



Girl Powered!



My name is Kallysta Ray and I love STEM/STEAM. I was always interested in STEM related things even from a young age. I was fortunate enough to have family that was educated to help me stay interested and informed in these areas. In middle school I tested far above the benchmark in math and this helped push me in to wanting to move forward into STEM. I am sadly one of few upper class girls to have an interest in STEM, but I plan to continue on the course of STEM into college.

Middle school was the first time my school was introduced to robotics, this was in the FIRST LEGO League. Michele Giovia was our coach and a great mentor into STEM. I joined this my 7th grade year and in 8th grade we made it to state. We didn't rank in the top, but we were told that we were one of the judges favorites. This started a long standing tradition for Tonasket.

There was one other girl on my team that year, but then she dropped the program. When I moved up to high school there were a lot of great opportunities that I was able to take advantage of, and I did.

High school had many more opportunities especially through the GEAR UP programs and the courses offered through Central Washington University. I have attended summer camps and classes at CWU for many years now earning college credits as I went. I had many wonderful experiences as well as a few bad ones in my journey through Stem. One of the best benefits of the programs I attended was the friends I made along the way. Many of these friendships are ones I will cherish for years to come.

At the same time I was entering HS the middle school developed a robotics class instead of an after school program. The new program, instructed by Nathan White, allowed many girls to explore the world of VEX IQ. The HS VEX VRC program continued to be a male dominant program even when Mr White started the HS robotics class.

This year a HS senior, Michael Gonzales, created a VEX IQ team in the elementary as his senior project. He has two teams of 4th graders competing in the IQ competitions this season. This especially exciting as there is an all girl team that is planning to continue on in robotics.



There has been a robotics program in the elementary as an activity, but continued interest may lead to an actual club or class being formed. The hope is to have a more defined program that spans all three education levels.

As well as robotics I joined the RECON astronomy project under the guidance of Ms. Bjelland. I have been in the program for three year and have had some great learning adventures. One of the big ones was a trip to eastern Oregon that I had to win a spot by writing an essay. In the essay I talked about how to get more people involved, especially younger girls.

When people started joining robotics, many realized that it had a lack of girls in it and it wasn't really being pushed to get more in it. The area we live in is not proactive in getting girls into STEM related areas. It is very rural and many girls, unfortunately, have not realized their potential. There have been many who attend the functions, but do not get the hook that pulls them into the fields.

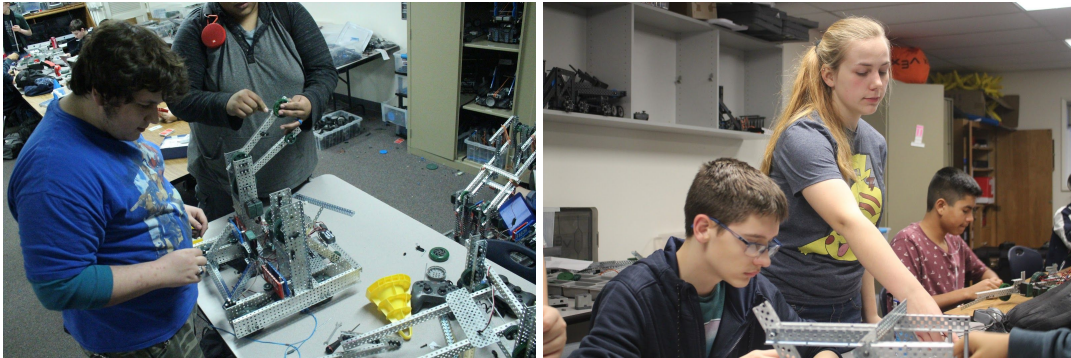
This year we had our first official Girl Power Event in Tonasket. At this event everyone seemed to be very timid and show a lack of interest in the beginning but by the end almost everyone is constantly asking questions about different fields in STEM, asking why girls are as involved, and seem to have a lot more confidence.



My time in robotics has helped me with my anxiety, confidence, and expressing my ideas. Robotics is a big reason why I push myself to become better, it inspires me. Which is why hearing the words girl powered means so much to me. I want to help as many girls as I can to pursue their dreams and not feel held back because of their gender; I used to be one of these girls. I realized most of the STEM fields seemed to be male dominated and it wasn't necessarily normal for a female to go into one of these fields. Being a girl is not a something to hold someone back, it should empower them. There are many smart, kind women out there that are doing a lot for the world. Girl power is what makes me who I am, girl power means constantly improving, learning, teaching, and problem solving.

The Tonasket Robotics club was formed in Oct of 2017 marking a huge leap of faith on the part of the school board and the student body. We will be the second largest non-athletic club in the school behind FFA. Three people on my team are in charge of running the club and its brought a whole new feeling to robotics. I have four people on my team, Zeke Silverthorn, Michael Gonzalez, Amaan Curnal and myself, Kallysta Ray. Amaan is president, Zeke is vice president and I am treasurer. We all have different roles on the team and have all dabbled in each area of robotics. Zeke and I build, I do most of the programming but Zeke and Michael help me solve problems in the program or help out if i get overwhelmed. Amaan likes thinking of

strategies and thinks of how we should tackle matches with different types of robots. We all work together and communicate well, but we are all very different people. Having a group of different types of people actually make robotics easier. When someone is having problems with building or programming anyone of our teammates can help because we all tackle things differently. This means as a collective we are very good at problem solving. My team is team 3183A, at our school we have 7 other teams and they are also a major help to all our success. We work with each other all the time, give a helping hand, and helping each other with solving programming and building issues.



Sometimes my team has difficulties because even though we are good at communicating with one another in person we have difficulties getting information to one another over text. If someone isn't at practice and they don't message someone there they won't know until the next day or so. This can cause arguments between us, but if it last more than a few minutes we call an emergency meeting and talk it over with the whole team and everyone explains what they need from each other. The meetings last about 10 minutes and we have never left one before everyone was happy. I believe that we get along so well because we have known each other for years. Michael, Zeke, and I have been going to robotics summer camps together since freshman year. We started out team freshmen year and Amaan joined us; we've always been a team.

Everyone on my team is very creative, we all have good ideas. To help figure out what ideas we should use we all sit down and talk through it with the team. We ask question like "How long will it take to build?", "What parts will we need?" and "How will this push us to be better and do better?"

Left Picture: (Left to right: Zeke, Michael, Kallysta.)



Right picture: (Amaan of the left working with Alexis, from another team)

My STEM role model is William Scholten. William Scholten has a huge heart, he pushes others to do their best, and he doesn't take no for an answer. William has changed my life like no one else. He has inspired me to continue in robotics, helped me help other girls get inspired, and has taught me to always push the limits of expectation and break through my limits. He has helped inspire more girls into the STEAM field than anyone else I have ever known. William has been a big part of my team's growth as well; helping my team grow closer together and bond over the years. He's always helping people in robotics, no matter what, whether it's coding, building, or journaling, he will always make time to help others. All of us look up to William and want to be like him when we grow older. William is the reason I want to continue robotics after high school and become an aerospace engineer.

