

FIRST Impact Award - Team 6606

2023 - Team 6606
Team Number
6606
Team Nickname
Prepa Tecmilenio PINK HAWKS 6606
Team Location
Metepec, MEX - Mexico
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.
Over the last three years, 100% of our FIRST graduates have chosen to study a career in college, 100% of last year's graduates went into STEM and 50% received scholarships from prestigious colleges in Mexico. 50% of Pink Hawks alumni stayed in FIRST programs as team mentors. One of our current mentors July Angeles was selected to join a NASA-led project, for which she was awarded "Presea Metepec 2022" an accolade for promoting STEM.
Describe your community along with how your team addresses its unique opportunities and circumstances.
In Mexico, only 8% of women choose to study STEM-related careers, in contrast to 27% of men. Therefore, we aim to create a network of workshops for women, alongside our programming mentor and Omegaup. The goal is to teach them the basics of programming and arm them with the tools to participate in future Computer Science Olympiads. Also, they imparted robotics workshops twice a month for the girls of the preceptory of Toluca to encourage them to keep studying and to learn about STEM.
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?
Our methods can be summarized as workshops, social and digital media, and leveraging our sponsorships to reach the most vulnerable members in our community. Through workshops we spread the FIRST message by example, bringing STEM to those most likely to be positively impacted by it. Our Podcast has grown in reach (5,000 views between YouTube and Facebook). The relationships and sponsorships we have cultivated have allowed us to reach vulnerable groups in society.
Please provide specific examples of how your team members act as role models within the FIRST community with emphasis on the past 3 years.
Every year we host the FRC kickoff in Toluca, we also host every year the FTC regional competition and this year we volunteered during the FTC national championship. During this season we created an initiative called "Robot in 3 days" where along the teams: 9065, 8734, 6605, 4723, 4371, 9053, and

3794. We worked together to create a basic robot that any team around the world can take inspiration from. Additionally, we are official ambassadors for #FIRSTLikeagirl in México.

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

Despite not having enough resources, we try to share them along with our knowledge. This year we worked on assisting teams 9065, 8734, 6608, and 6170 in obtaining a sponsorship with MAGNA after they reached out to us. Additionally, we have been mentoring rookie team 9065. The mentoring consisted in constant feedback and help with the business area. Finally, we have been working with CAM 43, a school for disabled children, and giving them STEM courses in hopes to start a FLL team next year.

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?

Through our podcast, we feature interviews with women with notable careers in engineering. Our Tik Tok account explains basic engineering concepts. Between both, we have reached more than 7,000 views. Last year, we organized 6 workshops with the organization "Sanando heridas" to create opportunities for vulnerable young women and girls of the preceptory of Toluca. Two girls that took the workshops are joining us in this year's regional.

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

Since 2018 we have been working with Epic Queen, an organization that shares our vision. Together we imparted a LEGO Mindstorm workshop and talked at Google. The event was transmitted through Facebook live, reaching more than 500,000 views. This January we collaborated with BMW and Extiende tu mano to donate brand new toys for over 150 low-income children affected by different types of cancer. We joined Zurich and the Red Cross in creating the Flood Resistance program: early warning system.

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

With our initiative #SmartIsTheNewPretty, we aim to make FRC teams more gender inclusive. We have interviewed 20+ different teams over the last year in a series of interviews directed at young women from FRC teams. We used interview data to create a network of support that helps teams empower their female members to become leaders in STEM, fostering a safe place for young women in the community. Apart from this, we upload Mexican sign language tutorials to our YouTube channel and give courses.

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

In our team we appreciate structure, which is why we implemented a designated area and leader for social projects, she ensures all our projects and initiatives run smoothly and continue to do so in the future. We also have a calendar in which we plan and schedule all our future, as well as ongoing projects. We also take weekly business classes, that all the team is required to take part in, our business mentor teaches us all about scheduling and organization, along with public speaking classes.

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

past 3 years

We have a special area in our team that oversees treating our sponsors like family by sharing our achievements and daily activities. We invite them to our school at every opportunity we must promote them, and we try to include them in all our projects, last year we even organized a joint donation with BMW. To obtain new sponsors we try everything from calling to emailing. In addition, we are in communication with our school's sponsorship area to get more companies involved in FIRST.

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

Last season we noticed that we needed to improve the engineering area, so in our off season we took programming classes focused on Java and C++, as well as a pneumatics crash course. We also reached out to several FRC alumni that were able to become our design and mechanics mentors, thus increasing the number of mentors in our team. Additionally, this year some of our team members participated in The OFMI (the women's Mexican Computer Science Olympiad).

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

Spreading the FIRST message has always been our priority, every year we organize an open house in our workshop where we invite every single girl in our school and teach how to use every single tool. Last year we started our project #Smartisthenewpretty where we aim to achieve 50-50 inclusion in all FRC teams. In the first stage of this project, we have focused on Tecmilenio's teams. Through our interviews and our support system we have made 40-60 progress on average for all Tecmilenio's teams.

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.

This year we were awarded with the "Transformación 2030" by Universidad Tecmilenio, for the workshops we imparted to the girls of the preceptory of Toluca. As well as the "Presea Metepec 2019" awarded by the Metepec City Council for inspiring people in science and technology. We were also finalists for the "Garza Sada" award given by Tecnológico de Monterrey.

Essay

Pink Hawks fans, start your engines!

Last season, just like much of the world, we reignited our activities and charged full STEAM ahead (pun intended). Our projects took us to juvenile detention centers, special-needs education centers, and even to a dog rescue. Throw in a couple of interviews with high-profile women in STEAM, and a complete restructuring of our team to gain a competitive edge, and you start to get the picture. Everything is set for

this season and, in true Pink Hawk style, we're here to give it all!

Sharing STEAM is caring for STEAM

As Pink Hawks, we want to make science and technology more accessible for everyone, but especially for underrepresented groups in the field, such as women and people with disabilities. Our projects keep this core value in mind, which is why we work so hard on our workshops, social and digital media, and teaching events.

Everyone deserves a second chance, right? But “second chances” often run out of steam, so we thought we would add some STEAM. Our main project this season has taken us to a juvenile detention center for young women and girls from our home state capital (Toluca, State of Mexico). Some of the young women and girls in this center have been perpetrators of violence, but many are there just as a preventive measure, coming from violent homes or other circumstances that place them at a risk of suffering violence. In a 6-session workshop, we taught them basic engineering concepts, we built a tested a small robot, and encouraged them to keep studying and learning about STEAM.

This project took us 6-months' planning alongside Sanando Heridas Foundation (which means 'Healing Wounds' in Spanish), an association that seeks to help the most vulnerable in Mexico. The workshop was so successful that we received the Transformación 2030 award from our own high school, Universidad Tecmilenio.

This is not the first time us Pink Hawks have gained recognition. In 2019, we received the Presea Metepec award for promoting science and technology, and in 2020 we were finalists in the prestigious accolade Premio Eugenio Garza Sada for student social innovation. And while the glitter of awards goes really well with our awesome team hoodies, the real reward is that some of the girls from the juvenile detention center that we taught has joined us for this Regional Competition, Yay!

Later this year, we are bringing the workshop to more detention centers in nearby municipalities: Metepec, Almoloya, Tenango, and Tenancingo. In Mexico, special needs in education often translate as barriers in education. This should not be! CAMs (Centros de Atención Múltiple or “Diversified Attention Centers”) are specialized centers for students with disabilities, where they go to complete their basic education. While CAMs are great, we thought kids there would share our passion for STEAM. So, we organized a LEGO workshop in a CAM from our hometown (CAM 43 in Metepec) to teach them basic engineering concepts through play. The idea is to encourage them to start their very own FLL team. This February, we organized a workshop for the elderly, to teach them about technology and online security. We also host “open workshop” sessions where we show other young women from our high school just how easy (and how cool) it is to use tools and work in our robotics lab. The idea is to get them interested in STEAM.

Nowadays, everyone has a podcast, but who has a PinkCast?

In our mission to spread the FIRST message and bring STEAM where it is most needed, we have continued to release episodes from our podcast, Pink Talks. We feature interviews with distinguished women in STEAM, including Simona de Silvestros, Formula E driver for Tag Heuer Porsche and Nathalie Vilchis, also known as NASA Girl. Through Pink Talks, we seek to inspire young women to pursue careers in STEAM.

While you can tune in to Pink Talks everywhere you get your podcasts, we have garnered over 5,000 views just between Facebook and YouTube. For this season, we seek to grow our audience, because we're just getting started!

Pink Hawks are no strangers to the limelight, we often get invited to panels, interviews, and talk shows. For example, in 2018, we got our very own SoyMéxico feature, a series by Televisa, one of the largest TV networks in Mexico, which celebrates and promotes Mexican achievement. This year we made an appearance in Mirada Global, a program by our local TV station, Radio y Televisión Mexiquense. One of our team members is an ambassador for Universidad Tecmilenio and she often engages in public speaking, taking every opportunity to spread the FIRST message. We estimate she has reached over 7,000 people.

As the first and only all-female FIRST team, we started the #SmartIsTheNewPretty initiative, which aims to achieve 50-50 gender inclusion in FRC teams. For the first stage of the project, we have interviewed over 20 teams to gather data about women's experience within their team, and within FIRST Competitions. For the next stage, we are creating a network of resources, such as workshops for coaches, talks for male participants and school leaders to promote gender inclusion and achieve our 50-50 goal in Universidad Tecmilenio within the next two years, and in all Mexican teams within five years. Gracious professionalism in action Smart, competitive, and gracious... what better words to describe Pink Hawks?

In the spirit of gracious professionalism and coopertition — and despite the resource limitations that we ourselves face — we always strive to help other teams with our time, resources, and know-how. For example, this year, Magna International Inc. reached out to us for sponsorship, we grasped the opportunity, but also helped teams 9065, 8734, 6608, and 6170 secure their sponsorship. We have been mentoring the rookie team, Space Hawks 9065, helping them get their business area started. As mentioned previously, we are also planning to mentor the CAM 43 team once it gets off the ground, and we are getting ready to kick start a new all-female FTC team in our school.

We created an initiative not only to help teams come up with ideas for their own robots, but also to foster coopertition among FCR teams. Alongside Pink Hawks, Tecmilenio's teams 9065, 8734, 6605, 4723, 4371, 9053, and 3794 worked together to create a basic robot in just three days, which is meant to be used as inspiration for other teams. Our values have taken us beyond the fields of STEAM. This January, we partnered with BMW Cever Metepec and Extiende Tu Mano (a charitable association in Mexico) to donate brand new toys to over 150 children with cancer. In July 2022, we collected over 100,000 plastic lids to support Operación Hormiga, an organization that helps disadvantaged communities. We also donated food and dog toys for Corazón Canino, a canine rescue organization, this August 2022.

What else is new at Pink Hawks headquarters? The team has undergone a complete administrative overhaul. We have restructured our business, engineering, marketing, social work, and programming areas to become more efficient and increase our competitiveness.

A few of our members participated in the Mexican Computer Science Olympiad and we took off-season Java and C++ classes. We have also increased our team mentors for our design and mechanics areas. Talking about impact and internal culture, we keep up reaching above and beyond, July Angeles, our deer mentor and team member since our foundation in 2017 has spread Pink Hawks ideas beyond any

border. In 2022 she travelled to Germany for a semester of education in engineering, and was selected for a NASA program in November. She was also awarded Presea Metepec 2022 award for promoting science and technology in our community. Sadly, this year she is not with us during the competition because she is taking part in another space program now in Poland! As Pink Hawks, we have our eyes set on our goals: promoting STEAM among women and other vulnerable groups, spreading the FIRST message, and increasing our competitiveness, all while remaining gracious and true to ourselves. We're revving up our engines and our minds are set on the prize. Who can stop us? ;

