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What Drives You?

My drive is to serve people. I love science and technology and I'm developing that interest in order to serve. My science project in 9th grade helped me discover my passion. I am concerned about climate change, so I decided to do my project on reducing human impact on the environment. I won 3rd place at the Central Utah Science and Engineering Fair for the project in which I designed and tested a prototype to convert power plant waste heat into electricity using Peltier cells. Using waste heat to generate electricity could lessen the amount of limited natural resources used by power plants as well as reduce carbon dioxide output because power plants could generate the same amount of electricity with less resource burning. My prototype successfully generated electricity. For the first time, I realized that I could use science and technology to actually make a difference. This realization drove me to find more problems to solve and learn more by taking AP classes that offer a deep level of learning. My drive was recently recognized when I was a semi-finalist in the Sterling Scholar competition in the science category.

Throughout my time taking science, technology, and math classes, I noticed the STEM gender disparity because there were few girls in my classes. Far fewer women than men pursue STEM as a major or career even though they score similarly in STEM in elementary school. Some of the factors that may explain this gender gap include: negative stereotypes about people who pursue STEM careers, societal sexism (implicit and explicit) that prevents young girls from pursuing STEM, and few women peers and mentors.

Four years ago, when I was offered the opportunity to create and teach a course on robotics at a summer camp for girls ages 8-12, I knew I could use technology to serve by contributing to closing the STEM gender gap by opening doors. The camp was sponsored by InsideSales.com (now Xant) and was a week-long STEM experience for girls called Girls Code. I volunteered at the camp for three years starting in 2017 (I

planned on volunteering in 2020 but Girls Code was cancelled due to the pandemic). My course focused on building and programming a robot to complete a maze. The purpose of completing the maze was to rescue an animal, because I wanted participants to know that technology is a tool that can make the world better, and not just a tool for entertainment. The camp focused on creating a positive and supportive environment for girls to pursue STEM.

My current plan is to major in Bioinformatics or Molecular Biology at BYU and become a research scientist. I might choose Bioinformatics because it would allow me to use computerized analysis of large data sets to improve medical interventions. Or I might choose Molecular Biology because it would allow me to treat and diagnose disease. Whatever I do, I will continue to be fueled by my passion for serving with science and technology.