

## Chairman's Award - Team 7277

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2020 - Team 7277

**Team Number**

7277

**Team Name, Corporate/University Sponsors**

Nelson Mandela High School/Amazon YYC1 Fulfillment Centre&Nelson Mandela High School

**Briefly describe the impact of the *FIRST* program on team participants within the last five years.**

Team 7277 has been successful in achieving its initial goal of inspiring STEM achievement through our young life. *FIRST* has enabled students to analyze their way around mechanical and technical issues despite time-sensitive matters, allowing them to overcome challenges and achieve success. The majority of students are committed to STEM-related post-secondary programs. Students involved in *FIRST* are offered scholarships and unique opportunities, opening up doors to further explore STEM careers.

**Describe the impact of the *FIRST* program on your community within the last five years.**

Team 7277 is known for giving back to the community and have been able to achieve this through several outreaches. Mentoring kids to use Micro:bit has definitely helped us advocate STEM, bringing about a positive change in young minds. We were also involved in cleaning the community and creating a stress-free environment for everyone around us through our mental health and environmental outreach. Our efforts have definitely helped reduce stereotypes within STEM and promote STEM careers.

**Describe the team's methods for spreading the *FIRST* message in ways that are effective, scalable, sustainable, and creative.**

Team 7277 emulates *FIRST* as a community full of hardworking and determined students paving the way for STEM and promoting it as a future option for youth. We advocate for STEM and inspire the next generation through our many outreach programs and collaborations with the Alberta Children's Hospital Youth Council, CIWA Immigrant Council, Youth Champions Youth Forum, local food banks, and Girl Guides of Canada.

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

Team 7277 is a community hub with the FRC team as the pinnacle program. FRC members act as role models and guide the two FTC teams (14717+15259) at Nelson Mandela High School. Junior high teams in our communities receive mentorship from FTC students to assist with the variety of challenges that arise during the season. Our team also works to spread STEM inspiration in our local elementary schools such as Grant MacEwan, providing our youngest students with a chance to jump on the STEM wagon.

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

To extend our FIRST family, we have our build shop open during our events. Our contact details are displayed on our team's website, allowing other teams to collaborate and seek advice. We have supported our neighbouring FRC team(6700) by assisting with fabrication facilities that helped them remain in the competition. To start an FRC team we advocate our initiatives through posters and inviting the kids from the Crescent Heights High Schools to visit the regionals in our school to inspire them.

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

To help other FIRST teams, we have started 7 FTC teams, establishing the NE Robotics Hub. This includes 2 teams (14717 and 15259) at NMHS and 4 at our feeder schools(14713, 14715, 14716, 14718). In 2019 we helped form FTC team 17409 l'myanistsitapikoan (Many People in One) with IndigeSTEAM. We have been volunteering at the FLL Jr. build season for 2 consecutive years. Alongside this, Team 7277 also created an EV3 curriculum. We also host FTC meet-ups, scrimmages and off-season events.

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

Team 7277 is proud to host FTC events and practice tournaments to reinforce the message of FIRST. We initiated 7 FTC teams and prepared them for competition with an annual pre-season scrimmage. We provide mentorship to teams while utilizing our building space. Team 7277 assists teams attending the Canadian Rockies Regional with their journey to and from NE Calgary. In 2018, Team 7277 provided a working robot for Team 1622 when their robot did not arrive for the regional competition.

**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 mentor 6 FTC teams (14717, 15259, 14713, 14715, 14716 and 14718), mentored at a FLL Jr. event in 2019 held at the Calgary Central Library and allowed team 4627 and 4604 to use our machine shop during FRC season. We designed a rookie guide, an EV3 kit curriculum and have been hosting FTC/FRC events for the past 2 years. To promote FIRST, we volunteer with institutions like Amazon Distribution Centre, Telus Spark, Grant MacEwan Elementary School. and Big Brothers and Big Sisters organization.

**Describe your Corporate/University Sponsors**

The Amazon YYC1 Distribution Centre in Northeast Calgary has been our key corporate sponsor this year. The Genesis Center has provided support since our school was built, offering their space to host regional competitions. Telus has recently assisted Team 7277 and encouraged our work to advocate everything STEM. As we continue to collaborate on STEM-related projects, the strength of our bond will be the building foundation to create a sustainable future for the next generation of students.

**Describe the strength of your partnership with your sponsors within the last five years.**

Our key corporate partner this year was the Amazon YYC1 Distribution Centre in NE Calgary. They provided our season funding and deepened our partnership through their Amazon Goes Gold Campaign and Camp Amazon where Team 7277 members helped children from the Alberta Children's Hospital with a STEM activity. The Telus Future Friendly Foundation has recently come on board as a supporter and we are excited to see what this partnership will bring.

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

FIRST is a global community designed for facilitating and nurturing skills in STEM. With an inspirational mission advocating for youth to become future leaders, it enables communication, confidence, and leadership skills within teams. Team 7277 believes that it's not only about engineering robots, but building strong FIRST students. A competitive environment allows participants to learn who they are under pressure by combining the talents to survive in a timeline sensitive build season.

**Briefly describe other matters of interest to the *FIRST* judges, if any****For FRC teams older than 5 years, briefly describe your team's broader impact from its inception.****Team Captain/Student Representative that has double-checked this submission.**

Gurlin Singh

## Essay

When people think of NE Calgary they visualize many things: they see the multicultural diversity that is more reminiscent of the world than any other part of the city, they see the airport and how it opens up our city to the world, and they see youth with a keen understanding of what it means to live in two cultures. Youth with hopes and dreams for the future. And ultimately, this is what 7277 was formed for and what it hopes to show the world. Because Team 7277 can be thought of as a collection of gears; basic structures that while inefficient on their own they can be used together to create intricate, compound systems. While each gear is important to the system in its sense, an entire system of these structures is reliant on each component to complete a task. Similarly, Team 7277 has created a system of community outreach through simple, foundational ideas that act together to form this team's multifaceted identity that is emblematic of NE Calgary. Our team continually represents NMHS and the FIRST community in a positive light through the promotion of diverse ideologies, ingenuity and professionalism; ideas that are put into action through the creation of several initiatives, forming the pillars of which this team is built upon. Team 7277 is focused on the mentorship of future generations, promoting the involvement of women in STEM-related activities, highlighting the importance of individual mental health and wellbeing, accommodating the global FRC community and, emphasizing the importance of environmental sustainability.

### Mentorship and Engineering Inspiration

"A mentor is a brain to pick, an ear to listen and a push in the right direction." - John C. Crosby

This year our mentorship outreach had the motto of "Each one teach one". This gave everyone on the team a chance to get involved with young students in our communities and teach them about STEM. In this process, we partnered up with organizations like Amazon (Camp Amazon), Telus Spark, Big Brothers and Big Sisters, and Grant MacEwan Elementary School to expand the message of FIRST by inspiring those students with Micro:Bits. Sharing our knowledge of Micro:Bits to younger kids left an impact on them and gave them an insight into STEM.

We have mentored FTC and FRC teams throughout the year and founded the Northeast Calgary Robotics Hub in 2018, mentoring 7 FTC teams. We also organized and hosted FIRST events in collaboration with the Genesis Centre like the 2018-2020 Canadian Rockies Regionals and various FTC league events and scrimmages for the past 2 years, allowing all students an opportunity to showcase their engineering minds. Apart from being the host, we assisted teams with mechanical, electrical or programming issues by opening up our Aviation machine shop. We provided media coverage for over 5 FTC events including the Alberta Championship.

To prepare teams for competition, we designed a game called "Mineral Madness" in 2018 which included a tournament schedule, rule book, and game guidelines. This off-season game used themes from 2019 along with game elements from 2018 to help teams practice their skills in a low-pressure situation. Additionally, we targeted young minds by making a curriculum for EV3 kits.

As a team, we attend numerous events to spread the message of FIRST such as the Lilac Festival Parade, Beakerhead, Student Maker Faires and school tours. These events showcased the robot that we have built for both build seasons. These events help us advocate for STEM and FIRST in our community, giving us a platform to extend FIRST's message to 100,000+ people.

### Mental Health Advocacy

Mental Health plays a significant role in defining who we are. Each individual's mental health is tailored to their identity, but having a positive mental wellbeing ensures a sense of balance in our lives. Team 7277 is not only about building a robot but also building foundations for a community.

Over the past two years, we created custom calendars and distributed them to local teams. The calendars were designed specifically for Alberta FIRST students which Alberta Diploma exam dates and key FRC dates, to help students maintain an organized schedule through stressful situations.

Team 7277 has created a mental health brochure, "Take a Breath", to distribute during FRC competitions and community events. We intend to provide coping and management strategies to establish a calm and secure mindset while navigating the world of FIRST. Our team developed a report on mental health which includes resources and scientific support on mental health cases.

Team 7277 understands the possibility of stressful situations and conflicts during FIRST competitions, as many teams face immense pressure to make precise decisions. A Calm Room (CR) is one of the main tasks included in the mental health initiative for Team 7277 as it provides a healthy space for all teams attending to relax. There are tea stations, couches, relaxing music and books. A new addition to the CR is the Calm Kits, a result of the collaboration between Team 7277 and Mandela Youth Champions. Calm Kits are portable CRs, which members sign out if they do not wish to reside in a confined room. The CR and Calm Kits provide a required mental break, with strategies on coping with competition stress.

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Our society is heavily reliant on social media to converse and develop ideas, and Team 7277 has taken advantage of this through the creation of "Tips of the Week", an ongoing initiative on social media platforms. These tips assist students in our school and other followers by providing advice that reaches hundreds of viewers, with a future intention of hosting mental health seminars at FTC events.

As a team, we have spoken with the Alberta Children's Hospital Foundation to have the opportunity to collaborate and raise awareness for mental health by planning to hold a fundraiser in support of the Build Them Up Campaign and inform students of the new Mental Health Centre. Team 7277 has been invited to join the upcoming youth council, in the Kids Helping Kids Provincial Program. Our members are placed on the youth council, in hopes of repairing the stigma that surfaces around mental health issues.

### Diversity and International Accommodation

Accommodating for international teams has been important to Team 7277 as it shows our appreciation for the beauty that lies in the diversity amongst FIRST students. As hosts of the Can. Rockies Regionals, we ensure the elimination of language barriers by providing translators and interpreters so teams can communicate effectively as seen with Team 4191 from Istanbul, Turkey. Since our team comes from different backgrounds, our members are also able to help breakdown language barriers by serving as interpreters. Safety is a priority to Team 7277 and language should not inhibit us from communicating these precautions with international teams. We made 1000 safety pins with messages in Spanish, Mandarin, Turkish and, French as a way of ensuring safety, regardless of language. Team 7277 comes from separate ethnicities, and it is important to ensure that diversity is a uniting force instead of allowing language to isolate us all. Team 7277 has provided batteries for teams crossing the U.S. border. Batteries had been provided in the past, and we plan on assisting Team Spyder (1622), along with other teams that require our assistance this year too. Not only do we accommodate international countries, but we also cater to the needs of those living within our community. We have been featured on RED FM, a local radio channel that speaks to 40,000 Punjabi speakers in Calgary to advertise our aforementioned food and clothing drive.

### Women in STEM

Women have always been underrepresented in STEM-related fields. Our main objective is to inspire young women to seek involvement in STEM careers rather than settle for conventional careers. The leadership positions that Team 7277 offers have primarily been assigned to women and as years go by, we get closer to achieving a 50:50 ratio in our team due to this initiative.

Often, the lack of women in STEM careers is a result of young girls not being informed about the vast STEM-related possibilities within school, especially common in girls who are in vulnerable circumstances, such as immigrants with different cultural expectations. To mend these issues, we target the problem at its root by collaborating with the Calgary Immigrants Women's Association and provided a foundation for exploring STEM career opportunities.

We have upcoming plans to collaborate with Telus Spark through their Telus Spark Friendly Foundations program alongside Team 4604 Immitrons, an all-girls FRC team from Calgary. As of now, we plan to host an event at day camps where we will introduce Micro:Bits to young girls between ages 8-10 to inspire them to pursue STEM-related activities. Team 7277 has also collaborated with Girl Guides Canada to promote interest in STEM in the next generation of leaders and innovators.

### Upcoming Initiative

Team 7277 is always looking to overcome obstacles along the way; our team has recognized the need to advocate for environmental conservation to ensure long term sustainability. Shortly after, our newest initiative, Environmental Conservation was created. EC focuses on the idea of creating a sustainable future for Team 7277, the FIRST Robotics community and the world. 7277 has been working on weekly bottle drives that go toward funding our program. We have collaborated with a local organization "Love With Humanity" for our food/clothing drive. Team 7277 recognizes that every impactful project starts small and has focused on the local communities of NE Calgary to begin spreading awareness about the importance of EC. However, we launched the Global Garbage Pickup Project to clean up garbage across the globe. Through the creation of a new initiative, Team 7277 is set to build a sustainable future for new generations to follow.