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## My Journey Throughout the World of VEX Robotics

In middle school, my robotics team, The Fantastic Four, was a team comprised of three girls. In an environment filled with boys, we were the only girls to rise to the occasion. We were used to heavily male-dominated competitions in the robotics world. The male dominance at robotic competitions filled us with discouragement, for we saw that so many girls were not being represented.



In our eighth grade year, our team decided to set goals early on to ensure our success throughout the season. With our determination to win and to represent girls in STEM, we won two competitions and the Inspire and Build Awards. We left our school as role models for the elementary girls (and boys) looking to explore the world of VEX and STEM.

In high school, I wanted to pursue STEM in an environment that I would be challenged by my teachers and welcomed by my peers. The same year I started attending the all-girls private school, Elizabeth Seton High School, was when the Robotic Runners was founded. They started the year with ten motivated young women containing students mostly from the Learning Engineering and Design (LEAD) program. LEAD is an introductory pre-career program that furthers the knowledge of students in the engineering field.



That year, they faced struggles ranging from technical problems with programs, building issues, and difficulties collaborating with other teams (especially boys). They rose to success despite these issues by persevering and not giving up when things seemed tough. They earned the Judge's Award twice and were invited to the Maryland State Championships. Since then, the Robotic Runners have been working to instill

values of diversity and excitement for Girl Powered in VEX. Through their hard work and dedication to the craft of building, programming, networking, driving, and documenting, they inspired more students to join the Robotic Runners or find interests in STEM. When thinking about what it means to be a Girl Powered team, we imagine a world that accepts strong women in STEM as leaders and innovators. Through our approach to each season, the Robotic Runners continuously work to exhibit diligent attitudes and a growth mindset to ensure success for our large Girl Powered robotics team. As women in STEM, it is important to understand our abilities, know when to ask questions, and always persist in the face of challenges.

While Seton is already very welcoming to all girls, especially through our daily announcements and school-wide activities, the Robotic Runners exemplify an inclusive environment by inviting all grades and all experience levels to participate in VEX. By doing this, we have a very large and diverse team. It is important to have diversity in our community because it allows for the varying perspectives of different types of people. By having a growth mindset our team understands that our abilities can be expanded upon.

Katherine Johnson inspires our team to be inclusive because of her tireless work ethic and ability to prove herself. Being a black woman in the 1930s was challenging, especially if you were working in a field full of men. With her ability to push herself beyond the limits with complex mathematical equations, she was able to help calculate the trajectory for early American spacecraft. She gives us hope that, by continuing to work hard every day at practice, we will be taken seriously as women in STEM.



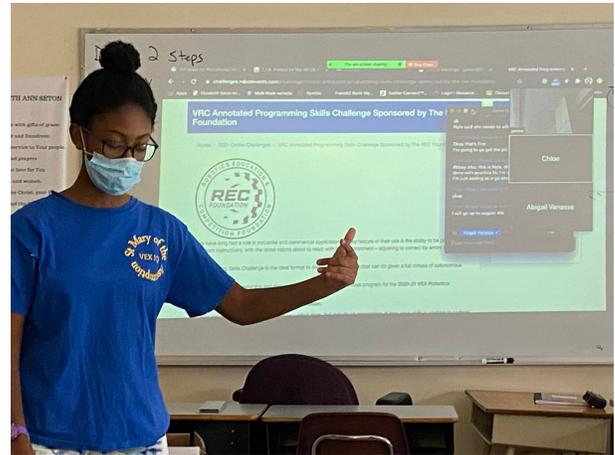
Through last year's experimentation of different roles, team members were able to adjust and see where they fit best. The project manager Janine became the lead programmer along with

welcoming me and Chloe who are new to programming. Instead of programming, Isabel was promoted to the main builder and main scribe along with welcoming me as a builder and scribe. Melissa was also promoted to the lead builder and welcomed new builders Jah' Kei and Meg. Nyla was promoted to the lead driver along with



welcoming the new team member Margaret as a driver. Makayla was promoted to Lead Networking Specialist and has small parts in other roles of the team. While most of the returning team members were promoted in their roles from the year prior, they also dropped roles that were exceedingly challenging for them or uninteresting. By doing this, they leave room for other members to find what they are best at, stick to it, and help the team succeed.

Despite these challenging times, the 2020-2021 VEX EDR robotics season for the Robotic Runners is looking bright. We have been meeting since the beginning of the summer to start building, programming, and planning. Janine has set up virtual meetings for those who cannot attend in person and for separate programmers meetings. Our X-drive robot “Queen Elizabeth” is fully functional and able to complete the Change-Up Challenge.



Girl Powered inspires girls like us to change the world of VEX Robotics for the better. We will continue to work tirelessly to ensure diversity and learning throughout our community.

