

INDEX

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Table of Contents*

Slide One - Our Company of Choice

Slide Two - Resources to Research This Company

Slide Three - Engineering Design Process Used By Professionals

Slide Four - Their Engineering Design vs. Ours

Slide Five - How VEX Prepares Us For Future Careers

Slide Six - Summary pt 1

Slide Seven - Summary pt 2

Slide Eight - Summary pt 3

Slide Nine - Credits

*Click the title of any slide to quickly go to that slide

Our Company of Choice

We chose to do the company INDEX because it's close to home for our team. We were fortunate enough to have the opportunity to visit their manufacturing plant and even were led on a tour. INDEX is a German American company that manufacture and engineer machines that create parts specific to customers' needs. We were inspired by both the more recent technology and the old stuff, too and thought it was a great representation of what robotics was all about.



Resources We Used to Research This Company

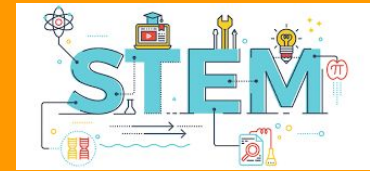
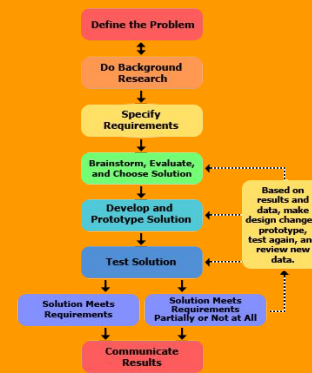


The best way we learned about this company was by visiting their location and talking to professionals who work there. We got a private tour of the devices used to measure parts and the machines themselves. This allowed us to ask questions and be intentional about getting the answer to questions that related to the things we were working through in practice. We also used their website to get a better idea of their mission statement and any statistics we may have missed when we initially visited their facilities.

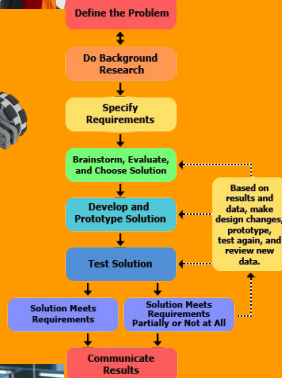


How the Engineering Process is Used By Professionals in the Workplace

One of the workers we met while we were touring was responsible for replicating a client's design and traveling to demonstrate his products. If the design he is given is unclear or contains pieces he has not used before, he might have to make adjustments to what he had so far and over and make changes to his existing prototype. Another main part of his job was to share it with his clients and communicate his end product his bosses and other colleagues.



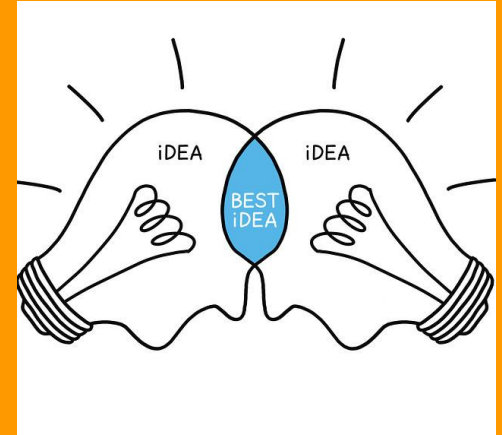
Their Approach to Engineering vs. Ours



The use of the Engineering Design Process has many similarities across all fields. In both VEX and the professional world we have to work together with a team to solve problems and share our findings. The way we do these things is different, but the basic principle is the same. We use pieces and put them together in unique ways to find the best solution to a problem. We use the work of others to improve our own and make changes that others can use as inspiration as well. We repeat the steps of modifying, testing, and evaluating over and over until we get the desired result.

How Has This Prepared Us For Future Careers?

In our future careers we will need to work with teams of people we may not agree with but will need to work peacefully with anyway. During our competitions and practices we also had many problems and challenges we had to overcome and this required a lot of qualities useful in the workplace. It has taught us resiliency and what it takes to be the best. It has also shown us how to have a passion for something while learning.



Summary pt 1

We arrived and were dropped off at the front entrance. We were all impressed with the overall sleek and technical feel of the building. Then, we were given some welcome gifts, including the mandated safety goggles we would have to wear all throughout the tour, and listened to a welcome speech. This told us where the company had come from, what its goals were and what we would be experiencing while on the tour. Then we were led inside and split into smaller groups to be led through stations. Being able to experience all the working parts in smaller groups allowed us to ask questions and have a more personal experience. There were six different stations that we went through that each showcased a different tool or process used to make things easier in their field. A few of the stations were very interesting to us and gave us insight into how to be a better VEX member and work the engineering design process to our best benefit.

Summary pt 2

One station in particular showed us how the machines used to make parts for their company operated and the day-to-day operations of someone who manufactures them. The man who was showing us how they worked was passionate about his work and had real life experience in the field he was talking with us about. It was really cool to look at how he had used steps of the engineering design process such as testing, improving, and communicating results. For example, once he takes the designs given to him by a customer and makes a product, it is his job to then take it to the customer and teach them how to use it. This is much like how the builders and drivers of the robots have to communicate to make sure they are using it to the maximum efficiency. We learned a lot about how the skills we were working with could be applied to real situations. He also talked about having to travel all around the world to make sure that the product he has made does the job well and aligns with the customer's visions. This gave us insight on how important the testing element is because it allows the company to make the best product possible before selling.

Summary pt 3

Although it was fun and educational to think about and see the how this company affects what we are doing now in VEX, to me what i got out of it even more than that was preparing for my future and being able to look into some future careers in the manufacturing fields. It allowed me to take everything I have learned as a student in VEX and use it to find a job that is enjoyable and fits my skill set. I think that opening yourself up to opportunities such as this is a great experience because it allows you to meet with people who really know what happens in the workplace and are willing to help you. Finally, it had a big impact on me because I found a company that values all of its employees and their teamwork and works ton make the world a better place for everyone.

Credits

https://us.index-traub.com/en_us/

Google is where we found most of the pictures

Pictures on Field Trip Day Taken by Lacy Bowyer