

GIRL POWERED!

Redefining the face of STEM

Changing the World One Step at a Time



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01.

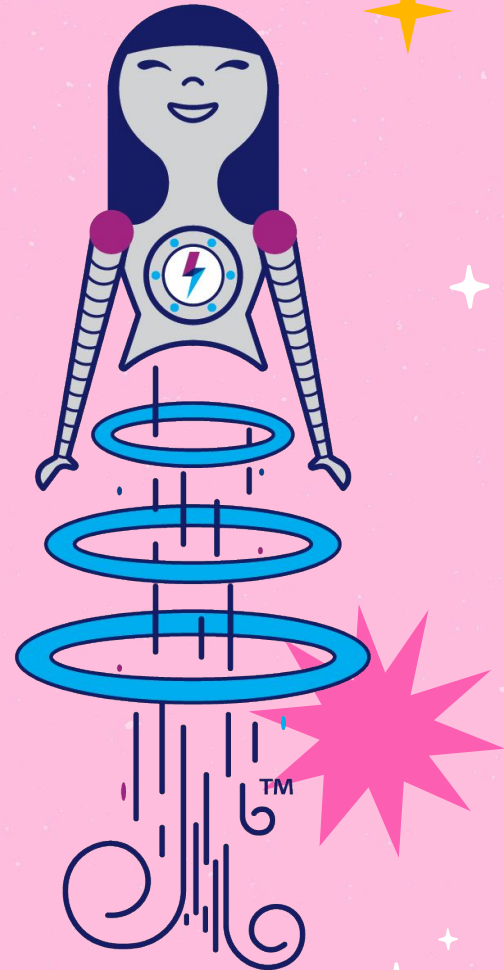
STRONGER TOGETHER

What Girl Powered Means to Us



Girl Power!

“Girl Powered” is a term we have all heard, yet what does it mean? As young women currently facing society’s standards, we strongly support the girl-powered initiative. When we think of “**Girl Powered**” it is enabling women to have the skills to change the world. This world started with men running the society engraved in stone. Nonetheless, women in the past and present are breaking down that stone by fighting and proving to the world that girls have the knowledge to create new ideas like boys. These brave, powerful, determined women are positively influencing and impacting future girls who want to explore the STEM field and career paths. They are paving the path for a more inclusive environment in STEM. In our team, there are 3 girls and 2 boys. Each teammate contributes an equal amount of work, and each member’s opinion/idea is heard and valued. All girls on our team do just as much work as the boys, if not more. Together, our team, **92E Elixir**, has 14 years of robotics experience, and 8 years is done by girls. Without women in the past, we would be incapable of learning robotics today. Each member, boy, and girl, on our team is hard-working, determined, and persevering, which is reflected in our robot.





“If you haven’t failed yet, you haven’t tried anything.”

-Reshma Saujani

02.

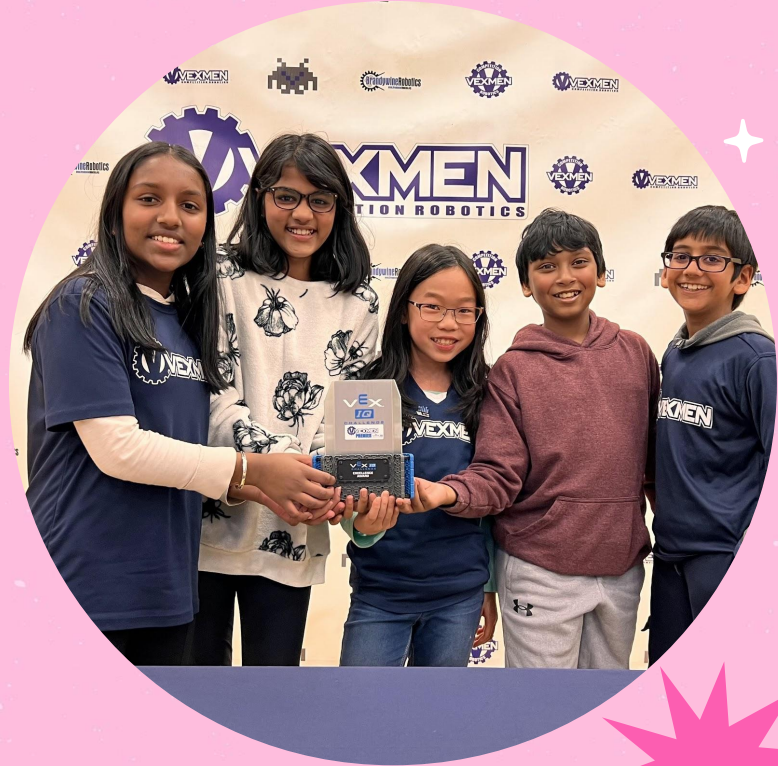
INCLUSIVITY ON **OUR TEAM**

Our Differences Make us Stronger



INCLUSIVITY!

Our team prioritizes and takes the initiative for a more inclusive environment in every aspect possible. Although our team encounters many disagreements at times, everybody has the mutual understanding that our differences and varying perspectives are what strengthens our team. Everybody's ideas are valued regardless of race or gender. Commonly, when women enter STEM fields, they find themselves in male-dominated workspaces and struggle to obtain leadership roles. In our team this is antithetical, both genders are given opportunities for leadership roles, and are fostered to try different roles. Our team is also inclusive by simply having strong friendships with each other and caring and respecting everybody's opinion.



DIVERSITY IN ROBOTICS!

Our team strives to attract a diverse group of students as it allows for more ideas. One significant part of robotics is the friendships and special bonds we create with others. The happiness of going to a tournament and creating special bonds with different teams of all age groups, races, and gender is an experience like no other. The VEX World Championship is a great example of becoming friends with a diverse group of students. At Worlds, we meet teams from different cultures, and through the *robotics language* learn new information. Another way we interact with more teams is by teaching others robotics. In our robotics club, many new members have joined this year. At times, some problems may occur that they can't solve. Recently, a team from our club, 92M, had a base that wouldn't move. We helped them out by calibrating their base, a trick we learned from years of experience. In this event, we taught them how to solve similar problems like this, and simultaneously saw a different aspect of robotics from what the team showed us. Bringing this back into the topic of an inclusive environment, our team can attract a diverse group of students by simply helping, caring, and supporting people.



OUR TEAM



ERIN FONG

This is Erin's 2nd year of robotics, she is the lead journalist. She is in 6th grade.



VEDH KOPPAVARAPU

This is Vedh's 3rd year of robotics, he is the lead programmer. He is in 6th grade.



DIYA SARAVANARAJAN


This is Diya's 3rd year of robotics, she is the lead builder and designer on our team. She is in 6th grade.

MISHIKA RAMPRASATH

This is Mishika's 3rd year of robotics, she is the game strategy lead on our team. She is in 6th grade.

TARAN SOLANKI

This is Taran's 3rd year of robotics, he is the driver lead on our team. He is in 5th grade.





03.

OUR TEAM ROLES

How Our Team Explores Different Areas
of STEM

TEAM ROLES!

Everybody on our team is assigned different roles based on their strengths and weaknesses. Yet everybody gets opportunities to try various roles. For example, Diya is the lead builder, but she still comes up with designs, programs our robot, practices driving and drove in the tournament, and comes up with game strategies. This is just one example of going out of what we are capable of and exploring robotics. Every member tries new roles irrespective of gender, age, and robotics experience and learns vast amounts of information in all fields of STEM, science, technology, engineering, and mathematics. In the end, we divide and conquer to get the work done, and each one of us works on what we are best at. In spite of that, we still help each other during the process. Through that we also explore different roles. Erin is the Journal lead, but still, when she is floundering, any team member will help her write the notebook. Their ideas give Erin a different perspective for her to write better in the future.



Diya is building supports inside our robot. Taran is helping Diya by building a mechanism. Erin is writing the notebook, while Mishika is helping her and creating designs. Vedh is taking the picture.

04. DIVERSITY OF PERSPECTIVE

How Unique Backgrounds Impact Robotics



DIVERSITY OF PERSPECTIVE!

Diversity of perspective is pivotal to our robot's design and our ability to succeed. Each teammate has unique experiences and backgrounds, which heavily influences our innovative robot designs. Our robot isn't built and designed by any one of us, but instead everybody contributes their designs and effort. A singular idea given from someone with a different perspective, it can positively change everything. For instance, this year while building a shooter to launch discs, everybody had different ideas. Most of us were leading toward a magazine and shooter, but one of us thought a flywheel would be better for our robot. They backed the idea with information with prior robotics experience, and our current design is a flywheel. This proves that diversity of perspective brings new ideas to the table. Still, when many abstract ideas are proposed, conflict arises in our team. Although our team has disagreements, we, 92E, have the ability to conquer any impediment.



05.

OUR STEM **ROLE MODEL**



How our STEM Role Model Inspires Us

STEM ROLE MODEL!

Our Stem role model is Mary Engle Pennington, a hardworking, determined chemist and biologist. She specialized in making safe and sanitary processes for preserving and shipping food. She faced many troubles and obstacles but got through. She wanted to learn chemistry, but her headmistress of her school considered it unlady like. But she didn't give up; she requested admission to the University of Pennsylvania to study science. After two years she completed the requirements to earn a degree. The trustees at the university didn't approve Mary's degree because they don't want women in the university. She was instead given a certificate of proficiency in biology. But if she didn't have a degree she couldn't get graduate studies. Faculty members used a rare rule at the university to grant Mary PhD in 1895. Two years later she took a fellowship at Yale studying physiological chemistry. Having come back to Pennsylvania, she was not able to find work. Instead she took a job teaching chemistry at a women's medical college. A few years later Mary was put in charge of a bacterial lab for the Philadelphia Department of Health and Charities. There she looked at milk, especially the milk in the ice cream vendors. She showed the vendors the bacteria on their equipment and told them to boil their equipment to disinfect it. She inspires our team to include others and persevere when things are tough. Like us, she didn't let any problems stop her from completing her goal. She inspired us to try different things. For example, we all like to help each other with our roles and try new stuff. In this team, 92E, we try to include everybody in what we do.



THANKS!

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Resources:

<https://www.womenofthehall.org>

<https://wednesdaywomen.com/engineer-mary-pennington-america-ice-woman/>

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