

FIRST Impact Award - Team 3506

2025 - Team 3506
Team Number
3506
Team Nickname
YETI Robotics
Team Location
Charlotte, NC - 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.
YETIs internalize FIRST values, embodying them as they thrive in collegiate and professional environments. 97% graduate college, 92% thrive in STEM fields, and 5% pursue business-related areas. 35% of alumni return as YETI mentors and 5% guide FIRST teams in their place of residence, volunteering at competitions, sponsoring FIRST prOgrams, sustaining 25 teams, thus guiding the next generation of leaders and sharing the transformative impact of FIRST.
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.
Located in the heart of Charlotte, our YETIs span 7 counties and 2 states. Our diverse perspectives on STEM education inequalities have allowed us to lead with one voice in advancing equitable opportunities. Charlotte consists of 28.7% economically disadvantaged students in 260 Title 1 schools that lack long-standing STEM programs. Recognizing this inequality, we created RISE with YETI to offer tailored eight-week-long STEM courses to 300+ students in Title 1 schools across our community.
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.
YETI's initiatives align with FIRST's mission to provide life-changing robotics programs. In partnership with our non-profit Queen City Robotics Alliance, we expanded "The Zone," sustaining a shared hub for 300 FIRST students, with practice fields, training, and resources. Additionally, we deliver and instruct LEGO robotics summer camps and after-school classes, teaching 60+ students this year, inspiring them to embark on their FIRST journeys, and championing STEM education worldwide.
Describe your team's goals and the progress you have made towards them to fulfill <i>FIRST</i>'s Vision.
Two years ago, we began #FIRSTEmpowered, highlighting stories of empowerment from the FIRST community to encourage STEM leadership. Starting by distributing flags at competition, #FIRSTEmpowered expanded to a movement and social media campaign, portraying FIRST's impact on

its participants and inspiring others to join. Recently, we launched our #FIRSTEmpowered Ambassador program, motivating members to internalize FIRST's values, share stories, and foster change in the world by celebrating STEM.

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

#FIRSTEmpowered has impacted 17,654 individuals globally, with effects seen across continents as flags proudly hang up in teams' pits from North Carolina to Australia. In just a year, our new #FIRSTEmpowered Ambassador program welcomed 2 ambassadors who champion FIRST's values, share stories, and celebrate STEM. We measure our impact in the number of people we reach, whether it is through empowering a member to share their story or inspiring a student to pick up a robot for the first time.

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 committed to supporting FIRST and the next generation of leaders. Our students and mentors serve as role models, volunteering at 6 NC FLL Qualifiers & 5 FTC events this season. Over the last three years, we have hosted 3 FLL tournaments and 2 FTC and FRC scrimmages, impacting and inspiring all levels of FIRST members through our roles as host, coach, referee, or volunteer. Our FTC and FLL teams regularly accompany us at outreach events, fostering a service mindset in the next generation.

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

Over the last three years, YETI has launched 1 FLL Explore, 6 FLL Challenge, 8 FTC, and 1 FRC teams, supporting 157 students through sponsorship and mentorship. This season, YETI members dedicated over 2,000 hours to sustain our four veteran teams. We have directly assisted FRC teams 2724 (returning rookie), 9005, 9150, and 9607 in the past three years by providing mentorship and competition support. In particular, we guided team 9607, which won the Rookie All-Star award.

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?

This season, YETIs dedicated 7,700+ hours to inspiring and directly reaching 120,104 individuals through STEM events, initiatives, and demos. Our long-term partnership with Girl Scouts of America has impacted 300+ girls since 2022, providing them with comprehensive STEM and business classes, and expanded the curriculum we use. Our after-school robotics programs at Montessori schools have introduced 120 students to robotics in three years, inspiring the schools to invest in STEM programs.

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.

Collaborating with the City of Charlotte, we championed a proclamation recognizing "Robotics Day." Advocating for robotics appreciation in NC, we attended FIRST NC Advocacy Day at the NCGA and the STEM Champion Awards, sharing our passion to legislators. Federally, we partner with SASA and

members of Congress, lobbying for STEM funding and creating a national impact. Additionally, we promote SASA's National Advocacy Conference and hope to establish an upcoming NC Advocacy Conference.

Describe your team's efforts in the past 3 years to promote equity, diversity, and inclusion within your team, *FIRST*, and your communities.

Prioritizing equity, diversity, and inclusion comes first with tailoring our long-standing STEM initiatives. Recognizing the lack of FIRST opportunities in Western North Carolina and gender barriers in STEM, we support Doyenne Inspiration West, providing 210 female and non-binary students an outlet to showcase their STEM skills. Our growing cybersecurity classes teach over 50 senior citizens technology basics, building digital confidence across generations.

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

Student mentorship is vital to sustaining the YETI experience, allowing rookies to shadow and learn from experienced veterans, conducting technical and business training for 170+ FRC and FTC students this year alone. Rookies are encouraged to complete 50 hours of outreach, while veterans exceed 100, showcasing their dedication every season. This prepares rookies to lead and initiate their own outreach events. For instance, our 2024 FTC Scrimmage was a rookie-initiated idea.

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

YETI, one of the largest teams in North Carolina, takes pride in being able to create technical, business, and service-oriented leaders of tomorrow. Despite this, effectively engaging 100% of our team is difficult, and many large FRC teams face a similar situation. Actively mitigating this, we host our annual YETI Picnic, Bonfire, CADathon, and Quick Build, among a myriad of other activities, strengthening the YETI bond and enticing members to discover their unique fit in the YETI family.

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.

Addressing the needs in our direct community, our supply drives provide food, care packages, and backpacks to over 5400 under-served members of the greater Charlotte area. The YETI voice is present on social media, Chief Delphi, FIRSTUpdatesNow, and our YETI Wiki, reaching 88000+ people. To encourage accessibility in FRC, we publicize our robot resources on Open Alliance. Our newest initiative this year, Go Green With YETI, promotes environmental sustainability among our team and FIRST NC.

Judge Feedback

FIRST has transformed the lives of each YETI, empowering us to take initiative and turn our dreams into reality, positively impacting our community. Which of our initiatives do you feel we CAN expand upon as we plan what we WILL do next season?

An area the team has an opportunity to improve.

Something that really impressed the judges.

Essay

Change, almost always, starts with a dream. Founded on a dream, YETI was established in the heart of Charlotte with just 16 students and 8 mentors. Building our team from the ground up, we embraced the FIRST mission, deciding to take the lead and share our passions for STEM with others. Over time, YETI's imagined a future where STEM opportunities are available to all, setting out to inspire and empower through innovation and collaboration. After 15 years, YETI's have turned "I can" to "I will," making that dream of change a reality. With 63 students and 19 mentors, we strive to build a brighter future by sustaining the mission of FIRST, building long-lasting STEM and leadership programs, fostering a service-driven culture through community giving, and advocating for informed legislation. I Can Build Recognizing the diverse needs of our community, YETI's establish long-lasting STEM programs to break socioeconomic, gender, geographic, and age barriers while building a future of equitable opportunity. Acknowledging the persistent gender inequalities in STEM, we partner with Girls Scouts of America to teach robotics merit badge classes, impacting 300 girls over the past three years. This year, we revamped our curriculum to create skill-focused lessons for each Girl Scout level, ensuring engaging learning experiences that build confidence and leadership. Recognizing the limited off-season events in Western NC, we initiated the idea for Doyenne Inspiration West in 2023 and continue to support its execution. The event has provided space for 210 girls and non-binary students to showcase their skills in STEM. Alongside empowering women in STEM, we build STEM interest in underrepresented communities. Partnering with Queen City Robotics Alliance (QCRA), we host drone programming summer camps and FLL Explore after-school classes, leading in curriculum development and instructing 60 students. Centered in urban Charlotte, we recognize our community's diverse barriers in STEM. In our community, there are 260 Title 1 schools lacking long-standing STEM programs. Aiming to address this inequality, we created Rise with YETI, a customized program that teaches K-8 students essential STEM and leadership skills through engaging activities. Our two custom-made robot games, "Go Away Garbage" and "Into Orbit," include challenge mats, 3D printed parts, and specific missions. This year, we obtained a grant from Eduporium, providing students with their own Edison robot to complete our challenges. At the end of each eight-week course, students showcase their creations and knowledge to their parents and teachers. Since August 2023, we have impacted 300+ students and conducted 12 courses at 5 Title 1 schools across Charlotte. Our efforts to build up our community extend to the competition setting. YETI's provide mentorship and multidisciplinary assistance for teams across the US. We take pride in seeing the teams we guide succeed in competitions. With our assistance, FRC team 9005 and 9607 won awards at competitions during their rookie seasons. Additionally, our FRC experience is showcased on Open Alliance, with 19,600 views through shows and posts since 2022, giving teams as far as Turkey access to our robot resources. I Can Sustain YETI is committed to sustaining shared knowledge in our community, instilling professional skills within our team, establishing a FIRST pipeline, and celebrating sustained STEM participation. With the recruitment of 60 rookies and mentoring 80 FTC students this year, skills training is vital for our team's sustainability. Since 2016, our Java classes have taught 450 students. CAD is critical for our design process, and through our Solidworks classes, 32 students have obtained professional Solidworks certifications. Our pre-season CADathon introduces members to the fast-paced build season, challenging members to develop comprehensive CAD, code, and documentation in one week. With our robot quick-build, YETI's prototype for previous FRC games, using recyclable parts to teach strategic design. These technical skills ensure our members are primed for success during the season and beyond. We focus on supporting our FIRST teams and initiatives by building strong relationships with sponsors. Our fundraising classes help FRC and FTC teams attract new sponsors and maintain long-term connections with current ones. Our newsletters share important updates, while Sponsor Nights demonstrate our appreciation for the financial and technical support we receive. We take pride in our strong fundraising efforts, being the only NC team

sponsored by WCP. We start, sponsor, and sustain FLL and FTC teams, building a successful FIRST pipeline. We host annual recruitment nights for FLL, FTC, and FRC, encouraging students to explore their passion for STEM with like-minded peers. Just this year, we started, sponsored, and mentored 4 FLL teams, 6 FTC teams, and one FRC team, in addition to sustaining 4 veteran teams. Since 2022, 60 YETIs have dedicated 3000+ hours to mentor teams in technical and business skills. Over the summer, YETIs lead FLL and FTC pre-season training sessions, covering mechanical, electrical, marketing, fundraising, and outreach projects. Our support and mentorship extend beyond pre-season training. YETIs continually guide our teams by scheduling meetings, creating game-specific materials, and sharing resources, fostering success at the regional and state level. FLL teams 53669, 60851, and 60854 and FTC teams 21829, 23889, and 27137 have advanced to state competitions, with many others winning awards at qualifiers. In 2016, partnering with QCRA, we established the Zone, a shared robotics space that offers technical training and serves as a hub for many NC teams. To expand STEM opportunities in Charlotte, we moved to a larger space in September of 2023, allowing us to provide FLL tables, an FTC field, and one of the only full FRC fields in NC. With this partnership, we have hosted FTC and FRC scrimmages, getting 40 teams and 400+ students ready for competition. Beyond FIRST, YETI encourages STEM participation across all ages. We have dedicated 1530 hours to demos and presentations since 2022. Our cybersecurity classes teach 50+ seniors citizens technology basics to build digital confidence. Our community partnerships with Microsoft, Woodlawn STEMfest, the Charlotte Hornets, and Schaeffler showcase STEM through robot demos, informative presentations, and festivals across Charlotte. I Can Give We cultivate a service-minded culture, utilizing our experiences to tailor unique outreach programs and create positive change. YETIs go beyond STEM initiatives, giving back to our community through drives and services. We encourage members to complete 50-100 hours of outreach every year, staying immersed in our community year-round. For the past ten years, we have partnered with Roof Above to prepare cold-cut sandwiches for the homeless, serving 4820 people during the holidays in the last three years. Since 2022, we have partnered with "The Relatives", a system of resources that helps find shelter and support for youth in crisis and meets the needs of 200 youth through hygiene product supply drives. Extending heartfelt compassion to Ukrainian refugees displaced by conflict and encouraging students at Title 1 schools, YETI conducts annual school supply drives. In the last three years, we have provided 450 school bags and lunch boxes filled with essentials. I Can Advocate Recognizing policy's pivotal role in ensuring equitable access to STEM opportunities, YETI actively advocates at the local, state, and national levels. Locally, YETI worked to establish the "Robotics Day" proclamation on December 20th, encouraging the celebration of STEM throughout Charlotte. This is one of the first written documents in the Mecklenburg legislature to mention the impact of the FIRST program. We are currently working with the state government to establish a statewide Robotics Day for all in NC to observe. Since 2023, YETIs have visited Capitol Hill, meeting with US Senators and Representatives in partnership with the Student Association for STEM Advocacy (SASA). We lobby for legislation including Every Student Succeeds Act and the CHIPS and Science Act. Beyond Capitol Hill, YETIs stay engaged with politicians, inviting them to our workspace to showcase the transformative impact of FIRST and reinforce the importance of their continued support for STEM. This year, we assisted SASA in promoting national advocacy efforts in NC and hope to establish an NC advocacy conference. In 2023, we launched #FIRSTEmpowered, an initiative showcasing stories of empowerment from the FIRST community. Building on its momentum, we started #FIRSTEmpowered Ambassador, motivating FIRST members to lead in STEM empowerment. In just a year, this program welcomed 2 ambassadors who champion FIRST's values. Go Green with YETI is a newly launched initiative committed to advancing eco-friendly practices in FIRST. YETIs practice sustainability by encouraging the use of reusable water bottles and recycling materials to build our robots and field equipment. Partnering with FIRST NC, we're implementing "greener" practices in our 2025 competitions and beyond, supplying

reusable water bottle options and raising awareness through emails and social media campaigns, reaching teams across NC. We Will Last year, we challenged ourselves to make an even larger impact by doubling our outreach. This year, we said “We will,” surpassing this goal and dedicating over 7700 hours to our community. Our goal is not just to extend our service hours; we strive to amplify our impact, broaden access, and create opportunities, directly reaching 120,104 individuals and empowering them through the transformative power of STEM. YETIs are determined to sustain, build, give, and advocate, prioritizing the growth of our local, state, national, and global communities. Not because we CAN, but because we WILL.;

