

## **FIRST Impact Award - Team 3604**

<b>2024 - Team 3604</b>
<b>Team Number</b>
<b>3604</b>
<b>Team Nickname</b>
Goon Squad
<b>Team Location</b>
Brownstown, MI - 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>
Through FIRST, we impact our team by giving our seniors chances to earn scholarships, including \$15,000 from Kettering in 2022. Our team also raised \$15,000 in the past 3 years in scholarships through Trivia Night for Woodhaven seniors. Our team is filled with 6 FIRST alumni mentors and 4 alumni from our team. We also host events for other teams, including our “Hands-on Hallway” which gives students learning experiences through companies showing their technology and educational opportunities.
<b>Describe your community along with how your team addresses its unique opportunities and circumstances.</b>
We are active in our community by engaging in community service projects regularly. For example, we have a yearly golf outing that raises money and supports local businesses by sponsoring holes at the event. Our members also annually gather thousands of American flags to adorn the graves of local Veterans. We also support DADARA (Detroit and Downriver Area Robotics Alliance) kickoff by co-hosting and organizing a Strategy Dictates Design presentation for 10 teams to ensure their success.
<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>
The Goonettes Invitational, an annual all-girls event that encourages and highlights female team members, invites teams from across the country to participate in robotics and STEAM. From 2022 to 2023 the total number of students who participated in Goonettes increased by 55% from 276 to 429 students and the amount of female student participation rose 63% reaching 268 which is about the total number of participants in 2022. We also use the event to also train females for key volunteer roles.
<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 a team that highly values Gracious Professionalism, we provide various resources to other teams to aid their success. By holding two coding seminars in 2023 for 6 FRC teams, we were able to share resources, such as swerve drive and command-based programming, and allow them to see our shop.

Last year, multiple team members mentored our 5 FLL and FTC teams in our district. In addition, we work with FRC Team 5050 CowTown to annually support their FLL Expo, allowing students to explore robotics.

**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 mentored 13 FIRST teams, 8 of them being FRC, along with this we assisted 3 more in the past 3 years. We primarily give them coding and mechanical support but often invite them to our shop for any topic they may need support on. We also have a 7 week camp from Feb-Apr where our district's FRC and FTC members teach 40 6th-7th graders about robotics and coding. They spend the 7 weeks in 2 teams making a robot, learning about FIRST, and have a competition with custom rules at the end.

**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?**

Last year, 4 female team members went to a middle school STEM conference and spoke to female students from 19 middle schools, educating them about STEAM and FIRST. On average the girls rated our presentation 4.5/5, and one of the participants joined our team. We also run Goonettes Invitational where we allow visitors to meet major companies and universities such as Ford, GM, U of M and Kettering, giving networking opportunities and hands-on learning experience with cutting edge technology.

**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**

Our team is a part of an organization named DADARA with 13 FRC teams. We host a Week 0 where DADARA comes together to test initial strategies and drive together. We also participate in kickoff, which we ran pre-2021 with DADARA, and supported in future years. We also worked with Altair and helped them become an official FIM sponsor for the 2024 season giving all teams in Michigan access to their software. Altair is also the event sponsor for our hosted competition, the 2024 Woodhaven Event.

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

The Goon Squad is proud of our diversity and inclusion as a team. We host the Goonettes Invitational, an FRC event that shines light on women in STEAM by having a competition with all-female drive teams. We've had a noticeable increase in female team members, with an 83% growth from 2022 to 2024. We make sure all students have equal opportunities to all roles on the team such as team leads, presenters, and outreach events. We also always respect and accommodate for beliefs held by team members.

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

We ensure that there are always young minds interested in robotics by mentoring FRC, FTC, and FLL Challenge/Explore, with every team we have ever started still being active today. Within our own school district, we've had an increase in new FRC members, 59% being rookies last year and 44% being rookies this year. We have a plan with our schools to create a district-wide program/hub where all levels of FIRST will work together, sharing knowledge and resources with each other.

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

When it comes to sponsors, we make sure that we have a mutual relationship. For example, we partnered with Altair to use/review their software in 2022 and presented it via video call to all of FIRST in Michigan in 2023. We ensure good communication with our sponsors by making sure they are included in our events, such as the golf outing, where we had 38 local companies sponsor holes in 2023. We also gained Gaglio General Contractor as a sponsor by inviting them to one of our competitions.

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

Last year our team found a challenge that we're actively working on solving; communication. With a lack of proper communication and having over 60% rookies last year, our team struggled to get work done, which we are solving by utilizing the messaging app, Slack, and the task management site Trello. These allow us to know exactly what to work on and have significantly improved communication. With better communication, our team can focus on projects more efficiently, allowing us to excel.

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

Our team, in addition to mentoring and maintaining teams, has a goal of starting more teams in the Woodhaven district. We have a plan with our school district to increase the 12 teams we have now to 14 across 8 schools and increase the members in robotics across grades by 15% for a total of 150 in 2024. With this expansion, we are creating a district wide FIRST Robotics program at the upper elementary school between the FRC, FTC, and FLL teams to create better communication between the teams.

**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.**

There are tons of ways in which we benefit our students, all of which encourage a hard work ethic. When we fundraise during trivia night, we commit all of our proceeds to student scholarships. Furthermore, all of our students are given opportunities to work with our sponsors, such as Stellantis and the companies during the Hands-on Hallway, which includes a myriad of large tech businesses & colleges. This gives students the education they need to excel if they choose to pursue a career in STEM.

**Judge Feedback**

Who/When	Feedback
Apr 04, 2024 04:01:25 PM EST	<p><b>What is the best example of a team going above and beyond that you've seen?</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>
<p><b>Essay</b></p>	

Who Are We? GOON SQUAD! GOON SQUAD! Throughout the on & off seasons, our goal is to constantly be looking for the next steps in making FIRST loud. We have always gone above & beyond,

whether assisting/mentoring other teams, getting more people & students involved with FIRST, or proudly representing the Goon Squad's legacy. We are the gracious professionals of the future.

FIRST Empowers Diversity Goon Squad goes above & beyond to expand and support diversity in FIRST. Annually, we host an all-girls off-season event called the Goonettes Invitational. We invited 32 FRC teams from across the nation. This past year, 425 students competed! At Goonettes, it is mandatory to have an all-female drive team and encouraged to have an all-female pit crew. This spotlights girls in STEAM and encourages them to be leaders in their communities! At Goonettes, we have an interactive experience called the Hands-On-Hallway. We invite sponsors, colleges, and other FIRST teams to bring a STEAM-related interactive activity to showcase themselves. Here, students and anyone who attends have the opportunity to interact with colleges and STEAM-related companies including Ford, GM, Kettering University, Women in Aeronautics and Astronautics, UMICH, Stellantis, FAMNM, and more. In 2024, we had 10 vendors. Examples of hands-on activities presented are: VR experiences, Boston Dynamic robot dog "Spot", space propulsion tech, a 12ft rocket, neuroprosthetics/3D printed hands, and they even showcased the future of tech with bipedal robots. We have many great reviews from students and mentors who enjoyed the phenomenal tech these groups brought to our event. During Goonettes, some of our team members were interviewed by WDIV 4. This allowed us to spread the word of our event reaching 57,000 households. We have been covered in at least 4 media publications in the past 3 years reaching thousands more in our community!

FIRST has many diverse communities that we are a part of. At the beginning of every season, the Goon Squad goes to the new season's kick-off event hosted by DADARA (Downriver And Detroit Area Robotics Alliance). In the past, we would host the DADARA kick-off at our school, but over the last two years, we have supported kick-off at other DADARA team schools. This year, the Goon Squad presented "Strategy Dictates Design," teaching how to strategically manage their time, resources, & organization to create the most successful bot they can. The Goon Squad is also diverse in other STEAM participation sports. We have students in all sorts of activities such as Cyber Patriots, Quiz Bowl, Distributive Education Clubs of America (DECA), & other sports. Having students in different activities broadens the Goon Squads' community, creating a space where a student can join any club or sport they want, knowing they won't be alone.

FIRST Provides Opportunity The Goon Squad provides opportunities for our community to explore FIRST. In May of 2023, 4 female representatives from the Goon Squad went to Wayne County Community College to host a workshop at a middle school girl's conference, reaching 19 different Downriver middle schools. Here, we explained in depth STEAM and how to use FIRST as a tool. We brought our robot for demonstration & had hands-on experiences for the girls. Afterward, we were stopped by more students & adults who asked questions about our team. After the event, one of the coordinators emailed the Superintendent of our school district directly to tell him what a huge impact we had on the students at the conference, the girls even rated the workshop a 4.5/5. This event sparked the interest in robotics for many girls attending & gave them the opportunity to pursue STEAM, now with the exposure of the FIRST community. Students from other districts joined their teams, and a student who attended this conference, is now on the Goon Squad as a rookie. We also have the shop open during our school's open house, ready to answer questions & recruit new members. This year, we gained 15 rookies (44% of the team) and throughout the past 4 years, we have gained 40 rookies, all due to our community outreach!

Our mentors provide plenty of STEAM opportunities. In 2023, Jacob, an alumnus of our team, helped

strengthen the bond between us & our sponsor, Altair. We applied Altair's software for CAD and CNC in exchange for our feedback. In mid-2023, a small group of Goon Squad students traveled to Altair for a tour and had the opportunity to talk about STEAM and exchange ideas. Due to our help, Altair is now an official FIRST in Michigan and event sponsor of the 2024 Woodhaven District Event. We also had the opportunity to give a presentation to all of FIRST in Michigan on behalf of Altair, explaining how we used their software in the context of FIRST. Skills learned at meetings can be applied to jobs in the future. Alumni on our team have applied their experiences from shop to many varieties of STEAM roles. Students have many opportunities to talk to sponsors & several past students have gone on to work or interned for them. We also love impacting seniors heading into a new chapter in their lives at college. Annually, we co-host our school's Trivia Night. This is a fundraising event where you pay for a seat at a table & participate in trivia alongside our school's Quiz Bowl Team. We split the proceeds. In the past 3 years, we have raised \$15,000 of profit, which become scholarships we give to seniors heading into college.

In 2023, we were invited to a Kiwanis meeting, an organization designated to improve communities, managed by a bus driver in our district. During the meeting, we gave a presentation of the robot to each subsection of the team & did a drive-around with the robot. This allowed Goon Squad students to practice their communication skills and professionalism. Annually, we host a golf outing fundraiser. People pay for their tickets & we sell lawn signs to place around the courses to advertise companies. Last year, we sold a total of 38 signs to local businesses! This helps our small businesses exposure, builds connections to new sponsors, & can even build connections to future scholarships. At this fundraising event in 2023, we made \$9,151.

FIRST Ties Connections Annually, the Goon Squad participates in our school's homecoming parade, proudly representing the team in Woodhaven. The Goonettes Invitational promotes connections through FIRST. During this event 5/7 referees were female and 2 were trainees, 3/5 of the FTAs were female with 1 trainee, and both the field supervisor and field trainee were female too. Not only does this event uplift female students, but also female FIRST volunteers. Continuing on about our Hands-On-Hallway, we provide connections from vendors to participants, and between vendors as well. Through university vendors, we provide the opportunity to connect students and parents interested in pursuing education. We connect companies with aspiring STEAM leaders that FIRST builds. Not just our students, but all others who attend this event due to it being a doors open event, have the opportunity to talk to STEAM companies and college groups. For example, in 2022 an intern from Ford came to the shop for a Q&A because they came to Goonettes. They talked about what it was like to work as an intern at Ford. With the scholarships that we fundraise and provide to seniors, the support mentors provide us, and the experiences we have had on the team, almost all of our graduating students (99%) attended higher education & some even went on to work for sponsors such as Ford and Bosch.

FIRST Inspires a Legacy The Goon Squad has mentored and volunteered for the past three years at many FLL/FTC/FRC events. We have had at least 8 teams in the past 3 years come to our shop to see, work, learn, and grow. Through this, we have reached many students and given them advice about robotics, as well as letting them know that robotics is not only about engineering. The Goon Squad actively mentors 13 teams across FRC, FTC, FLL Challenge, and FLL Explore. In 2023, our district's FTC team The Goonies #8777, had low amounts of students interested in robotics; there were only 6 members on the team. As a result, we supported the Goonies in doing a 7-week camp for 7th graders during their off-season. 24 students attended the 2023 camp session, 39 students are attending the current 2024 FTC session. After the first camp that was run, the Goonies had 15 members, the maximum

an FTC team may have on a team! Half of those new students attended the camp, and the other half learned about robotics through students who attended the camp. During the 2023 FTC season, one of our Goon Squad members mentored at almost all of their meetings and attended all of their competitions to cheer them on! The Goonies won one of their events, qualifying for states. We also send students to five of our elementary/middle schools to help and mentor FLL/FTC teams at every one of their meetings. We are actively creating the Woodhaven-Brownstown Robotics District Program. This district program consists of our district's FIRST teams where 4 of our district teams' shops will be combined in our district's middle school building to create a robotics hub. This will allow more sustainability within all levels of district FIRST teams. This way, we will all be directly involved with one another, sharing resources such as time, fundraising, mentorship and much more. This brings our legacy to the next level ensuring the education of FIRST to all that want to join STEAM at any level.

Goon Squad Makes our Legacy Loud The Goon Squad has a legacy; we are heard within the FIRST community, and we are loud. We proudly chant our name, ensuring everyone in our community knows who we are! We are always looking for the next step in using FIRST to expand STEAM opportunities in our communities. Between mentoring teams, community outreach, and events, we are loud and proud of our legacy. ;

