

***FIRST* Impact Award - Team 7428**

2024 - Team 7428
Team Number
7428
Team Nickname
Gigawatts
Team Location
Fort Payne, AL - 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.
100% of our team members are pursuing higher education, while the graduation rate of Alabama is only 54%. We even had a team member be the first woman from Alabama in 50 years to attend Harvard University. We've made an impact on our community & ourselves through volunteering, mentoring, & working as a team. People are floored to see a 150lb robot that a team of high school students created, whereas 3 years ago, even high school students didn't believe they could build something so complex.
Describe your community along with how your team addresses its unique opportunities and circumstances.
Major threats that we found in our SWOT analysis are a result of economic losses in our rural community. Though Fort Payne was once the "Sock Capital of the World," the economy took a major hit due to outsourcing. We combat this by partnering with local businesses to showcase new-age skills & technology that will empower their workforce. Grant submissions have earned us over \$70,000 in the last 3 years to fund registration & equipment. We may be a small city, but we sparkle like a metropolis.
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?
Alabama's STEAM field is dominated by our big cities like Huntsville & Birmingham, but southern areas of Alabama get minimal exposure to STEAM education. We want to change that. We spread STEAM in our school to grades k-12, as well as started the first FTC team in the surrounding 4 counties, & we partnered with museums & STEAM conferences to host demonstrations. We measure these successes in the amount of kids interested in our programs, how many events we attend, & how many people we impact.
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 built on gracious professionalism & coopertition. 20% of our team currently helps mentor FLL & FTC teams across Alabama. We partnered with FLL & FTC to host the 2022 AL State championship.

Recently, we had many team members volunteer at various other events in 2023 & 2024. The workshops & presentations we host show the superb skills & capabilities learned from FIRST. Due to our efforts, regional partners trust the Gigawatts & partnering teams to serve in volunteer & mentor roles.

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

The Gigawatts team members mentor two FLL teams & one FTC team. First in Alabama tasks us to mentor new FRC rookie teams. We utilize an Andy Mark kit to learn with, record videos, & make presentations to assist FIRST journeys. Our training & material can be found at Gigawatts7428.com. We've also conducted training at the AL Coaches' Workshop. Our recruitment process includes demonstrations at conferences, science museums, & seminars. Our goal is to reach areas without a FIRST team.

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?

We spend over 1,400 hours each year showcasing the benefits of STEAM education to show kids, parents, & educators the lasting impact that it can have. People ask us about how to get involved with STEAM after our demonstrations at science museums & STEAM conferences. Over the years, our team has made a name for ourselves in the state's computer science & robotics education initiatives & has become role models for younger generations through our collective success. Our team leads by example.

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

The Gigawatts focus on partnerships with our local companies first, such as GH Metal Solutions, Siemens, HEIL, & Fort Payne Steel to provide funds, mentors, & internships. Our unique enthusiasm & passion attract opportunities & mentors. Mentors include NASA scientists, software developers, engineers, & arts professionals. This year, we've also partnered with many teams in Alabama to create the Alabama Co-op, a server where teams from Alabama can seek & give help, guidance, & resources.

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

As founding team members age out, we want to make sure that our new members are just as—if not more—diverse. We respect each other & embrace our differences instead of seeing race, gender, sexual orientation, or socioeconomic status as a weakness. We are breaking the stereotype that women aren't STEM material by succeeding with a team made with 1/3 being women. We also have video conferences with teams in other countries, special education robot days, & robotics camps for kids in the inner city.

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

Fort Payne sees the value of FIRST. Our team has built a model robotics program in our FLL, FTC, & FRC teams & through our successes, has energized our community. FIRST curriculum impacts over 1060 students from Pre-K to 12th with plans to encompass more. Gigawatts mentor the next generation,

& have become role models for future teams. We always have a pipeline of eager students ready to recruit, astonished parents, a supportive community, & proud administrators to ensure sustainability.

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

Our sponsors are not worried about our marketing; our sponsor plan relies on our impact. Sponsors want to see that their donations are influencing good. To ensure that we can continue to receive meaningful contributions from people that believe in us, we've to make sure we give them something to believe in. When they see us work with other teams, build a functioning robot, & speak passionately about our time with FIRST, they have no doubt that our team creates future leaders in STEAM fields.

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

Our SWOT analysis has consistently shown that our main weakness is not having connections with professionals. We hosted a showcase night where all our sponsors & engineering professionals provided us with advice on our robot designs. Partnerships with the Alabama & Auburn Universities & the UA Astrobotics team have proven to be very beneficial because of their experience & expertise in a similar field. We have active connections with professionals in the engineering & business field.

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

When our team started, our founders focused on leadership & innovation. They had the motto of "Be a changemaker today." Now, we work to further their vision by changing the view of robotics & STEM education in AL & beyond. We promote the vision that a robotics team can build & become the future leaders & innovators of our world. We work hard to continue their legacy of building new members & teams who will carve their path into STEM. That is our team's call to action.

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.

This year, we lost many of our founding & core members. They built our team from the ground up & made "The Gigawatts" a name familiar to the STEAM community in Alabama. Now, we are not only trying to follow in their footsteps, but create a path of our own to lead future leaders & innovators behind. Our passion for STEAM & FIRST is what drives our team to keep impacting & improving the world around us. We don't want to just be a witness to change, we want to be a part of it.

Judge Feedback

Who/When

Feedback

Mar 05,
2024
11:58:36
AM EST

This team did not submit the optional question for the judges when entering their submission.

An area the team has an opportunity to improve.

Something that really impressed the judges.

Essay

What does it mean to be a part of change? We know that successful change is no accident. For the Gigawatts, our passion & enthusiasm, over 4000 volunteer hours, & overwhelming drive to learn & teach is what makes us a force of innovation & leadership. We have succeeded through change in our community & in our own lives. We have become leaders in the STEAM community, & are eager to learn 21st-century skills, connect & collaborate, & simply enjoy the things we do. But there has to be more to the equation than just defining values. What would motivate 24 high school students to spend over 16 hours each week for three months just for one defining & public moment at a competition? We are upholding & enriching the legacy that we've worked so hard to create. After losing so many founding & core members this season, we are starting a new chapter of the Gigawatts. Our goal is to show people that to be a Gigawatt means to continuously have the love & passion to improve the lives of others through STEAM. This hunger to become empowered learners & enthusiastic teachers is what brings us together & brings the magic into our legacy. Our legacy is built on the lives we have changed: This Gigawatt's journey started in a small town, where there was minimal exposure to STEAM fields, education, & opportunities. After moving to Fort Payne & contributing to our program for 3 years, he said, "I could have never done FLL or FRC back where I was, & moving here genuinely changed my life." Now he is a co-captain of the Gigawatts & brings innovative solutions to our robot. 3 years ago, we recruited a first-generation American who needed a platform to hone his technology skills, but had no place to explore his talents - except for our FLL team. Now, he has become a mechanical leader on his FTC team, & aspires to become a leader & mentor for his current program next year on the Gigawatts. This year, an FRC rookie hit the ground running & shattered the stereotype that women aren't STEM material by becoming one of our central graphic design & animation team members in just a couple of months with no prior knowledge. She went from a passive bystander to a commander of her own future. Most of all, our team's legacy has changed because of each individual. This year, our team's call to action is, "Be the change-makers, not the spectators." All of the Gigawatts are connecting with meaningful careers that our program puts them on track for. STEAM education is the future, so we make sure to give our members the technical & professional skills they need to continue influencing the world as an adult. STEAM Education Alabama is currently ranked as #44 in the country for education quality. Education is vital to our community & the world, especially in a time when so much is changing. As our team members have experienced firsthand, the FIRST curriculum provides participants with skills & capabilities that help the world thrive. That's why we've introduced & assisted FIRST teams across the globe, & have inspired educators, students, & parents in Alabama to start a FIRST team through our performance in competitions & publicity in the community. Besides helping create teams, we also implemented a curriculum based mostly on FIRST values, but it also incorporates project-based learning & computer science. This has been implemented in grades k-12 in the Fort Payne City School System, with the opportunity to join a team starting in 5th grade & up. We also coach 2 FLL teams & have spent over 500 hours working with them on all their challenge elements. We also started the first FTC team in the surrounding 4 counties to prepare them for aging out to FRC. We also mentor 15 other FTC teams & support 3 other FRC teams. Outreach We love FIRST, & through our outreach, we get to celebrate & share that love with everyone we meet. We believe that if we can introduce people to the FIRST community as an inspiring and accepting group, they will be hooked for life! We love to spread our enthusiasm with demonstrations & presentations because they give us the most ability to interact & connect with our audience. We've presented at Huntsville STEAMFest, The Space & Rocket Center, community civic clubs, The National Space Club, McWane Science Center, & countless more. Each year that we go to these events, people recognize & remember our team. Some have even told us about how we inspired them to start or join a team in their community. It's moments like these that make FIRST worth it. Additionally, we host app design, CAD basics, & beginner python classes at libraries & museums across Alabama. We also spoke at STEAM education conferences for educators, including one at Auburn

University. Currently, we also worked with science museums in each major city in north & central AL. Once people see what we can do because of FIRST, they are excited to start their own journey in STEAM. Advocacy & Connections Known as the former “sock capital of the world,” Fort Payne took a serious economic hit due to textile outsourcing. This has created a heavily saturated market in our area’s STEAM corporations, so we needed to make more professional connections. This season, we set a goal to retain & enrich old relationships & create new ones. First, we started with sharing our successes with local, state, & national governments. We’ve hosted our Governor, state senators, & representatives, & our state school board member is now one of our strongest advocates & has been able to share our success to show others the impact we are making on Alabama and beyond. Additionally, we’ve hosted our federal senator & house representatives. We’ve maintained these connections for multiple years, & their advocacy has been so helpful to us in impacting the education system in Alabama. We’ve also made significant progress in gaining meaningful connections with professionals. We realized that using our sponsors as sources of advice was an untapped resource for our team, so we asked all our STEM-related sponsors, local professionals, parents, & interested teachers for feedback. We also started the Alabama Co-op, a server for Alabama teams to give & share advice. Partnerships & Sponsorships Although our success comes from hard work, we wouldn’t be able to accomplish anything without our community recognizing the value of STEAM. Support from administrators, parents, local businesses, & mentors has allowed us to truly make an impact. The opportunities that FIRST provides our students with ensure that when someone invests in the Gigawatts, they further invest in the success of their future. We were called upon by the Fort Payne Sheriff’s department to build a robot for their snipers to practice their shooting. This robot drives in a random pattern autonomously around the field to simulate a real-world experience for snipers. In our first test with them, an FBI sniper expressed his appreciation for our robot by saying, “That was tougher than anything I ever did in sniper school.” We also developed relationships with universities & organizations across the state to increase mentorship & volunteers for our team & FIRST events. We’ve created an active engineering symbiosis with the University of AL Astrobotics team, UAH Engineering, NACC Engineering, & Auburn University. We also contacted VFW & the American Legion to provide volunteers & advice to teams around the state. Connections with businesses, universities, & professionals are extremely important & essential to our team’s success, but we wouldn’t be able to do it without over \$60,000 in grants over the past 3 years & over \$12,000 from sponsors & donors. This funding has not only given our team members experience in gaining monetary connections, but has given us the ability to reach new heights as a team. Diversity Our team is made of people from all different backgrounds & academic levels, but we all have one thing in common – our passion for STEAM education. We believe that having a diverse group of people with different backgrounds & perspectives is essential to creating a global learning community. With all the conflict happening in the world right now, it’s important to learn how to collaborate with people that all have different cultural beliefs & views. 1/3 of our team is female, & our younger FLL & FTC feeder programs both have over 50% female or POC representation. We know that anyone capable of a job should be put in a position to accomplish it, no matter what background they have. On the Gigawatts, our leaders reflect the demographics of our town, & we are always trying to expand our horizons & continue to include everyone. The women on our team are encouraged to apply for awards, take a leadership role, & are trusted to represent the team. Some of our most important roles like graphic design, website builders, mechanical & programming captains, & more are all filled with POC or female members. Our Growth & Journey in FIRST Our dedication to our program got us a name in the STEAM world, not to mention our being honored as FLL State Champions, 2nd place FLL State Champions, International Invitational awardees, Rising Star Awardees, FRC Rookie Inspirations, Congressional & Governor’s App Awardees, Entrepreneur Awardees, & Southeastern Chairman’s Awardees. However, we know that our legacy of serving as role models to others is the highest award we could achieve. To see all our hard work & dedication come full

circle in other teams' success is the best part of FRC. As founding members age out & leave big shoes to fill, we are ready for the challenge. We've made a name for ourselves in the STEAM community, but our story isn't over yet. We are not going to watch change happen around us; we want to make history. That mission will never end for the Gigawatts, & we all contribute everything we have to make sure that we leave a lasting impact on the world.;

