Girl Powered: Tipping Stereotypes

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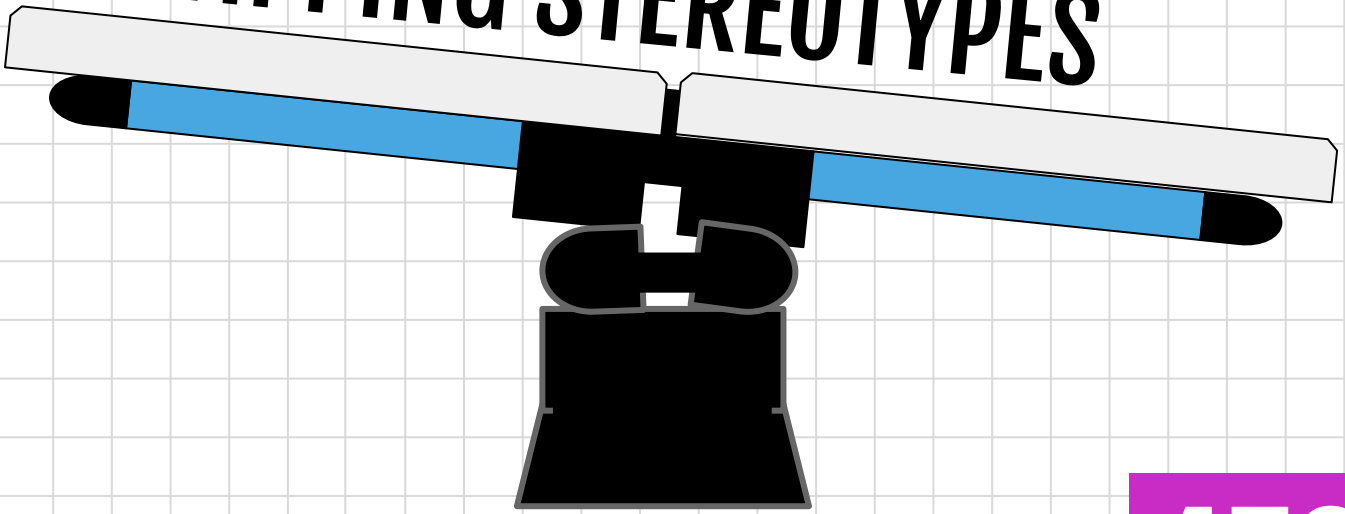
Team Number: 45009Y: Kool Kidz

Location: El Paso, Texas, USA

GIRL POWERED

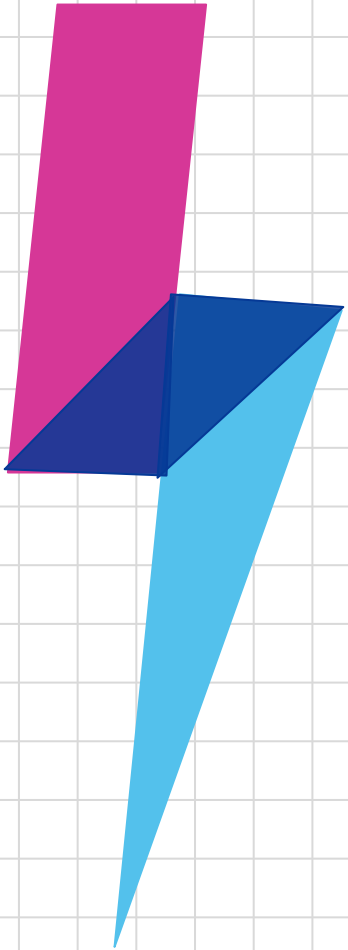
TIPPING STEREOTYPES



45009Y

WHAT IS GIRL POWERED?

Girl-powered is the idea of challenging gender stereotypes in the STEM world. It is an opportunity that gives girls the power and the voice to be represented and supported in pursuing their studies and a career in STEM. As a robotics team from an all-girls STEM school and being one of the first all-girl robotics team in the El Paso region, we have worked hard to break barriers that have been created by a predominantly male field. We have persevered through independent and hands-on learning to understand the complex components behind the robotics competitions, where we often are perceived as a incompetent group because of past ideologies that look down on women and their ability to be logical and critical thinkers. Annually, the El Paso community hosts a girl-powered conference at the University of Texas at El Paso that hosts over 400 girls from all over the region and invite them to participate in hands-on, dynamic learning about the exploration of the broad aspects of the STEM field. Our school hosted this past year's event, and taught and mentored young women in our community about the innovative approaches to STEM education, including but not limited to 3D printing, robotics, and biomedical engineering, among others. Girl-powered is everything to our group because it represents women's futures in STEM, and how our robotics team is directly involved in creating exciting and fun opportunities to recruit young women in STEM careers.



GIRL POWERED APPROACH IN ROBOTICS

Girl-Powered impacts our approach to robotics in the way that it inspires us to work harder than everyone else to overcome challenges and barriers. As an all-girl robotics team, we know that our sisterhood at YWLA is looking towards us as an example of leadership, ingenuity and determination. It has also taught us an expanded skill set in the various roles of a robotics team, as opposed to specializing in only one area. Our approach to robotics has been impacted by the regional Girl-Powered conference, that we have both attended and hosted, that gives us the opportunity to teach and mentor young women about the importance of problem solving and encourage them to pursue careers in STEM fields. We have learned so much from reflecting from the feedback and iteration of the design process.

OUR STORY

YWLA Robotics is from El Paso, Tx. It was established in 2018, and our team, 45009Y the Kool Kidz, began with VEX IQ in our eighth grade year. We learned the fundamentals of robotics as well as established a true passion for it. During our freshman year, we played the game Tower Takeover and won the Judges Award, and were invited to state. Then COVID hit and everything stopped. While our hands-on robotics programs were halted, the Kool Kidz took the initiative to help mentor middle school students through virtual robotics, and our members became OSHA-certified. In our school, we have known each other since middle school, which has allowed us to create close bonds with one another and have similar focuses and goals within robotics. This year we got inducted into the International Robotics Honor Society and it is our team goal to qualify for VEX World. An important person in our team story is our middle school coach, Ms. Rivera. She continues to guide us through each challenge and shows us how to speak up and fight for what we believe in. Kool Kidz is a group of passionate dreamers who will all work toward bettering ourselves and each other, through robotics.

MEET THE TEAM

Danielle Legarda
BUILDER

Danielle is a junior on our team, and this is her third year participating in VEX. She is interested in becoming an architectural engineer and is able to effectively build the designs that our team comes up with.

Sophia Espinosa
ONLINE CHALLENGE SPECIALIST

Sophia is a junior on our team, and this is her third year participating in VEX. She aspires to be a STEM educator. She is a valuable asset in our team, as she is well versed in every category, but mainly focuses on online challenges.

Arlene Cruz
BUILDER

Arlene is a junior on our team, and this is her third year participating in VEX. Her creativity and prior experience in building helps our team to excel and understand the building process.

MEET THE TEAM

Riddhi Patel
TECHNICAL WRITER

Riddhi is a junior on our team, and this is her third year participating in VEX. She is interested in the medical field an enjoys documenting the process as well as CADing the robot.

Yuky Macias
CADER

Yuky a junior on our team, and this is her third year participating in VEX. With her passion for designing and drawing prototypes she was the perfect candidate to execute the role this year.

Jeanette Rivera
PROGRAMMER

Jeanette is a junior on our team, and this is her second year participating in VEX. She was interested this year in learning how to program and being able to diversify her skills.

Sofia Grobova
DRIVER

Sofia is an eighth grader on our team, and this is her third year participating in VEX. She was interested in getting involved in VRC through the mentorship from our team.

STEM ROLE MODELS

GINGER KERRICK

Ginger Kerrick was the first Hispanic female NASA flight director. She was born in El Paso and attended the University of Texas at El Paso. She wanted to transfer to Texas Tech University; however, she had many financial difficulties. She reached out to a physics professor at Texas Tech, and he recommended she visit the school. Following that visit, she received two jobs and $4000 worth of scholarships, which later landed her an internship at NASA. We find her as an inspiration in the STEM field because of how her perseverance gave her the opportunity to pursue a career in space exploration and collaborate with astronauts. She is a strong, woman of color who has set the foundation for other women to pursue leadership positions in the future.

CATHY CHEN

Cathy Chen is an Asian-American who is originally from New York and moved to El Paso in 2013. She is a co-founder of Fab Lab which is a part of the MIT Fab Lab Network and a makerspace that has a focus on education, digital design and fabrication. She has a Bachelors of Art from Duke University, a Masters of Design from Keio University and the CORE certification from the Harvard Business School. She is an inspiration because she has helped to make a space for people of all backgrounds to be able to work together in creating new innovations for our community. Additionally, she is an advocate for young girls in STEM, and hosts the program, Girls Who Code.

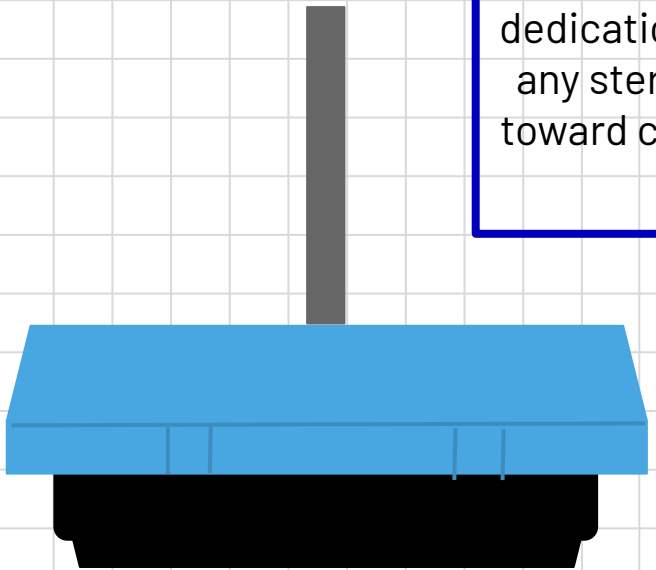
INCLUSIVITY

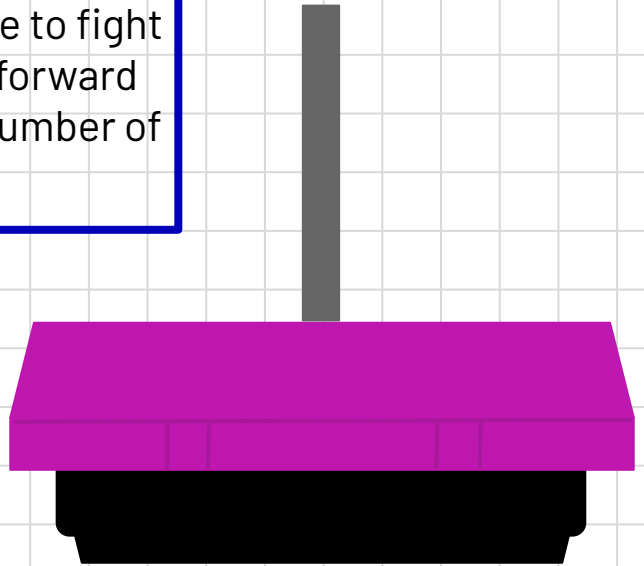
Our high school robotics team is a welcoming space that includes team members with various ethnicities and cultural backgrounds. We encourage our members to support and mentor middle school students from within our community. In our school, our robotics team referees and judges middle school competitions, and have all of the official certifications to do so. After school, we provide support for middle school teams who have questions or concerns regarding how they can improve their robotics team. It was surprising to find that in our community service with middle school students, we have learned so much from them as well. We learned how to be better communicators in explaining the processes and procedures of robotics, which benefits us in competitions when we need to speak with others and clearly communicate our own points and strategies. We also learned how to network with other teams and help each other to be better, within our school and community.

DIVERSITY

Our robotics team is from a diverse bi-national community living on the United States-Mexico border. Within our team, we have three unique ethnicities in our leadership that bring a variety of perspectives and experiences into the way we critically approach problems and challenges. We all work together to solve problems from a design thinking approach. Each of us have different long-term career goals in what we plan to pursue, such as architectural engineering, orthopedic surgery and aerospace engineering, among others. Similarly, we also all have diverse roles and responsibilities on our robotics team which highlight each of our strengths and weaknesses. The dynamic of our group is that although we all have our areas of expertise, we are all team players and support each other.

Ultimately our main goal is to inspire young women to be confident, not be afraid to speak up and challenge themselves in the STEM field. Our team hopes that future generations of young women won't have to question why gender diversity is important because women's roles will be equally distributed with men, and also paid accordingly. We have a dream that with our dedication and hard work, we will continue to fight any stereotypes about women and push forward toward creating a landscape of a higher number of women in STEM field careers.





CREDITS

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