



# Girl Powered

What it means to us...



When we hear the phrase girl powered, the first thing that comes to mind are the words inclusion, diversity and empowerment. As more thought goes into it, we think about the differing perspectives women bring into the STEM field. Being an all-girls team, we approach robotics with the goal to show others that anyone can succeed in the STEM field.

## Our History

Our journey in VEX robotics started off on the Canyon Hills Middle School VEX robotics team. We had a teacher, Mr. Cabase, who inspired and motivated us to join the new club, where he was the advisor. Participating in the Nothing but Net game started our interest in VEX and allowed us to become familiar with the program. During our first year, our advisor taught us the basics of robotics, and as the years progressed we continued to evolve and become more knowledgeable about the engineering and design process. After promoting to high school, we attempted to start a robotics club for the Starstruck game, but the school could not fund both an FRC and VEX club at the same time. Eventually, we decided to create an independent team, and, thus, Bionic Resilience was born.



## The Ups and Downs

Every summer, as the new game is introduced, begins the brainstorming process. Pros and cons are listed, countless concepts are drawn, and decisions are made for what mechanisms should be used. Although it may not always work out or how we want it to, we always start over and are determined to try again. As a team, we may argue like sisters do, but in the end, we're still a family. We respect, accept, and try each other's thoughts and ideas as everyone on this team brings a different perspective to the process, especially with three new members on the team. With a new game, new members, and a new school year, this season has proved to be a turning point for all of us.



## Inspiring Others



In the beginning, we started by reaching out to younger girls in elementary and middle schools. During this, we soon noticed that our goal should not be to just reach out to girls, but to all kids with differing backgrounds. Our goal was not to push men out of the STEM field, but to create an equilibrium of men and women. In addition to giving presentations, we plan on hosting workshops to give kids a hands-on experience. We also persuaded our school to establish a VEX club, where we teach our classmates the basics of engineering and coding.

## Our Role Model

Marian Diamond was a leading scientist who made generous contributions to neuroscience, neuroanatomy, and neuroplasticity. Diamond became the first female instructor of science at Cornell University, then became a professor at UC Berkeley, teaching neurology and anatomy. She taught us that we can do whatever we want as long as we put our minds and hearts to it.



## Our Perspective

As an all girls team, we realized that while it is important to make people aware of the lack of women in the STEM fields, it is more important to show people that women bring a varying perspective that is critical to the success of not only this field but many others as well. In our experience, we noticed that our perspective on the robot's design process and strategy was focused on trying to build a more diverse robot that would be able to do everything. We also realized that other teams, generally male dominated, have robots that focus on one aspect, but have stronger strategies. From this, we learned that we need all kinds of perspectives and views in the STEM field in order to advance in technology.



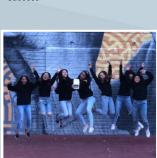
## The Learning Process



In robotics each team member contributed to the design, engineering, and strategy of the robot. This caused us to learn important skills that lead to the growth of our team. Having the members of our team doing various roles was very beneficial. The brainstorming process taught us how to develop. During competitions we got opportunities to interact with other teams and develop different strategies for upcoming matches. Putting everything that we learned together eventually led to our team's success.

## The Future

As robotics taught us important skills, such as communication, teamwork, and problem solving, we thought more about how these skills can be implemented into our future. Through joining robotics, members of our team made the conscious decision to go into the STEM field. VEX has taught us the basic building blocks of the field and influenced them to choose engineering as their career path. Other members plan to use the skills taught through robotics for their own careers.



## Credits:

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