2616Y: A Testament to Representation

A “Built by Girls” decal shines across our robot under the bright Kentucky Expo-Center lights.

It’s crazy to think that just over a year ago today we were entering the robotics room for the first time and that in just under one year many of us will go on to college pursuing degrees in different engineering fields.

When asked why we didn’t join robotics earlier, the answer is simple: gender stereotypes surrounding girls in STEM. It isn’t always easy being an all-girls robotics team, but it’s something we have grown to be proud of.

2616Y & WHAT "GIRL POWERED" MEANS TO US

Iris's meticulous nature really shines through as the primary notebooker of the group. Her keen attention to detail and ability to thoroughly analyze designs helps her to perfectly depict the complexity of the design process step by step.

G⚡P

"Being passionate in all that you do-being independent, in that you are driven to prove others wrong."

As the head builder, **Caylin** is the creative mastermind behind the group. Screwdriver in hand, Caylin constantly thinks of new ways to improve the design of the robot. Her design intuition shines through as each new build solution presents itself.

G⚡P

"Looking in the face of adversity with determination, and consistently overcoming society's obstacles."

Drawn to critical thinking problems by her physics, math and computer classes, **Nafessa** loves tying her mathematical abilities to the design process. A writer and public speaker, Nafessa relishes in the judge's interview and scouting portion of a competition.

G+P

"Fostering an environment that values personal- growth and positivity, in which girls and boys work side-by-side to further society."

As a recent Girls Who Code Graduate, **Caroline** has a lot of experience coding, making her a invaluable asset to the team. Her ability to focus even in high stress situations is evidenced by her consistent success as our head driver and alliance captain representative.

G+P

"To step outside your comfort zone and experience something new."

Kaileigh's positive energy radiates throughout the team. When she isn't helping with strategy as a drive coach, she is cheering us on. As our biggest cheerleader, we can always count on her for the motivation we need.

"Putting forth a valiant effort to better oneself as an individual and being inquisitive about all life has to offer."

A natural born problem solver, **Shir** will often help program new autonomous programs. Her ability to work quickly is especially helpful instants before a match is about to begin when a new program is required.

"Trusting in my abilities and knowledge enough to tackle obstacles in a merit-defined rather than gender-defined manner."

Computer science whiz, **Vidhya** finds excitement in crafting new autonomous and skills strategies. Her persistent mindset during competition really shows as she runs through the pit to scout and meet with new teams.

“Uplifting your peers, encouraging them to go above and beyond in their pursuits to show that girls are fearless and capable in all that we do.”

From Student Government to Newspaper, band to dance organizations, we all hail from separate ends of the school. We each have our strengths and our weakness, but together were able to come together to form a balanced and inclusive team in which everyone has the opportunity to shine.

Our team is composed of seven diverse personalities. Our diversity is an asset. With it, we understand the importance of promoting women and other underrepresented groups in STEM so as to bring a unique perspective to the field.

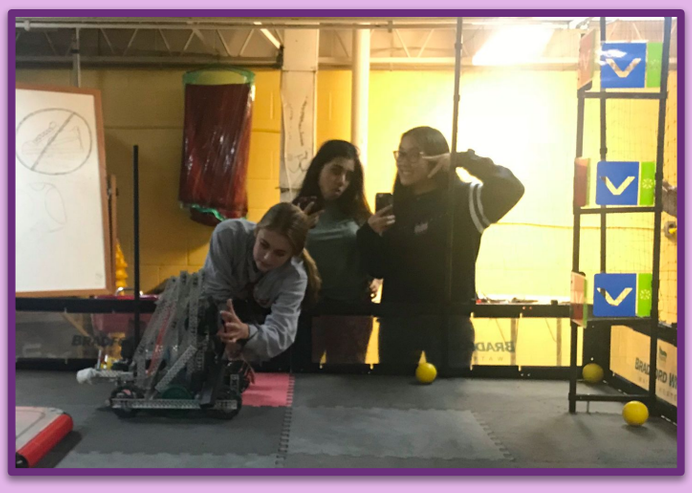
Best of all, we are friends. I say this with the utmost love, but there is no one I would rather lose my mind with at 3:00 A.M, than with my team hours before a tournament is about to begin.

FINDING OUR PLACE WITHIN THE ROBOTICS COMMUNITY

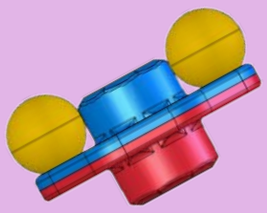
Within our state, our school is known for its highly-esteemed robotics program. The expectation, of course, was no less for us. We constantly pushed one another to do our very best.

Even so, other teams in the state didn't always take us seriously. Realizing this, we dedicated all year towards proving ourselves, not only to our school, but also to our state. At States, it all paid off after we placed 4th/48 in qualifications, had the highest Autonomous-Programming score of the entire competition, took home the NJ State Design Award and qualified for Worlds. It was surreal to see how far we had come as rookies with little to no experience in robotics.

Since then, we've found acceptance and even friendship within the robotics community. Through our social media handles, a middle school all-girls team in South Carolina reached out to us to serve as their mentors.



From time to time, we'll still come across a roadblock. Just the other day, a referee referred to us as "amateurs," in comparison to the rest of the teams from our school. But, what we've learned over the years is the importance of standing up for yourself and proving others wrong. We took his comment and channeled it into doing the very best we could, ultimately becoming alliance captains as well as taking home the design award.



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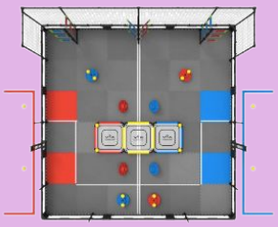
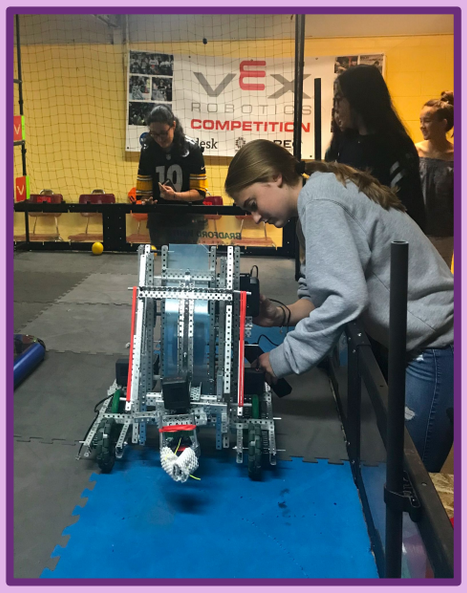


Already we've changed our design multiple times. We kicked off the season with a six bar lift for stacking caps, a flywheel for intaking balls and a claw for intaking and flipping caps. In theory, our robot was great. It could successfully accomplish all aspects of the game. But in practice, it just wasn't conducive to the quick-paced, volatile nature of the game. After placing second to last at our first competition, we realized it was time for a change. We went back to the drawing board and switched out our six bar for a two bar chain lift and our flywheel for a centered catapult. Revised robot in hand, we went into our second competition and did significantly better, ultimately qualifying for the State Championship.



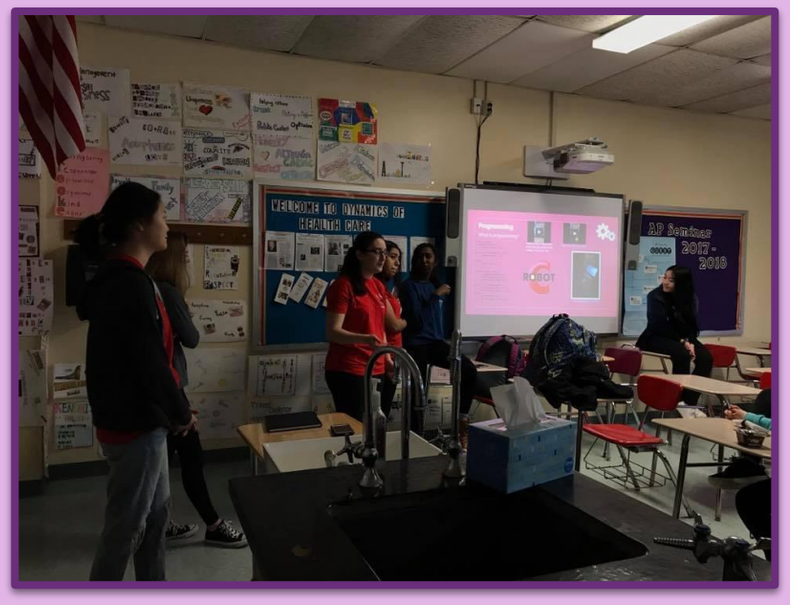
So much of robotics, we realized, lies in the trial and experimentation process. Just as our robot continues to develop, so do we.

From something as simple as learning how to handle a screwdriver to something as complex as learning how to program through AP Computer Science courses, all of us have shown significant growth not only in our abilities but in our confidence.

And this is only the beginning. The seven of us cannot wait to see where not only we, but girls as a whole, can go from here.

WOMEN IN SCIENCE: NEXT GEN

Noticing the lack of girls in STEM within our community, we decided to organize a Women-in-Science presentation. Last May, over forty girls from 4th through 8th grade joined us in learning the basics of coding using Scratch as well as the build process involved in constructing a clawbot. Sensing their excitement, we knew we had done it: we had kickstarted a new generation of young girls.



Through our school's Women in Science chapter, we have taken major strides to encourage more girls to experiment with robotics by organizing an "Intro to Robotics" presentation for all interested members, something that would've given me the confidence I needed in order to join my freshman year as opposed to my junior year.

A LOOK INTO THE FUTURE

As sad as it is that it's our last year in robotics, we are graduating having created an impact not just in our school, but in the community at large. Today, our robotics club boasts three all-girls teams, whereas one year ago, it was just us. Many of these girls look to us as their role models, coming to us for design and programming help. Being able to spread our knowledge and experience with underclassmen girls is incredibly rewarding, and we can graduate, rest assured, that these girls will continue to grow our legacy.

OUR ROLE MODELS

Competing at worlds as a beginner team was an incredibly humbling experience. But the best part was without a doubt meeting a network of girls who, like us, were enthusiastic about robotics. As some of the only girls in our high school's program, seeing a conference room at the Girl Powered Event was incredibly empowering, reassuring ourselves that we were not alone. With determination and confidence radiating off the walls, it was then we realized that it was girls like these, self-motivated and cooperative, who were our role models.

Girl Powered

Along with our advisor, the Girl Powered Initiative has helped us tremendously. Coming in with no experience, watching the “Why Girl Powered” video gave us the reassurance we needed to not give up. Seeing girls, not much older than us, speak with such confidence in their abilities, showed us that we too could follow suit.

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Our feature on @vexrobotics instagram page!!