



Breaking Walls

Akanksha Maddi and Tracie Luu from Foothill Falcons Team 1000A



Ever since I was young, I was constantly reminded of the fact that I was a girl. People gifted me dolls and Strawberry Shortcake folders before I ever asked for them.

When I first joined the robotics team as a lowly freshman overshadowed by the experience and skill of the upperclassmen, I expected to be shoved off to the side to let the boys take over, as they had done in my previous math and science classes. To my surprise, I noticed how everyone was given an equal chance to contribute ideas. As I became more comfortable building with VEX parts, I was able to contribute more to the team.





In team 1000, we have a very free-form method of organizing our team members. Apart from the programmer, whose role requires special skill sets, there are no set roles in the building process. Each member is responsible for the creation of various parts of the robot, from the basic design, to building, to testing and repair. Even if a member is not a driver or officer, they contribute to match strategies, such as coordinating with alliance members on whether to take a defensive or offensive stance, going down to specific cones and mobile goals each robot will take care of.

Diversity is key to the functionality of a working team. With different backgrounds and upbringings, people develop different personalities, perspectives, and approaches.

These are key to the chemistry of our team, the overall creativity when it comes to problem solving, and strategies in planning, specialization, and the design process. Diversity is what allows for people with practical and down to earth approaches to discuss with those with far-fetched, imaginative ideas, and subsequently merge the best of both worlds to create a better plan. Team members are able to balance each other out.





This is why in our team, each member's value is based not on gender or race, but on merit. Though our numbers are few, the girls on our team are some of our most valued members. In fact, two out of our five officers are girls in a club with a total of five girls.

This is especially why we go out of our way to help inspire younger girls to have an interest in the STEM fields. We appear at events, such as at the local Donlon Elementary STEM day, and talk to young girls who haven't been pressured to drop interest in science and math. By inspiring a love for a fascinating, yet male-dominated field before the ill effects of stereotypes and stigmas take hold in middle school, we hope to continue the growth of our club years and years after we leave it.



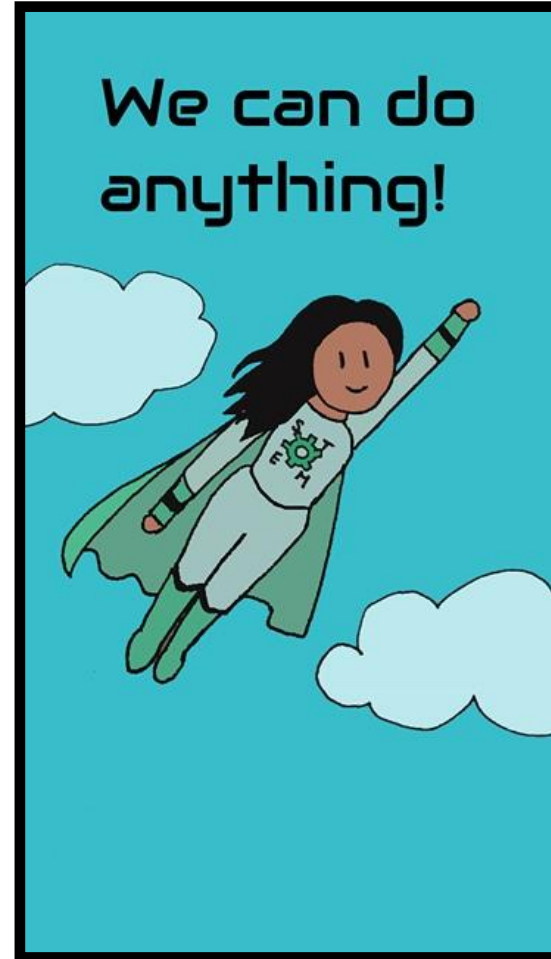


Over the years, I've personally learned much about the engineering process through a hands-on approach that students do not receive through school. Not only was I exposed to a world of building with metal, where I learned about various tools and methods to work with metal such as dremeling and soldering, and the realm of electronics, including learning about breadboards, repairing wires, and arduinos, I was able to learn about perseverance and the importance of problem solving when completing a large project.

More importantly, working as a part of team 1000 has given our members, especially the girls, the confidence to pursue any large project at hand. Even when we lack sufficient parts or we come across a problem that seems impossible to fix within the time constraints, we are able to tackle it with confidence and persistence. Even with low funding and other circumstantial issues, we were recently able to qualify for the Finals in our recent tournament.



Therefore, in my mind, Girl Powered means being able to pursue any task a girl wants to, even in a field where she's the minority. It's being able to support other women when they try new things.





Jackson as she presents a wind tunnel model

This is why my STEM role model is Mary Jackson. As an African American female born in the 1920s, she faced discrimination on two fronts. It is remarkable that she was able to overcome these stereotypes to obtain a career in the STEM field at NASA. She focused on the topic of air flow and its effect on flight. Her determination to succeed against such great odds is astounding. Jackson also worked to encourage future women to follow in her footsteps and join the STEM field.

To me, Girl Powered means having the ability to shape the world to a place where being a girl and smart aren't mutually exclusive, and being able to inspire other women, young and old, to make an impact on the world we live in today.



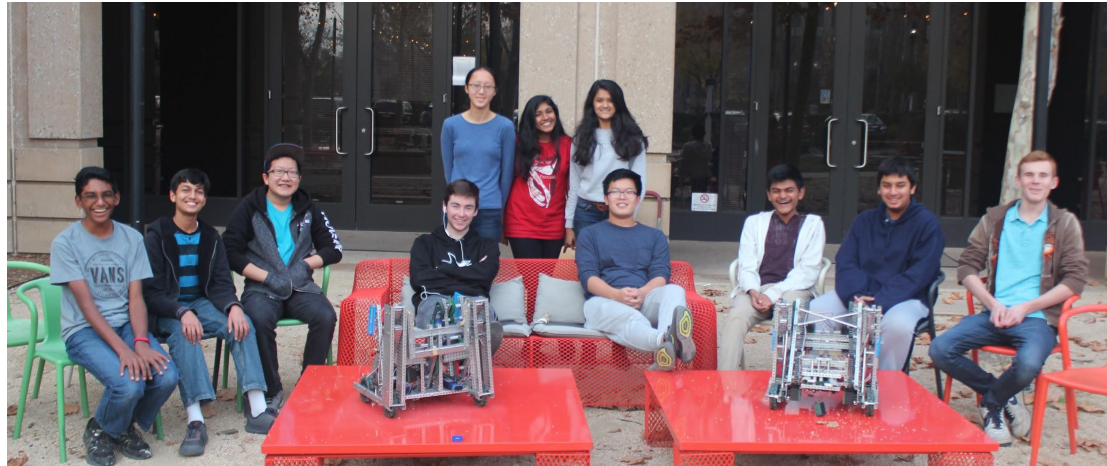
Credits

Title: Breaking Walls

Essay Written by: Akanksha Maddi

Pictures Drawn by: Tracie Luu

Team: Foothill Falcons Team 1000A



Online Pictures:

Title Page: <https://familyshare.com/3442/breaking-down-emotional-walls>

Mary Jackson: <https://www.nasa.gov/image-feature/mary-jackson-at-nasa-langley-0/>