

***FIRST* Impact Award - Team 1071**

2024 - Team 1071
Team Number
1071
Team Nickname
Team MAX
Team Location
Wolcott, CT - USA
Describe the impact of the <i>FIRST</i> program on team participants within the last 3 years. This can include but is not limited to percentages of those graduating high school, attending college, in STEM careers, and in <i>FIRST</i> programs as mentors/sponsors.
In the past 3 years, 100% of student members have graduated from high school. All of them went on to college; 90% majored in a STEM field. At least 16 team alumni are currently mentoring teams across FIRST programs, with >10 volunteering at events this season. Team MAX also increases cultural awareness by connecting with students in Africa, bringing a deeper understanding of the world. Ultimately, the team allows students to develop leadership and organization skills that help them in life.
Describe your community along with how your team addresses its unique opportunities and circumstances.
Our community offers many opportunities for our initiatives to grow. We're in a small town, where word spreads by mouth very quickly. Because of this, a lot of the town knows about us. We also have strong connections with our local library and public schools, who help market our programs. This relationship has extended to local politicians, to whom we recently gave tours around our FTC and FLL events. We create STEM opportunities for students in a town in which the options are otherwise limited.
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?
We can look at the number of students participating in our STEM programs to measure success. Many of our participants in these programs later join a FIRST team, improving their relationship with STEM. For example, our FLL program has grown from 12 to 15 teams. Our team shares the FIRST message through our email list to contact the community about events we are holding, as well as our social media. We can also measure results by impressions on our social media, with 110K+ in 2023 alone.
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.
The team has a large presence within the CT FIRST community. This year, we're supporting all CT FTC events that we don't host or run. We also supported the CT FLL Championship. We're the only place in NE where you can find an official event at every level of FIRST. At our offseason event, WIWI, we

encourage members of all teams to try roles they would not have a chance to do otherwise, such as game announcing.

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

In 2021-22, we mentored 12 FIRST teams. In 2022-23, we mentored 12 as well. This season, we mentored the following teams: -4 FLL Discover -5 FLL Explore -5 FLL Challenge -1 FTC Students are key in our team mentorship. All of these teams were mentored by students, with additional support from 1071 mentors. In partnership with the Wolcott Robotics Foundation, we've also reached an agreement with a local daycare to implement FLL Discover into their curriculum for more than 70 kids across 12 teams.

Beyond starting teams, what initiatives have you done to help inspire young people to be science and technology leaders and innovators? What results have you seen from your efforts in the past 3 years?

We lead STEM programs that educate and excite. Science Splash continues to be a local favorite, with 4 weeks of the after-school program this fall, and an additional 4+ weeks planned this spring. In 2023, >70 students participated. Students at every elementary and middle school in the town are offered the chance to participate in fun science experiments. Let's Make Stuff continues to thrive; the semi-monthly program exposes students grades PreK-7 to engineering with hands-on projects.

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

We have continued our strong relationship with the Wolcott Public Schools. The teams we mentor and events we hold wouldn't exist without their monetary support and stipends for FLL and FTC mentors. They also provide space for events and meetings. The Wolcott Public Library is also a key partner as they play host to our FLL Discover program and 3 FLL Explore teams. The Wolcott Robotics Foundation is a key sponsor, contributing thousands of dollars in local sponsorships annually.

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

Team MAX is extremely supportive of various diverse groups of people. The team has 7 members that are openly part of the LGBTQ community. The team's gender ratio has also significantly improved, as there are 12 girls and 15 boys. We split up into small project groups, which are assigned tasks and then recap and regroup weekly with the full team. This allows our members to each feel as if they have a purpose on the team and have their ideas heard.

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

In the past three years, the Wolcott Robotics Foundation has been revived. This year, there was a focus on sponsorships, with a large increase in local sponsors. Two years ago, the team advocated to the Board of Education for new stipends and budget for our FIRST teams. This \$9600 increase improves long term stability and improves retention. The WRF's new FIRST Teams Committee now provides a unified guidance to all robotics programs in Wolcott. Team members compose >85% of the committee.

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

past 3 years

This year, the WRF formed a new Sponsorship Committee made up of 4 team students. This committee created a program that assigned specific prospective sponsors to each student for them to send letters and visit. It's been successful, raising more than \$8000 in new sponsors for the WRF. Also, in an effort to increase retention, we held a Sponsor Day over the summer, where sponsors got to go around and learn more about all of our programs and the impact they have as sponsors. It was a big success.

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

One area we need to improve is internal organization. Every season, we seem to have issues with integrating the robot and making sure that everyone has a specific job. This season, we are addressing this by dividing up into 7 smaller project groups, each with their own student leader. These groups work closely together to complete tasks. The leaders meet weekly during school to discuss the best course of action from a high level. These groups will continue to work together during the offseason.

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

We tackle delivery of the FIRST mission from multiple angles. We believe that the best way to do this is through getting kids on FIRST teams and at events. FIRST is most seen by the public at these, so we supported, hosted, or ran 10 in 2023; we're the only team in NE to run an official event at every level of FIRST. This season, we're running: -FTC Kickoff -FLL Challenge Qualifier -FLL Explore Celebration -FLL Discover Celebration -FRC Kickoff -FRC Offseason We also host an FTC Qualifier.

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 position in the Central Connecticut Robotics Alliance is noteworthy. We're working with two other local FRC teams to create a practice space at a local community college. This will be open to teams from across the state. We've raised about half of the funds necessary to complete this project. This won't just help us, but the community college will also gain exposure for their manufacturing program. This program is helping to fill a gap in skilled manufacturing in CT.

Judge Feedback**Who/When****Feedback**

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Teams operate many different and unique outreach programs. Do you prefer to see local or global outreach from a team, all else being equal?

An area the team has an opportunity to improve.

Something that really impressed the judges.

Essay

A successful robotics team can be compared to an iceberg. There is a part of each team that everyone sees, but more importantly, below the surface, are the core components which make that team great. Team MAX exemplifies this concept, as our impact can be seen from Wolcott CT to around the globe. For

every program or event we run, there are hundreds of unseen hours being put in by team members, all of whom epitomize the team's core values of teamwork, communication, commitment, and leadership.

The Surface

The team has several well-known outreach initiatives, such as our Let's Make Stuff (LMS) and Science Splash, which have become staples of Wolcott's STEM scene. At Wolcott High School (WHS), our work with the People Investing In People Foundation (PIIP) is a hallmark of our robotics team. Beyond Wolcott, our influence in the FIRST community can be seen across the district; we're the only team in New England to run an official event at every level of FIRST. These things are just the tip of our iceberg. Behind all of these successes is a team of students dedicated to delivering the mission of FIRST and helping children understand their potential.

The Shallow Waters

Beneath the surface, The Shallow Waters illustrates our core value of teamwork. Working together is crucial to providing high quality FIRST events and creating a positive team atmosphere. It is essential to have every individual involved in the planning and execution of our outreach programs.

Our members work together to create the best possible experience for those attending our programs. We partner new members with veteran members to give them the opportunity to take an active role on the team, ensuring that they learn to become leaders while having adequate support. It isn't just working together that allows us to thrive, it's the dynamic our members have with each other that makes us successful. This year, we broke the team up into 7 subteams, each with a student leader. This allows each student to have a voice within their subteam and design more effectively and efficiently.

We value the ideas that our peers bring to the table and appreciate their company. These connections are found in our group activities like our Monday meetings, where we sit down to award slushies to dedicated members and have a team discussion to keep everyone involved. Whether we're finalizing designs, brainstorming strategies, or developing solutions, we are using our communication skills to effectively share and encourage one another.

The Descent

As we dive deeper beneath the surface, an essential skill for any organization is the ability to discuss ideas freely and publicize programs successfully. Thus, a value we emphasize is communication, both within our team and outside of it.

As a team, we use Slack, where we not only segregate our different subteams for efficiency, but stay synchronized. Slack is used daily as a vital resource to our team's collaboration. The students specifically stay connected through a group chat where we discuss ideas, give updates, and manage outreach programs. A cornerstone of our organization is Google Workspace. All of our emails are managed through the platform along with photos and other files, allowing us to communicate with outside groups and manage our social media effectively.

Our ability to communicate with the public is a major part of why our programs are successful. We reached >17K people across Facebook and Instagram alone in 2023; our posts garnered >110K

impressions across all social platforms last year. Our email list consistently grows, now nearly 375 people. Without our marketing, neither LMS nor our FIRST teams would happen.

To promote STEM internationally, we've worked with PIIP, a nonprofit working in Owerri, Nigeria, since 2016. With PIIP, we've helped fund and create ILABS, a science center and school in Owerri for students to gain experience with STEM. In 2023, we sent >40 Chromebooks, 6 EV3s, 4 FLL fields, WiFi and routing systems, science lab equipment, textbooks, a backup power supply, and more. Now a fully licensed school, many students are now attending the center full time. We have taken several opportunities to travel to Africa as well, furthering our impact on STEM in Africa. In the past year we worked on creating My City My Culture, an initiative that sets up video calls for US students to learn about traditions in Owerri. More than 40 American students witnessed tribal dances and other cultural activities like weddings and naming ceremonies. We've enabled students across the world to build communication skills that can be applied between different cultures, benefitting us mutually in technical and nontechnical areas.

In our work with PIIP, we have taught ILABS students technology skills, extending their understanding of STEM. We meet with students in Nigeria multiple times a week using Google Meet to teach them the fundamentals of programming. Last year, we sent over an FRC robot for use in the science center to give African students hands-on coding experience. We're excited to note that students in Owerri are even helping program our robot this year. Whether it's within our team, our community, or internationally, we enable everyone to communicate multiculturally, express their opinions and ideas, and become their best selves.

The Depths

Going down deeper, everyone on Team MAX is committed to ensuring the success of and leading our outreach programs. We're extremely proud of everyone's commitment to our team and the delivery of our mission and that of FIRST.

With the amount of outreach we do, it is imperative to have a major of commitment from our students. Without our entire team's participation in our outreach, we could never ensure the level of quality that we produce when it comes to spreading the core values of FIRST. Our outreach programs such as LMS and Science Splash would not exist if it weren't for our entire team's commitment.

Started in 2011, Science Splash brings fun and educational experiments to our local elementary and middle schools. In 2023, we explored topics such as density and freezing points with interactive activities such as making ice cream and a density tower. Another initiative is LMS, where we've fostered the innovation skills of children in our community through building interesting take-home projects like terrariums and rubber band helicopters beginning in 2016. Since 2018, we've made more than 350 projects, and we're still going strong.

At our many FIRST events, our students make up a large portion of the volunteers. 18 students put in 163 hours running our Wolcott FTC qualifier and FLL Explore celebration. In 2023, we dedicated >1000 volunteer hours to the 10 events we ran, hosted, or supported. On top of this, this season, 13 of our 27 students mentored 15 Wolcott FLL and FTC teams. Students dedicated >7000 hours to the team in 2023, including nearly 1000 hours in outreach, and have already put in >2000 hours this year. That doesn't even include the hours that we spent mentoring teams!

Without the exceptional commitment to achieving our mission from our team members, none of what we do could be possible. The depth of our members' commitment is boundless.

The Core

Throughout our entire team, above the surface and below, is our commitment to student leadership. Leadership is engrained in our team's philosophy, ensuring each student has an opportunity to take initiative. We believe that when students lead, the best programs emerge, allowing us to have a big impact on our community and on our students.

Our social media is entirely student driven; every post we've published since 2021 has been done so and curated by students. Our mentors know that we can run programs at a high level, and we do so with the utmost care and professionalism.

Save for an adult supervisor, our outreach programs are entirely planned, marketed, and run by students. For Science Splash alone this past year, we ran over 35 experiments with over 70 excited kids in attendance, giving us critical experience in organization and volunteer management.

We also led >20 local scouts in a STEM day this winter, an increase from last time. We introduced STEM concepts and showed young minds that they can be leaders when students guided them through lessons. Cathy, a Pack 230 adult leader, said "it was awesome to see how excited all of the scouts were because of the science you did with them".

Students also hold important roles within the Wolcott Robotics Foundation. Three serve as members of the FIRST Teams Committee, making major decisions for the town's soon to be 28 robotics teams. Students also entirely make up the sponsorship committee, serving as the guiding body for the WRF's large increase in sponsorships this year.

The mission of Team MAX includes inspiring students to realize their full potential. By enabling them to lead, we promote the mission of FIRST and give them the chance to flourish in STEM. Our philosophy of student leadership is why our programs are so successful. Young participants see students doing amazing things, giving them confidence to lead themselves.

Team MAX is an organization that is known locally, globally, and in the FIRST community. But there is so much more to us than what others see. Below the surface is a program that emphasizes the growth of each team member. We prioritize the experience students receive through our many outreach programs and FIRST teams, and use teamwork, communication, commitment, and leadership qualities to do so. Our team of students is dedicated to delivering the mission of FIRST and helping children become immersed in STEM. While other awards may be accessible at shallower depths, the Impact Award is only reached by the deepest of icebergs. Our iceberg extends deep down into the ocean, reaching the point where it becomes a model for FRC teams and can hit the Impact Award.;

