

Chairman's Award - Team 1772

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2018 - Team 1772

Team Number

1772

Team Name, Corporate/University Sponsors

General Motors Brazil/Novelis inc./General Motors/Prefeitura de Gravataí/FITESA/CARBE & AIDTEC

Briefly describe the impact of the *FIRST* program on team participants with special emphasis on the 2017/2018 year and the preceding two to five years

Most of our students join college right after school (what's uncommon in Brazil) and most of them receive scholarships. Two of our students were nominee as Dean's List Finalists. Besides, our kids have experiences with internships at our sponsors' companies. They also work as mentors for local teams & have great chances to know other countries while spreading *FIRST* values, as happened in China. We also have ex-students graduated in tech-companies.

Describe the impact of the *FIRST* program on your community with special emphasis on the 2017/2018 year and the preceding two to five years

We developed with the Brazilian Ministry of Education a project to introduce robotics in around 2.000 public schools. We host a huge festival called "Robotics Day", to show for our community what robotics is all about. We also created the "Girls' Camp Day" to motivate girls to learn STEM & to pursue careers on these fields. Furthermore, we support an educational robotics project at the Federal Institute of our state. We also do several STEM presentations at schools.

Team's innovative or creative method to spread the *FIRST* message

An online magazine designed & written by our students (bilingual). Girls' Camp Day, a meeting held by our female members to empower women on STEM. A partnership with the scouts' of the city to teach kids about STEM. Also a partnership to help teams from the city's gymkhana to develop robots to solve challenges. We count with national & international interviews on newspapers and TV. A bilingual Facebook. We also held workshops at the municipal mall. An Instagram account & a Safety website.

Describe examples of how your team members act as role models and inspire other *FIRST* team members to emulate

We have been supporting the CRC in China, yearly, since 2015. We've been promoting free courses of STEAM on our community and also gave FLL courses to teachers and kids from public schools. We had also mentored 5 FLL teams in our city. Our students and mentors are volunteers and judges on the FLL events in Brazil. The team also holds especial activities for girls to empower on STEAM.

Describe the team's initiatives to help start or form other FRC teams

We do our best to assist kids who are aiming to start new teams in BR & abroad. We've travelled to China to assist 8 rookie teams. Our students developed a bilingual handbook to be published on the team's website to support new FRC teams for free. We've donated tools for new teams & we've mentoring them. We have been working together with the Australian team 4613 through the help of 2 mentors who live abroad. Teams 5800, 6902 & 6957 has also been supported by our team since their foundation.

Describe the team's initiatives to help start or form other FIRST teams (including Jr.FLL, FLL, & FTC)

It's very expensive to start robotics in BR even FLL & FTC, but we always do our best to motivate school students, through lectures all year long, to join different STEM projects at their schools (since 2013, we reached about 100 schools). We had also visited some Colleges to promote FIRST, so they can sponsor initiatives in BR. Our team members also work as volunteers to train new FLL mentors.

Describe the team's initiatives on assisting other FIRST teams (including Jr.FLL, FLL, FTC, & FRC) with progressing through the FIRST program

Before the FLL season starts, our team holds free lectures to teams all around the city. We prepare those kids through workshops of Lego and Sphero, so they can increase their knowledges in STEM. We also work as volunteers at the FLL events afterwards. During the off-season, we also held mini-courses or workshops for any kid of groups interested in learning about robotics.

Describe how your team works with other FIRST teams to serve as mentors to younger or less experienced FIRST teams (includes Jr.FLL, FLL, FTC, & FRC teams)

We helped team 6902 & 5800 by donating tools & by having online conferences. We assisted the time 5800 during their first regional in Vegas, where they got the Rookie All-Star. We also helped them to find ways to participate of the CRC event with us. This season, we're helping team 6957 with their robot & also helping team 6902 at their very FIRST regional. We gave workshops for 6 chinese teams & helped them during the CRC competition. We've promoted FLL courses.

Describe your Corporate/University Sponsors

AIDTEC, General Motors Institute, General Motors, Novelis, CUYRA, DOW, CARBE.

Describe the strength of your partnership with your sponsors with special emphasis on the 2017/2018 year and the preceding two to five years

We've been invited to participate of events on the matrix of GM & Novelis in BR. Some GM's employers helped us on the robot's building season. Together with the IGM, in 2016, we started an FLL team. We gave our old robots to exhibition at these companies. We held workshops inside 5 GM's factories in Brazil & Argentina. Our students get chances to be trainers with our sponsors. We developed projects to improve our city with the help of our sponsors. One of our students won a Award from GM.

Describe how your team would explain what FIRST is to someone who has never heard of it

FIRST goes far beyond what we expected of a robotics competition. It shows people the importance of teamwork and the importance of the individual dedication for who participates of this amazing project. In addition, with FIRST we learn to put aside the differences that separate people from each other and then, we create bonds to unite us through the singularities that make each of us unique. That makes of FIRST more than a simple competition of machines, but a place to share human values.

Briefly describe other matters of interest to the FIRST judges, if any

In Brazil, the study of STEM has a very small space in people's lives; therefore, our mission to spread FIRST becomes very difficult, but we never give up! One of our greatest achievements is the growing number of girls who join us. Nowadays, 50% of the team's composed by women & our main goal is to give these girls the same opportunities boys have. Another important point is that 100% of our students finish school, what is amazing, since just 70% of brazilians graduate. Most of them go college.

Team Captain/Student Representative that has double-checked this submission.

Gabriela Tomaz do Amaral Ribeiro

Essay

I. The History of Team 1772 - The Brazilian Trail Blazers

Our team was founded in 2005 inside a disabled bathroom of a public school in southern Brazil, by a 16 year old high school student who had no background knowledge of STEM. With the help of 5 other students, that boy looked for financial aid in his community to start the project. At first, they faced a lot of difficulties as no one believed in their potential, but they didn't give up!

II. The team's expansion

To keep our team's growth, our founder created AIDTEC (International Association for Technological Development), a nongovernmental association, in order to accomplish all the legal requirements for the team, allowing us full autonomy to work. After that, the team's workshop was moved from the school where it was started and established at its founder's house. This allowed more people from different schools to join us.

Nowadays: Although considered an important team at the FIRST community, it was very difficult for team 1772 to become visible in Brazil, since gaining access to technology & science is difficult in the country - especially to high schoolers. However, with much effort and with the help of our sponsors, we worked to improve our community. Because of this, in 2016, our team won a workshop space inside the GM complex in the city of Gravataí in order to grow the team's capabilities and resources.

III. The team's organization system:

We use FIRST as a powerful tool for showing youths the importance of dedication, education and teamwork. All the members that make up our team work hard to promote education within our country, freely teaching STEM and citizenship to kids. With that, we're trying to rectify inequalities present in our society through gracious professionalism and STEM.

The areas: Our team is divided in 6 subteams: mechanics, electronics, programming, design, awards and business. Weekly our mentors held workshops and short courses about these issues. After that, our students are ready to apply this knowledge to practical activities.

IV. At our community

Today, team 1772 is one of the largest and most influential FRC teams in Brazil, being recognized for all the work we have done to improve communities all over the country through our projects. Ex: We developed a partnership with the Brazilian Ministry of Education to promote robotics courses for thousands of kids around the country, in thousands of public schools!

Robotics Day (Camp 1) - This project was developed by our team to spread STEM & the FIRST values within our community. Throughout the day, we hold workshops, play games and run educational activities with the people from our city to show them what robotics is all about.

Girls' Camp Day (Camp 2) - Our team ran and hosted a camp day specifically aimed to motivate the girls of the team to empower themselves in the areas of STEM. Throughout the day, several activities took place. Female graduates from engineering courses held seminars to talk to the girls about this area and the job opportunities in the fields. Afterwards, a woman with a master's degree in astrophysics held a small talk to introduce the area of study to the girls. The female mentors of the team then performed practical activities aiming to show the girls that women and men can and must work together to build a better society. We also received a motivational video made by the girls from FRC Team 987.

Visiting schools: During the year, we visited schools to run workshops and give presentations of our robots to kids. In the last 3 years, we visited more than 100 schools and reached thousands of youths. We were also invited to performance presentations at two colleges: Cesuca & PUCRS. Furthermore, we held a worksho? for a class of adults who are getting back to school to complete their basics studies (at the Colégio de Aplicação da UFRGS).

Educational robotics at the Federal Institute: our students volunteered to a project, held at one of the most important technical school of the state, to promote the teaching of physics through robotics to kids of high school levels.

V. FIRST community

Spreading FIRST in Brazil is a big challenge. However, team 1772 is always looking for ways to improve the different categories of the competition in the country. For that, we have been meeting with some of our great sponsors, to talk about this issue.

FRC: Those teams are very expensive to be created here, but we give as much as possible to do that. In partnership with the Australian team 4613, we started and mentored teams 5800 and 6902. We also donate to them some tools and assisted them with whatever they needed to build their robots. Then, in 2016, we travelled with team 5800 to participate in the Las Vegas Regional, where they received the Rookie All Star Finalist Award. This season, we're helping team 6957 with the programming of their robot & also helping team 6902 at their very FIRST regional at Montreal. It's also important to remember that, after 8 years, the number of FRC teams in Brazil has started growing again.

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FLL: In 2016, with the support of GM, we founded a new FLL team. We also assisted others teams. Furthermore, our students and mentors were volunteers and judges at the FLL regional in Brazil for the third time.

CRC: For the third time, we were invited to assist in workshops at the China Robotics Challenge. Our students and mentors assisted 8 new FRC teams in the last 3 years.

Our friends: Team 1772 works together with other teams inside and outside Brazil. We have been meeting with team 1156 and 383 to host and run robotics activities in our country to promote FIRST in Brazil. Furthermore, we have been working with teams from other states such as teams 5800, 1382, 6902 and 1860. We also keep contact with international teams as 6957 and 987 from the USA, and 4613 from Australia.

VI. The impact of FIRST on our team members

Our team members are an excellent example to the kids in their communities. In the last 5 years, 95% of our them matriculated to college. 75% were granted scholarships. It's a great number! The University of São Paulo shows that only 30% of students from public schools in our country start college after finishing school and the Brazilian Institute of Geography and Statistics says that just 14% of Brazilians who complete high school begin college. All our students also achieved great grades in the most important test in Brazil - ENEM - (comparable to the SAT in the USA); they were all above the national average score.

Even our high school students receive scholarships. In the last 4 years, 2 of our students won an award for their participation at FIRST from the Fundação Estudar in São Paulo. 3 of our students were also accepted into a very competitive and large technical school in our state - Instituto Federal Sul-rio-grandense, a government high school. The two girls who applied received the 1st and 6th places in the selection process.

Moreover, because of the great partnership we've with our sponsors, these youths have even more opportunities to secure a good job after their education. They can also easily become interns at these companies.

Our girls: We have heavily invested to incentivise girls to participate in the team. We've never before had so many girls on the team. Nowadays, our team has 50% of our members girls, and our main goal is to keep this number and to give increasingly more opportunities for them on the STEM fields. For that, we've held activates specially designed for girls. We invite women who work with STEM or who study it to give free workshops to the girls. We also have 5 female mentors on our team from a group of 11 people, and our doors are always open to receive new people. Another important thing is that we also help young girls, who are not able yet to participate of FRC, to meet the world of STEM by always encouraging our female students to talk during free lectures within schools for children about their experiences. We also work with FLL teams at the same way.

Cultural experience: We provide our students with a massive amount of cultural experience, as those kids have lots of chances to be sponsored by the team to know visit new countries and live with different people. Just in 2017, our students had chances to travel to and compete in 2 countries, and the Brazilian State of Santa Catarina.

VII. Sponsors

We always work together with our sponsors! We visit their companies and think about ways to improve these places by developing innovative projects. Just in the last 3 years, we visited five GM's factories & the Novelis' factorie twice. In 2015, our students met the GM's vice-president and participated in a ceremony to commemorate the factory's anniversary. Because of these accomplishments, team 1772 won the Entrepreneurship Award (2014) and the Gracious Professionalism Award (2016). One of our students also won an award from the GM representatives due to his performance on the team.

VIII. Our mentors

Most of our mentors were students on the team while in high-school. Now, they work as volunteers to keep the project on going by dedicating their free time to teach STEM to the team's next generation.

IX. Our mission

Our mission is to improve our country through science and technology by spreading FIRST values (Gracious Professionalism and Coopertition). Team 1772 strives for a country and a world where everyone has the same opportunities to learn STEM, and where everyone's ideas are respected. We want to change lives!

Last season:

+600 hours of activities. +500 people of our community were reached. +300 students involved with robotics. Almost 20 students mentored by the team for free (50% of girls). 2 countries visited. 2 regionals. 1 award. +20 public exhibitions. 1 Chinese team mentored. FLL teams mentored. +45h of STEM courses for kids and teachers.