

Personal Essay

This year has been one of the best years that I have experienced in the endeavor academy. Not only have I learned more about things that will be useful as an engineer like what a muon is, how to design a circuit board, how to wire a robot together and how to find an effective solar panel, but I also learned what it is to be an engineer. That is, how to plan an effective strategy to accomplish one's goals, how to work with a team and how to react and adapt to an ever changing situation.

The first project we undertook was the creation of the Mark III Led kit. The Mark II fell short in several areas and we took on the challenge of improving it. To do this we each had to first assemble a Mark II kit, to better understand what it is to be a student trying to assemble one of these things. It was frustrating, to say the least. We walked away from the Mark II as a class, ready to take on the Mark III and really make a product that we could be proud of. We worked furiously and vigorously to ensure that the design was top notch. But once we had the design finished, we would have to wait to get the parts ordered; we had to move onto the muon project.

The muon project was another class project, but we broke up into three teams within our class. Each team had their own hypothesis about what the muon's and what would happen with different variables and what not. Our hypothesis dealt with air pressure and the number of muon's that could be detected. During this project we were each to research and better understand what these cosmic rays were and their potential uses. Personally, this part of class seemed the most waste of time, as it seemed to be

more of a scientific pursuit rather than engineering design. But before we knew it, the hot air balloons were upon us.

The hot air balloon project was different from last year. Having carried one egg our first year, then two eggs our second, we were challenged with carrying something a little bit heavier this year; a telemetry system of some sort. Three teams were assigned once again. We had more resources, to build the balloon, but less time and more work. That coupled with the objective that seemed more relevant than giving an uncooked egg a ride created a project that almost seemed like something I could see myself doing in the future as an aerospace engineer. As that is my intended field of study, this project was undoubtedly my favorite.

Then we came to the Boe-bot project. This was a couple of weeks of reading a manual and testing a circuitry system that we would build. Though this was informative and gave me a much deeper insight into electronics and programming, it wasn't as productive as I would have hoped. I did learn a lot, but there was a lot I missed because we were crunched for time. If I had longer, I would like to revisit this. But we still had to do our independent projects, and we only had five more weeks in the year.

So we split into various groups once again. This time we all were able to choose an objective. This is where I feel I learned the most this year. A lot of time and effort goes into finding a project that is practical and cost effective, not to mention within the time restraints. So when my team chose to convert a remote control car into a solar powered remote control car, I was ecstatic. It was fun and I could see a lot of practical opportunities that would stem from this project. Here is when I most learned to work with a team, set independent and relative goals and watch my time effectively. That deadline

can really sneak up on you quick. The first thing we had to do was find a cost effective and practical remote controlled car. Once we did that we had to do research on a solar panel that would produce the proper power, that is, the proper current and voltage. Since we didn't have the motor to test, we just made assumptions based on the fact that the car's battery was a ten volt rechargeable battery. We found a rather small solar panel that would fit our needs pretty well. Though we were wrought with failure as when we found that the terminals to the solar panels were flimsy and easily removed. This defect rendered three of our five solar panels completely useless. This is when I learned the resourcefulness capable of a team faced with defeat. We adapted and found another solar panel that would work without the problems of the past solar panels. With some quick thinking and quick timing, we reevaluated our goals and got the project back on track.

So this year has been a real benefit. But it was also the most fun I've had in an endeavor class. We finally started doing things as they will be done in the real world. The experiences and lessons I learned will stay with me for the rest of my life. This is Plemmons, signing off.