

***FIRST* Impact Award - Team 1410**

2024 - Team 1410
Team Number
1410
Team Nickname
The Kraken
Team Location
Denver, CO - 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.
100% of our team has gone on to higher education or the military, primarily in STEM fields. Many team members have stated that they had previously wanted to pursue non-technical degrees and now find themselves majoring in STEM-oriented education. Kraken has five alumni currently mentoring the team due to their positive experience in FIRST. Our members have declared that being a part of the Kraken combined with the FIRST ethos has played a key role in reaching their goals after high school.
Describe your community along with how your team addresses its unique opportunities and circumstances.
In Denver alone, more than 2,100 students attend after-school programs because they have nowhere to go. A majority of these students qualify for free lunch, showing clear signs of poverty in our school communities. To address these issues using our STEM niche, we introduced a program called Kraklettes. We design a variety of robotics kits that include instructions, materials, and FIRST educational pamphlets. We partner with the Denver after-school program, Kaleidoscope, to donate these kits.
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?
Kraken spreads the FIRST message by showcasing at local marketplaces, participating in the Women in Communications and Technology event, and outreach at libraries and schools in the community. These initiatives have reached over 400 people a year to peak interest and awareness of STEM and FIRST in our community. Our Under the Sea project reached out to 100+ schools, setting up tours at regional competitions, to educate students and teachers about FIRST and how they can get involved.
Please provide specific examples of how your team members act as role models within the FIRST community with emphasis on the past 3 years.
Kraken focuses on being role models in the FIRST family by maintaining a presence at all levels, including showcasing FTC and FRC robots at four FLL Challenge events. Alongside this, we excel in setup, concessions, and field work, requiring 10 volunteer hours from students who assist at FLL, FTC,

and FRC events. We also aid the Colorado FIRST community, supporting teams in need and donating equipment, impacting hundreds of students and families yearly, spreading FIRST's ethos and excitement.

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

FRC 1410 has been directly involved in four FIRST teams. These teams include FTC Team 17153, Squid Squad, who just completed their fifth season and qualified for the state championships. Two other teams that we have assisted are FTC Team 18211, Biggie Cheese, and FTC Team 8096, Cache Money. We have also helped aid other teams through mentoring and donating equipment, like donating our lathe to Team 8334, a newer FRC team in need of more equipment.

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?

Each summer we hold a 6-week STEM education series, Let's Get Kraken, in a low-income public library. Through this series, we present FIRST programs to around 20 people a day, resulting in students attending team meetings. Through Kraklettes, we work with upwards of 15 elementary schoolers per school per year throughout our school district. Our outreach programs have resulted in placing students from each school in FTC teams and inspired students to join or start FIRST teams.

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

The Kraken has secured a partnership with Comcast, presenting annually at WICT Tech It Out conference, garnering \$1800 for empowering young women in STEM. Hot Shot Fabricators has become integrally involved with the team providing mentorship, advertising, in-kind donations, and internships. Six sponsors provide mentors to the team, amplifying our success. We have accomplished a stronger mentor base, a stronger public awareness of STEM interest, and a tighter relationship with other FIRST teams.

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

Within our team, we have built a highly inclusive environment, resulting in 50% of leadership being women and $\approx 50\%$ being LGBTQ+. We completely revamped the FIRST youth protection program video to increase relevance and inclusivity. Alongside Team 4293, we collaborated to create the Young Engineers Association, a 501c3 that promotes STEM among youth. Projects at Montbello Library & Kraklettes advocate STEM in underserved communities. We also offer scholarships to our low-income students.

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

We maintain historical documentation of mechanisms, strategies, scouting statistics, branding/marketing, etc, which is available to all members and updated regularly. We also employ a system where upperclassmen advise and mentor underclassmen in their subteam. To ensure the longevity of our team, we catalog all steps in our processes so by the end of the year our newer members feel confident independently running the team.

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

We approach 30-40 businesses annually in Denver to discuss relationships and raise awareness of FIRST robotics in the community. Sponsors are invited to join us at outreach events, competitions, and in our shop to increase engagement. We present them with their own team t-shirts, and their companies are listed on our website, merchandise, and robot. We update our sponsors monthly, via emails, about team status and, of course, thank them effusively for their dedication.

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

Our team can improve on financial accessibility. While we offer financial aid to all our students, we hope to find new ways to further assist our team and the FIRST community. We have started developing a plan for home teams to host other teams at competitions to lower costs for any team in need. Creating a system in which teams can find free accommodations near the competition site, without the cost of hotels and home rentals, increases accessibility of travel and participation to more teams.

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

Our goal to fulfill the FIRST mission includes revamping the YPP video. We have impacted teams, such as 1339 Angelbotics, by promoting a more inclusive environment. We are getting this video out to the greater FIRST community. We foster access to STEM and FIRST through Kraklettes, Let's Get Kraken, and Under the Sea. All of our outreach programs stimulate confidence to enter STEM. We provide skills-training as well as life skills to build desire to go out into the world and help other people.

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.

Kraken is committed to making STEM education available to all students. To do this, The Kraken and Komodo, Team 4293, collaborate to create the Young Engineers Association, a 501c3 that promotes STEM among youth. Because of this we are able to encourage participation regardless of ability to pay fees, and we offer scholarships to low-income families in the urban Denver area. As a non-profit, we promote STEM education and offer resources to all people regardless of race, gender, or sexuality.

Judge Feedback

Who/When

Feedback

Mar 23,
2024
02:46:00
PM EST

What do you say stands out to you most out of all the presentations you hear?
An area the team has an opportunity to improve.
Something that really impressed the judges.

Essay

Team Kraken has fostered an environment that allows students to discover their passion for STEM. All our students opted to follow STEM after FIRST. Our team's rigorous program prepares students to move

on to prestigious institutions such as Yale, Dartmouth, and Duke. These students have all stated that it was because of the skills they learned on our robotics team that made them successful in their admissions and preparedness for college.

This year our team rolled out our new program, Under The Sea. Given our limited budget, we wanted to find cost-free ways to spread the FIRST message and expand the FIRST community. With this program we have reached over 100 schools in Colorado and Utah. We offer students a chance to attend FRC regional tournaments to explore FIRST through watching competitions, touring pits, and learning about STEM. For schools/teams closer to our school, we offer assistance in developing their own STEM programs. We host students in our shop to learn about what being a part of a FIRST team looks like, assist schools with starting their own teams, and aid pre-existing teams. We support these students through mentoring, donating equipment, and working with advisors to grow their STEM/FIRST programs. By focusing on the greater Denver community specifically, we have been able to reach underfunded schools. As a team who receives less in monetary funding than other schools and community teams, we feel especially inclined to support students with greater financial need. Our scrappiness allows us to find new and innovative ways to be sustainable allowing us to help sustain others. The Kraken's hope is to build on the connections we have made to continue to support students.

The iconic 'Let's get Kraken' program has now been running for three years. Our whole team volunteers during the summer at a low-income library in the Montbello community. Creating this program has involved designing a curriculum for all areas of STEM education. Each week we cover a different topic spanning building, programming, and electrical. Each topic involves educational sessions and hands-on activities that engage the young minds. As the years have progressed, the Montbello community has become more aware of our sessions and attendance has grown. We began reaching over 20 people per day, totalling 600 people per summer. By increasing the amount of kids who have access to STEM education, we have been able to encourage more students to develop a love for innovation and creation. Additionally, parents and kids are taught about FIRST and ways to get involved with robotics. We distribute information cards which families use to learn more.

The Kraken makes a focused effort to recruit and retain sponsors. To keep a strong relationship with current sponsors we reach out monthly, offering updates and opportunities to attend FIRST events or to come explore our workshop. Additionally, we reach out to 20+ businesses annually surrounding George Washington High School to invite them into our robotics community and educate them about what our team does. Many of these businesses have offered their support in monetary and in-kind donations. One business that we have recently developed an especially strong relationship with is Hot Shot Fabrication. We spend hours working with Hot Shot, going to their headquarters, communicating multiple times a week, engaging them in our shop, and collaborating on designs. We have done the same with Ball Aerospace Engineering, and are fortunate that they supply us our head mentor. Our students see their futures in STEM, and experience growth and innovation with this sense of community involvement from Hot Shot Fabrication, Ball Aerospace, and many others. Many of our sponsors offer future opportunities such as internships and apprenticeships.

Every year, our dedicated members and families generously volunteer their time and energy to provide concessions and physical assistance for activities at Colorado's FTC and FLL regional and state competitions. Alongside this, The Kraken and Squid Squad demonstrate our robots and talk about the benefits of participating in FIRST. Our students often step up to assist with events through FIRST initiatives, or are actively involved in the competitions, particularly in the case of our FTC team. The

collaboration of students, mentors, and supportive parents on The Kraken ensure the seamless operation of our activities. Coming to competitions, providing concessions, and promoting the team, not only allows our own members to get more involved in FIRST, but also continues to spark interest in younger members of the program, encouraging them to continue to participate in robotics and emphasizing the good they can do.

One of our projects that has made our team especially unique is the work we have done to encourage diversity and inclusivity in FIRST as a whole. To do this we took an active role in changing the media that FIRST promotes. A year ago, when our team was shown the Youth Protection Program video, we found it displayed instances of “male saviorism” where females were overlooked and protected by the males when in reality they are fully capable of doing so themselves. It also fails to show racially diverse students and lacks accountability and appropriate alternatives when it comes to inappropriateness of mentors. To solve this issue, over the course of this past year, our entire team participated in the revamping of this video. We took a multifaceted approach that addressed the behavior of mentors and students alike. Students of all backgrounds are represented and the script that we rewrote includes the necessary processes for dealing with concerning and abusive behavior as well as more nuanced processes for coping with issues in a modern, inclusive way. We then took our redesigned video and began reaching out to FIRST to spread awareness about this issue. We have coordinated with FIRST headquarters, Debbie English the FRC partner of Colorado FIRST, John Larock from Team 365 in Delaware, and other local FRC Teams. While we understand that this video may not be used for official FIRST purposes, we feel that it is necessary to take immediate, intentional action to show how much of a difference one video can make. The process of redoing the YPP video has already created a stronger sense of acceptance among our team and other teams who have seen it. We are excited for this inclusivity to develop in other teams as the new YPP message is shared. Our hope is to spread this message to the greater FIRST community to show welcomeness to all marginalized students.

Our consistent engagement with sponsors has created the opportunity for us to present annually at the WICT Tech it Out conference. Kraken is the only team that has been consistently chosen by Comcast, above other FIRST teams, to attend this conference for the past four years. Leaders in the telecommunications’ industry from across the nation participate in this event and listen to our predominantly female presenters as they discuss what FIRST is and how, as leaders, they can engage in this community. Many of these leaders have made donations and have continued to follow the progress of our team. Gaining experience by presenting at this prestigious event is only part of our overarching goal to eliminate prejudice in STEM communities. Because of us, these industry pioneers are able to apply FIRST values and missions to their workforce. As a result, The Kraken’s impact extends to businesses across the globe.

One of the more prominent programs we initiated this year is the Kraklettes. This project involves designing kits, purchasing materials, constructing the kit, creating instructions, finding after-school programs interested in collaboration, and then going to the schools to demonstrate the kits. Each kit also includes an educational pamphlet about FIRST and ways to connect with the Kraken about starting a team or getting assistance with a current team. Our intent with this project is to reach as many schools as we can in the Denver area. We have completed successful beta-testing and are currently in the process of coordinating with an additional 11 schools. Kraken believes that bringing this STEM experience to this many schools will create an immeasurable impact on our future engineers.

In the past year, our team has been reaching out to start getting involved with some new youth

organizations. We are establishing workshops with both Children's Hospital of Colorado and the Girl Scouts. In the summer of 2023, several team members drove to Cheley Camps to run an interactive workshop and demonstration, partnering with the CHCO Burn Camp. The workshop involved teaching the kids about electricity, coding, and circuits through Arduinos while demonstrating our robot. Coming this April, The Kraken will run a program called Get Krack-a-lackin' with the local Girl Scouts Dream Lab to get girls from Brownies to Cadettes interested and involved in STEM. This program will be hands-on, teaching the scouts how to build and program small robots in order to complete an obstacle course or challenge. Both of these programs aim to increase The Kraken's and FIRST's presence in our local community while getting involved in initiatives and organizations we are passionate about.

We have partnered with JSI, a local healthcare non-profit, to begin planning a workshop surrounding LGBTQ+ inclusive language on teams. We feel it is important to foster an environment where our students feel comfortable and safe. In the spirit of FIRST's value of inclusion, we are opening up these workshops to any interested Colorado teams. The workshops will also be alongside a similarly-themed informative pamphlet that will be available in the resources section of our website alongside our revamped YPP video and technical resources for coding and marketing. To view our YPP video go to: <https://youtu.be/Qr8rvz1trDk?feature=shared> ;

