

FIRST Impact Award - Team 2491

2023 - Team 2491
Team Number
2491
Team Nickname
NoMythic
Team Location
Saint Paul, MN - 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.
NoMythic is more than a team. We are a community. A family. We support our members through their time with us and stay connected afterwards. For the last 3 years, 100% graduated from high school. Many go on to college and then work in STEM. Four have returned as mentors recently: Zack, who is a computer engineer. Evan and Emilio, who work as programmers for the U of MN. Seamus, who now works with Milwaukee Tools. All have helped lead our team as students and continue to help as mentors.
Describe your community along with how your team addresses its unique opportunities and circumstances.
NoMythic students come from Avalon School and Great River School (GRS), two small urban charter schools. This partnership gives team members the opportunity to learn from students with other experiences and knowledge. We've taken advantage of our schools' unique programs to encourage students to engage in our team's work. Avalon students can get up to three high school credits for being on the team, and student captains dedicate GRS' built-in internship time to organization and leadership tasks.
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?
When it comes to spreading the <i>FIRST</i> message, we start close to home. Our team members mentor and, as an organization, we financially support our schools' FTC and FLL teams. Each summer, we run a summer Lego Camp for elementary students at GRS. Furthermore, our lead mentor started a Robotics Elective for middle schoolers, where students learn about coding, robot design, and CAD. Each of our programs are chosen because they matter to us and are programs we can keep building, year after year.
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.
Our team captain, Phoebe, is a role model for many students on our team and in our community. The community has acknowledged Phoebe's exemplary contributions by selecting her as a Dean's List

Finalist twice. She shows great leadership and makes sure that all people feel safe on our team. Our team members are also role models for younger students. Many of us mentor FLL and FTC teams and Lego Summer Camps, guiding students involved to be passionate, creative, and curious.

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

NoMythic created Mythical Robotics, an umbrella organization to support the FRC, FTC, and FLL teams of both GRS and Avalon. Mythical Robotics helps organize all resources - space, funds, and mentors. Students on NoMythic also mentor the other teams - FRC supports FTC, and both support FLL. We've supported our local FRC community by building field elements for a shared practice field and assisting other St. Paul teams to build quality bumpers.

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

In 2021 we organized a STEM Speaker Series. We had several STEM professionals zoom in to give talks on their careers and answer questions from our team members and visitors from our school communities. In addition, bringing our robot to events such as Kaposia Days, the MN State Fair, MOA's Allergy Safe Halloween, and the Bakken Museum's Droid December has given us a chance to share the joy of robots with kids and distribute information about FIRST programs to their families.

Describe the partnerships you've created with other organizations (teams, sponsors, educational institutions, philanthropic entities, etc.) and what you have accomplished together with emphasis on the past 3 years

With our team itself representing a collaboration between two schools, we deeply value partnership with others. Lasting relationships with sponsors lead to renewed support each year. Last year, we created a "scouting alliance" with four other teams to gather data in a shared system. In doing so, we built opportunities for teams and students to create connections. In 2020, we worked with KnightKrawler to print hundreds of face shields for front line workers.

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

We've spent recent years focused on creating and sustaining an inclusive and equitable team and supporting students with marginalized identities. This has included strengthening specific supports for low-income students, neurodivergent students, and queer students. In 2021 we received the FUM Diversity Grant to fund workshops with a local antiracism education organization. This past year we have been working with a mentor who specializes in DEI to develop programming specifically for our team.

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

Our leadership structure is highly collaborative, based around five student captains and four mentors who keep the team running smoothly. Our emphasis towards working together ensures that when team members graduate, their knowledge has been passed on, and there are other members ready to take on the work and bring up new leaders. We also document our processes in our team handbook, Trello, Google drive documents, etc. such that they can be referenced and understood in future years.

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

NoMythic works with a wide range of sponsors, from software and engineering firms to college fraternities, to receive community-based support for our program. We initially connect with sponsors via a student-led sponsor presentation that builds a meaningful connection with our supporters. During build season, we send weekly updates to our sponsors to show the impact of their support and how their donation is used. We also invite them to our shop to show them how our team functions.

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

Our team deeply values a strong community. At times, we have struggled with cohesion, especially with students from two schools and separated subteams. We are addressing this through Unicorn Families, groups of students and mentors from different schools and subteams, who eat dinner together. We are also making plans for competition so that students will get to collaborate with students they don't typically interact with. We are constantly thinking about additional ways to strengthen our team.

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

NoMythic actively works to create sustainable, long-term systems that nurture our students to be confident, passionate, and caring leaders who work to make the world a better place through cooperation. We created the following mission statement to guide our team to pursue this goal: "We strive to create inclusive STEM communities to grow future generations of passionate problem solvers." We have used this guidance to improve our focus towards what we care about as a team.

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.

When the pandemic hit us in 2020, our team was full of enthusiasm following our first regional win as alliance captains. That momentum propelled us into Zoom robotics, which we kept up consistently for the next year and a half before returning fully in person last fall. From our virtual end of year celebration, to a summer of screen sharing CAD, to a full season of hybrid meetings, we never stopped building our community, our knowledge, and our robots.

Essay

NoMythic is a loving, laughing tie-dyed frenzy of community! Through sixteen seasons of learning, growing, and finding new ways to develop in both our knowledge and our spirit, we have formed a diverse, welcoming community focused on creating future generations of passionate problem solvers prepared to take on any challenge. We work with other teams, students, and members of our larger local community to foster STEM learning and teamwork, bringing our unique enthusiasm with us wherever we go.

Over the past three years, we have continued to grow in leaps and bounds, despite the interruption of the pandemic and a year and a half of practices over zoom. Last year was our third time in team history attending the World Championships, which we qualified for by winning the Engineering Inspiration Award at the Northern Lights regional. At the World Championships, our team's individual and dedicated aesthetic won our division's Imagery Award, and we finished our season strong by placing third at the Minnesota State competition.

However, these achievements aren't the only thing we value. More than anything, we prioritize building deep, long-term, and sustainable relationships both within and outside of NoMythic. We put lots of time and effort into creating healthy connections between team members, with other local teams, and with sponsors. These relationships help us cultivate a welcoming environment and a safe space. These conditions help encourage students who might otherwise be intimidated by STEM to try it out when we offer hands-on experiences to local youth members and Experience The Team Nights for prospective members to see what robotics is like.

NoMythic is structured so that students can choose the area of work they are most passionate about and want to specialize in. We have three subteams: Build, Programming, and Operations. Subteams are fully student-led by captains who are assisted by knowledgeable mentors. Our subteam captains meet regularly to discuss the status of the team, and we finish our practices with an all-team community meeting to ensure that subteams do not become disjointed from the whole that is NoMythic. During these meetings we also recap what every subteam did during the practice, so students from every subteam can stay up-to-date with each other.

An important way that we help build community within NoMythic is meals. Our team eats dinners together, which are often provided by student's families and are prepared to accommodate our student's unique dietary restrictions, from allergies to diabetic needs. Eating together helps us to build community and connections with each other, an important aspect in making NoMythic feel more like a family than a team. During these meals we further promote intermixing between subteams through Unicorn Families. Unicorn Families are assigned groups of mixed and matched students and mentors who eat together once a week; this allows team members to talk with other people from different parts of the team.

In addition to fostering connections within our team, we have been reaching out and working on creating that same environment for others too. Each summer, NoMythic hosts a Lego camp program through Great River School to work with students to create Lego robots; introducing more kids to STEM in an easily accessible and fun format. NoMythic is also a part of the larger umbrella of Mythical Robotics, an organization that also encompasses the FTC and FLL teams from Great River and Avalon schools. The other teams under Mythical Robotics are often mentored and assisted by NoMythic students, giving the younger students an opportunity to learn valuable STEM skills and NoMythic students an opportunity to practice teaching and leadership.

We also host inter-team events, such as our annual workshops dedicated to assisting other FRC teams with bumper building. At competitions, we work with other teams in a scouting alliance, where we collaboratively collect match data together. This helps to lower the stress and workload of all teams involved in gathering information about other robots for strategy work and alliance selections. We are eager to share our time and knowledge with other teams, and the lasting friendships we're building will support all of us greatly in the future. We also build relationships with our larger local community, attending events such as Kaposia Days, a South St. Paul neighborhood festival, the Allergy-Safe Halloween event at the Mall of America, and the Bakken Museum's Droid December. At these events we give children and teens hands-on opportunities to learn about robotics while also giving members of our team opportunities to practice communication and outreach.

One of our greatest priorities on NoMythic is building a safe space in STEM and taking steps towards changing its reputation as a field lacking in diversity. NoMythic works to allow lower income, neurodivergent, and LGBTQ+ students to all have access to robotics in a welcoming environment.

NoMythic works with the Minnesota-based Smith Family Foundation to fund a sliding-scale option for team fees and student expenses, such as travel fares. This helps us be financially accessible to our students and welcome members to the team regardless of their economic status.

As a team with a particularly high proportion of neurodivergent students, it is important to us to create a safe environment in which everyone's emotional, physical, and sensory needs are considered. We make sure sensory needs are being met with accommodations such as having noise-canceling headphones available in the often overstimulating shop, encouraging breaks, and having individual food accommodations.

In our work to make robotics accessible for all students, another area we focus on is academic support. While extracurriculars are sometimes seen as a privilege for students who get good grades, we know that each student faces unique circumstances that can make school challenging, and that shouldn't bar them from experiencing our unique learning environment and opportunities. In fact, robotics can help students find the motivation, skills, and support to succeed in their classes as well. Our team works with students and teachers to make plans with individual team members if they are falling behind or feeling overwhelmed, and we encourage them to take time during practices to complete schoolwork if necessary. It is our team policy that students are passing all of their classes to come to competitions, and we offer as much help as we can with academics to help students reach that goal.

Many students on NoMythic are LGBTQ+. As part of our mission to make everyone feel welcome, we have created a team culture that respects the identities of all of our students and supports their needs. We have made pronoun sharing a regular occurrence so that students can be referred to in the way they feel most comfortable. At competitions we work especially hard to affirm student identities. Knowing that gendered rooming assignments can be difficult for queer and gender diverse students for a variety of reasons, we instead room by comfort, which not only helps queer individuals but ensures all students feel safe with their sleeping arrangements. We also reach out to event organizers to ensure gender neutral restrooms will be available. Finally, we show our support visually through having a rainbow flag in our pit and partnering with the Twin Cities-based organization All Are Welcome Here to provide welcoming signage and pit handouts. Our group of LGBTQ+ students and mentors are prepared to support each other in educating and building a safe space for our team and community as a whole.

In addition, last year we submitted a letter to FIRST concerning the physical and emotional safety of our transgender students at Houston World Championships after gender affirming healthcare was branded “child abuse” by the Texas governor. Along with the letter, we presented a student-written petition to FIRST asking for statements of support from FIRST to back up their value of diversity in STEM as well as action to move towards locating the World Championships in a different location in order for our transgender students to feel safe and heard.

Our team values drive us to take action whenever we can to make the world a better place. This can take the form of larger scale activism like our petition, or even just doing something tiny to make an individual day a bit more fun, like a team pajama day. We focus on building a deeply supportive environment to create meaningful STEM learning experiences for everyone.

NoMythic is more than just a unique tie-dyed team of enthusiastic learners— it is a socially and emotionally supportive community that helps students build lifelong skills not just limited to STEM knowledge; such as teamwork, compromising, and embracing failure as an opportunity to learn. On NoMythic, students have found what FIRST can build: not just robots, but lasting community and relationships too.;

