Girl⁴ Powered

1727Z: Seeing STEM Through a Different Lens

MALLORY COOPER, ROKHIYA KANOUTE, BHARGAV SRINIVASAN, LOGAN TAO, MICHELLE WANG, NERISSA WONG

Meet Our Team Members!

Mallory Cooper: 3rd year doing robotics; builder and documenter

Rohkiya Kanoute: 1st year doing robotics, builder, designer

Bhargav Srinivasan: 4th year doing robotics; main driver, builder, and programmer

Logan Tao: 4th year doing robotics, builder and strategist

Michelle Wang: 3rd year doing robotics, documenter, scouter

Nerissa Wong : 4th year doing robotics, primary builder, documenter



What Girl Powered Means to Us

We believe that Girl Powered is about inclusiveness and **diversity.** Girl Powered is not only about getting more girls to participate in STEM but also to increase **involvement.** We believe that Girl Powered **applies to** everyone regardless of their gender, ethnic background, sexual orientation, etc. Our goal this year is to make our team inclusive and welcoming to everyone. Everyone deserves **opportunities**. Our club consists on mostly males, so we want to **encourage more females to join** as well. Girl Powered does not only apply to STEM fields but in all aspects of life. But, there is a higher disparity of males and females especially in STEM fields.



A New World of STEM

Our journey begins at **Ridgely Middle**, the school that **sparked our passion in robotics**. Nerissa, Bhargav, and Logan joined robotics as 6th graders. We each remember seeing the informative flyer about the robotics, club tryouts, which intrigued us. Coming from elementary schools who all had very developed STEM programs, we had already become curious in the field.



Confused?

We were shocked as we went to the first informational meeting. The overwhelming majority of boys in comparison to the girls was unexpected, which made us wonder, what was keeping all the girls from joining such a fascinating club? When we tried to get some of our other friends to join, they simply responded with "Oh, I'm not smart enough," or "That's a 'boy' thing," and "I wouldn't be capable". As ardent members of this club, we wanted to prove this stereotype wrong, and encourage everyone, regardless of gender, race, religion or sexual orientation to pursue their dreams in STFM



Undermined by a World of Boys

As we started our first season, we faced many challenges each on our respective teams. In addition to getting familiarized with the VEX program there were also many times where more experienced teams would look down upon our cluelessness. For example I (Nerissa) remember very clearly in 6th grade where our alliance partner for VEX IQ was a much stronger and experienced team. After seeing that we were a new all-girls team, they told us to just **do nothing for the match** and let them do all the work, out of fear that we would just "mess things up." I was frustrated and enraged, as they had **based our entire** image on the fact that we were girls, and we were inexperienced in robotics. This event simply added more fuel to the fire as I was now more **passionate** about female participation in the field.



Diversity Lead to Success

As we **grew** and **learned** more in the Ridgely Robotics community, the new season was approaching, and we started scouting for members for next year's team. After being a bit hesitant, I (Nerissa) was able to convince Mallory and Michelle to join robotics with me. We continued to thrive that season, winning design and tournament champion multiple times throughout 7th and 8th grade, going on to the Maryland State Championships. We were able to show what being in an all-inclusive team meant, and how our different backgrounds, perspectives and strengths contributed to create something amazing. We taught each other so much and the **diversity** of our team really allowed us to reach our full potential. Diverse members = diverse solutions!





Harnessing Girl Power

Now, as members of the Dulaney Robotics, we reflect upon the memories that the Ridgely Robotics program has brought us. We continue to go back and encourage female membership of the Ridgely Robotics Team, as well as coach younger teams. We were also ecstatic to see that at tryouts the number of females interested had increased, to almost 50%!



One of the teams that we coached (952B) getting the Amaze Award

A "Takeover" of Girls

As an all freshmen team, we were apprehensive about competing at the high school level for the first time. We started planning from the beginning of the season in May and had continuous weekly meetings. Our hard work paid off. We received the Design Award at our very first competition. During the middle of the season, we added a new member to our team. Rokhiya was eager to be a part of VEX and join robotics for the first time. We were inclusive and helped Rokhiya feel welcome. This year has been our most successful season so far, as we placed 2nd overall and going undefeated at our last competition. This is all due to our open-mindedness and inclusiveness to everyone on the team. We hope to use our platform as high schoolers to continue advocating for equal opportunity in the STEM field at all age levels.



Rokhiya

Not Perfect Yet

Despite seeing the tremendous growth in female participation in VEX, we noticed some discrepancies. Many teams, especially those with many males and few females have the females put to the task of doing the engineering design **notebook.** Our team is working to change that stereotype, as we let everyone on our team contribute to designing and building the robot along with writing the notebook. Being allinclusive to everyone's ideas is our main goal and that has been part of the reason why we are so successful.



Who Inspires Us? Marie Curie: 1869-1934

Marie Curie inspires us since she was a groundbreaking woman in the fields of physics and chemistry. She was the first woman to win a Nobel Prize in Physics for her work in radioactivity. She also received a Nobel Prize in 1911 for the discovery of Radium and Polonium. She is the only person to have ever received two Nobel Prizes in different fields. Living in an era with few female scientists, Marie Curie persevered through gender barriers and stigma while pursuing an education the STEM field. She was denied from the University of Warsaw but was able to receive an education from a series of underground classes. She then moved to Paris to study at Sorbonne University. These prestigious awards are incomparable to the impact that Marie Curie has left. She was a role model for women around the world and left an important legacy.



Conclusion

Being Girl Powered isn't all about girls. It's about equal opportunity for everyone with a passion in STEM. We are extremely grateful for the establishment of the Girl Powered Program, and hope that as a community, we can raise awareness on the unfairness towards certain demographics in the field. Together, we can establish a well-rounded, diverse and inclusive community both in VEX and the STEM fields.









- Team Number: 1727Z
- Entrants: Mallory Cooper, Rokhiya Kanoute, Bhargav Srinivasan, Logan Tao, Michelle Wang, Nerissa Wong
- Title of Entry: "1727Z: Seeing STEM Through a Different Lens"

