

## Grl Pwr

We are 39W, The Avengers. This year our team is just Nikita Shishu and Maryam Khan. Last year we had seven people, but the rest of them were unable to continue because of COVID. Although it is more challenging to be a two person team, we work harder and are able to make up for it. We have to do more jobs, but luckily we do not need a scout this year since we cannot go to any big competitions. We each build a separate part of the robot (usually one of us builds the right side and the other builds the left side) instead of both of us working on one part. We are both drivers and we take turns driving. Maryam is the main programmer as she has a lot of coding experience. In previous years, each person on our team would have a couple various roles. This would help us be more efficient. People would also learn more about their role as they did it. If someone was doing a job that they were less familiar with, they could ask for help. This also helped us become closer as a team.

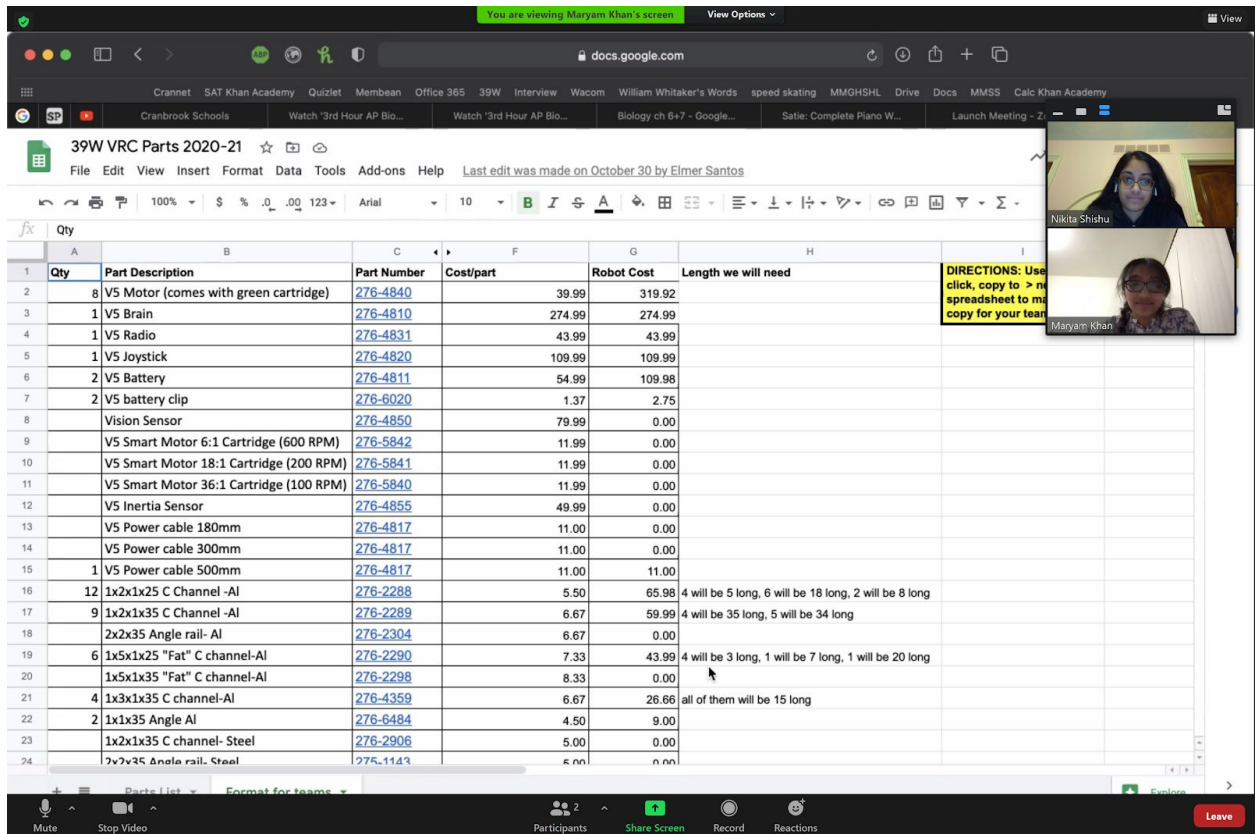
We started robotics in sixth grade with VEX IQ. We were passionate about it and learned a lot. In eighth grade we transitioned to VEX and although the transition was difficult, we were able to understand more and improve our skills. We have made it to states every year, except in eighth grade we only got to regionals.

We have both done STEM outside of robotics. We both used LEGO Mindstorm in elementary school. We also did a program called Girls Who Code in sixth grade. We have done STEM camps over the summer. We believe that these experiences taught us a lot about the world of STEM.

We have faced some challenges as girls in robotics. As STEM is a field mostly dominated by men, it can be harder for us women to be taken seriously. In eighth grade, most of the teams at our school qualified for states, but we didn't. Someone heard one of the boys in

robotics say that since we were just the eighth grade girls team, we probably wouldn't have won anyways and people didn't care about us as much. He ended up being wrong, as we qualified for states in ninth and tenth grade. This is what comes to mind when we think of "Girl Powered." People may doubt our abilities because of our gender, but we rise up and prove them wrong with strength and determination. Sometimes we will have to work harder than others to get recognition. Another thing that comes to mind is convincing more girls to join STEM. Last year, we had three new girls on our team. Our team has always been all girls as we have known each other for longer and we get along well.

Something that is important to us is making sure that all ideas are heard and valued. In previous years, during lab sessions sometimes our team members would just talk for a bit and share ideas. While this helped us build a better robot, it also helped us bond and improve team chemistry and it created a more inclusive environment where everyone knew they could have a voice. This was especially good last year, when we had a seven person team, because some of us didn't know each other very well and three people had less experience. This year, because of COVID and the fact that we are only a two person team, we are unable to do this. Since our lab times are limited, we must be building the robot the whole time. However, we do Zoom calls where we brainstorm more ideas and talk about our plans for the next lab session. Our team chemistry is already pretty strong since we have known each other for five years, but these Zoom calls are still helpful. The picture below was during a Zoom meeting where we came up with an idea for our robot and we were putting the parts we would need into a spreadsheet. This meeting was good because we were able to share ideas and come up with one final idea, and because we were organized so that during our first lab session, we were able to start building the robot immediately.



There have been many women in STEM that were unrecognized during their time. Three important women in STEM were Katherine Johnson, Dorothy Vaughan, and Mary Johnson. They were the architects of an important operation in space history- when John Glenn was launched into orbit. People doubted their abilities simply because they were African-American women. These women proved everyone wrong and their contributions turned around the Space Race and created history. They are important to us because if people ever doubt us because of our gender, we can remember that these women had the strength to persevere and rise beyond everyone's expectations of them. They remind us that as long as you have courage and determination, you can succeed.

This is our team, 39W. We may be a small team, and it will be harder this year because of COVID, but neither of these factors will stop us from continuing to work hard and succeed. If

people ever think less of us because we are women, we will show them that we are powerful and we are not worse than them simply because of our gender.

## Credits

**Entrants:** Nikita Shishu, Maryam Khan

**Team Number:** 39W

**Title:** Grl Pwr