



# Girl Powered

9181X - Seaquam Secondary



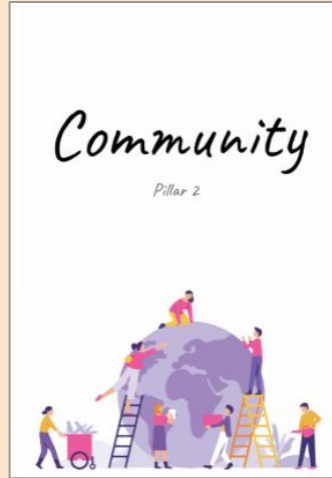
# We Are All Girl Powered!

Girl Powered allows for more positive experiences for all in the field of STEM. It addresses the “STEM is only for men” issue and brings to light that all genders are able to participate and succeed in STEM. Girl Powered acts as a stepping stone to greatness for those who are passionate and interested in the field of STEM, creating an inclusive and diverse environment. Not only does Girl Powered represent those of the female gender, but encourages people from all backgrounds to discover their new strengths through hands-on activities.

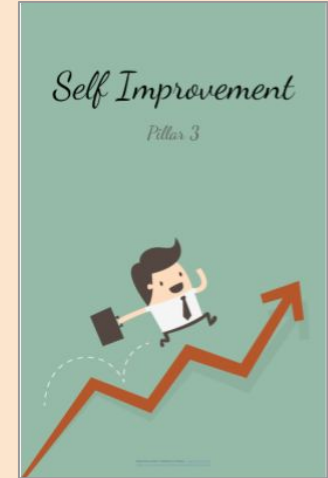
# The 3 Pillars



Competitive Spirit is striving to unlock one's potential through continuous self improvement and dedication while still being kind and considerate. Set goals and dream big!



Community is assisting other teams in your own school and mentoring groups outside of the program. It is also shop etiquette and being a team player.



Self-Improvement is reflecting on the past to create a better future. It is also being open to criticism and always wanted to do better and improve; you can never stop improving.

# Olivia Roschat

Manager & Design Book

This is Olivia Roschat's fourth and final year in Seaquam Robotics. She is the captain of 9181X and focuses on design book and inter-alliance communication. When she joined Seaquam Robotics in 2017, she was one of two girls in a program of thirty students. Her goal is to inspire other students to pursue STEM programs and mentor those who are beginning their journey.





# Ria Sachdeva

## Programmer

Ria is the programmer on 9181X. This is her third year in the Seaquam Robotics program. She joined Robotics as a builder, but became fascinated with the coding that made robots move. From then on, Ria developed programming skills. Her goal in Robotics is to expand her coding skills and pave the way for future Seaquam Robotics students.

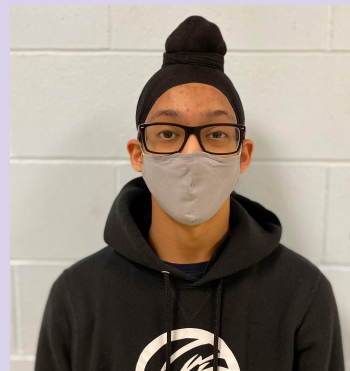




## Austin Vokey

Builder

A grade 12 student entering his fourth year of robotics, Austin is very excited to see exactly what Change Up will bring. He's been invested in build/design since he was a little tyke, building Lego sets. He also plays for the Metro Athletic Football Club in the VMSL U21 league.



## Guransh Rajput

Driver & Builder

Guransh is a grade 11 student currently in his third year of robotics. He likes how there is always something new to learn, something to iterate or something to improve in Vex Robotics and enjoys the competition and teamwork aspects as well.

# Recognition and Reflection

Our team's theme this year revolves around recognizing and synthesizing our strengths while praising our achievements and growth. This involves constant and consistent communication on all parts. Though robotics is a fast-paced and ever-changing environment, we still try our best to take the time to reflect, often referring to a specific topic or goal set earlier that day.





# Recognizing Olivia's Strengths

"I've known Olivia for four years, three of which we've been in the Seaquam Robotics Program together. She was fairly quiet around people she didn't know, but we were soon able to cement a friendship built around a mutual competitiveness. In our first year of robotics in Grade 9, when Olivia was on a team with Grade 11 Students, a teammate named Catarina was able to take her under her wing. She taught Olivia many fundamentals revolving around build, design, leadership and life in general. This was a blessing for her, as Olivia's level headedness was what allowed her to become team captain when she joined my team in Grade 10, and these past two years when Ria and Guransh rounded out our team. Olivia did, however, decide to pay it forward by being a similar leader for a Grade 9 student on our team last year, as Catarina was for her. We all hope this tradition of girls empowering girls continues as Seaquam Robotics grows."

- Austin Vokey





## Recognizing Ria's Strengths

“Ria and I have been on the same team for 3 years, starting during the 2018-2019 Turning Point season and continuing through Change-Up. Over the years, it has been very clear that she is passionate about programming and is always looking to learn new things. In my view, we are lucky to have such a reliable teammate who cares about doing well. I remember last season, a few weeks before the Coronavirus Pandemic, Ria was set to go to India the same weekend our team had a high stakes tournament. Although Ria was feeling sick and tired— on top of being super busy with school exams and packing up for her trip to another continent—she stayed for at least 3 hours in the shop everyday after school that week, so that we could have a programming skills run and a match autonomous for the upcoming tournament. That same dedication and commitment has shown no signs of stopping this year, where we are performing in all aspects of the program better than ever before.” - Guransh Rajput



## Meet Our STEM Role Model:

Gitanjali Rao is a 15-year-old scientist and inventor who was awarded Time Magazine's Kid of the Year for following her passions of STEM while making a difference in the world. She has invented technologies that prevent cyberbullying and identify contaminated drinking water. Not only that, she empowers others, especially those our age, to make a difference in the world by doing what they truly enjoy.





"I cannot see a world filled with kindness without science and technology being involved."

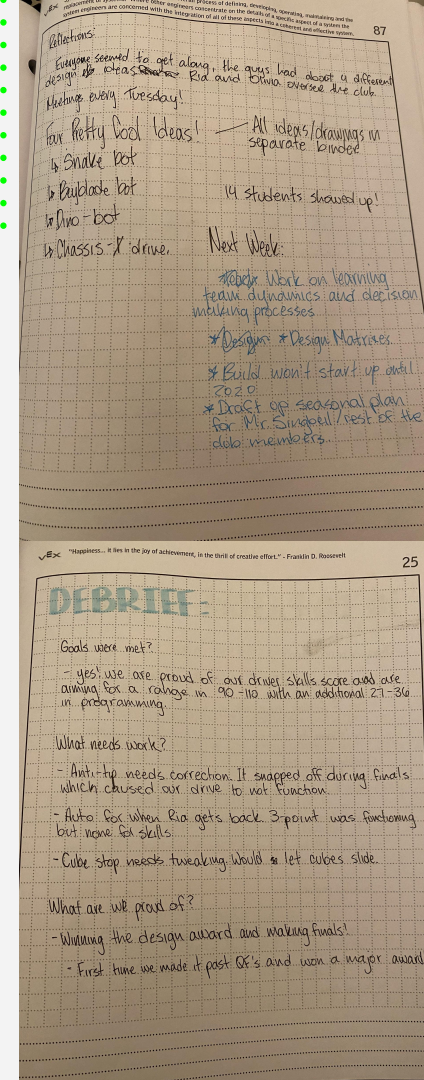
- Gitanjali Rao



# How Rao Influenced our Design Theory

After hearing about Rao's design, our team decided to adopt and slightly modify her process to one that would benefit us.

Rao's process relies on a cycle of observing, brainstorming, researching, building, and communicating. We decided to add on an additional point in the cycle to debrief with the rest of our team. This ensures that even with our busy schedules, we are able to stay on the same page. We encourage others get creative with design cycles and make a system that works for their team!



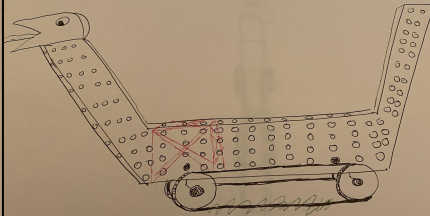


# All Hands On Deck!

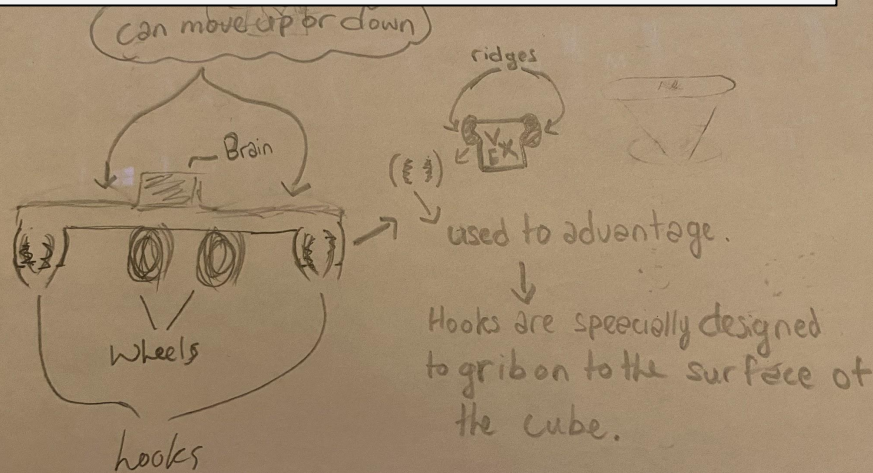
Prior to the COVID-19 Pandemic, our team had an exciting visit to our local Girl Guide troupe. We organized hands-on activities for the girls; including driving our robot, creating a mini design book, and a tower building competition that worked on their communication and teamwork! This was our first time involving the community in our passion and found that it was a valuable experience for everyone on our team.



	Snake	Keyblade	Grappling the ring
Time	3	4	5
Score	3	3	5
Appearance	4	4	2
Coding	5	4	3
	4	4	2
	19	19	17



### Some Designs from Junior Robotics Club!



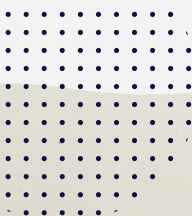
## Introduction to Robotics (club)

Last year, Ria and Olivia decided to create a club for Grade 8 students interested in Robotics where they could get a headstart before the competitive program next year. Here, they would learn from the girls about building, programming, and designing the robot, as well as being able to interact with others who share the same interests and desire to learn. These students showed drive by volunteering at Seaquam tournaments. Although the club ended early due to COVID-19, we were excited to see that many of the club members joined the program this year.



Our program's diversity enhances our ability to have a successful season. Due to our differences, we have varying perspectives that enable us to develop individually and as a group. Everyone is consistently trying to improve their skill level while raising others to their true potential. The inclusive environment of the robotics community allows for a improvement of the gender gap in STEM.





# Thank You!

Entrants: Olivia Roschat, Ria Sachdeva, Austin Vokey,  
and Guransh Rajput

Team Number: 9181X, Seaquam Robotics.

Title Of Submission: Girl Powered

Find us on Instagram @9181X.vrc

Disclaimer: All photos without masks  
or social distancing were taken Pre  
Covid-19