

## **FIRST Impact Award - Team 108**

<b>2024 - Team 108</b>
<b>Team Number</b>
<b>108</b>
<b>Team Nickname</b>
SigmaC@T Robotics Team
<b>Team Location</b>
Fort Lauderdale, FL - USA
<b>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.</b>
The SigmaC@T Robotics Team boasts 43% female representation, exceeding the tech industry's 26.7%. We prioritize historically underserved communities, with 74% black and 20% Hispanic students. 100% of SigmaC@Ts graduate high school, 86% attend college, 10% choose trade school, and 4% enter the workforce. Notably, 50% of mentors are FIRST alumni. 72% of surveyed alumni pursue STEM careers. Major sponsors employ team alumni, showcasing FIRST's enduring influence.
<b>Describe your community along with how your team addresses its unique opportunities and circumstances.</b>
108 is based in the heart of a historic community in Fort Lauderdale at Dillard High a Title 1 school. Established in 1907 as Colored School 11 our school is an integral part of Broward County Public Schools. The demographics reflect a rich tapestry with 90% Black and 5.63% Hispanic. We leverage our history to create paths for students, providing a gateway to opportunities in the world of STEAM. Our goals are rooted in addressing the circumstances of our community, aiming to inspire and empower.
<b>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?</b>
Over the past 3 years, the SigmaC@T Robotics team has employed diverse and innovative methods to spread the FIRST message. Initiatives like hosting Queer in STEAM workshops, Tech Career Fair, and National Black Women in Construction Day engage a wide audience. School Visits and free after school programs directly connect with students, hundreds of students. The team measures success through student reach, community participation, awareness raised, and positive changes observed in the community.
<b>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.</b>
As Florida's oldest team, we focus on leading others. Hosting an open lab every Saturday during build season, we provide a collaborative space for knowledge sharing. Embracing a spirit of inclusivity, we

actively guide rookie teams, offering insights and support. For teams in Broward County, we navigate the complexities of district purchasing and facilitate enriching field trips. SigmaC@T's legacy is not just in our achievements but in the mentorship and collaboration.

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

This year we established the Dillard Technology Foundation, a non-profit aiming to break down cost barriers for teams in low-income communities. Despite being just six months old, we aspire to expand its impact over the next five years, addressing critical challenges that hinder participation in FIRST, especially for low-income and rookie teams. SigmaC@Ts demonstrate a commitment to the broader FIRST community, embodying the values of assistance, mentorship, and inclusivity.

**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 past 3 years, 108 has inspired young leaders through diverse initiatives, engaging with schools, and hosting events like our Tech Career Fair. Activities like workshops, math tutoring, and middle school visits reach hundreds, fostering STEAM interest. These efforts reflect increased student engagement, with thousands of students reached in various activities, showcasing 108's commitment to nurturing future innovators.

**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**

With the National Association of Black Women in Construction, we engaged over 300 students annually in our industry day. Florida Power and Light, a key sponsor, played a crucial role in establishing our STEAM lab a space for workshops on FRC and STEAM. These collaborations enriched educational experiences, promoting a broader understanding of STEAM. The Dillard Tech Foundation, a testament to our commitment, addresses financial barriers, supporting students in FRC participation.

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

108 has 100% completion of FIRST's equity diversity and inclusion (EDI) training we prioritize uplifting all students, creating a safe space within our team guided by inclusive core values. We host various EDI workshops for community members. Our team embodies built-in equity and diversity, reflecting the diverse makeup of Dillard High School. Residing in a Title 1 institution, we leverage our history to engage with our community, providing pathways to opportunities in STEAM.

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

108 has a multifaceted approach. Knowledge dissemination is a priority we focus on spreading expertise and cultivating future leaders. Documentation captures our processes, preventing information loss. Core values, especially over communication, facilitate knowledge transfer within the team. Even after graduation, former members return as mentors, contributing to ongoing learning and guidance. The production side, encompassing art and newsletters, serves as vital documentation for team members.

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

Networking is a cornerstone using alumni, members, or mentors connected to desired sponsors ensures a personalized approach. Our newsletters not only showcase our activities but also serve as a networking tool. Sharing newsletters with sponsors creates transparency on the impact of their donations. Sponsors actively engage by witnessing and participating in our work in the lab and at competitions, creating a firsthand connection to the team's achievements.

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

Our team recognizes the need to expand and help communities globally. Leveraging our school's connections, we now host low-budget events and volunteer services to maximize impact. Additionally, the creation of the Dillard Technology Foundation exemplifies our commitment to overcoming financial barriers, enabling support for students in low-income communities. These active steps represent our dedication to improvement, ensuring broader and more meaningful community outreach in the future.

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

Outreach to various schools allows us to introduce FIRST and its mission to a broader audience. Bringing community members into the team serves as a direct demonstration of FIRST's impact. Keeping pace with technology ensures effective communication with kids, fostering a connection. This multi-faceted approach reflects our commitment to advancing FIRST's mission, evident in the progress we've made toward creating a community of informed and motivated future leaders.

**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.**

Our team stands out as a STEAM powerhouse in a fine art and emerging tech magnet school. We uniquely expose artists to STEM, showcasing the potential for creative minds in engineering careers. Our fusion of art and technology creates an innovative, collaborative environment.

**Judge Feedback**

Who/When	Feedback
Mar 03, 2024 07:32:04 AM EST	<p><b>Any suggestions on motivating schools in our district to start FIRST teams? Key hurdles are a shortage of dedicated mentors and financial constraints.</b></p> <p><b>An area the team has an opportunity to improve.</b></p> <p><b>Something that really impressed the judges.</b></p>

**Essay**

At the heart of Dillard High School, FRC Team 108 The SigmaC@T Robotics Team acts as a symbol of innovation, diversity, and artistic integration of STEAM. Our team's composition—43% female, 74% Black, and 20% Hispanic—reflects not just the demographics of our community but our commitment to redefining the scope of STEAM, so students like us become professionals shaping the world. The 33311

area code has the lowest household income in all of Broward County and the highest percent of people over 25 in the nation who did not graduate high school. We want our members to become catalysts for change, constantly on the move aspiring to be better through the channels of STEAM.

Our narrative is deeply rooted in the historic legacy of Dillard High School, established in 1907 with the original name of colored school 11. Our team's record of 100% high school graduation, with a significant progression into higher education and STEAM careers echoes our dedication to inclusive STEAM education. Our team holds a strong foundation to encourage students in and out of our team to pursue their goals and push forward into their futures for success. Our team motto "Innovation through iteration!" Carries our beliefs as we constantly strive to learn and grow for ourselves and our community.

Throughout our community outreach, we work to embody the spirit of STEAM through diverse and impactful initiatives. Our various drives go beyond conventional boundaries, providing essential supplies ranging from menstrual products to professional clothing, addressing the varied needs of our community. Dillard Tech Talks opens a world of possibilities, where industry leaders inspire over 400 students at a time with their experiences and insights, igniting a passion to pressure STEAM careers. Allowing first-hand outlooks and experience to students who would not have otherwise had the opportunity. Through Dillard Days, we invite young minds to step into the shoes of a SigmaC@T, helping spark early interest and enthusiasm in for STEAM. Our commitment to the environment and community wellness is evident in our Clean Up Crew and Garden Projects, where we blend ecological stewardship with education, instilling a sense of responsibility for our planet and those who live on it. The educational pillar of our outreach is further strengthened by our Group Math Tutoring and Middle School Mentorship, where we directly engage with students, helping them navigate the challenges of mathematics, a cornerstone of STEAM education. Our presence at Career Fairs and the development of free educational worksheets exemplify our dedication to making STEAM accessible and exciting for the younger generation. With these activities, we aim to make sure we can get kids started as young as possible without the development of another team even though we strive for that in further years. Recognizing the importance of mental well-being, especially in high-pressure educational environments, our Mental Health Monday initiative provides essential resources and support to those who often struggle with keeping up with their mental health. Our engagement in the arts, demonstrated through Artserve and art show events, uniquely positions us at the intersection of technology and creativity, showcasing the harmonious blend of robotics and artistic expression. Initiatives like our PodC@Ts podcast series extend our reach, enabling us to disseminate the message of STEAM innovatively and effectively to a wider audience.

At the core of SigmaC@T Robotics Team's strategy for continuous impact in STEAM education is the Dillard Technology Foundation. Over the next five years, this foundation is set to evolve into a significant catalyst for change. Our journey begins with establishing comprehensive scholarships to support students from diverse backgrounds, ensuring equitable access to STEAM opportunities, such as competitive robotics and higher education. We like to forge strong partnerships with local businesses and philanthropic entities, to secure essential resources and funding. As the foundation matures, we aim to extend its reach to other underserved areas and implement a mentorship program, connecting students with experienced STEAM professionals and SigmaC@T alumni. By the fifth year, our goal is to solidify the foundation's role as a model for community-driven STEAM education, using feedback to continuously refine and enhance our programs and further education and or experiences for those who are interested in furthering their education in these areas.

In parallel with the foundation's development, our team is intensifying efforts to expand middle school

outreach. We are crafting engaging STEAM workshops tailored for younger students, focusing on integrating these activities into their regular curriculum through lasting partnerships with local middle schools. We want them to be able to have hands-on experience and gain technical skills in a fun and creative way. "Be an Inspiration: Lead by example..." is a core value that we hold close that carries us when host our workshops. Our team members, who embody the diverse spirit of STEAM, will serve as mentors, to inspire these students and showcase the vast possibilities within these fields. Additionally, our annual STEAM fairs will provide a vibrant platform for young learners to showcase their talents and interact with professionals, fostering a thriving community of enthusiasts of STEAM and leaders in our community.

A pivotal part of our strategy involves collaborating with our school principal and the South Florida Regional Director of FIRST. This partnership aims to amplify the growth of FIRST programs throughout Broward County Public Schools. By leveraging their leadership and influence, we plan to introduce more students to FIRST's enriching experiences, aligning with our vision of making STEAM education more accessible and widespread. This collaborative effort will increase student participation in FIRST programs and ensure that these programs are tailored to meet the unique needs and potential of each school within the district. To create more teams and expand on our communities bring FIRST, or more specifically FRC back to public schools across Broward County once again. Collaborations are evaluated based on the growth and sustainability of FIRST programs within Broward County Public Schools. The expansion of these programs and sustained participation rates serve as indicators of our success in promoting STEAM education.

Key to our team's mission is a strategic approach to evaluating success, ensuring that our impact in the realm of STEAM is both meaningful and enduring. At SigmaC@T Robotics Team, success is not just quantified but felt and observed in the tangible progression of our students and community.

We assess our impact primarily through the educational and career paths of our students. A stellar 100% high school graduation rate and the significant progression of our team members into higher education and careers that align with their goals, underscore the effectiveness of our programs. However, our measure of success extends beyond these statistics to the qualitative improvements in their confidence, creativity, and problem-solving skills. Communities are not just numbers and scales, they are groups of people that move differently and exist to thrive around each other to reach and achieve their own separate goals to push forward and we encourage that.

In our community outreach, we gauge success by the depth and breadth of our engagement. The number of individuals benefiting from initiatives like Sigmecat Drives and Dillard Tech Talks provides a tangible measure, but we delve deeper, seeking feedback to understand the real-life impact of these activities. This feedback informs us so we can enhance our future strategies, ensuring that we continuously adapt to meet the evolving needs of our community. Using the information we get from these talks we coordinate and evolve changing and conforming to see what else we need and what we should bring back so we can continue to pursue and evolve our community for the better. Every ounce of information is taken in and recorded so we are always moving forward taking our community with us.

Our long-term projects, notably the Dillard Technology Foundation and our middle school outreach programs, have their specific success metrics. The foundation's impact is measured not just financially but also in its ability to increase STEAM participation and awareness in underserved communities. Similarly, the success of our middle school outreach is gauged by the number of students engaged, the

integration of STEAM activities into school curriculums, and the feedback from students and educators. Especially in younger minds, middle schoolers who have no idea what STEAM is are learning to love it and become deeply engaged in it. Kids at Dillard Elementary are learning about programs they never thought possible due to our showcases at Career City.

The SigmaC@T Robotics Team's journey is a testament to the transformative power of STEAM education that embraces diversity and creativity in all ages. As we continue to build on our rich heritage and community, we remain committed to inspiring and empowering the next generation of leaders to continue and achieve their dreams. Our extensive range of initiatives, each uniquely contributing to the tapestry of our community's growth, stands as a beacon of hope and innovation in the world of STEAM. ;

