

My name is Heather Skiffington, and I'm writing this for my team, SPC Bots Bosco. I am from Saint Peter's College, in Palmerston North, New Zealand. I think at our school, equality and diversity is very important to us and being a girl in our robotics club, it has been eye opening, seeing the importance of these values in action.

Robotics, being a difficult sport, requires many abilities; innovation, unique thinking, and a wide array of different views and perspectives. Of course, achieving this takes time and intelligence. This is why my team and I think that what Girl Powered stands for is so important - to create an environment perfect for great ideas. An inclusive environment, one where people can still have differences like race and gender and age, but a few key similarities, like love for learning, respect for those around us. Those similarities will bring us together, to form a community that is ever-expanding and able to help all kinds of people to enjoy robotics in a safe and strong learning environment. This is why I believe that the Girl Powered initiative is vital to create a secure community devoted to learning, respect and compassion.

When I first started robotics, I was year 7 (6th grade), and I saw my big sister Anna do it the year before me. She had enjoyed it a lot, so I decided to give it a try. From the get go, I found programming quite challenging, but as time went by and I practiced more, it got considerably easier. Building, however, I enjoyed immensely. Finding parts that fit, planning for an effective design, and reinforcing the robots' stability; that was my forte. Even though I disliked programming, the good thing was that there were other options. I didn't always have to program because of the vast array of jobs to be done. I loved driving and it has been awesome seeing my driving abilities grow throughout the years. It was really helpful to have such a wide variety of options in what to do, because it allowed us to structure our teams in ways that everyone did a fair share of the work and did as little of the things that weren't their strength as possible.



A match was being scored (Heather and Laurie)

When I think of the phrase “Girl Powered”, I think collaboration, I think unity, and I think equality. In an age where so many things are going wrong - if we’re all being honest - like climate change, mass extinction and the high likelihood that World War 3 is upon us, we need our strongest minds all working together. This means people that can make a change. Not people chosen because they look official, or professional, but people that are smart and innovative, regardless of gender or age or race. We can create a future for our children and theirs that is less polluted, sick and impoverished than our generation, and those before us. Girl Powered tells us to speak our minds, contribute to matters that are important, and above all; think. Use your brains girls. We can use our intelligence in the STEM fields to create inventions to make Earth a better place to be.

In previous years, creating the STEM Project for my team has been really fun for everyone involved, because we all added one of our own ideas to the plan, and combined them all. In doing this, we created projects that had a little bit of everyone’s thoughts. Everyone in my teams have all really bonded, because we have all had to collaborate with each other, and make the situations we have had work for all of us. We couldn’t just ignore one person’s ideas, because that would hinder all of us, so by processing each idea, we could determine its value, and build on it from there.



Two St Peter's teams collaborating (Teams Bosco and Apollo)

Our robotics club has worked on creating more diversity in our student population, and we have done a few things to get more people interested like: hosting and organising girl powered events (credit to my big sister, Anna, and Jorika Bonkowska), visiting local primary schools to share robotics with them, and even visiting the festival of cultures hosted in Palmerston North Square with our robots. All these things bring in new and different people, with great thoughts and even more willingness to learn. When my sister first joined robotics in 2016, there were around 4 or 5 girls in the entire club which was maybe 40 strong. With the promotion of girl power, we have proudly raised that number to 11, in 2019. All we had to do was show how much fun robotics is to the girls at our school, and, of course, we found young women ready to learn and compete in robotics.

The STEM role model I personally look up to is David Attenborough, a world renowned zoologist, who narrates and films nature documentaries. I've always been interested in life sciences, especially zoology, biology and microbiology, and seeing him on TV was so fascinating. Travelling the world, studying species of animals, even having species named after him; that made me want to grow up and be like him. I think with modern technology, we can do incredible things, explore places no human has ever dared to venture, and by developing our robots, we can do those things safely with their assistance.

My team consists of three girls; me, Zöe Moore-Smith, and Laurie Cao. We created this team quite late in the season, maybe halfway, because the previous team, SPC Bots Marcellus, was getting too big for everyone to have

something to do. There were 6 girls in it, so we decided to split in halves for productivity's sake, and continue separately. It ended up working really well, we got a new design book and all took turns documenting our progress. The robot began coming together really well, all of us working to create a sturdy base, me making the arm, and Zöe creating the claw. The claw took a lot of work to perfect, because there were so many things it needed to do, and we had to make it as functional as possible. Thankfully, our designs ended up being successful and got us into the finals at nationals. Even though we didn't win, we learnt so much valuable information on the way.



The team with our robot at nationals (Laurie, Zöe, and Heather)

I'm so fortunate to be able to receive opportunities like travelling to America with the other qualifiers from St Peters, and volunteering at the world championships. I honestly think volunteering will be an incredibly fun experience. Doing robotics, displaying the Girl Powered values, and travelling to the other side of the world is one of the many things I am able to do because of girl power. Working together, us guys, gals and non-binary pals, we can change the world. We can and will speak our minds, do things that matter, and as I said before, think. Thinking of ideas that will save the world is the only way we can even begin to save it. Thank you.

## **Credits**

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