



History and Growth

Founded in 2013, Team 4855 - Ramageddon, is based out of South Haven High School, located in South Haven, MI, and the team competes in the international FIRST Robotics Competition (FRC) league. FIRST stands for "For the Inspiration and Recognition of Science and Technology" and their mission 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.

The 2013 rookie team consisted of 14 students, two coaches, and two mentors. Since then, Ramageddon experienced steady growth in students, mentors, sponsors, fans, and revenue. FIRST does not set a cap on how many students may be on a FRC team and in 2019 and 2020, Ramageddon had approximately 30-40 students on the team. That growth hit a slight roadblock when the worldwide pandemic of COVID-19 interrupted our lives (which is not unlike what other FRC teams have experienced). The 2023 team consisted of 2 coaches, 12 mentors, 15 students, and countless fans affectionately known as "Fanageddons". As a team, we continue to strategize methods to increase student participation for upcoming seasons.

In 2019, Team 16204 - GOATageddon was formed at Baseline Middle School in South Haven, MI. GOATageddon competes in the FIRST Tech Challenge (FTC) league. The FTC program at Baseline has proven to be extremely popular, even to the point where students are turned away each year due to a FIRST mandated cap of 15 students per FTC team. In 2021/2022, the founding coach of GOATageddon was ready to step aside as the team's coach as she no longer had children on the team. She worked diligently to find a replacement and was able to form a partnership with St. Basil Catholic Schools. In 2022, GOATageddon was coached by staff from St. Basil's and the team consisted of students from both St. Basil's and Baseline. Upon conclusion of the season, St. Basil's formed their own FTC team and two (2) FIRST Lego League (FLL) teams. That meant that for the 2023 season, GOATageddon would be in need of new coaches and mentors to oversee the team at Baseline Middle School. Fortunately, at the recent Baseline Middle School Science and Engineering Expo, Ramageddon recruited potential new coaches for GOATageddon. In addition, we recruited 19 new students at the expo for our FIRST teams for the 2023/2024 season.

Just prior to the COVID-19 pandemic, a FLL team, Team 50426 - Lambageddon, was formed at North Shore Elementary School. Unfortunately, that team was never able to compete due to the pandemic and the coach for the team has since then decided not to coach the team. Fortunately, a new coach was recently recruited for Lambageddon and in 2023, a former Ramageddon mentor volunteered to coach a FLL at Maple Grove Elementary School, creating Team 28192 - Kidageddon.

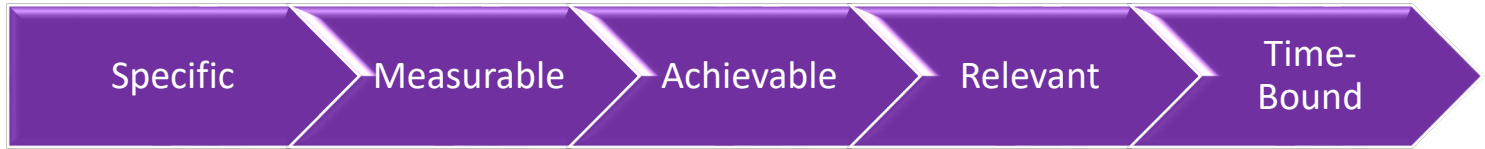
Having FLL and FTC teams in South Haven is vital to the success of the FRC team at the high school, as the students on the lower-level teams gain valuable experience that drives their passion for STEM and helps prepare them for the rigorous tasks that they will encounter during their time on the FRC team.

Our Current Position

To move the South Haven Robotics program forward, our mentors and students have identified our current strengths, weaknesses, opportunities, and threats.

Strengths	Weaknesses
<ul style="list-style-type: none"> • Large group of FRC mentors with STEM experience • Devoted FRC coaches • Community support/partnerships • Returning sponsors • Strong bank account balance, allowing us to fund lower level teams • Advanced scouting app and scouting alliances • Student's interactions with judges • Alumni support • Parent/Student interest in all levels of FIRST • Sustainable FRC business plan • Team building activities 	<ul style="list-style-type: none"> • No practice facility • Lack of space • Turnover of FTC coaches • Recruitment of FTC/FLL coaches • Lake MI = no businesses west of us • Depth of experience in coding • Membership down After COVID • Pre-season training/orientation • Not a 501(3)c which makes us miss out on certain grants/sponsorships • Coaches do not have a school credit card and often use their own money to purchase equipment/materials. Reimbursements do not include taxes paid. • Unlike many schools in MI, our FRC team is not recognized as a "team", and we do not currently qualify for varsity letters or graduation credits.
Opportunities	Threats
<ul style="list-style-type: none"> • Alumni as mentors • FTC/FLL teams • Mentoring other teams • Orientation program • SHHS FIRST Robotics Scholarship • Social media • More community outreach • Creating a STEM event that includes all grade levels and other teams. • Freudenberg grant renewal • Getting back our "Sea of Purple" (fans in the stand) • Invite SHPS administration to events • Form a SH Robotics Boosters Club, 501(3)c with a Board of Directors 	<ul style="list-style-type: none"> • Conflicting clubs/sports • Lack of student initiative post-COVID • FRC State Championship now held during Spring Break • FRC Championship now held in Texas • Mentor burnout • Lack of transportation • Upset parents/students when FLL/FTC team size is capped

Goal Setting



The following goals have been developed by FRC team members and mentors.

- Recruitment: Increase team recruitment to 17 team members for the 2024 season, 20 team members for the 2025 season, and 25 team members by the 2026 season. This will be achieved by increasing awareness of what our members do on the team, participating in more outreach opportunities at the middle school and high school, and by hosting a STEAM event at the high school.
- Summer Skills Camp: Increase attendance at the 2023 Summer Skills Camp by increasing the marketing of the event. Invite Bangor High School's team (7809 Valhalla Nation) to join our skills camp. Bangor's team reformed after COVID and they need assistance with basic FRC tasks such as fabrication, programming, and business technology. Invite FLL/FTC coaches to partner with us on the skills camp.
- Summer/Fall Workdays: These workdays will be separate from our traditional skills camp. During our workdays, we will finish projects that we did not have time for during build season, and we will start to prep for the upcoming build and competition season by working on projects such as the Impact Award essay.
- Team Training: We will broaden our mandatory training sessions to include not only safety training, but the following training sessions: Interviewing with judges, public speaking, scouting, FRC awards, social media, etc.
- Team Bonding: During the summer of 2023, we will host a fun, non-robotics related activity for current team members to thank them for their commitment to the team.
- FLL/FTC Teams: We need to have all levels of FIRST at South Haven Public Schools. The FRC team will assist in finding a coach for the Baseline Middle School team, GOATageddon. The FRC team will assist with the new FLL teams at North Shore and Maple Grove. FRC team will offer guidance on how to start a FLL team at Lincoln School and then assist with that team.
- FLL/FTC Mentorship: For the 2024 season, FRC is adding FLL/FTC mentorship/volunteerism as a new minimum working requirement for team members. If a FRC student is unable to mentor a FLL/FTC team or volunteer at one of their competitions, the member may volunteer at a FRC competition. This cannot be at a competition in which Ramageddon is competing.
- Host a STEAM Event: Annually, Ramageddon has hosted an ice cream social at the high school to recruit new students, but attendance has been lower since COVID. For the fall of 2023, the team will revamp this event to be open to be on a larger scale and it will reach a broader audience. Team members will work on this project during our 2023 summer workdays, which are separate from our skills camp. This event will also educate attendees on the various sub-teams of Ramageddon:
 - *Build Team* • *Programming Team* • *Business Team* • *Scouting Team* • *Safety Team* • *CAD Team*
- Outreach to Other FRC, FTC, FLL Teams: Ramageddon should host an event that is open to other FRC, FTC, and FLL teams. This event could be held at South Haven High School, Lake Michigan College – South Haven Campus, or at another location in South Haven. Hosting activities that include other local teams would help us in our goal of winning the Impact Award.
- Outreach: Participate in an additional five community outreach opportunities during the 2023-2024 season.
- Recognition: Have business team members create and publish regular shout-outs on social media to recognize team members and mentors.

- Drive Team: Host regular drive team practices throughout the year. Conduct drive team try-outs and rules tests during build season.
- Team Orientation: In addition to the mandatory student/parent orientation session and the mandatory safety training, create additional mandatory training to be held just prior to Kickoff, including but not limited to judges/interview practice, intro to scouting, intro to FRC resources (GitHub, Chief Delphi, The Blue Alliance, etc).
- Delegation: Coaches will delegate tasks such as scheduling team meals and carpooling to parents.
- Open Door Policy: Parents, SHPS administrators, sponsors, and the media will be invited to portions of our team meetings so that they can learn what we are working on.
- Rewards: Coaches will develop a reward system that encourages team members to conduct research outside of team meetings and to encourage team members to be more active during brainstorming sessions.

Taking South Haven Robotics to the Next Level

The FRC and FTC teams at South Haven have proven that they are worthy of competing at not only the district level, but also at the state and international level. However, there are a few weaknesses in our programs that have made it difficult for our teams to be consistently great. In order for us to move from good to great, our teams need the following resources.

Dedicated Practice Field:

This is a stretch goal, but one that is vital to the ongoing success of our teams. The FRC, FTC, and FLL teams need a dedicated space where they can drive and operate their robot on a field that is similar to the actual competition fields. This is extremely important for the FRC team as we have large, heavy field pieces that are constructed with plywood that splinters regularly. Because we do not have a dedicated practice field, most years we must forgo building life-size replicas of the competition field pieces because we do not have anyplace to store them. This means that the first time that the team gets to practice with field pieces is when we arrive at a competition. This puts us at a huge disadvantage. On the few years that we did build the tall/large field pieces, we either had to leave them in the high school's Integrative Learning Center (ILC) or move them to the loading dock. The field pieces look very out of place in the ILC, and constantly moving them back and forth from the loading dock or up against walls in the ILC is dangerous.

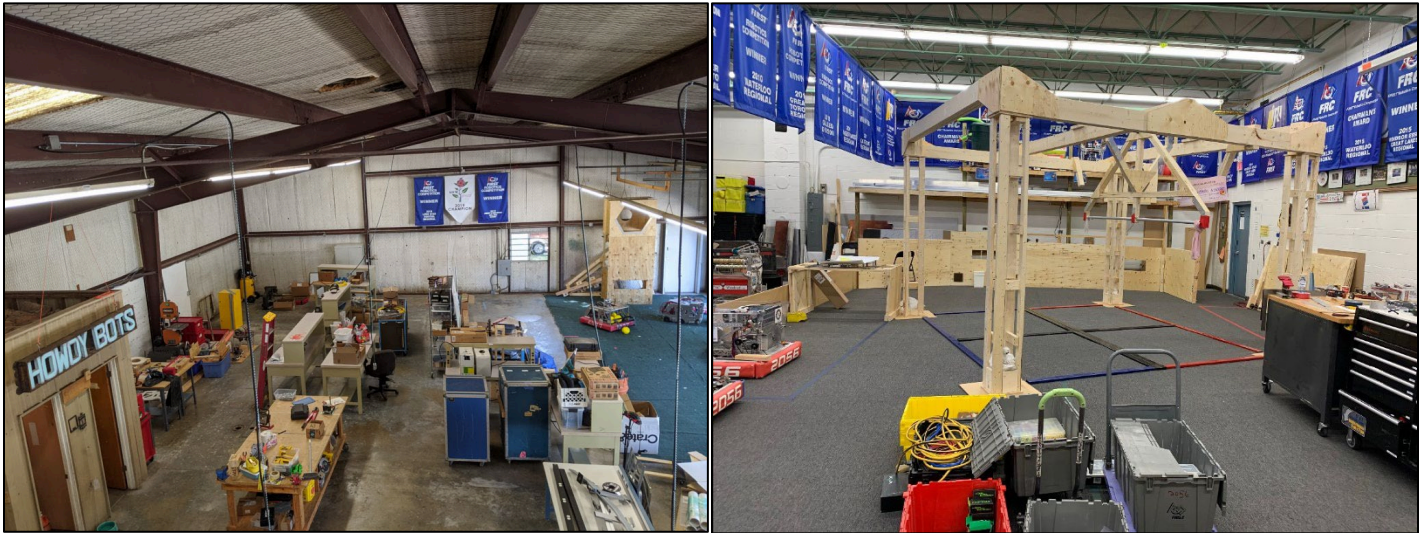
Currently, our FRC team practices in the ILC at the high school. This is less than ideal, as the ILC is not always available to the team, and when we do have access to it, we must move heavy furniture out of the way so that we can set up our field pieces. After practice, we must move the field pieces again, vacuum plywood and tire treads off the floor, and replace the ILC furniture. We need space where we can leave our field pieces up 24/7 and not have to worry about accidentally ripping the ILC carpet, or worrying about whether the space where we practice is already booked for another group/meeting.

If we had a practice field, we open the facility to other teams, giving us an opportunity to practice with other robots rather than waiting for a competition. This would be huge for our drive team members! Speaking of our drive team members, if we had a dedicated practice field, we could offer year-round drive team practice. The past few years, our driver and operator only had a few days' worth of practice on the robot which is likely one of the main reasons why we did not qualify for the State Championship.

You can take a great driver and win with a bad robot, but if you have a bad driver, you will lose with a great robot.

We want to work with school administrators to determine if there is currently any space available now or any space that may become available in the near future that we could use as a dedicated practice field. If not, we would like to discuss other options that may be available for the FIRST teams.

Below are a few photos of other team's practice fields. The photo to the left shows that the Howdy Bots have a combined build space and practice field. The photo to the right depicts how large the field pieces can be. In both photos, the teams are able to display their "Blue Banners" on the walls. Team 4855 Ramageddon does not have space for displaying the Blue Banners that we have won, and the team pays for its own display cabinets for displaying its various trophies, plaques, and ribbons in the high school.



Create a 501(3)c and Recruit a Board of Directors:

One of the largest struggles for the high school and middle school coaches has been purchasing critical supplies, equipment, and materials. With only six to eight weeks to build a competition worthy robot, when we need supplies, we need it within the next 24 hours! In the past, we had a school administrator as a coach which was helpful in expediting our purchases, but now that he is no longer a coach, the current coaching staff must place a purchase order (PO) with the school before an item can be purchased. If we are working on a Friday night or on the weekend, then we need to wait until SHPS staff are back in the office on Monday before the PO can be issued. Due to this delay, the coaching staff have found it faster to purchase the items with their own credit cards and then request reimbursement. The problem with this course of action is that the school cannot reimburse the coaches for the taxes paid on purchases, which means that the coaches are on the hook for the taxes.

Now that we are expanding robotics to the lower-level schools, we would like to create a "Robotics Boosters", similar to the band boosters or athletics boosters. The SHPS Robotics Boosters would have a board of directors who would meet regularly, following an official agenda. The board would have financial oversight of all FLL, FTC, and FRC teams at SHPS which would be beneficial in the following ways:

- Sponsors could write one check to support multiple FIRST teams at SHPS, rather than making donations to various teams throughout the year.
- Reduced chance of robotics donations going to the wrong account. The Finance department would not need to worry about which team should receive the donation or which account should be charged for purchases. In the past, a few of the FRC team's donations have been accidentally placed in the South Haven Public School Foundation account and this year a \$500 Entergy Community

Connectors Grant was issued by Entergy but not received by the team. We are in the process of trying to track down that money.

- Designated coaches could be issued a credit card to purchase supplies, equipment, and materials.
- In addition to the traditional method of sponsors writing checks, they could also make donations online via www.ramageddon.com or via Venmo.
- As a 501(3)c, sponsor's donations would be tax deductible.

We have many Fanageddons in this community comprised of alumni, parents of alumni, current and retired STEM professionals, and others who would be willing to be on a SHPS Boosters Board of Directors.

Conclusion

We know that technology is a huge part of all our lives, and it will continue to grow rapidly exponentially within our lifetimes. We need to make sure that the students who attend SHPS are given every opportunity to embrace science, technology, engineering, arts, and mathematics (STEAM), and with the robotics teams, they will have that opportunity.