

FIRST Impact Award - Team 3990

2025 - Team 3990

Team Number

3990

Team Nickname

Tech for Kids

Team Location

Montreal, QC - Canada

Describe the impact of the *FIRST* program on team participants within the last 3 years. Think about percentages of those graduating high school, attending college, in STEM careers, leadership skills, and serving as mentors/sponsors in *FIRST* programs.

Our team has empowered over 1500 students to explore STEM through FIRST, with our alumni network growing from 4 to 26 students annually. Of these, 100% pursue higher education (95% in STEM programs), and they excel at companies like ABB, Bombardier, Google, and Amazon. We've fostered equity, increasing female alumni by 32% in two years. 63% of our mentors are skilled graduates who choose to give back to the FIRST community. Our community initiatives and outreach projects are 100% student-led.

Describe your community along with its unique opportunities and circumstances. Think about your geographic region, diversity of town/school, language barriers, socioeconomic barriers, and cultural expectations.

In contrast to global trends, Quebec's francophone FIRST community has faced a 40% drop in teams over the past five years due to limited funding, scarce human resources, language barriers, and inadequate facilities. Public and private schools struggle with fewer competitions held in cramped school gyms and at inconvenient moments such as spring breaks. Yet, these barriers unite us, driving us to embark on a mission to expand STEM in our province in order to ensure our survival.

Describe the team's methods, with emphasis on the past 3 years, for spreading the *FIRST* Mission in ways that are effective, scalable, sustainable, and creative.

In 2024, we created another FRC team, TechJunior 9406, where members have curriculum-integrated robotics classes. Considering our FIRST community challenges, our team will host two new off-season competitions during spring and fall to triple the number of competitions in Quebec and to encourage other teams to join FIRST. In collaboration with the RSEQ, we are working to make robotics accessible for all by promoting STEM in public and private schools through the OUR Sport initiative

Describe your team's goals and the progress you have made towards them to fulfill *FIRST's* Vision.

Through the OUR Sport initiative, we are working to make the FIRST vision a reality by creating a curriculum-integrated program to balance school and robotics across Quebec and beyond, by tripling FRC events in Quebec with the RSEQ (Quebec's student school sport network) in order to ensure their survival, and by rallying community support with a petition tabled at the Quebec National Assembly. Our goal is to make robotics accessible and to give it the recognition it deserves.

What impact has your team seen from your efforts described in the above question? How does your team measure impact?
Over the past three months, our project has gathered thousands of supporters, including over 60 FRC teams from across three continents. We even participated in a race as a way of promoting robotics as a sport. Our initiative has been featured on CBC, CTV, TVA, Télé-Québec, and Global News, reaching over 3 million viewers. We will also host Quebec's first ever off-season FRC event this year and welcome over 30 teams from Quebec and Ontario.
Please provide specific examples of how your team and team members act as role models within the <i>FIRST</i> community with emphasis on the past 3 years. How do you share these best practices with other teams?
When our regional competition was unexpectedly canceled last year, we refused to let our community be left behind. Taking matters into our own hands, we stepped up to host the regional in our school's gymnasiums. This year, Team 3986 followed our lead and took on this challenge to ensure Quebec teams could compete in their own regional event. Our team has attracted the attention of numerous schools in our province for our curriculum-integrated FIRST program and for our workshop.
Describe your team's initiatives to Assist, Mentor, and/or Start other <i>FIRST</i> teams with emphasis on activities within the past 3 years.
In 2024, we started and mentored team 9406, TechJunior. We have also assisted 13 other FIRST teams by providing technical, financial, and logistical help. Furthermore, we partnered up with 5 Impact Award Finalists to conduct a series of seminars for teams seeking guidance in team management. Moreover, during the competition we hosted in 2024, we made our machining workshop accessible to several teams that required assistance in creating parts for their robots.
What other initiatives have you created, grown, sustained, or participated in (<i>FIRST</i> or otherwise) to help inspire young people to be science and technology leaders and innovators? What outcomes have you seen from your efforts in the past 3 years?
We have visited elementary schools, introducing over 200 children to STEM. We have also held activities during our annual Open House, attracting future students. This high registration rate allows us to exponentially grow our curriculum-integrated robotics program, which includes more than 600 students. Moreover, our female team members participated in the annual challenge of the Girls Code, a Quebec-based charity promoting girls in STEM. They created an annual event called Girls and Science.
Describe the partnerships and relationships that you've created with other organizations (teams, sponsors, educational institutions, government, philanthropic entities, etc.) and what you have accomplished together, with emphasis on the past 3 years.
Our team offered financial and HR support to the Springtime Christmas Foundation and the Montreal Pediatric Hospital. We also created a STEAM exhibition with the help of local artists Benz and Sendy-Loo. Our team is working with local companies like PCI and Lumen, which allows us the opportunity to meet with their engineers and visit their facilities. In partnership with an engineering school, we have created a scholarship program to support our students. Check Q3/Q4 for collaboration with RSEQ
Describe your team's efforts in the past 3 years to promote equity, diversity, and inclusion within your team, <i>FIRST</i>, and your communities.
Our goal is to break down the prevalence of stereotypes in STEM, including the perception that robotics is for boys. We now have a fully gender-balanced team. Furthermore, 100% of our female alumni from last year pursued higher education in a STEM-related field. Our team also helps provide funding to students who might not otherwise be able to attend FIRST events. We reflect Quebec's diverse cultural community: we have over 50 different ethnicities in our robotics program.

Explain how you ensure your team and the initiatives you have created will be sustainable.	
Thirteen years ago, we started our robotics program to increase interest in STEM. Victims of our success, we found ourselves with too many students willing to join our only available team. To ensure that they stayed in STEM and continued to lead our community activities, we decided to create Team 9406, TechJunior, an introductory, education-based, and independent FRC team. Each year, around 25% of our alumni come back as mentors, thus ensuring an ongoing cycle of inspiration and learning.	
Highlight one area in which your team needs to improve and describe the steps actively being taken to make those improvements.	
Our curriculum-integrated classes are stable, but we struggle to keep a consistent amount of 10/11th grade students in our program. We modeled our team structure after 1678's, ensuring a better organization and a bigger place for new members. However, we have too many subgroups, causing a lack of communication, so we started using the Slack app and a homemade website called TECH to communicate with our team members and to confirm our presence at working sessions.	
Briefly describe other matters of interest to the <i>FIRST</i> 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, particularly noteworthy, or had a large impact.	
Although we continue to work on organizing more competitions, our ultimate dream is to create a sports-study program for robotics with sufficient resources to meet the critical need in our community. Like four US states, we envision a future where robotics is recognized and supported as a traditional sport. In Quebec, we're working to eliminate the barrier between public and private schools, ensuring that all have access to the same opportunities, eventually even having a permanent FRC field.	
Judge Feedback	
	When you think of Tech For Kids, what is the first thing that comes to mind? An area the team has an opportunity to improve. Something that really impressed the judges.
Essay	
<p>Four billion years ago, the beginning of life as a single molecule on the ocean floor marked the start of a new era. From this first spark of life to today's extraordinary complexity of humanity, evolution has been the force that allows species to survive. Now, just as the world's ecosystems are facing collapse and endangered species are facing extinction, robotics in Quebec is also at a tipping point.</p> <p>Since 2019, we have lost 40% of our teams, and with them, the dreams of countless young innovators. Not only have we lost one of our events, but our only remaining competition is under constant threat, and with this, the vital opportunity to reinvest knowledge. In spite of these hardships, Tech for Kids is leading the way into a new era where robotics must be redefined.</p> <p>*Robotics must defy stereotypes*</p> <p>In this new era, just as the diversity of life thrives through evolution, our team actively fights back against stereotypes associated with STEAM through numerous partnerships and projects, embracing inclusion, equity, and accessibility.</p> <p>Our commitment to inclusivity extends to gender equity as well. We have noticed teams where women are silenced</p>	

and relegated to the sidelines, while boys are consistently put in the spotlight, which goes against everything we stand for. This is why we have worked hard for the past three years to increase female participation, ensuring gender-balanced robotics classes for 7th and 8th graders. We are proud to spotlight the girls on our team, who have become increasingly engaged over the years, achieving remarkable milestones. In 2024, they won the annual Le Code des filles (The Girls Code) challenge for dedicating the most hours to robotics across the province. One of our alumni also took the initiative to launch the annual event Les Filles et Les Sciences (Girls and Science), empowering young girls to challenge gender inequity in STEAM and inspire future generations.

From a financial perspective, we have collaborated with our strategic partners to provide assistance to those who would not otherwise have the opportunity to participate in robotics. With the help of our foundation, every year, we reduce the cost per student from \$3000 to just \$550 by investing over \$250,000 with an additional \$15,000 in financial aid. Moreover, we have accumulated over \$75,000 in combined scholarships. On a global scale, children in underserved communities struggle to survive. Our dedication to helping them is reflected in the Christmas Baskets project, a collaboration with two charity organizations. We prepared 25 gift boxes filled with Christmas presents and robotics-themed toys, which were distributed in El Salvador, Nicaragua, Costa Rica, Cape Verde, Senegal, Gambia, and Ukraine.

Robotics is not reserved for adults either, which is why we encourage young minds to explore STEAM. We have led workshops in elementary schools such as Jardin Bleu, Sainte-Anne, and Externat Mont-Jésus-Marie. This allows hundreds of students from kindergarten to sixth grade to be introduced to robotics, eventually sparking their interest and inspiring them to join FIRST later on.

Robotics is often perceived as one thing: building robots. However, we see it from a holistic approach as something we can shape and explore in any direction. We have, for instance, collaborated with two local artists, Benz and Sendy-Loo, who have helped us incorporate art into our projects, broadening our perspective on robotics. We began by designing a special-edition logo, then added a creative touch to our social media and documentation. This all culminated in an exhibition that provided a unique opportunity to showcase our work to our sponsors, and our loved ones, in other words, our robotics community. During this event, we reflected on our season through a creative lens and highlighted the blend of technology and creativity. In the spirit of the Crescendo challenge, we partnered with our school's techno music students. They produced a soundtrack incorporated into our videos, such as our 2024 robot reveal. For us, art and robotics are complementary.

Our interdisciplinary and inclusive approach allows robotics to survive in our endangered ecosystem.

Robotics must be sustained in Quebec

In this new era, just as evolution responds to life's many obstacles, our impact stems from a deep awareness of our community's challenges.

However, before we could tackle these challenges, we needed to build a strong team, which is why at the heart of our impact is a unique and inclusive curriculum-integrated robotics program. It is the largest in Canada, with more than 600 students every year. Because STEAM skills come to life when applied through hands-on learning across our 5-year program, we have innovated by strategically upgrading our workspace to improve the learning experience of our students. Now, Quebec teams visit our workshop space to use it as a model for theirs.

Seeing as our team grew to over 80 students in 2023, we started 9406, TechJunior, a new team for 9th graders. This gave them more opportunities to participate. Ninth grade is now an introductory year in FRC where students can fully experience everything the program has to offer while receiving guidance from our mentors. This support ensures that by their second year, they are fully prepared to operate as an independent team.

Pushing beyond our comfort zone comes with its fair share of challenges. Starting a second team within the same

school means dividing our financial and human resources, time, and energy. Yet, we strongly believe the rewards far outweigh the costs. By creating this opportunity, we get to enjoy twice as much of what FIRST has to offer. This initiative goes beyond robotics; it's about building a stronger, more connected future, one step at a time!

Beyond the sustainability of our team, we play a decisive role in the survival of robotics in our province. In 2024, FIRST Quebec struggled to find a venue for our regional competition, as robotics must first be recognized as a sport in Quebec to access appropriate infrastructures. FIRST Quebec had no other choice but to ask us to host the event to ensure that it would not be canceled and that the work and resources of 40 teams would not go to waste. Within a few weeks, we developed a feasible plan and successfully hosted the Quebec FRC Regional for the very first time at our school. In fact, we set the example for 3986, Express-O, who followed suit and are hosting this year's competition in their installations. Inspired by our challenges, we decided to take the matter into our own hands and launched the OUR Sport initiative to support our community. This initiative seeks to get robotics recognized as a sport in Quebec in order for it to be more accessible and enjoyable for all students who express an interest in it.

It is crucial to reach as many people as possible in order to achieve our goal. Thus, we have started a petition with the National Assembly of Quebec asking our provincial community to support our initiative, which has already gathered over 1,000 supporters! We share our message through appearances on different media platforms. We have appeared on TV shows such as Salut Bonjour, the French morning show with the biggest viewership in Quebec, Global News, reaching our English community, 100 Génies, a science trivia show, the Canadian Television network CTV, and a commercial for BMO Bank of Montreal. In addition, we were on CBC radio, the Canadian Broadcasting Corporation, and we will be published in the Journal des Voisins newspaper, ultimately reaching millions of viewers. We have also reached out to teams everywhere around the world to learn about their situation and the impact our initiative has on them, all of which gladly showed their support for OUR Sport. In parallel, we are aware that we're not the only region that struggles with the sustainability of robotics teams. This is why our next step will be to work on getting other provinces to join us, making it a national effort. As our vision grows, so will OUR Sport, shaping the leaders of tomorrow and securing a brighter future. We are committed to building a community that is thriving, not just surviving!

Moreover, our students have collaborated with the Montreal division of the Quebec Student Sports Network (RSEQ-Montreal) to make robotics more accessible for everyone. This year, by running two off-season FRC events in spring and fall, we are not only providing numerous teams with the opportunity to participate in friendly events at a lower cost, but we are also tripling the number of events in the province. We actively encourage other Quebec teams to follow suit, empowering them to take an active role in improving our shared circumstances.

Furthermore, the possibility of a sports-study program in collaboration with the Quebec Ministry of Education grants many opportunities such as better integration of study and robotics, more scholarships, and less expensive fees, which provide equal opportunities to all hardworking students. Therefore, everyone would have the opportunity to experience FIRST to its fullest extent without any limits.

Four billion years ago, a single molecule sparked the evolution of life. Today, Tech for Kids carries that same transformative spirit. We have fostered equity, redefined robotics, and expanded STEAM access across Quebec and beyond. Join us on this journey to usher in a new era and create something greater than we ever could alone.

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