

Chairman's Award - Team 6637

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2022 - Team 6637

Team Number

6637

Team Nickname

BetaWolves

Team Location

Carney, Michigan - USA

Describe the impact of the *FIRST* 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 *FIRST* programs as mentors/sponsors.

Within the last 3 years, BetaWolves members have had a 100% graduation rate, with 64% attending college right out of high school and 45% in STEM careers. 45% of the graduates are in FIRST programs as mentors, helping BetaWolves, other teams, and in college clubs. 50% of team alumni adapted either their major in college or their career choice right out of high school to a skill they associated with something they learned and developed in FIRST.

Describe your community along with how your team addresses its unique opportunities and circumstances.

Our school is our community. Implementing FIRST into our district has provided opportunities our students have never been exposed to. Without FIRST, students in our community would not have an outlet encouraging STEM nearly to the degree of FIRST. Being a K-12 school, we have the unique opportunity to form close relationships between mentors, youth mentors and younger FIRST team members. Because our school is the heart of our community, we have the power to impact every person in our community.

Describe the team's methods, with emphasis on the past 3 years, for spreading the FIRST message in ways that are effective, scalable, sustainable, and creative. How does your team measure results?

The BetaWolves participate in several outreach events in our local and surrounding communities. One way we measure the impact of FIRST is through community participation at these events as well as our growing number of sponsors. We have spread the message of FIRST in our community dramatically through BetaWolves STEM nights during basketball games and our annual fundraiser. We can effectively measure participation during these events.

Please provide specific examples of how your team members act as role models within the FIRST community with emphasis on the past 3 years.

FRC team members mentor FLL and FTC teams. Several team members are supervisors, making sure FLL members achieve their objectives before competition. Team members consistently volunteer to help with team queuing at FRC events, robot inspection and reffing at FTC events, and leading our remote FLL competitions. The fabrication subteam also built the FLL competition tables. The marketing subteam has created posters and social media messages to promote the team, competitions, events, and sponsors.

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

Team 6079 and our team have worked closely to assist one another, sharing space, tools, Kick-off celebrations, and resources. Our programming subteam has mentored 6079's team in coding and troubleshooting. 2019 saw the start of FLL teams in our district, with the addition of FTC and FLL Discover in the fall of 2021. High school members have taken lead mentoring roles in these programs, teaching students how to code, build, and everything else that goes into FIRST.

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?

Our team has attended and conceived multiple community outreaches that have showcased the many ways kids can be engaged in STEM. We have traveled to a neighboring library to demonstrate what robotics is and how the children can use science and technology in daily life. We have also participated in community events, encouraging kids to take the lead solving problems using technology, innovation, and science. From this we have seen an increase in member participation and student involvement.

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

Forming partnerships with local clubs and small businesses has led to new sponsorships, fundraising opportunities for both our team and them, and additional outreach events to promote FIRST. Due to restrictions and unavailable equipment, we were unable to create supplies, however, we held a returnable can drive and donated the funds to another local robotics team, the RoboMos, to build face shields for local health care workers and hospitals during the Covid crisis.

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

One thing our team excels at is inclusion and equity for every person, finding a subteam where each team member can take charge no matter their ability or background. Our Team Captain leads the way, making sure every student, and community member, feels welcome, included, and excited about FIRST. He pushes all team members, businesses, and the community to fall in love with FIRST. The other students learn from his lead and personal connections form between students, mentors, and businesses.

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

We continue to build partnerships with sponsors, alumni, and local businesses to ensure sustainability. We are involving younger students and our community by incorporating two FLL programs and outreach events. We want to start FLL Jr so students will be able to participate on a FIRST team every year through graduation and beyond. We have the capability to be a legacy and create a lasting impact through FIRST, establishing a love of the program from a young age.

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

Each year, the team visits local businesses to make personal connections face to face with business owners. The students create a sponsorship packet including information about the team and achievements to keep the sponsors up to date on the team. We have grown to fifty sponsors using this strategy. We invite each business to visit our lab, mentor the team, and attend our local competitions, so they can see the impact of their donations. We promote our sponsors through our social media outlets.

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

One area our team struggles with is retaining students who are involved in several extracurricular activities. Sports are important to our school. We work hard each year to find ways to work around schedules in order to encourage all students to become part of the team, but many are very busy. We are actively starting new FIRST teams for every age. We feel this opens up opportunities for students to fall in love with the program at a younger age, encouraging a lifelong connection with FIRST.

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

We are all inclusive. All are welcome to participate in FIRST. We find a place for every person on the team. One of our goals is to increase engagement by all students, every grade and age. We are steadily increasing STEM in the classroom and in the school, through youth mentorship and team growth. This year, we added FTC and FLL Discover to our list of FIRST programs. Our goal is to have FIRST available for every grade level within the next two years, including starting an FLL Jr. 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.

In 2020 we discovered we were accumulating a huge amount of garbage through one-use products, such as paper plates, styrofoam cups, and plastic utensils. We knew we needed to do something to combat this issue. Lowering our

carbon footprint became one of the major initiatives of our team. Our team alone could fill an entire 35-gallon garbage bag of just plastic utensils over the course of one season. We changed our habits and are taking steps to also reduce our communities carbon footprint.

Essay

Our Mission

Our school is our community. Every opportunity we bring to the students in our school leads to better growth and outcomes for our community.

Our team mission statement: Create opportunities that are otherwise unavailable to students in our small community and rural location by unifying team effort and using fierce competition. The BetaWolves use the core values of FIRST to carve out new career paths for students after high school and prepare our future engineers for the ever-changing, ever-evolving workforce of today.

Growing leaders, innovators, problem solvers, and thinkers are goals of the BetaWolves. Team 6637's impact reaches well beyond building robots. The BetaWolves have seen the increase from one alumna our rookie year to six last year. We have seen graduating students become leaders in STEM careers, and almost half continue to be involved in FIRST after graduation, either by continuing to mentor our team or finding another team to assist. We have also seen several students graduate and work towards a career revolving around the skills and interests they learned through FIRST: airplane mechanic, journalist, chemical engineer, teacher, computer design, and manufacturing.

Growth and Sustainability

After our first year with FIRST, we changed our name to the BetaWolves. Our name is true to the Core Values of FIRST and the goals of the BetaWolves: "There is no done. We build, we iterate, we improve, we tear it all down. We start again. We are perpetually in Beta" (Eric Janofski, Head Mentor of the BetaWolves). Our team is constantly in a state of change because of the need to adapt to the challenges that result from having such a small school and community. Our team comprises sixteen student members. The demographics include 69% male and 31% female. Over the last three years, we have expanded FIRST in our district to include FLL Challenge for grades four and five, FLL Discover for our youngest students, and we started an FTC team for our junior high students this year. Approximately one quarter, 27% of the student body, is involved with a FIRST program. One goal the team has is to start FLL Jr. within the next two years. This would mean students could be part of FIRST their entire school career, grades Y4-12, becoming die-hard FIRST fanatics and innovators!

2019 saw the start of FLL teams in our district, with the addition of FTC and FLL Discover in the fall of 2021. High school members have taken lead mentoring roles in these programs, teaching students how to code, build, and everything else that goes into FIRST. FRC team members built the tables for the FLL remote competition.

Along with our current growth in student team members, we have also quadrupled the number of mentors we have. Our mentors come from numerous backgrounds, including teachers, parents, sponsors, alumni, and even our elementary Foster Grandparents. Sixteen mentors are a part of our team, six of which are alumni. We have a one-to-one team member to mentor ratio.

We can measure our growth by looking at our huge increase in mentors, team members, and sponsors over the last six years. During our rookie year, we had nine members and only four mentors, none of which were FIRST alumni. In our first year, we had six sponsors; today we have 50 amazing sponsors! Most of these sponsors are small businesses and they want to see students involved in STEM programs, such as FIRST.

Outreach

The BetaWolves take part in several outreach events in our local and surrounding communities. Our school is the heart of the community. We once hosted a robotics night during one of our school's basketball games. As well as hosting robotics night, we also will work concessions for our local Parent Teacher Organization at the games. Sporting events bring in many community members and offer us a perfect access point to promote the team and FIRST. At our annual fundraiser, Breakfast with the BetaWolves, team members host STEM challenges to engage children and community members, while also enjoying a meal with their family and raising funds for the team. Our team has a can drive where we regularly gain funds. Besides supporting the team, we have also hosted a can drive specifically to donate those funds to local families in need at Christmas time. Each summer, we take part in the Library in Bloom event and Robots at the local library, introducing FIRST to children and community members outside our district. Other outreach events include creating a float and taking part in the annual local Memorial Day parade and activities. One of our popular activities is demonstrating our robots to the public. We also let anybody that wants to drive the robots, drive them.

We have partnered with our local Lions Club to assist them in their fundraising and community service projects. Each year, we help them in cleaning up the highway through the Adopt-a-Highway program. Team members volunteer to help the Lions Club with two huge fundraisers and they donate money to the team to help us fund our outreach programs.

Jasper's Sugar Bush is a small business that holds an event for a local church group every year. Each year, they invite us to use their event as a fundraiser selling maple cotton candy. We have also partnered with another local small business selling homemade candies.

Essay - page 2

Impact

We have seen FIRST and the BetaWolves impact our community. FIRST provided an outlet for students who are not excited about traditional competitive sports. The BetaWolves have worked tirelessly for six years to grow the program and provide a way for students to gain skills in science, technology, math, and engineering. Besides building knowledge and a background in STEM, FIRST has also provided a way for students to gain experience and build social and communication skills, writing, creating a business plan, building relationships, problem-solving, working as a team, and other life skills.

In addition to student growth and outreach in our community, we have seen tremendous personal growth in students involved in FIRST. We have seen students grow emotionally, socially, and academically because of their participation in FIRST. Teachers, administration, other school staff, and parents have expressed how several students have grown because of their participation in FIRST. One student, in particular, was very shy and struggled to handle situations out of their comfort zone. He was a team member of the BetaWolves for four years, but in the first two years, he emotionally could not communicate effectively without getting very upset. As he grew with the program, he found his voice and became a leader in scouting and programming. Other students have grown into confident leaders within FIRST, but also in life.

Sharing Space

Neighboring districts have been fierce rivals in all high school competitions. However, through FIRST, Team 6079, JetSet, and the BetaWolves have worked closely to assist one another, sharing space, tools, Kick-off celebrations, and resources. Our programming sub-team has mentored 6079's team in coding and troubleshooting. When we travel, we assist one another in planning for food, lodging, and transportation.

Carbon Footprint

Until two years ago, we had not realized exactly how wasteful it was for us to use one-use products. It was eye-opening, looking at the statistics of how much we were throwing out just in one season. After viewing statistics, we began using reusable dishes instead of one-time paper, plastic, and styrofoam. With this initiative, we also taught some valuable life skills, like how to wash dishes and meal prep. When we changed to reusable dishes, there were some kids who had not known how to do dishes. We incorporated teaching some life skills. Once, a team member had a dirty spoon, not knowing how to wash it, went up to the soapy water, swirled it around a few times, rinsed it, and then put it in the dish rack. We ended up teaching the student they needed to scrub it with the sponge and afterward they knew the skill of how to wash dishes.

We continue to work on ways to lessen our waste in our school, community, and during competitions. At competition, the team will use completely compostable and biodegradable utensils and dishes made of bamboo and corn. By 3D printing some of our own materials, instead of having to order, we have reduced packaging materials. Implementing a standard of only using reusable water bottles has reduced our plastic as well.

Team Layout

Our team has a straightforward structure. At the top, we have our team captain. Underneath, we have each of our individual sub-teams. We have eight sub-teams: design, CAD, fabrication, control systems, programming, marketing, scouting, and safety. Each one of these sub-teams has a leader who makes sure everyone on their team stays on track and has a job to do. Our structure changes while we are at competitions. We have a pit boss and the scouting team also changes. Competition uses kids from other sub-teams in scouting to conquer and divide, making connections to all 40 teams.

We are the BetaWolves

Implementing FIRST into our district has provided opportunities our students have never been exposed to. Without FIRST, students in our community would not have an outlet encouraging STEM nearly to the degree of FIRST. Being a K-12 school, we have the unique opportunity to work directly with students of all ages. With the addition of FLL and FTC, we are able to introduce FIRST to students at a young age and we have the ability to mentor across every program. FTC team members become junior members of the FRC team, adding to the ability to sustain our high school program. We are growing life-long learners and lovers of STEM.