Goal 1.2 Reflection

In Biology 250 the main goal presented was to introduce the class to genetics and cell biology. This class was my second class that required us to do a semester long research project. In this class we analyzed the microbial diversity in dry soil compared to wet soil in Prince Edward County, specifically areas around Buffalo Creek. This class taught me important lab techniques such as DNA extraction, 16s rRNA PCR amplification, using online sequencing data bases, and identifying bacterial strands.

The second class that required me to look at different genetic levels of organisms was Biology 425. I was asked to write a paper discussing topical genomics and the opportunities it produces. This was a very important paper because it allowed me to research many different aspects to genetics and genomics and show the reader the benefits of this modern-day science. I was able to show scientific evidence that human and animal genomes can be directly compared and used to alleviate future medical issues.

The last article is a presentation that was done on colony forming bacteria behind the human ear. This project required us to learn how to properly swab and collect DNA from test subjects as well as how to properly handle and care for the genetic material. Once the bacteria grew, we were able to compare and critically analyze the growth of the bacteria to different cleaning methods.

Throughout these studies and many other courses, I gained valuable knowledge in regard to basic cellular and molecular biological principles and laboratory techniques. Though I learned how to preform PCR reactions as well as DNA extraction, it has been a couple of years since I preformed these techniques. I am not confident enough to say that I could perform these tasks proficiently and on my own. I feel that with further guidance and a refresher on those techniques I could become proficient. With that being said I am very comfortable in a lab environment and feel confident in safely transferring specimens, pipetting, and gathering sufficient data. These are very important skills for a scientist and I am very happy to have learned them.

I feel most comfortable in the field or in a lab environment. It gives me a sense of independence, responsibility, and total control. These characteristics I feel would have never been fully gained and valued without the lab classes I have taken at Longwood. I hope to obtain many more skills and characteristics while working in the field or in a lab-based area. I do plan on using these skills and techniques in my future career and hope to mentor others as my professor did me.