

We Construct Our Future Together

We, 39S, The Sisters, embarked on our journey to VEX in our first year to our high school. We were completely new to robotics, only with the passion to begin our new chapter in our school life. Su Kyung and Minseo, both of us have been interested in the STEM field but always wondered where we could apply our knowledge. Although we had basic knowledge in robotics from introduction to physics, we were still overwhelmed by the amount of information and depth VEX required us. There were many different roles and responsibilities as well as new building processes. We started new students intrigued in robotics to two women who learned how to actively design, program, and drive a robot. In this new unprecedented year with the pandemic, our team strives to connect together and promote the idea of women in STEM.

Su Kyung Lee, our captain, is a programmer, and a builder who is naturally adept at dealing with the robot in all aspects. From screwing pieces, Su Kyung programs with her knowledge that derives from years of computer science courses and her tremendous interest in all computer languages. It took her only a few weeks to familiarize herself with the new V5 software thanks to her previous experience with C++. It's her third year participating in Robotics in Cranbrook since ninth grade, along with Minseo. From a newbie, she has transformed into a proficient leader of the team who transcends her limits in all fields every year.

Minseo programs and builds our robots. Although she didn't completely get used to C++ yet, she is learning and improving continuously. She started robotics her sophomore year, without any information, but as a senior, she now knows much more about robotics. She is also our scout, builds as well, developing our strategy for matches. By comparing strengths and weaknesses of each team and their performances in matches, Minseo determines our alliances and forms a winning plan. In her previous team, she learned how to build, design, and code. This

year, she is applying her knowledge from previous years to our new robot and trying to find out what is most effective. Apart from programming, Minseo contributes greatly to our team with her excellent driving skills: her smooth turns and tactic results in our team's win in almost every match.

Sara gives ingenious ideas on our robot design. After she has taken a Robot Design summer course for two whole months, her understanding of the robot was insanely creative. She would take artistic, yet functional approaches towards our design and lift our robot to another level. She would completely change our perspectives on our robot and transform our robot into a majestic

One thing that led to our amazing team chemistry is our intimate friendship that began from the first day of school. We are both from the same country, shared similar ideas, and were intrigued by the same concept of VEX Robotics. We first joined a team that primarily only had one person as a driver that wanted to expand to have two *main* drivers. This team allowed us to build a sturdy base of our robotics knowledge that extensively expanded our horizons in this field. We learned how to create an inclusive team where diverse people presented different ideas but still strived to listen to all the members. This allowed our team members to be more active, encouraging, and less hesitant to present our ideas which we greatly benefited from. Since all the previous team members attended the summer sessions our school held, they were able to provide me and Minseo with extensive amount of information that allowed everyone in the team to be helpful and participating.

We chose to maintain an all-girls team this year because we know how much potential we hold. Although some guys in the team could result in diversity, we believed that no one

would understand our goals to ultimately make a better environment and to build a foundation for other girls new to this field.

To us, the phrase, Girl Powered is very special. Not only are we the only all-girls team in our school, but our approach to robotics is highly personal since we have started from scratch. Some teams might wonder where our inspirations came from. Marie Curie, the most powerful woman we consider, has always motivated us to move forward and think outside the box. Her influence in the field of science is incomparable, but she was also a loving and caring person. Not only has she demonstrated her intellect to make a scientific breakthrough, but she has also saved millions of people with her findings. Her quote, “You cannot hope for a better world without improving the individuals. To that end, each of us must work for our own improvement,” greatly inspired us to strive for our individual goals but still work together for a better world. Our teammates have studied outside our work times to work better and faster as a group, which facilitates all of our processes in Robotics. We, as an individual and as a group, will never cease to work and improve ourselves to let “others light their candles in it” as well. We will always strive to use our knowledge to produce a beneficial result to the rest of the world, with our first audience as girls.

"If you have
KNOWLEDGE
let others light
their candles in it."
-Margaret Fuller
#ElevateYourself

Entrants:

[Su Kyung Lee](#): Co-captain, Builder, Programmer

[Minseo Lee](#): Scout, Builder, Driver, Programmer

Team #: 39S

Title of Submission: "We Construct Our Future Together"