By the second week, the question had been seared into my brain: What is the most efficient dumper design for the robot? It was a topic that occupied even my dreams as our team frantically tried to design a successful system for the next VEX Robotics Competition. The solution seemed to be beyond our grasp until my attention was caught by a pickup truck emptying its truck bed at a construction site. The mechanism articulating the truck bed fascinated me, and I was struck by the idea that such a system was the perfect solution. Upon researching and building the prototype, I discovered that this system was extremely fast and capable of meeting all of our requirements. This resulted in the implementation of our VEX robot, which was affectionately called, “The Dump Truck.”

This is one example of how robotics has contributed to my appreciation of engineering in the world around me. Having grown up without the opportunity to challenge myself beyond the classroom, I find that robotics provides a unique, challenging opportunity to truly experience engineering. My first-hand experience with applying math and science to design and implement the various elements of robotics has helped me become a student who can think beyond the two-dimensions of a textbook. I have become more adept at learning abstract concepts, visualizing possibilities, and designing solutions. It played a crucial role in the development of my aspirations to become an aerospace engineer and has resulted in various unique opportunities.