

FIRST Impact Award - Team 5727

2023 - Team 5727
Team Number
5727
Team Nickname
Omegabytes
Team Location
Forest City, 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.
The impact of FIRST on our team has been significant. Many of our students have found their second home on the team and feel as if they're part of our family. The students who graduated after being members of our team are often more aware of their lifelong goals, and are hired by local STEAM industries upon turning 18. Students on our team who do not want to transfer into a 4 year university plan to go immediately into the workforce to put their skills to use.
Describe your community along with how your team addresses its unique opportunities and circumstances.
Although our team is based in a rural Tier One county, we actually have a number of engineering companies and businesses in our area. Unfortunately, many people are unaware of the exceptional possibilities within those companies. We're partnering with as many of them as possible, including META, Baxter, and Trelleborg, not only to show them what the youth of our community is capable of but to also show our generation all the opportunities we have right here at home.
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?
We've continued STEAMrollin', our community outreach program, which consistently serves economically disadvantaged communities within our county. In our partnership with the Grahamtown Team, we provide STEAM camps during the summer and various other community events. We're consistently serving our county by providing for FLL teams in every public elementary and middle school. We track our outreach hours to demonstrate our involvement within our community and ensure consistency.
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.
Our team is very integrated with the youth in our community. By initiating and organizing events using FIRST Lego League as our vessel, we have been successfully mentoring teams in every elementary

school in our county. Within our team, our student leaders have had opportunities to teach their engineering knowledge to new and rising members. We're passing our knowledge onto the next generation to initiate a chain reaction of leaders creating leaders.

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

Within the past 3 years, we've reached 90 Pre-K and 1st Grade classrooms through FLL Discover. We were awarded a grant that allowed us to work with all of Rutherford County Schools. We provided them with kits to assist them in learning about STEAM and the opportunities it can offer them in the future. We have also helped our FLL teams understand their new SPIKE Bots as well as worked with their mentors and coaches to ensure they can grow and improve on their own.

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?

Our team is very driven to inspire the next generation and show them the magic of STEAM. We've done this through our outreach project STEAMRollin', through long-lasting partnerships with local nonprofit organizations, as well as through local STEAM companies. Our FLL Discovery, FLL Challenge, Grahamtown partnership, and Blue Ridge Hope partnerships have made our ability to reach our community's youth spread tenfold. We are inspiring students to dream big and work hard to achieve their goals.

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

Over the past three years, we've been furthering our existing relationships by continuing our Grahamtown camps and community service projects. We've also been into many of our local schools and worked with their instructors and administration to assist with FLL and their robotics education. Additionally, we're planning an offseason scrimmage with other North Carolina teams to practice this year's game and support each others' engineering inspirations.

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

Our team has expanded its diversity and has continued to foster equity and inclusion while mirroring this throughout our schools and community by providing a welcoming environment. Our team consists of different races, ethnicities, sexualities, and gender identities. Every high school in our county school system is represented within our team, this diversity allows us to see different perspectives and approach our problems in more effective and efficient ways.

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

We've been focusing on the sustainability of our team. Our new documentation system, like team minutes and GitHub, allows us to keep track of what we've done and keep everyone updated. This way we know what we've done in previous years and how successful it was. Several of our current mentors are former students that have come back to train our team. We also keep consistent contact with

teachers and administrators in our area to ensure the FLL work we've done continues across generations.

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

One of our passions is to connect our community with the STEAM opportunities around them, specifically the several engineering companies within and beyond our county. We do this by partnering with these companies to involve them in our outreach events and invite them into our workspace as visitors and mentors. This allows us to gain useful workplace skills and foster new partnerships as well as improve existing ones within our community.

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

Within the team, we've focused on making ourselves more consistent in our outreach and social influence. We're doing this by assisting local FLL teams in their learning process and planning to volunteer at upcoming competitions. We also work to schedule events and posts ahead of time, and start on important projects well before their due date. We have been consulting marketing professionals from local industries to streamline our processes.

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

As we become more connected, we put greater focus on spreading *FIRST* values through student-led discussions, strong student leadership, and workshopping sessions which help our team thrive. We help children discover their talents by encouraging creative ideas, teamwork, inclusivity, and innovation within our outreach activities. By creating a safe and respectful working environment, we foster the belief that every idea has value and help children feel more confident in their abilities.

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.

During our off-season, our team hosted Programming & Design bootcamps. These student-led workshops offered our members the opportunity to learn about useful tools like Onshape and Java regardless of what specialty our members were a part of. These meetings encouraged our students to experiment with different specialties and learn a variety of applicable skills. As a result of cross-training, we become more connected within our own team and have more constructive discussions.

Essay

Throughout our success at the World Championships last season, we were asking ourselves, "What's next?" We realized our recent accomplishments and exponential growth have led us to maximize, sustain, and continue to enhance our capabilities. We no longer have just a hope to inspire a love of engineering; we're now successfully implementing measures that have a direct effect on our community. We are promoting STEAM education and encouraging the next generation to pursue careers in engineering and technology. Our outreach programs build a pipeline of young talent by providing hands-on learning experiences and access to resources, while our mentorship program connects team members with experienced mentors who can help them develop their skills and knowledge. We foster a culture of continuous learning and improvement, leaving a lasting legacy for STEAM in our community.

MENTORSHIP: To further expand on our efforts to ensure the sustainability of STEAM education within our community, we have implemented a number of strategies and programs to maintain the flow of information, resources, and support. This is critical to us because we live in Rutherford County, NC, which is among the most economically distressed counties in our state, as identified by the NC Dept. of Commerce. Due to this, we place a strong emphasis on training and development within our team. Members of our team have access to a diverse pool of mentors who come from a variety of backgrounds and areas of expertise despite the limited resources available in our county. A handful of our mentors have prior FIRST experience and are returning to the FRC community to assist us in reaching new heights. Other mentors are talented figures in major industries such as Continental AG, a manufacturing company within the automotive industry with roots in our home county. Mentors play an important role in helping our team members to develop the skills and knowledge needed to succeed. Sustainability requires building on the expertise our team gains from mentors and team competition. We regularly offer student and mentor-led training sessions and workshops which help our team members improve their knowledge and skillset. We also encourage our team members to attend relevant online conferences and other learning opportunities which can help them stay up-to-date with advances in the field of robotics engineering. Our doors are open to all, regardless of whether they are able to visit us in person or through virtual meeting tools. We value the diverse perspectives our many partners, mentors and members are able to provide. Over 34% of the youth in our county live below the poverty line. By providing inclusive opportunities, our team empowers the 35% minority population of our school system.

NETWORK: Our environment provides us with the ability to welcome visitors such as youth, parents, businesses, and other members of the community. These relationships we build help us spread a love for STEAM beyond the boundaries of the school system and into our wider community; this was our inspiration for our outreach initiative: STEAMrollin'. Through STEAMrollin', we focus on the availability of STEAM education by meeting our youth in an environment where they feel comfortable. We're leaving a lasting impact on our community through consistently engaging the youth in hands-on activities which teach concepts such as engineering, teamwork, and the scientific method. We are not just checking a box, but we're making a difference in people's lives. We're establishing a community that doesn't just leave behind footprints but stands beside them. We have been featured multiple times in the Daily Courier, a local newspaper reaching 25,000 subscribers/single copy buyers, right here, in our community. In addition, we work with ReachingROCO, a local news magazine focused on the revitalization of our county. Through our combined efforts over 4 issues and approximately 2,000 views per page each time, we're able to reach a wider audience and showcase the importance of STEAM education and innovation in building a strong, vibrant, and sustainable community.

ENGINEERING: As part of our mission to inspire a love for engineering, we are dedicated to integrating

ourselves with local high schools and volunteer organizations. By participating in Freshman Orientations, volunteering at FLL events, and working with nonprofits, we are exposing young students to the exciting world of engineering and demonstrating to them the impact that they can have on their community through their skills and passions. Over 75% of our outreach events are engineering-related and engage students with hands-on activities. These activities include basic STEAM concepts such as structural integrity, electrical currents, open/closed circuits, velocity, and density. Our team has dedicated over 800 community service hours for engineering over the course of the off-season. One of our core values is inclusivity; we believe that engineering and STEAM education should be accessible to all, regardless of race, gender identity, economic background, or any other potential demographics. We're fostering a welcoming environment for creative minds who are eager to make a difference; we are paving the way for diversity in the rising generation of engineers who will carry the essence of FIRST. As a part of this effort, we teach industry-relevant skills such as Onshape, Java, and wiring. We are thrilled for the future of engineering and are taking steps to send our youth into the best environment possible.

PIPELINE: STEAMrollin' is designed to create partnerships with a wide range of individuals and organizations within our community. These partners come from diverse backgrounds which range from educators to large engineering companies and are united by a love and passion for STEAM. A few of these partners include Trelleborg, META, Fountain Electric, WestRock, Touchstone, Baxter, and our local school system. By utilizing their extensive knowledge and expertise, we're not only benefitting our team, but helping to educate the younger generations in our area. We understand that the future belongs to our youth, and they hold the key to shaping our future; that's why it's so important to us to foster their creativity and encourage them to bring their ideas to life. We've built a pipeline for young children in our community by starting to guide them during their elementary school years, and we provide a constant flow of opportunities and support while equipping students with the skills and confidence they need to succeed in STEAM fields. We continue to support a consistent learning environment throughout intermediary education, college, and career aspirations. We recognize that early exposure to STEAM allows for a pipeline of information and talent to course through the lives of the students and those they impact.

LEGACY: We work to ensure that our endeavors continue even when our current members have graduated. The sustainability of our network, pipeline, and outreach are of utmost importance to our team and we aim to have a continuous, lasting impact through this. A huge part of this process is our student-led workshops which gives our team members the opportunity to understand and train in other specialties. We're fortunate to have a thriving and consistent support system of mentors, parents, and partners. Even as our mentors come and go, they stay updated with what we're accomplishing, and our doors are always open to them should they want to return. Our focus on sustainability goes beyond just our mentors and team training. We also prioritize creating a network of resources and partnerships that will continue to support our mission long after members have progressed to the next chapter of their life. These resources and partnerships involve organizations with a shared passion for our cause. We believe that by fostering relationships with these organizations, we can ensure our work will have a lasting impact and continue to make a difference in the years to come. Part of building our resource network has been developing a comprehensive strategy to implement and maintain the systems and processes that will ensure the continued success of our work. This includes regular assessments of our team's progress using meeting "minutes", which allow us to continuously improve and evolve our strategies. The diversity of our team backgrounds, experiences, and perspectives allows us to authentically represent our county and approach our work from different angles. This strengthens our ability to encourage diversity, equity, and inclusion within our team and outreach efforts. The diversity within our team creates a space where

everyone feels welcome and valued. Our team is dedicated to ensuring the sustainability of our efforts, and we believe that through continuous training, development, strong relationships, and an inclusive environment, we can achieve this goal in both our home, Rutherford County, and the STEAM community.;

