My time here consisted of doing research alongside graduate and PhD students. The off time I had was usually spent getting groceries, or staying in my room resting from a long day of doing work. Previous summer programs I participated in felt like they were preparing me for college. This program was preparing me for university research and living as an adult.

While doing research and touring the campus, I was exposed to many different majors and fields of study. I am currently a computer science major, but I am also seriously considering changing to a math major. Having had many new experiences here, I hope I can experience more when I graduate from the Blanding Campus and continue my education.

The math lab was what I expected and simultaneously not what I expected. There were math components, but what we learned about mostly was how research is done with math, using computers. We used programming software, which I enjoyed, to test out how randomness can be shown on a graph and how it can be manipulated to be less random. The process of doing this involves iterating certain math equations. When we do this, there are magnificent patterns created. This is how fractals are made, as shown in the picture below. Our instructor also taught us about the Fibonacci sequence, which is a math sequence that is used everywhere in art, architecture, and nature. It creates perfect spirals and the perfect rectangle. Plants use it to lay out its leaves to absorb the most sunlight it can, making spirals in the leaves.

Week 1
During the introductory week, our time was spent being familiarized with the campus, the different colleges, and in general what the University has to offer us. When I heard about the College of Science and how a degree in mathematics can be very useful for getting a job, it made me really reconsider my major, computer science. I have also heard many times before that programming is something that, if someone is dedicated enough, can be self-taught. This program has put me at a crossroads and has made me question what I’m doing with my life. I like this. It’s good for someone to consistently be questioning what they’re doing rather than just blindly going wherever they have, unintentionally, aimed themselves.

Week 2
From this lab, I have learned what research is really like. Research is mostly about doing precise and accurate measurements and processing it, usually with computers. During the week, we tested the quality of DNA and we went on the hiking trails to find butterflies and plants relating to those butterflies. In contemporary research, there is more data than there has ever been in the history of research. Because of this, the professor who leads us, Dr. Zach Gompert, has knowledge of programming. His graduates also have some knowledge of coding as well, because the skill is invaluable for analyzing the data and condensing it to be interpreted by the researcher.

Week 3
In this lab, I was an assistant to graduate student researchers and got some experience in doing actual research. What the lab wanted to do was find a healthier alternative to trans fats. The current problem is that trans fats have certain qualities that can create very delicious shapes and properties that other alternates cannot achieve. We wanted to find an oil that is not only healthier, but can keep these tasty properties in the baking and cooking processes. The lab showed me that there are more niche areas of science that maybe aren’t as appreciated or looked at, but they have made changes to the way everyone lives in small ways; small ways that add up and create big change. The lab also gave me the opportunity to work with students from foreign countries. It was interesting to interact with them and communicate.

Week 4

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