

FIRST Impact Award - Team 3506

2024 - 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. This can include but is not limited to percentages of those graduating high school, attending college, in STEM careers, and in <i>FIRST</i> programs as mentors/sponsors.
YETI members use FIRST as a tool to empower, instilling a strong STEM, business, and interpersonal foundation within themselves and our community. Although only 75% of local students attend college, YETI's proud to have 100% of alumni pursue postsecondary education (92% in STEM); that is 185 students inspired to become STEM professionals and community leaders over the past 3 years. The transformative nature of FIRST is evident, as 35% of our alumni return as mentors, growing every year.
Describe your community along with how your team addresses its unique opportunities and circumstances.
YETI spans 7 counties and 2 states, giving us a unique insight into the lack of opportunities that lay within the greater Charlotte region. Within our diverse community, there are 193 Title 1 schools and 25% economically disadvantaged students that lack the resources to participate in STEM programs. Recognizing the inequality in STEM participation due to the lack of mentors, transportation, and technology, we build custom programs to serve Title 1 schools in the greater Charlotte community.
Describe the team's methods, with emphasis on the past 3 years, for spreading the <i>FIRST</i> message in ways that are effective, scalable, sustainable, and creative. How does your team measure results?
To YETI, inspiration fuels innovation; therefore, our success is aligned with the people we inspire. Recognizing a disproportion of women in STEM, alongside other NC FRC teams, we initiated Doyenne West, an all-girls off-season competition, opening space for 10 more teams to attend the event. In addition to competitions, our robotics summer camps and afterschool programs spread the message to 150 younger students, inspiring them to join FIRST programs and pursue leadership in STEM fields.
Please provide specific examples of how your team members act as role models within the <i>FIRST</i> community with emphasis on the past 3 years.
YETI's capacity as a role model is evident at FLL and FTC competitions, where YETI is both host, coach, referee, and volunteer, inspiring and guiding the next generation. Over the last 3 years, we hosted 1 FTC and 2 FLL competitions, impacting a total of 87 teams and 1,675 people, serving as a role model to

young FIRST participants. Through FIRSTUpdatesNow, OpenAlliance, and ChiefDelphi, we showcase our progress, collaborating and assisting teams globally, reaching over 17,500 people.

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

This season, YETI student mentors provided tailored training to 11 FIRST teams (starting, mentoring, and assisting 1 FLL Explore, 6 FLL Challenge, and 4 FTC teams), fostering an environment for success. YETI continues to mentor FRC Team Avian, who received the Rookie All Star award last season, and partnered with Whitewater Middle School to host the NC FLL Bracket A Semi-Final Event. Additionally, we hosted a 2023 season scrimmage, allowing 7 NC FRC teams to practice before competition.

Beyond starting teams, what initiatives have you done to help inspire young people to be science and technology leaders and innovators? What results have you seen from your efforts in the past 3 years?

In the last 3 years, YETI volunteered 7520 hours, inspiring and impacting 24,715 people through various STEM initiatives. Our most recent initiative, #FIRSTEmpowered, emphasizes how members are empowered by FIRST and use FIRST to inspire others. YETI distributes flags during competitions and manages a global social media campaign, reaching 7356 people in 10 months. #FIRSTEmpowered is powerful, encouraging impactful outreach and inspiring others to start their own transformative FIRST journey.

Describe the partnerships you've created with other organizations (teams, sponsors, educational institutions, philanthropic entities, etc.) and what you have accomplished together with emphasis on the past 3 years

Partnering with our non-profit QCRA, in 2023, YETI impacted 350 students through STEM camps and 5250 people at robot presentations and sponsorship tours. To expand sponsor partnerships, we work on undisclosed commissioned projects, giving members a better transition into the professional setting. Additionally, over 3 years, our long-term partnership with the local Girl Scouts of America Council has grown 172%, impacting 850 young girls and introducing them to robotics and communication skills.

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

YETI promotes equity, diversity, and inclusion, empowering our community with STEM opportunities. Recognizing the growing gap in STEM and the importance of youth robotics exposure, we started RISE with YETI, introducing STEAM education to Title 1 schools. YETI designed a tailored curriculum and game, engaging underrepresented students in a hands-on STEAM experience. In just 4 months, we reached 35 students at 2 schools, continuing our efforts at Whitewater Middle School in the spring.

Explain how you ensure your team and the initiatives you have created will continue to run effectively for the foreseeable future

To ensure we continue to provide support to our community, members must learn our mission and how we accomplish it. Our mentorship training allows new members to shadow students in their leadership roles, giving them familiarity and experience. As returning members run events, new members support planning and management, in preparation to assume these key positions the following season. Students are given opportunities to volunteer at these events and gain specialization in specific roles.

Describe your team's innovative strategies to recruit, retain, and engage your sponsors within the past 3 years

Sponsors are a crucial part of our team and provide us with the opportunity to pursue our mission. This season, we showcased our team at demos with Schaeffler, Trane Technologies, and JR Motorsports, among 25 other sponsors. We engage our sponsors through social media and host an annual sponsor appreciation night to acknowledge their contributions and encourage networking among students and sponsors. Our sponsors inspire us and provide incredible mentors to emulate, and enable our growth.

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

YETI's application-free process promotes inclusion, catalyzing our growth to 67 members in the past 3 years. Although this gives us the opportunity to expand our network, guaranteeing 100% team engagement can be challenging, an issue faced by other large FRC teams. Actively resolving this issue, our team building activities strengthen the YETI bond, while technical activities such as our CADathon and Quick Build encourage members to find their place and have the transformative FIRST experience.

Describe your team's goals to fulfill the mission of *FIRST* and the progress you have made towards those goals.

In accordance with the FIRST mission, our goal is to lay a strong STEM foundation, paving the way for the next generation through local and global efforts. Our after school programs at Montessori schools introduce STEAM concepts, impacting over 120 elementary students in less than 2 years. Through our involvement with EYERIS, a joint effort between teams across the US, and the FIRST Education Board, we create intricate curriculum and start FIRST teams in underrepresented countries globally.

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 or particularly noteworthy.

YETI met with members of Congress to advocate for increased STEM and robotics funding at the SASA National Advocacy Conference, impacting students across the nation. Partnering with SASA, we will be promoting the NC Advocacy Conference, empowering NC teams to advocate for STEM. To help protect our elderly, YETI teaches technology basics and online safety at senior homes. YETI plans to publish an interactive children's book series to spread the STEM message to our community and beyond.

Judge Feedback

Who/When	Feedback
<p>Apr 06, 2024 02:12:35 PM EST</p> <p>Essay</p>	<p>Whether you are a participant, alumni, volunteer or judge, FIRST has proven to be a life changing endeavor. In light of our initiative #FIRSTEmpowered, we want to know your story as a judge! How has FIRST empowered you and shaped who you are today?</p> <p>An area the team has an opportunity to improve.</p> <p>Something that really impressed the judges.</p>

For the past 14 years, YETI Robotics utilizes FIRST as a tool to create the promising young leaders of tomorrow. With a team of 67 students and 23 mentors, we have dedicated 3000 hours of outreach across 40 events this season, meeting the growing demand for STEM opportunities at all levels, locally and globally. Intertwining impact and innovation, we focus on empowering the underserved, inspiring our community, and sustaining our efforts, shaping the next generation of innovators. #Empower STEM disparities continue to grow in our local community, where 193 Title1 schools lack the resources for proper STEM programs. Recognizing this gap, our team kickstarted RISE with YETI this season, an affordable gateway to STEM. Using a YETI original robot game, 'Go Away Garbage,' the program informs elementary and middle school students about environmental protection while introducing robotics and business concepts. Within four months, RISE with YETI impacted 30 students at Parkside Elementary School and Whitewater Middle School. The program continues to expand during build season, as we plan our spring session at Whitewater Middle School. This program has proven to be a beacon of excitement for robotics education, sparking passion and ambition in the many young, underrepresented students of our community. Focusing on STEM education for the next generation, specifically to empower girls in STEM, our 7-year partnership with Girl Scouts transcends the boundaries of conventional robotics workshops. Through our customized curriculum that intertwines programming, robot design, and presentation skills, 230 girls earned their Robotics Merit Badge in the past 3 years, propelling their interests in STEM and potentially joining FIRST teams. In line with our commitment to increasing opportunities for women in STEM, we initiated the idea of growing Doyenne Inspiration, an off-season competition aimed to provide female and non-binary students with the opportunity to become STEM innovators. Recognizing the budget and transportation limitations FRC teams in West NC must overcome to participate in the East NC off-season competitions, we collaborated with FIRST NC and FRC teams 5190, 2642, 3737, 7443, and 6894 to host Doyenne Inspiration West. With 10 teams in attendance this year, this expansion has opened the door to over 60 female/non-binary students, showcasing their skills, networking with inspiring STEM professionals, and creating a stronger and more empowered FIRST NC. In addition to empowering youth, YETI strives to educate an often overlooked community, senior citizens. Through interactive lessons and educational bingo games, our flexible curriculum has equipped over 50 senior adults with proficiency in cybersecurity and technology basics, instilling the confidence to safely navigate the internet, stay connected with their loved ones, and become a protected member of the online community. Following this success, we are partnering with our non-profit QCRA to work to expand this program, with classes at libraries and community centers for senior adults across the greater Charlotte region. Empowerment is truly the heart of YETI and through our initiatives, we are able to connect with our community, foster a resilient environment, and overcome disparities, all to create a lasting impact. #Inspire Empowerment is only the first step, as inspiration drives and creates passionate leaders for the future. To YETI, inspiration is vital as we initiate STEM opportunities all over the globe. On a local level, we conduct demos, instruct at summer camps, and offer after school programs, introducing people of all ages to STEM and FIRST. Our after-school program at Omni and Guidepost Montessori schools focuses on teaching robot design, programming, public speaking, collaboration, and teamwork utilizing a tailored STEM and business curriculum. In the 2 years since beginning this endeavor, we reached 70 students, inspiring them to explore STEM and create more FIRST teams. Last year, YETI members traveled to Washington D.C., spreading the importance of STEM at the nation's capital alongside FRC teams 2834, 1718, and 1086 among many. Through Student Association for STEM Advocacy (SASA), we learned how the legislative process works and how to advocate for STEM and robotics funding nationwide. We discussed the importance of the CHIPS and Science Act and the Every Student Succeeds Act, crucial legislation that supports STEM education funding, with US House Reps and Senators, and expanded our efforts beyond the Hill, as we continue to network with our elected officials to support our cause. Amplifying the voices of all FIRST NC teams, we are assisting SASA in

revitalizing the NC Advocacy Conference to initiate legislative change at the state level. On a global level, YETI launched the #FIRSTEmpowered initiative, taking empowerment to new heights. Initially, YETI distributed flags at FIRST NC competitions to spread the message of empowerment locally. Through our active global social media campaign, FIRST participants, mentors, and alumni share their "Empowered" story, highlighting the ways FIRST has empowered them or how they used FIRST to empower others. In just 10 months, we reached 7356 people, including FRC Teams 226, 1718, and 503, furthering the feeling of the FIRST family. #FIRSTEmpowered is powerful, encouraging impactful outreach and inspiring others to pursue their own FIRST journey. Furthermore, YETI partnered with EYERIS, a global initiative headed by FRC Teams 226 and 503, that is dedicated to providing resources to start FIRST teams in underrepresented countries. Our Business Captain, Radhika, serves as one of 5 executive board members and curriculum lead, providing insights into the operations of the organization. Along with 100 contributors, YETI members work with the EYERIS curriculum team to create resources, currently being pilot tested by FRC Team 2506, that inspire global teams. EYERIS connects with the FIRST Education Board to reach a broader audience. Inspiration fuels innovation and our efforts truly portray our mission of producing future STEM and business leaders, creating a long lasting impact locally, nationally, and globally. #Sustain While empowerment breaks barriers and inspiration fuels innovation, sustainability ensures lasting positive change in YETI, FIRST, and the global community, contributing to a resilient cycle of innovation. Despite the challenges of moving locations, we endured, creating a usable workspace and training rookies within a few months. To ensure our students and FTC teams are ready for the pace of build season, veterans instruct about 50 students in Java programming, strategic robot design, outreach innovation, and fundraising. Additionally, our newest development, YETI Wiki, stores documents on robot code, team history, and onboarding guides for easy retrieval, advancing our documentation and sustainability efforts. To support the FIRST Pipeline, we host FLL and FTC recruitment events, with over 145 students in attendance this season, promoting FIRST teams and instilling a passion for STEM. Through summer coaching sessions on robot design, programming, core values, fundraising, outreach, and innovation projects, 20 YETI students established 6 FLL and 4 FTC teams. We also mentored our first-ever FLL-Explore team, guiding 12 students in exploring design, art, and engineering skills. In addition to mentoring teams, we hosted the NC FLL Semi-Final Tournament A on Dec. 9th, where 35 teams competed and over 675 people attended, giving teams across NC the ability to participate in more events. Globally, our contribution to Open Alliance, FIRSTUpdatesNow, and ChiefDelphi helps teams as far away as Turkey and as close as Canada, with insight into our robot design, CAD, and outreach. Aside from sharing technical knowledge, we have reached and engaged thousands through Instagram, Facebook, Youtube, and X/Twitter regarding outreach events. Due to our extensive outreach and robot needs, financial security is a priority on YETI. Students are encouraged to fundraise a minimum of \$1000, while YETI collaborates with long term sponsors like WCP, Studio Displays, and Gerdau, and hosts an annual sponsor appreciation night dedicated to thanking sponsors for their support, networking with local businesses, and encouraging continued partnership for the future. Beyond robotics, YETI strives to foster a resilient, independent and positive community. With over 4,000 local, homeless individuals lacking basic necessities to survive, we partnered with The Relatives and assembled 200 hygiene bags to help homeless youth. Likewise, the annual Operation Cold Cuts event encourages our team to donate and prepare sandwiches for the homeless, impacting the lives of 3200 homeless people over the last 3 years. Additionally, our school supply drives provide essential resources for Whitewater Middle School and Ukrainian refugees, ensuring educational equity. YETI seeks to find new and creative avenues to share STEM and FIRST. Plans are underway for the upcoming season, including doubling current initiatives and an interactive children's book series teaching core STEM skills through a combination of creative engineering and literature. We're also partnering with She Built this City to run STEM summer camps for underrepresented high school girls. Last season, FIRST founder,

Dean Kamen, challenged us to share our FIRST experiences with the world. He encouraged us to share our stories regarding the incredible impact FIRST has on so many. Dean asked, and we answered. YETI's pursuit of STEM empowerment works to enable global change. Combining innovation and inclusivity, we make an impact empowering, inspiring and sustaining the next generation of STEAM leaders worldwide. From classrooms to communities, our impact echoes through the lives we changed, sparking passions and amplifying voices one empowered individual at a time. ;

