Career Readiness Online Challenge

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VEX robotics is an amazing company and opportunity for many reasons. It helps students of all ages to understand STEM and its uses, it helps bring interest to technical careers, it helps people to learn the engineering design process, and it even helps to prepare students for their very own careers in the future. To prove this, we interviewed someone from a technical occupation to ask how their knowledge of and use of the design process compares to our very own; the one we always follow when we make our own robots. Our physics teacher informed us of one of his old friends who was studying to be an engineer, so we contacted him.

The engineer we interviewed was Mr. Matthew Brumburg. We decided to interview an engineer due to the fact that multiple members of our team were interested in the career field. Mr. Brumburg was a product design engineer technical specialist for the engine company called Cummins. Engines and combustion were also an interest to the team, so this career suited our needs well. We learned that Mr. Brumburg centers most of his time working on improving the main body of engines that the company produces. He was a member of the base engine team, so he worked on cylinder blocks, heads, gear coverings, alternators, camshifts, and things of the sort. He told us that he uses software and CAD to edit designs to try and find ways to improve upon them. Then, we asked about his uses of the engineering design process, and as it turns out, he follows the same fundamental steps as we do. These steps are to ask and identify the problem, research the problem, imagine and develop possible solutions, plan and select promising solutions, create and build a prototype, test and evaluate the prototype, and improve or redesign as needed. He followed each of these steps when developing something new, or steps 4-7 when trying to improve upon an already existing design. We follow the design process in very similar ways; going through each step until we have something made, and then repeating a cycle of steps 5-7 until we are perfectly happy with the final product.

VEX robotics has prepared each and every participant for a better future and future career. Evidence from professionals in STEM careers shows that all of the work we are doing throughout the program is seriously relevant in the real world. Most importantly, we will have a much better understanding of the engineering design process going into college or future careers now that we have participated in the robotics program. VEX prepares all of its members for a better future.