

FIRST Impact Award - Team 3616

2023 - Team 3616
Team Number
3616
Team Nickname
Team Phenomena 3616
Team Location
Lafayette, LA - 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.
FIRST has left a positive impact on 100% of participants, past/present. It has not only given students the opportunity to use tools, innovate/create, design, trouble-shoot/problem solve, program a robot, and strengthen public speaking; but opportunities for a career of their choice. Members/mentors' manners and courtesy have strengthened (noticed and respected by parents/teachers/community). High School Graduation Rate: 100%, Pursuing STEM Career: 90%, and mentors include 69% returning alumni.
Describe your community along with how your team addresses its unique opportunities and circumstances.
We are a unique fusion of individuals characterized by different personalities, ethnic backgrounds, and classes that utilize these cultural variances to encourage values of FIRST "one student at a time." We engage the community in STEM at the events we host such as STEM/Robotic camps/workshops/tournaments and middle/high school math tournaments/science fairs. Volunteered at week-long ASTRO Camp at local university, tutored students in Math and ACT Prep, and over 100 hours of demos per year.
Describe the team's methods, with emphasis on the past 3 years, for spreading the FIRST message in ways that are effective, scalable, sustainable, and creative. How does your team measure results?
Our team utilizes our community's interest in STEM to manifest FIRST ideas. Not only hosting FLL Qualifiers and FAST Starts in Lafayette, but also traveling to Shreveport, Houma, Thibodeaux, and Schriever, LA to co-host. All proceeds go to the non-profit organization. This service ensures the longevity of FIRST. Our team strives to reach a greater audience each year and thus far has succeeded in this mission. We now have 28 FIRST teams in the area.
Please provide specific examples of how your team members act as role models within the FIRST community with emphasis on the past 3 years.
Team 3616 is a role model to help transform the culture in ways that inspire respect for science/technology to many FIRST teams (FLL, FTC, FRC) and others. We ignite a spark for creative

problem solving, engaging workshops, promoting diligent collaboration, and modeling safe work practices. We model gracious professionalism for competition/non-competitive events. We are always willing to accept invitations to present at any event or to help a team at competition, their school, or by zoom.

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

Started/Assist/Mentor FTC 11200 and FLL Team 56596. Assist FRC 4336. Work with John Deere/Lafourche & Terrebonne School District for the last 3 years to encourage FRC participation. Most recent FTC initiative was VAL Robotics & co-hosted a FLL Qualifier at Fletcher Community College. Initiated FTC Teams 15284, 16771, & 16916. We bring a load of FIRST robots to exhibitions allowing students to drive. Effort results: 8 FLL teams initiated. Assist FLL/FTC teams in person, emails & phone.

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?

The team is driven to make future innovators that can shape tomorrow. We actively commit to STEM outreach having over 3500 participants in the last 3 years in STEM camps, math/robotics tournaments, science fairs, and virtual competitions. We use every opportunity to inspire young people by bringing STEM totes full of joy to places we go. In 2020, our Innovation Project inspiration was a 5-year old boy, but the results of our efforts are now an inspiration to him and his peers/family/supporters.

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

Team 3616 brings STEM interest/careers to life to bridge the gap between industry/education by having professionals encourage STEM, provide employment opportunities, provide visits to facilities, in-kind donations, and financial support. We share team experiences with companies, school district/university leaders, IEEE/ISA/Engineering Society, Rotary Club, libraries, museums, and the medical profession. Most recent accomplishment: partnership with the university to assist with NASA ASTRO Camp.

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

We are characterized by different personalities combining creativity/innovation. We strive to overcome boundaries that could prevent us from achieving success, where STEM/Robotics is not practiced. Converging from various schools, ethnic backgrounds & classes, we utilize cultural variances to encourage the integrity FIRST upholds & strongly believe that diversity leads to innovation. We do not charge a fee for our FRC team, nor for the FTC & FLL we assist/mentor from 12 different schools.

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

At the beginning of each year, our first initiative is to have seniors pass on knowledge to underclassmen to ensure a continuous flow for the future of the team. We host STEM camps utilizing EV3 robots/arduinos to promote FIRST/critical thinking/problem solving/ teamwork that helps to recruit future participants. We continue to host FLL/FTC/Math tournaments, science fairs, and FIRST/STEM/Robotics at many community/state events. This year we started training parents how to mentor a FLL team.

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

Team 3616 recognizes our sponsors on our logo sponsor board that travels with the team, on social media, logos on our robot/t-shirts, and then engaging sponsors at our open house at the beginning and at the end of the year banquet. Invites are given to tour at any time and for competitions. Mentors/sponsors have invited friends/associates to see our program resulting in more mentors and sponsors coming on board. To recruit members, a slideshow is shown at various schools by the members.

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

At the beginning of the year we had to take effective action to strengthen communication amongst the team. Each team member and mentor had a different mode of communication that worked best for them, making messaging/sending information challenging. Students weren't checking emails often and mentors didn't use the same messaging apps as the students. We remedied this issue by using Slack as our main way of communicating - making sure that 100% of the team was actually using it. 100% effective!

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

Our goal was to increase STEM outreach (students/adults), start a FIRST team(with at-risk student emphasis), strengthen university partnership and increase community awareness. Accomplished by volunteering for a week-long ASTRO camp for at-risk students at U.L.L., hosting a free summer STEM camp, working with U.L.L.to strengthen the Science Fair, donating 200 STEM kits to 1st graders, FLL training for parents, starting/assisting/supporting FLL/FTC Teams and revising WEBSITE with QR code.

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.

Pandemic: made/distributed 2000 surgical straps to U.S. workers, held virtual robotic/STEM competitions. 2020 Top 20 World Innovation Project. Made/distributed 200 STEM kits in 3 schools to 1st graders after COVID. Hosted high/middle school math tournaments. Training for FLL parents. Started/assisted/supported FLL/FTC team. Hosted free summer STEM camp/fall workshops. Volunteered: week long U.L.L. AstroCamp for at-risk students. Hosted FLL qualifiers: Lafayette/Shreveport/ Schiever/Thibodaux, LA

Essay

Team Phenomena 3616 of FIRST robotics continuously pursues professionalism along with the prospect of improving education through robotics and academia. Team 3616 demonstrates proficiency in STEM, communication, leadership skills, and rapport building with assistance from our mentors, community partners, and peers through outreach events such as annual math tournaments, hosting FLL competitions, and STEM camps. Team 3616's mission, since our establishment in 2011, was not just to build excellent robots but to amplify existing skills and new skills in our future innovators. The team has come a long way with guiding many individuals in our community, the state of Louisiana, and beyond to be the next generation of STEM leaders. Team 3616's humble beginnings originated in a small closet at a local high school that contained the bare essentials needed for running a robotics team. We utilized mainly the closet and the hallway from the years 2011 to 2020. Realizing that our resources were limited at this school because of the space constraints, in 2020 we moved the team to the High School Career Center which enabled us to accomplish more ambitious goals. The Career Center opened countless doors for partnerships with a greater number of public, private, and home schooled academia. Additionally, the team gained a full practice FRC field, tools/equipment, and then were able to build a stronger partnership with university professors and college students. Our team was also able to have more room to mentor our FTC team and in addition start and mentor an FLL team in the same facility. This facility does house a second FRC team that was fostered and started by Team 3616. Even though both teams share some of the same equipment and bounce ideas off of each other, they are distinct in each of their own ways. Each year brings on many new students with little or no skills. Prior to the beginning of the school year, the leaders and mentors gather to discuss the planning of workshops, fundraisers, and outreach events for the pre-build season.. This meeting serves as a catalyst to begin our adventures for the new school year. In the pre-build season, many hours are spent preparing to host two FLL tournaments, state-wide middle and high school math tournaments, and middle and high school Parish Science and Engineering Fairs. Besides learning all the rules, writing math problems with answer keys, and showing up to run the events, the team also creates, designs, and makes the awards. Our students utilize CAD design (Fusion 360), a laser cutter, CNC routers, 3D Printers, and various other hand held non-power tools to make the awards. Fifty plaques and stands were fabricated for this past year. In addition to making the plaques, one of our sponsors requested the team to make 100 number plates for a local motel in Lafayette, Louisiana. This motel was very gracious to provide their conference room to showcase the robot to the public and an area to hold ACT Prep Workshops; besides financial support the last two years. Team 3616 are strong advocates in getting our community involved with STEM; but, also other communities in the STATE of Louisiana. We have the saying for the team - one student at a time. We have traveled over 10,000 miles in the last 12 years throughout the state of Louisiana to be advocates of STEM/Robotics to students and adults through presentations at various professional conferences, teacher workshops, STEM events, Maker's Fair Events, partnering with other school districts to co-host robotic tournaments, technology luncheons, STEM camps, volunteering at many competitions (FRC, FTC, and FLL), Saints/Pelicans STEMFEST, State Capital Events, I.S.A., IEEE, Society of Engineers Banquets, Cable Tec Expo, STEM nights at local Middle Schools, World War II Museum Events, and Festivals. Our strong community presence and outreach of hosting robot competitions and math tournaments, along with showing up at local restaurants, local festivals, and local elementary, middle, and high schools set a strong foundation for our professional reputation which opened more doors to spread our passion of STEM/FIRST to others. Our presence at some of the school district board meetings helped the FIRST teams in our district get partial funding for registration and granted us easy access into the public schools. Team 3616 has demonstrated robots to thousands of individuals at many different events and schools. The team created business cards to distribute at these events and to students. Many of the students have helped with many technology issues at their own school (such as troubleshooting chromebook issues for students, replaced parts on teacher/student

laptops, and repaired multiple scantron machines for staff) and have helped set up maker's space labs in the libraries. The team has also helped repair electrical musical instruments for the local School of Art and Music programs. Besides Team 3616 members helping in person; many members and mentors give advice by email or a quick Zoom call to other robotic coaches, book stores for advice on STEM kits, Boys and Girls Club Activities, and badges for the Girl/Boy Scouts. During COVID, the team continued to reach individuals by hosting virtual robot competitions (FLL) and virtual contraption contests (and for younger children - a robot coloring contest). The team also began a loan out program for any student interested in learning during COVID. We had many EV3 LEGO kits, Arduino Kits, Raspberry Pi's, and LEGOS to loan out. In addition, the team designed, 3D printed, and distributed over 2000 surgical mask straps for service workers across the United States. In the summer of COVID, thousands of emails were sent out to encourage students and teachers to participate in STEM activities that were provided electronically. In addition, the students made over 200 STEM kits for underserved elementary schools for students when they came back to school after being off for many months. With students dedicated to engaging others in STEM and making an impact, Team 3616 helped to continue FIRST in our community even in difficult times. Realizing that many families were having financial difficulties, the team hosted a free summer robotics and STEM camp with members inviting three people each. Perfect attendance occurred throughout the three day camp. In addition, the team volunteered to help run a week-long ASTRO Camp at the local university for at-risk and underserved elementary/middle school students. Throughout the week our students had the opportunity to witness diversity in action. Those in attendance were from many backgrounds, sharing a variety of stories from various perspectives. We are very fortunate to have several Spanish speaking students on the team that helped several students by translating instructions in Spanish. It is very helpful when we travel (for presentations and competitions) to have our students as a team be fluent in eight different languages, including sign language. At this camp, they also learned how to work with children and university educators who were hosting the camp. At the end of the camp, Team Phenomena held a robot demonstration that was greatly enjoyed not only by the students and adults from this camp, but from others participating in various camps at the university. As one enters the doors of the facility, they are greeted with the pleasant smell and sound of machinery in use, such as a laser cutter, many kinds of saws, a plasma cutter, 3D Printers, and much more. The environment at the career center is fueled by a driven community of hard working ambitious students and gracious mentors. Examples of this can be seen during the COVID-19 season when the inspire challenge was sent out to all teams via FIRST Robotics. A product was developed by Team Phenomena 3616 after reaching out by a Zoom call to a five year old boy with a compromised leg (prosthetic leg) that lived over 100 miles from our facility. He was asked what would be his wish if he could have one. His response was riding a bike like other boys. The team instantly got to work, drawing designs in their engineering notebooks, day in and day out working on making this wish come true. Eventually, a business plan was made, an orthopedic surgeon got involved, a prosthetic manufacturer and a patent lawyer joined as well. The end product of these forces was a patented, user friendly, bike assistance kit which is unlike a fully electric E-Bike. The add-on kit can be installed on a regular bike that will only assist peddling on the most difficult maneuver of the circular peddling pattern. Utilizing a raspberry pi, a quadrature encoder, and a lithium ion battery, this kit is universal and able to be attached to any bike for any human with a compromised lower limb whose objective it is to ride a regular bike. The kit is now nationally known because of its ranking as top 20 in the world for the innovation project during the COVID season of FIRST Robotics. It caught the attention of CBS in New York. The producer and crew of the CBS Good Morning Show paid a visit for the day and interviewed the students on the team. One of the local cajun restaurants provided lunch for everyone as well. A feature story of the team was then aired on National television (2.44 CBS Subscribers and 14K YouTube Followers). (Click to view: <https://www.shorturl.at/loFG4>) Team Phenomena 3616 is a major advocate of FIRST ideals in

Louisiana. The team is a dedicated group of individuals who have and will continue to accomplish their mission of building future innovators through academics and the integration of STEM. With our annual outreach programs, we hope to ensure the longevity of STEM throughout our community and Louisiana. We hope to perform well this year in competition but more than all we hope to inspire and educate future leaders. Though it is a robotics team, Team 3616 Phenomena is building more than robots, we're building future innovators.;

