotics was recognized and accepted for their differences; however, Team 564 made sure that they were. Each person who is involved in robotics comes from different backgrounds, countries, and families, but here, none of that matters. Nobody is thought to be more important than another, and you are accepted for who you are. The message of inclusivity has spread throughout communities like schools, towns, and all the people in between, thanks to our team. We have inspired and impacted people of all kinds, not excluding them based on their differences like others had done in their individual lives. Our robotics team is one of many clubs in Longwood that truly defines our school motto, "Every One...Every Day." ;

