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Capstone Process Paper

My senior capstone was an organized group of three; it was the combined effort of me and two other colleagues, Matthew Ginnetti and Winston Wright. We taught an astronomy mini-course for lower classmen in our school at The Franklin Institute. This idea originated from an astronomy project that got off its feet four years ago, during my freshman year. As time passed it became a permanent program, and our time spent working along one another gave us an idea of incorporating astronomy into our capstone. The complete idea of creating the mini course, was something that was just brought up during a discussion. All three of us have recognized that astronomical science isn't very much appreciated and or widely anticipated in the world we live in today as it use to be. As Neil deGrasse Tyson would say, "We've stopped dreaming", in a video explaining the reasons behind why NASA is currently an underfunded program in the government and its effect on astronomy has deterred. That phrase was one of our motivations, and so we decided to create a project that would educate or at least shine light to younger classmen that this subject is still alive.

We wouldn't have this big of an opportunity to have part of the freshman population to attend our mini-course, had it not been for the partnership between The Franklin Institute and our school. So to come up with our very own program and to get it running we went by our school's five core values; Inquiry, Research, Collaboration, Presentation and Reflection. Each of these five essential values were used accordingly throughout the whole course. Inquiry, as stated before was what really had us thinking and brainstorming ideas for our capstone. Then proceeded to how we were going to present our topic, or how to capture the interest of younger classmen to be more involved with Astronomy. Next came research, now when we got

an idea of what we were going to do, it became apparent that astronomy was spanned a list of topic stretching a light year in length. Here's where research came in, as we decided to sort out what some of the most popular yet new topics in the astronomical world. As for three members working on this, we narrowed it down to three studied topics; Exoplanets, Rocket Engineering and Exobiology. Now, none of us three are extremely proficient with these topics, and so the research phase was not over yet. Each one of us three were responsible for one topic, I was in charge of Exobiology, and therefore I spent approximately a week of research into Exobiology, the study of life beyond earth.

The real process of my capstone was a duration of about 3 and a half months. That includes everything from coming up with the idea of the mini-course, to the brainstorming what topics to tackle, rough drafting and creating the final product to be presented to the audiences. Each step of our process was closely tied in with our school's five core values as explained earlier, it was basically our guidance. Now as simple as it may have sounded, doing all the research for the topic of Exobiology was quite hectic. I utilized a variety of sources, most were online and less of paper copies. Reason behind that is because the books from libraries are not exactly up to date with the more popular topic of today. The most recent discoveries were very unlikely to be published in hard copies before digital. Of these resources, I made my way through a lot of studies and some works from colleges.

Regarding the amount of resources that I used, often times I skim articles to get a broad overview of what message it's trying to send to the reader whilst saving time. Exobiology was a different situation, it required every ounce of my attention as I had to meticulously read through all them. But the biggest obstacle was trying to compile all of these interesting facts into the presentation, where it had to make sense yet maintain the audience's attention. I didn't want to be jumpy with how I was going to display these facts, so pacing and keeping a good flow was

the key. Not to mention, each course lasted 90 minutes, finishing too early would be a problem. To overcome this, I tried to keep my slides clean and non-text heavy, that way it enforced me to know what I had to say but also keep the pace steady. The two presentations I gave went pretty smooth, and I'm sure careful planning played a crucial role.

The overall process of this capstone felt very long over the course of the six weeks but it was actually quite brief in comparison to other capstones. However, what I felt most satisfied about was the fact that there was so much accomplished over the three month period. Most importantly, it taught me that careful planning does pay off, sometimes it doesn't and that's part of the learning process. In general there's a sense of reward, when taking things one step at a time. Now if I were given a second chance to redo this entire capstone, I'd most likely extend the duration of the mini-course and be able to outline the connections between Exobiology to Exoplanets and Rocket Engineering. That way they wouldn't feel so much as being thrown around these different topics. At the end of the entire course, we also set up a survey link that each of the students had to complete, and from that we got a lot of feedbacks, both positive and negative.

I believe that as a student I've contributed lots to the partnership of this school to The Franklin Institute, and it's wonderful knowing that since it first started off as a separate solar photography project reached a culminating point four years later. And like every other student in the school, I'm proud to have made any sort of contribution to the school as it has done its deed by handing me opportunities.