

# Robotics Past, Present, and Future



Greetings from Liberty Christian School in the year 2017. In 2017, there was no robotics program and nobody knew if one even existed. There were Legos, computers, Knex, and Erector sets.

Then one day, a parent began to explore the options for students to learn

more about STEM. In the late summer of 2017 robotics became a reality for five students, four boys and one girl. That's me, Hannah.

I was the only girl on the team. This had its advantages and disadvantages. The boys mostly asked me to get things for them or to clean up stuff. The boys really didn't think much about me being there and often did their own thing until one day the coach asked the boys to do some documentation in the engineering notebook.



One of the boys responded with the comment, “Can’t Hannah do that?”. Well... let me just say that never happened again. My coach quickly stepped up to my defense and told the boys that I was not their secretary. The whole dynamic of our team changed that day. I became one of the main coders last year and therefore did not do much building or driving. We ended up having a very successful year with a great STEM project and went to the VEXIQ World Tournament.



That was such an amazing experience. I listened to so many motivational speakers who wanted to encourage the next generation of young kids to reach for the stars. One person in particular that stands out in my mind is Ayah Bdeir. We have chosen her as our STEM role model

because she was brave and found a way to make her dreams come true.

She is a female that had a dream and didn't let anyone stop her. I am sure that her girl power found it necessary to include men in the making of her Little Bits along the way but she did not let them take over her project. She had a desire for electronics to reach the hands of all children, male

and female. She did so with the invention of Little Bits. They are like an electronic version of Legos. They are so cool! She had done it, she stepped into a world where men mainly dominated and made herself known.

At the VEX IQ World Tournament she stood before me receiving the 2018 STEM HERO award and was inducted into the REC Foundation Hall of Fame for her personal and professional contributions to young people. Ayah said that the power of “electronics should be in everyone’s hands so that anyone can build, pro-type, and invent”. In 2014, Popular Mechanics recognized her as one of 25 makers who are reinventing the American dream for her creation of Little Bits. Little Bits were created so that at the simplest level children and adults can play with lights, sounds, and sensors without any previous experience. How cool is that? I was so inspired by her that I couldn’t wait to get back to school to tell all my friends about it! From that day forward everyone wanted to join the robotics team.



Hi, my name is Elizabeth.

Let’s jump forward to the summer of 2018. I am one of the girls that was touched by Hannah’s enthusiasm of robotics and her trip to the World Tournament.

This summer LCS began enrollment for its next robotics team. Three of their original teams members were not

going to return in the fall. After having the first year behind them the LCS robotics team was ready to recruit for year two. This year we have grown from one team to three teams. Guess what the boy to girl ratio is this year? I will give you a hint.... It is not 4:1. It is 7:7! We are equal in number. When we use the term GIRL POWER we do not stress that we are better



than the boys. We just want to encourage other girls to take the step into the STEM environment and see the many fun opportunities that are there for them to try.



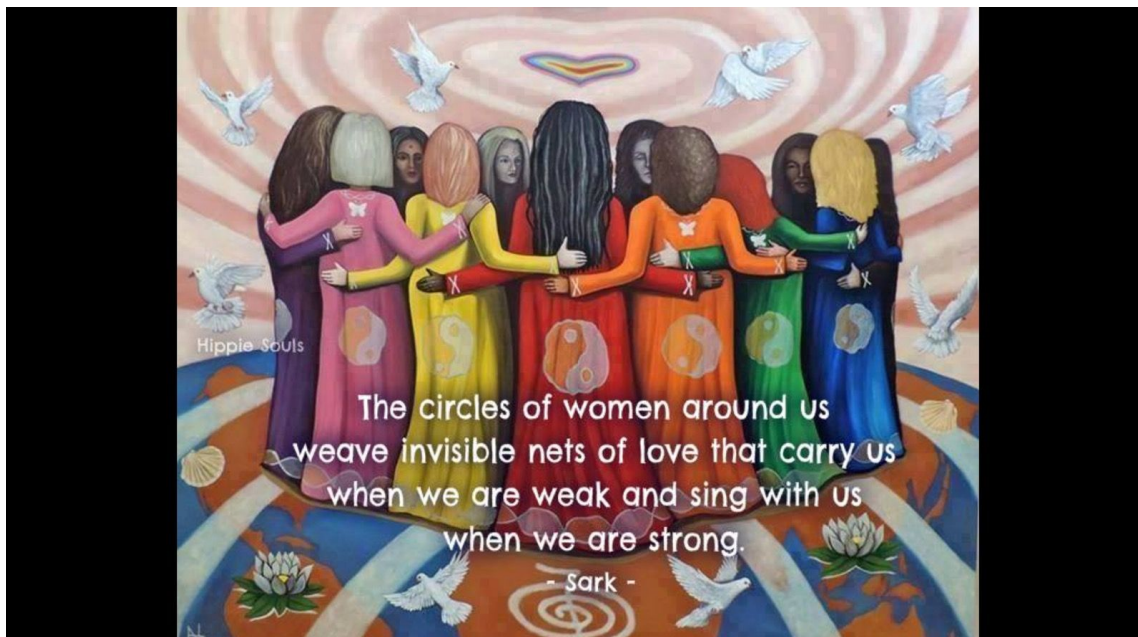
This picture shows the great support of our families. Without them, none of this would be possible. They support us and our coaches. They come to all of our tournaments and encourage us even when we don't get a trophy.

We have as many girls interested as we do boys. That is a great feeling to be in a group of equally diverse students. Our coaches make sure that each of the students are equally challenged in all aspects of the program. We all participate in brainstorming, building, coding, driving, and working in the engineering notebook.



We all take turns at doing everything so that we know all about our robot and how it was designed and built. Some of us are stronger in certain areas than others, but we continue to encourage each other to learn and grow. Our coaches make sure that there is never a job that is labeled as a boy/girl job and therefore we are all treated with equal challenges. Our coaches really do rock ( by the way, we have two female coaches and one male coach)!

Now let's travel to the state tournament and beyond... hopefully, the summer of 2019 will bring us even more excited participants and our teams will grow even more as more girls are empowered to step out and feel welcomed to join this crazy, fun, mind challenging, afterschool world known as robotics. We are beginning to understand that it is about the journey and the things we learn and take with us along the way.



**United we stand, divided we fall....**  
**Girl Power**

# **Girl Powered Online Challenge Credits**

**“Robotics Past, Present, and Future”**

**Submitted by:**  
**Hannah Kraus - 5th grade**  
**Elizabeth Aker - 5th grade**

**Team:**  
**21117 B**