

## Team 6546B - Girl Powered Essay

Picture a team predominantly comprised of girls, a team where those girls didn't have to worry about working extra hard to prove themselves, a team where they don't feel outnumbered or uncomfortable, a team that encourages equality and inclusion. That, to us, is what comes to mind when we heard the phrase 'girl-powered'. It's more than just work done by girls, it's about the environment that is fostered as a result. Many of the girls, both in our team, and in other parts of the program, have felt this to be an issue. While no one was outright against girls, there was a distinct majority of men in the robotics program at our school. Still, this did not sway us, because our team believes it is important that everyone, of all genders, should be involved in any effort to make the program more inclusive. To get us started on that path, this team participated in numerous dialogues with others in the program. Before moving forward, we wanted everyone to understand why it was important that we try to create this new environment, and how girls felt about the current one. The biggest challenge in this process was making some people understand the necessity behind it. It could be hard to explain the validity of your experience when others didn't have that same experience. Yet in time, almost everyone in the program understood. In our team, this dialogue wasn't a simple one-time event, but a long experience that could be seen in how we conducted ourselves. Such an example of this is when the time came to assign roles on our team.

When our team was brought together, we found that we had a large variety of skills, interests, commitments, and experience. We found a way to assign roles in a system that was most fair and accounted for people's abilities rather than how they might have been perceived because of their gender. Almost everyone on the team started out as part of the mechanical team and being involved with the building of our robot. Afterward, all members experienced being parts of different roles, from programmer to CADder, to author of the engineering notebook. This allowed for each member to find a role that best suited them while still understanding the needs and duties of other roles as well. Just because someone was a programmer, does not mean that what we learned as a builder suddenly doesn't apply anymore. Members specialized in specific roles, but we still relied on one another. One instance of this is when Ananya Shah, originally our mechanical engineer used her prior experience with building to assist with a CAD problem. As our robot became more technically advanced, and our notebook became more sophisticated, we relied on the feedback of one another to ensure that we could meet our own high self-set standards.

Our team has eight people altogether. Three of them are females, and all of us are new to VEX Robotics Competition (VRC). This is our first year participating in VRC, as well as the online challenges. Although we had other student coaches to guide us along the way, the team had to really come together to navigate a season of new challenges while also dealing with the restrictions set by Covid-19. In the technical design of the bot, our different perspectives helped us refine the mechanisms of the robot. For example, while some members might be more inclined to use a technique or design they saw on another robot, other members would be more critical and ask about the feasibility and effectiveness of the part, and suggest other creative approaches. A result of this discussion would be a modified design adapted for feasibility and the overall preferred strategy our team has. In the online challenges, we had less guidance from others, because our team has not participated in any of them before. Consequently, we relied on each other, as a team more than ever. All of our efforts in the VEX Online Challenges would not have been possible without each other. For example take this essay, even though it is the 'girl-powered' award, all genders were encouraged to participate. We found this encouragement to be involved in diversity efforts coming from many people, but as a team, one of the most influential role models we had, was our adult mentor, Mrs. Meredith White.

Ms. Meredith White (or as we call her, Ms. White) has been a part of our robotics program for a long time. She has seen many brilliant students in the program in her time. She is the person we go to when we start feeling uncomfortable or if we had a situation we didn't want to be made public. While she has provided insights regarding design, she always puts people first. She would routinely ask people how they were doing and would always notice when one of us would display visible cues that we were going through a rough situation. Most importantly, she leads the charge on creating a more inclusive environment for girls, both in our robotics program and STEM as a whole. During the dialogues mentioned earlier, she was an active participant, and helped us take action afterwards. There are no diversity initiatives that Ms. White is not a part of, and she always encourages everyone to join these initiatives. Following her example, our team has become involved with more initiatives and efforts to be able to create a better inclusive environment. Following her example, we started to care more for the team, rather than the robot. Following her example, some of our members are thinking about pursuing STEM when they were not previously. We hope to make her proud through our actions, not just in building the bot, but inspiring a more inclusive and diverse environment.

To this end, we collaborate with other teams and people to make this happen. Our female members would sometimes represent the robotics program through social media or other communications in an attempt to show people that robotics is for people of all genders. We are currently working with someone in another program to form a Society of girls Engineers Chapter in our school. We hope for that chapter to be functioning next year, and act as a support system, not just for all girls in robotics, but those in other STEM clubs in our school as well. Unfortunately we could not be more personally involved with events and demonstrations to show other high school students and middle schoolers how we've all grown, learned, and had amazing fun in robotics. Some of our members do take part in Geek Girls, which is another initiative sponsored by Ms. White to encourage middle school students to be more involved in STEM. Some of our team will graduate next year, but those that remain hope to continue being part of robotics, and continue the work of inspiration, unhindered by COVID-19. This year has been rife with problems and unique circumstances, however, our team will continue pushing for a diverse and equal team where everyone, regardless of gender will be comfortable in pursuing their interest in STEM.