

My capstone project was about creating an FLL (FIRST Lego League) Team at John S. Martinez Sea and Sky STEM Magnet School. The purpose of my project was to create a robotics team in a middle school to inspire the youth, especially girls and low income students, into STEM related fields. I, myself, am apart of a FRC (FIRST Robotics Competition) Team here at Career High School. I have had the luxury of experiencing what it is like to be on a FIRST team and the benefits that come with it. I wanted to give this opportunity to younger students as well. I specifically picked Martinez as it is a STEM based school. The teachers emphasize the importance of STEM in their classroom work so I knew the students would be interested in joining a team in which they can build robots out of legos and even travel to compete in competitions.

I researched the psychological benefits of STEM on young students. My research showed all the positive effects of being a part of a STEM related after school organization. It showed how it can help students strengthen some of their essential life skills such as team work, public speaking, and time management as well as it can foster creativity, increase self confidence, strengthen problem solving skills, and encourage trying again after a failure. For my research I used many different websites, to find the psychological benefits of STEM based organizations, such as stem education journal, engineering for kids, crimson education and many others.

In order to make my vision come to life, I had to talk to many people. I emailed many of the teachers from John S. Martinez to set up a date inorder for me to demonstrate our robot to their students to get the students interested in joining the team when it is officially created. I emailed Larissa Spreng, Alyssa Basso, Diane Mitchell, and Debra Goodrich to present my idea to them and set up a date to come demonstrate our robot. I also had to contact Cliff Branzell

(FRC558 Mentor) and meet with Bob Osborne (Career Teacher) to ensure the date given by Martinez was a good date for them to drive our team and robot to Martinez. Lastly I had to constantly meet with Cynthia Scheetz (Career Teacher, FRC558 Mentor, Capstone Mentor) to ensure I was completing all the paperwork and doing things in the correct order.

At the beginning of my project I expected to have an FLL Team set and ready to compete by December. As I started moving along in my project I quickly realized that simply wasn't possible. I would have to work on creating this team even after I presented my project at my school. At the end of the completion of this project the tangible outcome will be an FLL at John S. Martinez school with students who are interested in STEM and want to learn from their experiences.

This project taught me a lot but most importantly it taught me the importance of having some patience. There were many times when I wasn't getting responses from Martinez or I would realize that I can't possibly have the team set by December which would be very frustrating but I had to be patient and move at a reasonable pace. Directly from my project I learned about the importance of STEM in our lives and how we are surrounded by engineering and technology. It taught me how important it is for us to notice the significance of STEM in our daily lives as well as the benefits that can result by engaging in such a demanding program.

If I were to ever do this project again I would make sure to create a PowerPoint and show videos of FLL rather than FRC when I go to demonstrate my robot. This time we were told we would demo the robot in the gym which would not have any projectors so I didn't create a PowerPoint but we ended up doing it in the library and I could've used live visuals to effectively explain what FLL really is.