



Full Metal Beavers

FIRST Team 6636

Official Team & Member Handbook

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Jamaica Gateway to the Sciences Robotics Club

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MISSION STATEMENT

TO MOTIVATE YOUNG PEOPLE TO PURSUE EDUCATION AND CAREER OPPORTUNITIES IN STEM-RELATED FIELDS, INSPIRE THEM TO BECOME LEADERS AND INNOVATORS, AND ENHANCE SELF-CONFIDENCE, KNOWLEDGE, AND LIFE SKILLS.

VISION STATEMENT

OUR LONG-TERM VISION IS TO REVOLUTIONIZE THE WAY THE WORLD AND OUR COMMUNITIES WE SERVE VIEW AND THINK OF STEAM.

OUR CORE VALUES

Equity

We value equity. We continuously strive to make an equitable environment to provide a safer, more respectful, and more successful atmosphere for each member. We pride ourselves on providing the necessary tools for success for each of our members of the Full Metal Beavers and our members of our various communities we serve.

Opportunity

We provide an abundance of opportunities to each of our members. We have a variety of departments and subdivisions where we are able to provide members to experience skills in business, arts, human

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resources, accounting, marketing, writing, public speaking and many more. We hope to add more aspects to the team that incorporates STEAM in order to help members meet this golden commitment.

Unity

We are proud of how strong and unified the Full Metal Beavers is as an organization. As a team, not only do we direct our efforts to exhibit the characteristics of our former leaders but to review their shortcomings, so we can exceed their achievements and become even better examples for the following year. Promoting the idea that “a chain is only as strong as its weakest link” will help us create an atmosphere where the team is encouraged to collaborate, which will create beneficial attributes for all our members.

TEAM HISTORY

Full Metal Beavers was established in 2014. Full Metal Beavers was founded by our lead mentor, Dr. French, in a small classroom that only implemented the study of Physics and Engineering. Starting with a team with no more than 15 members, our team grew to 50 members this year. It started off with only two departments: Business Department and Engineering Department. Now our team grew into multiple branches that stem from two new additional departments named, Competitions Department and Operations Department. Each season our team goals develop from one another; however, our core value to inspire the community to adhere to STEM stays strong all throughout the seasons. Every year new leaders rise up to follow the alumnis’ legacies to enter a new season of FRC.

Awards: FRC 2017-18 POWER UP has been the most successful season for our team to this date. We had achieved:

- Instagram Team Photo Competition - 1st place
- Team Spirit Award

Rookie Season 2017

- Hudson Valley Regional

Second Year 2018

- SBPLI - Long Island Regional #1
- SBPLI - Long Island Regional #2

Third Year 2019

- SBPLI - Long Island Regional #2
- New York City Regional



***FIRST* ROBOTICS COMPETITION**

FIRST stands for "For Inspiration and Recognition of Science and Technology" was founded in 1989 by inventor Dean Kamen. The mission of *FIRST* is to inspire young people to be science and technology leaders and innovators, by engaging them in exciting mentor-based programs that build science, engineering, and technology skills, that inspire innovation, and that foster well-rounded life capabilities including self-confidence, communication, and leadership.

What is FRC? Under strict rules, limited resources, and an intense six-week time limit, teams of students are challenged to raise funds, design a team "brand," hone teamwork skills, and build and program industrial-size robots to play a difficult field game against like-minded competitors. It's as close to real-world engineering as a student can get. Volunteer professional mentors lend their time and talents to guide each team. Each season ends with an exciting *FIRST* Championship. The game, along with the required set of tasks, changes annually. While teams are given a standard set of parts, they are also allowed a budget and are encouraged to buy or make specialized parts.

The FIRST Robotics Competition is one of four robotics competition programs organized by FIRST, the other three being FIRST Lego League Jr., FIRST Lego League, and the FIRST Tech Challenge. FIRST Robotics Competition has a unique culture, built around two values. "Gracious Professionalism" which embraces the competition inherent in the program, but rejects "trash talk" and "chest-thumping", instead embracing empathy and respect for other teams. "Coopertition" emphasizes that teams can cooperate and compete at the same time. The goal of the program is to inspire students to be science and technology leaders.



PRINCIPAL APPRECIATION

Caren Birchwood Taylor

Ms. Birchwood-Taylor has been an educator in the science field for over thirty years. Her expertise ranges in professional teachings such as Physics and Chemistry to Chemical Engineering. She progressed as a mentor teacher to an assistant principal for science at Bayside High School. In 2011, she founded this glorious school, Jamaica Gateway to the Sciences.

“Robotics is somewhat unique in that it presents several skills and requires a wide knowledge such as coding (programming), carpentry, appropriate use of electrical tools, marketing, accounting, and communication (verbal and written). It also demonstrates the effective use of oratory (speaking), leadership, organization, teamwork, professionalism, time management, budgeting, and reliability.

“Team fasten collaboration, inclusion, and collegiality. The skills and knowledge acquired are prerequisites and preparation for lecture careers and post-secondary education.”

Satanya McLaughlin

Ms. McLaughlin has an undergraduate degree in Biology and a minor in Secondary Education. She started working as a high school Biology teacher two months after graduating from college. Thereafter, continuing her education earned her a Master’s degree in Education and a second Masters in School in School Administration. She has served as Assistant Principal at Jamaica Gateway to the Sciences from 2011 to present day.

“The Robotics Team is not just for students who are interested in STEM related careers, but it is for every student. The skills that are being cultivated and in the program are valuable life lessons that will help one to become a productive member of society. Members of the Robotic Team are learning organizational skills, time management, collaboration of working with others, verbal and written communication as well as problem solving skills. Furthermore, members are learning how to prioritize working towards meeting deadlines of different phases for their project. These invaluable skills used on a daily basis by the Robotics Members can be used in their classes as well as when they go off to college to ensure academic success.

“Full Metal Beavers encourages students to foster positive relationships with their peers and staff members. It is a mentorship program of monitoring students’ behavior and academic performance. As

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a result, members of the Robotics Team adhere to school policy and norms in behavior as well as academics.”



Meri Dimas

Recently appointed as Assistant Principal at Jamaica Gateway to the Sciences, Ms. Dimas has been a constant supporter of the Full Metal Beavers. She was born and raised in Jamaica, Queens, Greek-American, who attended Townsend Harris HS. She graduated from Queens College and earned several degrees of History, Special Education, and Educational Leadership.

“As a proud advocate for our organization, I believe that the Full Metal Beavers has impacted and continues to impact the school with everything they do. The team is an extension of our community and without it we would not be whole. The team has become synonymous with our reputation and I am proud to say you all make up our team.

“I was raised by a single mother and my grandparents. They taught me to always strive to reach new goals and never say ‘I can’t.’ STEM is the wave of the future and as such it is the right of every student to be exposed to various career paths and get training to ensure future success. Robotics is an excellent gateway into STEM- it’s high stakes and students are taught valuable skills that they need for the future. Robotics is accessible to all and they do not discriminate. It’s so dynamic that even if you do not want to build or program- they will find a place for you. I am amazed everyday by the team’s consistent dedication.”



Mentors

Raymond French

A former student at Thomas Jefferson High School, Dr. French was once part of Team 1600 as a programmer. After graduating, he attended Michigan State University, received his Bachelor's Degree in Science and Physics, and shortly after, returned to New York. At Pace University, he earned his Masters of Science and Education. Lastly, he enrolled in a PhD program at Columbia University and wrote a dissertation about working with a particle accelerator to detect dark matter particles. Currently he's teaching Physics at Jamaica Gateway to the Sciences and passionately mentoring Full Metal Beavers after school.

"Jamaica High School, with approximately 4000 students in the past, had a robotics team. Unfortunately, the teacher ended up leaving, which dismissed the school's team for almost 10 years! That's when I decided that I'd like to start a robotics team for JGS myself because I was part of a robotics team back in high school too. Robotics projects such an important message. First, FIRST teaches students about Gracious Professionalism, Coopertition, how to be professional, a creator, a thinker and a young person functioning in the 21st Century. I believe that STEM is one of those pathways into becoming a successful person."

He wishes to instill confidence and achievable success for Full Metal Beavers. Reflecting back on the fact that 17 years ago, he himself was part of a Robotics Team, however he didn't get an opportunity to be a leader there. Looking forward, he is a mentor of a team. He hopes for students to look at this situation and build enough confidence in themselves so the students could also envision progress in the future and say to themselves that "I could be like that." He wants each individual to be themselves and be proud of it. He suggests the students in STEM and Robotics to grab any opportunities that they have in front of them : "Life provides all of us a lot of opportunities; however, sometimes we are really timid to grasp onto those opportunities. Some students tend to grow up in a household, where they aren't encouraged enough to take risks and I'd say that joining an after school Robotics Team is a risk. Especially since no one knows what it's going to be like. I think having some faith in themselves and not having a mentality where they are constantly skeptical about their decisions, would lead the students to have a lot of fun. Life's short so make it what you want it to be. Take chances and just do it!"

Dennis Tai Wong

Mr. Tai is from an immigrant family and strived to excel academically and educationally. Likewise, Tai went to Baruch as a psychology major and thereafter earned his Masters at Queens College. Significantly, he is now a conscientious and diligent school counselor at Jamaica Gateway to the Sciences.

"A close coworker and friend of mine, Dr. French, invited me to join the Robotics team. He was searching for another mentor and thought I would be a good partner. Since then, we have been working together to increase the efficiency and fluidity of the team."

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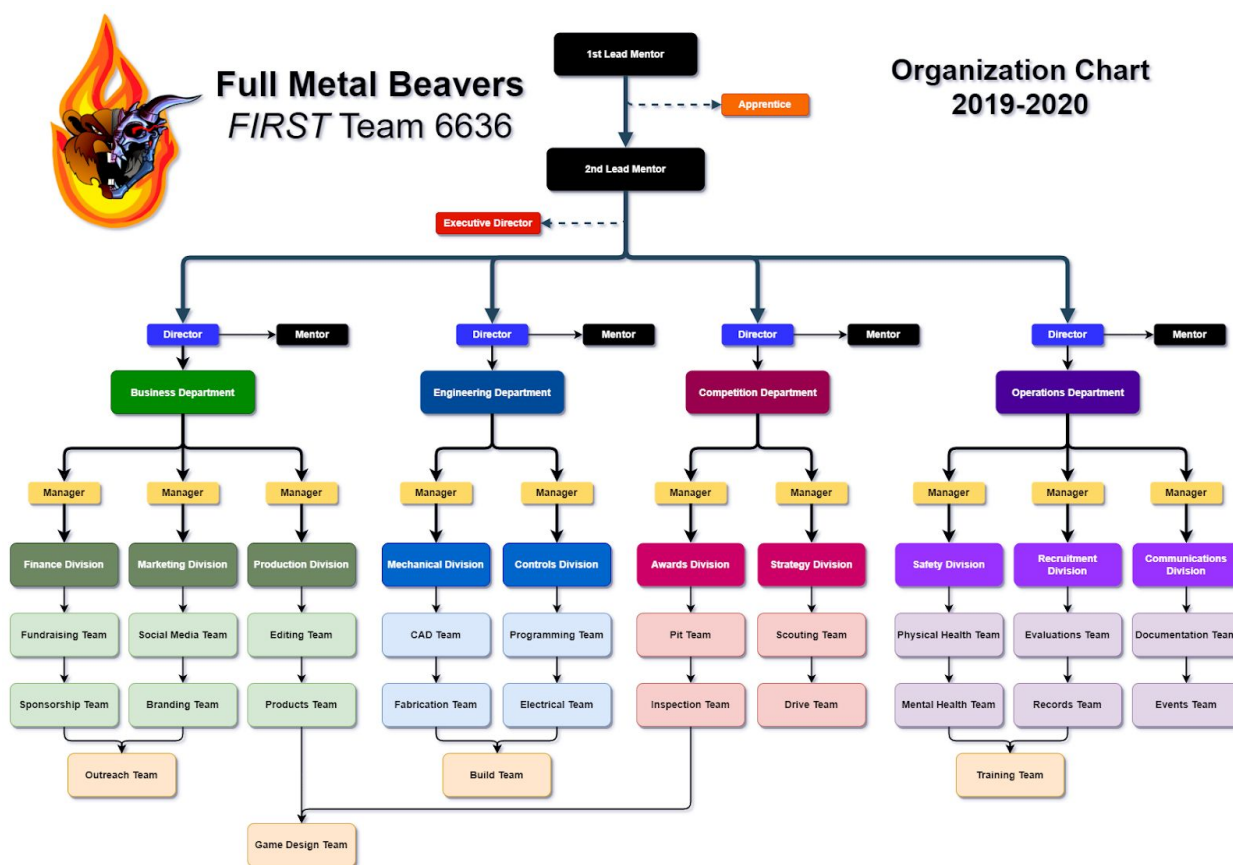
"Full Metal Beavers consists of several talented, and tenacious individuals. Seeing their progress and interests in the STE(A)M field reminds me of my experiences. I was always interested in science; I learned to build my own computer and became passionate about technology. Moreover, I envision members would have an opportunity to do the same and utilizing FIRST Robotics will be a good experience for them. I would

like to embody those highly interested in engineering, and especially women in the sciences, to encourage female representation."



Organization

The Full Metal Beavers, Full Metal Beavers has 2 lead mentors, Dr. French and Mr. Tai. The team comprises 4 different departments, each playing an important role and as an essential job building up to the competition: The Business Department, Engineering Department, Competition Department, and the Operations Department. Within each department, they hold subdivisions. They help organize each department and allow the departments to function conveniently. Each department contains a director of the department, managers of each subdivision and their collaborators. The mentors oversee the works of the director while the director oversees the work of the managers and the collaborators.





The Business Department:

The Business Department is responsible for all economic and marketing aspects such as fundraising, branding, graphic design, social media, outreach, sponsorships, apparel, merchandise, and products. There are three divisions under this department, which are overseen by the Director of the Business Department.

The Finance Division

The Finance Division consists of the Fundraising Team, and Sponsorship Team. This division is responsible for soliciting sponsors and maintaining all financial records. Members maintain sponsor relations and recognition, prepares grant proposals, and obtains other commercial donations of supplies and services. They collaborate with Media & Outreach to produce marketing collateral materials, including logos, t-shirts, team giveaways. This division is regulated by the Manager of the Finance Division.

Roles under the Fundraising Team are:

- **Fundraiser**: Someone in charge of planning and executing events or any other way to acquire money.
- **Fundraising Event Coordinator**: Someone who executes the team's fundraising events to increase finances.
- **Accountant**: Someone in charge of budgeting money and making decisions regarding spending that money.
- **Treasurer**: Someone who oversees the team's finances and general financial oversight.
- **Financial Statement Handler**: Someone in charge of tracking the team's financial records.

Roles under the Sponsorship Team are:

- **Sponsor Liaison**: Someone in charge of maintaining meaningful and long lasting relationships with the Team's sponsors.
- **Outreach Coordinator**: Someone in charge of creating and executing engagement ideas and campaigns with relevant sponsors.



The Marketing and Productions Division

This joint division is co-managed and regulated by the Manager of Marketing and Manager of Productions. This division consists of promoting technology and engineering through various community activities. Coordinates events, seminars, and activities to raise awareness of FIRST; assists other FRC, FTC, and FLL teams. Includes organization of team activities and mentoring of other FIRST teams. The division also supervises team brand identity, including team apparel, t-shirts, and mascot. Additionally, this division handles the development and manufacturing of physical, virtual, and creative products. This division holds the *art* aspect our team has to offer. Marketing and Productions communicate with each other in order to create digital and physical products for the team to be marketed by the Full Metal Beavers brand. The Media & Outreach Team: publishes projects created from the Productions Division that include graphic design, digital photography, video production for website design and updates, and social media. Members develop, maintain, and submit media projects for competition entry. The Editing Team takes care of all the video projects that the Full Metal Beavers produces. This team works by being responsible for all scriptwriting, video directing, and final photography drafts within their projects. The Products Team is in charge of all the physical products that are produced by the Full Metal Beavers by designing buttons, apparel, flyers, brochures, etc. This sub-team functions by creating content necessary for events, projects and ideas. Afterwards, their content is sent to the Marketing Division to review and publish.



The Engineering Department

The Engineering Department is responsible for all engineering related projects such as robot design and construction, engineering documentation, and the robot's competition performance. Within this department, there are two subdivisions, which the Director of Engineering oversees the success of this department.

The Mechanical Division

The Mechanical Division responsible for designing, prototyping, and fabricating the robot. They oversee all prototyping and mechanical aspects of the robot. The division works alongside the Controls Division to lead the build team and consists of the CAD Team, Bumper Team, and Prototyping Team.

The CAD Team consists of:

- **CAD Designer:** Designs and models components through the use of Computer Aided Design.

The Bumper Team:

- **Bumper Builder Buddies:** In charge of constructing bumpers for every season.

The Prototyping Team:

- **Mechanist:** Responsible for operating any power tools and machinery
- **Fabricator:** In charge of prototyping and constructing any mechanical component.

The Controls Division

The Controls Division consists of the Electrical Design Team, Programming Team, Systems Team. This division is responsible for electronics, wiring, circuitry, and sensor systems. Develops and updates robot computer programs. Responsible for the design, building, and incorporation of any manipulators (including pneumatics) and sensors on the robot. The division is also responsible for a category called the "Systems Architect." This division is regulated by the Manager of the Controls Division.

The Roles Within the Electrical Design Team:



- **Electrical Engineer:** Responsible for wiring and organizing all electrical components on the robot.

The Roles Within the Programming Team:

- **Programmers:** Responsible for making the electrical components work efficiently and correctly.

The Roles Within the Systems Team:

- **Systems Architect:** In charge of communicating between all the divisions within the engineering department to ensure every mechanical aspect corresponds with all control aspects.



The Competition Department

The Competition Department is responsible for preparing the team for the FIRST Robotics Competition. Their projects relate to scouting, safety during the competition, drive team coordination, team database, and data collection system, and they are responsible for monitoring any FIRST related websites and forums along with providing competitive information prior to and during the competition. There are three divisions under this department, and the Director of the Competition Department oversees the success of this department.

The Strategy Division

The Strategy Division consists of Drive Team, and Scouting Team. Within this division, the Scouting Team members are to collect information, look for strategies and maintain communication with other FRC teams. The Drive Team is responsible for operating and handling the team's robot during the competition. This division also enforces all FRC rules throughout the whole team is regulated by the Manager of the Strategy Division.

The Roles Within the Drive Team are:

- ***Drive Team Coordinator:*** Someone in charge of creating the Drive Team for the competition. The Drive Team includes, 1-3 robot drivers and/or human players, 1 technician, and 1 drive coach.
- ***Coach:*** a guide or advisor
- ***Driver:*** an operator and controller of the ROBOT
- ***Human Player:*** manages the object of the game
- ***Technician:*** a resource for ROBOT troubleshooting, setup, and removal from the FIELD

The Roles Within the Scouting Team are:

- ***Scouters:*** Scouters have the responsibility of analyzing and inputting data about FRC teams into a scouting report.
- ***Scouting Representative:*** The Scouting Representative is in charge of collecting, organizing, and maintaining records about other teams. This information will be used to determine strategy for team alliances and opponents, as well as alliance selection during the regionals.



The Awards Division

The Awards Division consists of Game Design Team, Pit Design Team, and Essay Team. This division is dedicated to helping the team achieve awards in FIRST. Responsibilities can be creating unique videos for certain awards and writing remarkable essays for several awards. The Game Design Team is responsible for producing content such as the RPG to be presented at the FRC Competition for team recognition and accomplishment. This division is regulated by the Manager of the Awards Division.

The Roles Within the Game Design Team are:

- **Game Master:** The Game Master is in charge of understanding all game rules and competition guidelines. This person also makes sure the robot, the Drive Team, and the greater the robotics team is following all game and competition rules.

The Roles Within the Pit Design Team are:

- **Pit Administrator:** Someone in charge of overseeing the design, construction, and maintenance of the team's Pit Station before and during competition events.

The Roles Within the Essay Team are:

- **Award Submitter:** Someone in charge of the submission for the various awards for FIRST and FRC events. Awards submissions include essay writing, videos, art work, etc.

The Roles Within the Inspection Team are:

- **Robot Inspector:** Robot Inspectors perform mandatory robot inspections and weigh-ins to ensure compliance with robot design and construction rules.



The Operations Department

The Operations Department is responsible for the overall functionality of the team and its departments, followed by divisions and sub-teams. Within this department, 3 divisions are responsible for communications and projects, as well as safety and mindfulness, and another is accountable for member recruitment and dismissal. The Director of the Operations Department oversees the success of this department.

The Communications Division

The Communications Division consists of the Events Team and Documentation Team. Events Team is liable for planning and execution of events influencing collaboration within members and interest in STEAM fields. The Documentation Team coordinates team deliverance of information as well as accountability of access to credentials. They consistently communicate with other departments and divisions to maintain the stability of the dossier. This division is regulated by the Manager of Communications.

The Roles Within the Documentation Team are:

- **Secretary.** Someone in charge of documenting meetings, sending emails, preparing agendas, and other written forms of communications.
- **Photographer.** Someone in charge of documenting the team using digital cameras and editing the photographs taken.
- **Videographer.** Someone in charge of documenting the team using video cameras and drones and editing the videos taken.

The Roles Within the Events Team are:

- **Events Coordinator.** Someone in charge of planning, scheduling, and executing team events. This person will maintain the calendar for the team as well.

The Recruitment Division

The Recruitment Division consists of the Training Team and Evaluations Team. The Recruitment Division's responsibilities are to maintain a schedule and communicate with all new and pending applicants of interviews. The Training Team conducts the training workshops where they educate acceptees on team's rules, expectations, vision and goals. The Evaluation Team monitors the performance of current members and leaders to hold them accountable for team rules and



expectations. Other tasks include keeping careful, accurate, and frequent records of member attendance to meetings and other important statistics. This team is also responsible for member conduct and moral as well as the dismissal of members. This division is regulated by the Manager of Recruitment.

The Roles Within the Training Team are:

- **Training Coordinator:** Someone in charge of planning and executing training workshops for new and current members. Workshops are used to educate members on team rules and expectations, and "how-to" tutorials for other departments.

The Roles Within the Evaluations Team are:

- **Evaluation Coordinator:** Someone in charge of monitoring the performance of current members to hold them accountable for team rules and expectations.

The Safety Division

The Safety Division consists of the Physical Health Team and the Mental Health Team, and configures many elements of safety. The Physical Health Team oversees for potential hazards while in workshops or securing areas that are occupied. They manage the team pit during the competition. They also enforce the safety rules and regulations for the engineering department. Their management helps the team maintain a good image for the team in FRC. This division is regulated by the Safety Captain. On the other hand, The Mental Health Team alleviates members to feel at ease or comfortable while enjoying their task. The Safety Division provided resources to ensure everyone's ability to work without the fear of getting hurt or stressed.

The Roles Within the Physical Health Team are:

- **Physical Health Safety Advisor:** This safety advisor ensures the physical health of every member throughout the season is maintained while making sure every member follows all safety protocols.
- **Build Team Safety Advisor:** This safety advisor is a part of the build team and ensures all safety protocols are being followed during the build season to prevent any physical injuries from occurring as well making sure tools are being used and put away properly, and using necessary protective equipment when needed.

The Roles Within the Mental Health Team are:

- **Mental Health Safety Advisor:** This safety advisor ensures that all members are mentally stable to take on certain tasks, as well keeping themselves updated with the

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wellbeing of every member. This safety advisor finds ways to destress everyone from time to time.





Impact

Academic:

Within being a STEAM team and adapting stricter rules on education, our team influences members to work smarter and harder. Our commitment towards providing knowledge and aid in those fields helps students on their day-to-day education in certain classes that they may have. We are a nonprofit organization that does way more than just robots, but educates students in several other fields such as Fundraising & Community Outreach, Mechanical Design & 3D Modeling/CAD, Programming & Video Game Design, Art, Film, Photography, Physical & Mental Health Safety, Professional Workshops, and so much more!

Leadership:

Full Metal Beavers builds the robots of today and leaders of tomorrow. Our organization functions on a student-run basis with a structural system, distributing tasks and responsibilities. Each member has the opportunity to take initiatives and foster their ideas into a project, giving them leadership and creativity. Our team is committed towards shaping the leaders of tomorrow by influencing the importance of reform and responsibilities.

Community:

Full Metal Beavers are committed to shaping the community around them as much as inspiring future leaders in STEM. As such, we seize every opportunity in hopes of making the world a better place, one smile at a time. Every month we hold volunteering opportunities for the team to give back to the community. In addition, our Greener Gateway initiatives is an opportunity for us to impact the community within Jamaica Gateway to the Sciences. Every week, we collect plastic bottles from all around the school and recycle them at a nonprofit called Recycle For Education.

Life Skills:

In addition, Full Metal Beavers impacts its members by preparing them for real world situations that would be required of them. Through rigorous coursework that is required of each member, we teach them how important dedication and commitment is in order to strive for better. In addition, members learn communication skills, as well as time management to help them better adjust and adapt to any environment. We also teach our members that without failure and constant error and trial, we will never reach success. We teach members to embrace their qualities and attributes that make them unique to ensure their self esteem and confidence elevates.



Personal Growth:

The Full Metal Beavers offers wide ranges of opportunities for all of its members through the four departments and its corresponding positions. All members are encouraged to strive for the best and test out their leadership, communication, teamworking, and critical thinking skills through the various tasks that they have to complete. Members on this team are able to turn their weaknesses into strengths and enhance their self confidence within themselves.





Team S.W.O.T. Analysis

<i>Strengths</i>	<i>Weaknesses</i>
<ul style="list-style-type: none"> • Leadership skills • Organization / Structure of the team that ensures integrity • Commitment and Dedication • High standards to avoid mediocrity • Good communication throughout the team through Discord and G- Suit. • The Full Metal Beavers are well connected so that our mission of unity, opportunity, and equity are upheld. • Collaboration within the Team through the Departments to ensure Unity and cooperation • Members are aware of their own strengths and weaknesses through the Training Sessions and their Training Coordinator. • The Full Metal Beavers have strong mentors so that members can learn and train to be future leaders. 	<ul style="list-style-type: none"> • The lack of motivation is a serious weakness because it affects the quality of the work needed to be completed. • Struggling to meet deadlines • The inability to follow through with ideas. Ideas should be turned into projects and plans not left as ideas. • Poor time management is a big weakness. The underestimation of the amount of time we have at our disposal subsequently causes missed lucrative opportunities. • Imbalance of task distribution causes members to “burn out” and not produce quality work. • Poor planning and disorganization cause seriousness and time wasted away from the team. • Distractions during work time; this also wastes time and efficiency of the entire team.



<i>Opportunities</i>	Threats
<ul style="list-style-type: none"> ● In The Full Metal Beavers, members are given the opportunity to learn how to use software such as CAD, 3D Max, and RPG Maker MV. ● With the Full Metal Beavers, members are able to build on their communication skills in events such as our outreaches. ● The Full Metal Beavers acts as a gateway to STEAM field careers to a young audience. ● Members of the Full Metal Beavers are given more opportunities for STEAM-related internships. ● Members of the Full Metal Beavers are given the opportunity to enter a top tier college due to FIRST being recognized as a STEM-related community which allows them to stand out more to colleges. ● Being part of the Full Metal Beavers exposes a person to the conditions of a real team and helps build on teamwork and collaborative skills. ● Members of the Full Metal Beavers are given the chance to increase their professionalism by helping them acquire skills such as writing emails, speaking professionally, and dressing appropriately. ● Members of the Full Metal Beavers are exposed to a hierarchy system, this system helps members learn how to appropriately act in a work environment. ● The Full Metal Beavers also offers members entrepreneurial opportunities through offering members work in marketing, finance, sales, and design which provides members with a well-rounded preconception of the business industry. 	<ul style="list-style-type: none"> ● A common threat to our team is fundraising, in order for our team to pay for our supplies and events we must first raise the money in order to pay for these necessities within the team.. ● Dangerous environment during outreaches ● Academic Suspension.: If members do not meet certain grade requirements they are liable to suspension, which means they may not participate in events like the competition. ● Parental Consent ● Equipment status and tool safety pose a large threat to the team. Without the equipment, the progress on the robot and the team's tasks are slowed, and tools can also cause any safety issues if not properly used by members. ● Environmental properties is also a threat to the team as it could get in the way of certain events, that may have had to be canceled due to circumstances, and troubles the testing of the robot for the team ● Lack of resources also causes a huge problem for the different departments as it will severely slow the progress of the task they are trying to accomplish



Rules

- Maintain a balance with both school work and team events. (This means each member must maintain at least a 75% in each class they are enrolled in during a semester as well as an overall 85% for each marking period)
- Must be respectful to not only team members but the entire school community.
- Team-related information must not be disclosed with non robotics members.
- Always have to be aware of safety precautions during the build season.
- No insubordination at any situation or to anyone.
- Best respectful to the lead mentors and those who are managing you at all times.
- Must be accompanied by a leader when accessing team storage materials.
- Must not say, do or show inappropriate things and/or behaviors at any time.
- Cannot let non-robotics individuals operate/use any team electronics, materials, tools.

Expectations

To be part of Full Metal Beavers you do not need to actually know how to build a robot. We need members that are dedicated and can commit to the team in the long run.

- Members must be able to attend all meetings, especially those which are mandatory after school for its entire duration. ***Unless they have a valid excuse for that day.***
- Members must be able to attend meetings and events during weekends, breaks, and the summer are necessary when ensuring the team is maintained. ***Starred Above***
- Each member must be both dedicated and committed to the team.
- Members are expected to maintain a similar manner during school as they do during a team activity.
- Members are to maintain a healthy collaboration with all other members.
- Members are responsible for their own duties of their role in the team as for other departments.
- Members should volunteer for other Departments in need of assistance and are fully responsible for their duties.



Penalties

Consequence Points:

- Any infractionable offenses now award points:
 - 5 points for Lack of Communication
 - 10 points for Unexcused Absence, Unpaid Fee, Incomplete Task
 - 15 points for Unsafe Action, Misuse of Resources
 - 20 points for Insubordination, Academic/School Related, Inappropriate Behavior
 - 0-50 points for any other infractionable offense (discretion of the leader)
- Acquiring 10+ points will result in an EMAIL/VERBAL WARNING
- Acquiring 20+ points will result in an INFRACTION
 - 3 INFRACTIONS result in an immediate TERMINATION
- Acquiring 50+ points will result in an immediate TERMINATION

There are opportunities to reduce points or gain negative points. These opportunities are at the discretion of the Managers, Directors, Executive Directors, Apprentices, and/or Mentors.

Termination

Terminations are the last resort after any member continuously breaks the rules or fails to meet expectations. At that point the member will be released from the team and will only be able to join again the following school year, unless banned, in which case, they are not allowed to reenter the team.



Communications and Information

Aside from our email: info@fullmetalbeavers.com, and website: fullmetalbeavers.com, our status as a nonprofit organization gives us the opportunity to have limitless communication via Google. We have been able to acquire a brand new domain and G Suite subscription for our organization, the Full Metal Beavers. This allows members to have their own unique, professional email address that will help add to our organizational goals of the Full Metal Beavers' mission.

In addition, our benefit allows us to implement several email groups for easier communication on different subjects. Please view them below:

mentor@fullmetalbeavers.com
director@fullmetalbeavers.com
manager@fullmetalbeavers.com
business@fullmetalbeavers.com
competition@fullmetalbeavers.com
engineering@fullmetalbeavers.com
operations@fullmetalbeavers.com
info@fullmetalbeavers.com
finance@fullmetalbeavers.com
team@fullmetalbeavers.com

Email/Group for MENTORS
Email/Group for DIRECTORS
Email/Group for MANAGERS
Email/Group for BUSINESS DEPARTMENT
Email/Group for COMPETITION DEPARTMENT
Email/Group for ENGINEERING DEPARTMENT
Email/Group for OPERATIONS DEPARTMENT
Email/Group for team announcements and services
Email/Group for ACCOUNTS RECEIVABLE & PAYABLE
Email/Group for sending whole team emails

Social Media and Communications Platforms



Follow our Instagram and Facebook to stay up to date with the meetings and team activities.

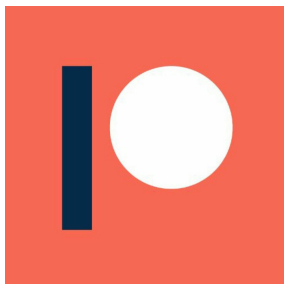
Instagram: @team6636

Facebook: www.facebook.com/FullMetalBeavers/

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Team Discord: This is where the team keeps a consistent communication. From discussions related to specific departments, to bonding conversation, entertainment, and even online meetings, it all happens right here.



Patreon: This is another way to help support the Full Metal Beavers on a more ongoing basis by becoming a Beaver Patron on Patreon. Patreon is a membership platform based in the United States that provides business tools for creators to run a subscription content service. It allows creators and artists to earn a monthly income by providing exclusive rewards and perks to their subscribers, or "patrons." Each tier in Patreon comes with various levels of rewards for a Beaver Patron.

Collaborator Tier \$2 per month:

Your name listed as one of our sponsors on our website: www.fullmetalbeavers.com

Beaver Retriever Tier \$5 per month:

Along with everything in the Collaborator Tier, patrons will also receive a Thank You Message, delivered straight to your inbox and a SPECIAL monthly sticker to collect.

Beaver Believer Tier \$10 per month:

Along with everything in the Beaver Retriever Tier, patrons will also receive an EXCLUSIVE monthly button/pin to collect. You will also be subscribed to our monthly email newsletter to get special updates on team events.

Beaver Friend Tier \$25 per month:

Along with everything in the Beaver Believer Tier, your name is included in our monthly shout out of our Patrons on our Official Instagram page, @team6636 and you will receive an EXCLUSIVE 3D printed item.

Beaver Ally Tier \$50 per month:

Along with everything in the Beaver Friend Tier, you'll get a photograph of our entire team doing something amazing that month and your name will be printed on our Team's Banner which we show during the FRC in front of thousands of people.

Beaver Supporter Tier \$100 per month:

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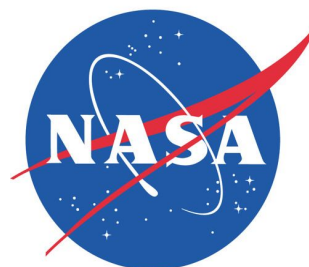
Along with everything in the Beaver Ally Tier, your name will be distinguished from the rest of our Patron supporters, on our website and Instagram page. We'll send you one of our cool team apparel, a one-time, but very special and very personalized Thank You Plaque, and other surprise loot.

Prime Beaver Tier \$500 per month:

Along with everything in the Beaver Supporter Tier, your name will be EXTRA distinguished from the rest of our Patron supporters, on our website and Instagram page. Your name will also be added to our ROBOT. This tier also includes a secret loot and a special access to some projects we don't want the public to know about just yet such as exclusive animations, video games, film projects, 3D printables, community projects, competitions, and so much more.

Sponsors

Full Metal Beavers would like to thank our three acknowledged sponsors who heavily contributed to us.



INTUITIVE
Foundation

Sponsorships are very important to the team for they help the financial structure of the team's economic status. Being funded by companies not only expands our branding but establishes relationships with these companies and businesses.

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This year the Full Metal Beavers is sponsored by NASA, Jamaica Gateway to the Sciences and the Intuitive Foundation. The money collected from Sponsors is used for several reasons within the team. By contributing monetary support, the team will be able to purchase necessary materials and tools to construct the robot. The team will be able to purchase important items that will be beneficial towards executing events or publishing products that extend team inquiry.

Most of the responsibility is held to the Business Department as the Marketing Division executes Outreach events and holds members such as sponsor liaison. Outreach events are days in which members must attend journeys to local or moderate businesses to request for financial support. In addition, Outreach events also form bonds with companies and search for men and women that can mentor team members in areas of engineering learning. In return to Full Metal Beavers receiving money and support, we advertise their logos on our robot to be viewed during the competition and advertise on our team website. More advertising opportunities such as your logo on a banner that will be displayed at events and tournaments, logo and link on the sponsorship page via team website, and logo on the back of the shirts. Moreover, sponsors shall receive Full Metal Beavers products, for example: a thank you plaque and Full Metal Beavers shirt.

Events System

Our Team Calendar can be viewed on the Team Drive and on our website, Fullmetalbeavers.com, which represents dates when we execute meetings, workshops and events. However, significant dates to acknowledge are:

Fiscal Year:

September 1, 2018 - August 30 2019

Pre-Build Season:

September 1, 2018 - December 31, 2018

Build Season:

January 6, 2019 - February 20, 2019

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Competition Season:

April 30, 2019 - May 1, 2019

Post-Build/Off Season:

May 1, 2019 - June 30, 2019

Fundraising Season:

May 1, 2019 - August 30, 2019

