

Girl Powered Essay

VEX/REC 2021-2022 Online Challenge

Team: Robotics Royalty (#17961A)

School: Twin Rivers Middle School, Buford GA

Participants: Ella Wilson, Misha Gandhi,
Sophia Brown, and Gabrielle Watkins

Essay Title: We Write Our Own Narrative

Our names are Ella, Gabrielle, Misha, and Sophia. We are four girls of the 5-person Twin Rivers Middle School, Robotics Royalty team. However, our team was not always majority girls. After long consideration and talking amongst our initial 10-person TRMS team, we decided to split into two sections of five. This resulted in both our team and a second team: Bearly Logical.

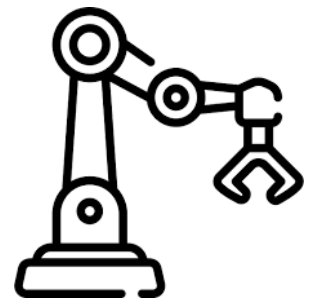


While coming into a unique high school competition world as a predominantly-girl, let alone middle school team, we faced many frightening challenges. At our first competition, we walked into a cafeteria overflowing with dozens of high schoolers with intimidating robots and mechanisms. But, like Oprah Winfrey once said, "Whatever you fear most has no power---it is your fear that has the power." This quote led us to finish in 8th place at our first ever competition against 33 high school teams and two other middle school teams, none of which were majority girl teams. After this, we realized, if we strip fear of its control, we can ignite the true power inside of us.



The girl power inside of us.

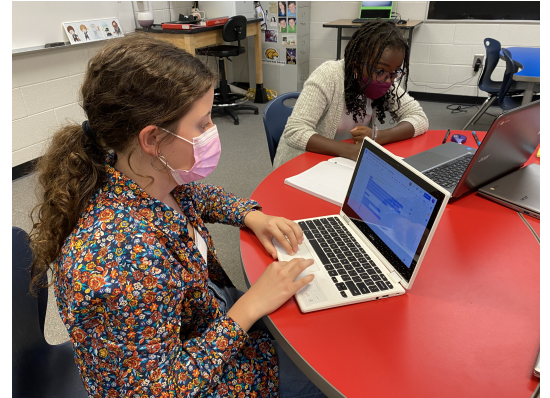
Girl power.



"Girl power" is a commonly used term to describe the remarkable things a group of girls can do. But to us, it means so much more. It means we are limitless even in a society that has excluded females, especially young girls, from industries like Computer Science, Robotics, and STEAM. We imagine that Girl Powered is an opportunity for girls to show and realize their capability in minority-female sectors. Girl Powered means we can voice our opinions in the robotics world and pursue the

opportunities we are often overlooked to earn. It means as a Robotics team of young women, we can inspire the girl power in others, no matter their religion, ethnicity, or race.

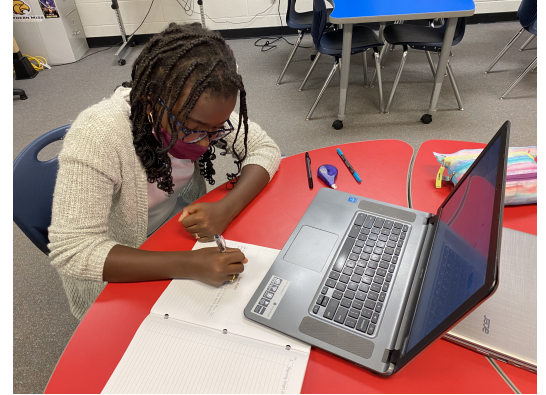
Our capability as a team, leads to the encouragement to attempt multiple roles. We didn't create concrete and restrictive environments where team members were required to "stick to" a single job. Instead, we collectively comprehend our strengths/weaknesses to identify flexible team roles. In our team, we established the chemistry to be adaptable. In the practice room, it was frequent that programmers would build parts of the robots just as designers would strategize programming plans because we believe that there are always different pieces to the puzzle. We were all inspired by female role models who to indudle in this philosophy.



Sophia, the autonomous period programmer, was inspired by Joan Clarke, a cryptanalyst or code breaker in WWII. Sophia started programming in first grade when her friend convinced her to join a coding club or Wiz-kids. This launched her interest in coding, and she later joined First Lego League. Sophia mentioned that, " This experience helped me with compromising and working with others that have different views and opinions."

Ella is our documentor, planner, and engineer. She was inspired by Ada Lovelace, who is a mathematician, and also considered the Founder of Computer Science. In the second grade, Ella was introduced to coding by her mom, the school's robotics coach. She volunteered to help at her school's programming club in 4th grade, and like Sophia, continued to build her expertise in the First Lego League. Ella tells her team that throughout this year's season she, "Learned that we are all going through different things, so we should try to help each other."

Gabby, one of our designers, planners, and documenters, was inspired by Reshma Saujani, founder of "Girls Who Code", a non-profit organization to inspire girls to join Computer Science. She began coding in the 3rd grade at a programming club at her school. Later on, the founder of the club invited her to multiple summer coding camps and Drone Wars contests. From there, her interest in coding, engineering, and robotics expanded. She says, "Through this team, I realized that when we patch together different ideas and people, amazing things can happen. This helped me as a student, a team-mate, and as a person."



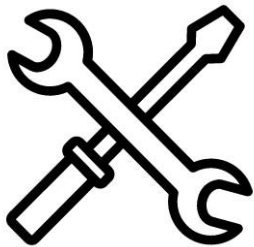
Finally, Misha is our main driver and one of our programmers. She says she was inspired by nobody but herself. She believed that she had to build *herself* up in a tough competition world. Misha started her robotics journey in the 4th grade when she participated in First Lego League. She continued doing FLL in the 5th grade and made it to Regionals with her school team. She could not do robotics in 6th grade because of Covid-19, however, she started doing it again this year, in the 7th grade, with VEX Robotics on the Robo Royalty team. Misha adds that this year helped her to, "grow as a person and unlock new skill-sets".



Our diverse group of girls was due partly to one of our STEM role models and coach, Jason Hurd, the Computer Science teacher at our middle school. Mr. Hurd was very inclusive from the start of the application process. To even qualify for the team, our coach assessed us on skill and intelligence, not race, ethnicity, religion, or gender. This allowed the most skilled people to join the team, not a specific group of students. We all create an inclusive environment between all team members as influenced by our coach. With so many

different girls, a multitude of mindsets and perspectives are guaranteed. And every day, whether in the robotics room or at a competition, we are impacted by having multiple people of various backgrounds and experiences.

For example, when selecting our new drive train after the first competition, we had to consider multiple opinions. We collectively decided our current base was not fulfilling the expected standards. We all had different perspectives on the best chassis. Some team members believed the certain drive trains would not allow easy robot platforming. But other members believed a chain mechanism to lift mobile goals onto the platform was more efficient than elevating the robot itself. Combining these opinions, we decided to rebuild the chassis as the Kiwi Drive Train following the University of Kentucky's engineering guide. This was the best—and most beneficial option for our team.



These are the disagreements that we have on what is best for the team and is what makes us feel like a family. All in all, as a team that experiences disputes, hardships, prejudice, and victories, we want to live by Irene C. Kassorla's motivational words to all the girl-powered young women: "The pen that writes your life story must be held in your own hand."

We hold the power to inspire others and be a leader in a world of followers. And we hold the power to write *our own* narrative that generates what we embody as a team: *girl power*.