the and the contract of the contract of the second of the

## JOURNEY TO BECOMING GIRL Engineers!

 $\cdot \sim \sim \sim \cdot$ 

here have been allowed and a second a s

### INTRODUCTION

This is the 11462H girls robotics team from Robert O Gibson Middle School in Las Vegas, Nevada. This is our submission for the VRC Girl Powered Online Challenge. Being in a class full of boys and being the only girls team is unique but can also become stressful and difficult to be just like a boy engineer. At the end of the day, it's like you've been a great engineer and didn't even have to be like the boys because there is so much more women can do that men can't because we have our ways that help us to become strong, intelligent, and have our rights. That's how we went from working in houses cooking to being out in the field and working the same jobs men do but better. "Girls should never be afraid to be smart" - Emma Watson



#### WHEN YOU HEAR THE PHRASE, GIRL POWERED, WHAT COMES TO MIND? HOW IS IT REFLECTED IN YOUR TEAM'S APPROACH TO ROBOTICS?

When we hear the word "Girl Power", we think of girls as a team getting involved into things guys think we are not capable of leading, learning, and doing such as military or engineering. This is reflected in our team's approach to robotics because we're the only girl's team the class which means we're surrounded by boys that think that we can't do better than them. But in a competition we proved them wrong by only our team from our school making it into the semi-finals. That day they were mind-blown of how it happened, but it was because of how we didn't lack in the confidence of losing just because we were girls. Us girls have more capability of doing so much more if we believe we can do it and ignore the words of those who don't want you to make it. People in our class often like to make fun of us just because we're girls, and they don't think we will do distinguished work. On several occasions, we have proven them wrong. "Girl Power" helps make us feel empowered because it is us girls who are help changing the world.

## HOW YOUR TEAM TOOK INITIATIVE TO CREATE A MORE INCLUSIVE ENVIRONMENT THAT ATTRACTS A DIVERSE GROUP OF STUDENTS?

Our team has taken initiative to create a more inclusive environment that attracts a diverse group of students because we welcome everyone's ideas and we take the ideas into consideration to help improve our robot. We also treat everyone we work alongside with respect and generosity. We make everyone feel like they are actually a part of our team and that their ideas do matter. We don't treat them as if they are just some random strangers because in the end, they are just giving us constructive criticism. When someone gives us an idea we plan on ways to include it onto our robot so it can help us. Often times, this idea is helpful and is a huge contribution to our robot.



#### HOW EACH TEAM MEMBER TRIED VARIOUS ROLES ON THE TEAM. EXPLAIN WHAT YOU LEARNED THROUGH THIS EXPERIENCE.

In our team, each team member has a role that they take a lead of during class.. To being with our competition drivers which include, Yaresly Agustin and Yarely Rodriguez. They practice after school on Mondays, Tuesdays, Thursdays, and Fridays to improve on driving and scoring point. Next is our journalist, Arionta Teague. In this job she writes in the engineering notebook of what we did for the day and struggles we can improve. In the notebook it also include image or drawing of what we had changed on the robot. We also have our programmer, Ashley Castillo. In order to have the robot move we have to program that's when our programmer comes in with putting in codes in the computer to have an autonomous and driver control. Finally we have our builders, Briana O, Yarely Rodriguez, and Yaresly Agustin. When it comes to building we work to get it done and not procrastinate. We chose to have 3 builders because we have experience of building to make things quick and also with someone being absent we have two other builders to help one another.



### HOW DO YOU BELIEVE DIVERSITY OF PERSPECTIVE CHANGES YOUR ROBOT DESIGN, YOUR TEAM CHEMISTRY, AND EVEN YOUR ABILITY TO SUCCEED?

The diversity of perspective when concerning the robot design, team chemistry, and ability is quite positive. All of our team members have very different personalities, sometimes clashing, and thought processes which makes for some comparatively different designs. We all agree that we will be objective when it comes to making decisions that will be the best result for our robot. We rate designs based off a matrix that we place individual scores for each section. Examples of what we would give scores on would be information given on the design (materials, lengths of items, etc), game manual qualifications, and functionality. The team chemistry is one of the best I've seen. Due to our divergent personalities, we all bring our own flavor to the team, and we all show respect to each other. We joke around, yet take our work seriously. We each have our own roles that reflect what we are best at.



# WHO IS YOUR STEM ROLE MODEL AND WHY? DOES THIS PERSON INSPIRE YOU TO HAVE A MORE INCLUSIVE TEAM/PROGRAM? HOW?

Our STEM role model is our robotics teacher, Ms. Pinero, because she works hard to help us get better in preparing for any competition. Also, because she gives up her time. What I mean by that is she stays as long as she can after school to give us time for us to finish building our robot for a competition that we may have the next day. Not everyone would give up their time but our teacher does just so we can become successful one day. Ms. Pinero inspires us to be more inclusive into the engineering by challenging us into trying something new like. For example, we had our first competition awhile ago, and many of us were afraid to talk to our alliance because, of course, they were high schoolers. But with her telling us to have confidence and not be scared to talk about what to do in our upcoming match, we were able to overcome our fears and have triumphant matches. Now with current competitions, we're not afraid anymore. We enjoy meeting people from different schools and discussing strategy with alliances.

7

#### CONCLUSION

In all our endeavors, we have strived for excellence. Our achievements are reflected upon our work and exigent applications. 11462H is extremely thankful for all the opportunities we have been given in order to succeed and become the very best we can become. Being a girl is empowering, and our team is glad to be a representative for girl power in our school. Our team has given our every thought and promises to robotics. Again, it may be difficult to be an all girl's team, but we are ultimately glad to have this experience. Being a girl engineer makes you face problems you had thought you wouldn't need to face.

