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## REFLECT

This summer, I learned quite a lot about myself. I learned that it is ok to make mistakes, I learned that it is ok to ask questions (even if they are really silly), and I learned it is ok to show how much you know (without being cocky).

In my initial meeting with my mentor Philip Rockson, I learned that I was going to be working with cover crop. More specifically I learned that I was going to be working with PGC (perennial ground cover). I got so excited and I just got done learning a small amount about it in my last chemistry class. So before I arrived on campus I was thinking about my research, and how I get to be a part of it.

While doing my research I realized how broad of a range STEM is. I mean I always understood, but this summer helped shape more and more how they work together. This summer I was working with people from all ranges of STEM through my project, and they all had a different key detail in what we were doing. It was important to work with them and understand their aspect, as well as it was important for them to understand our side as well.

## FIGURE SOMETHING OUT

While I had some idea of what I was going to be doing this summer, I had no idea how detailed the work I was going to be doing was. I was given articles to read, and then my mentor and I talked through them, while I asked questions and made connections. Later this summer we had someone

new come and join us. I saw him asking the same questions I did, and I explained things in a way that helped me understand the project, that led to more questions that I also didn't know the answer to. We both became more and more curious about the project, but it brought us closer, and we figured things out together as the time went on. This was definitely important, and will be important to know for the classroom because I have to understand that everyone has to start somewhere, and in order to help them, you have to remember you once were in the same spot as them.

As much as I thought I knew about our project, I learned pretty quickly that I did not know as much. My first day I had to read a bunch of articles and publications to even get a better understanding of what we were doing. I also had never taken corn measurements before, but I got the handle of that pretty quickly.

To combat the uncertainties of not knowing, I continued to ask questions. Then I told everyone I knew about what I was doing. I told my parents about why my project was important, I had debriefs with my roommate each night, and when I was unsure I made it a point to talk it through with my mentor. He really helped assure me that I was on the right path, and understanding what I was doing.

I learned (for my future classrooms), to give students creative liberty. While the project was laid out for me, I was the one who designed my poster, took measurements, created graphs for data, explained the data, etc. My mentor

## FIGURE SOMETHING OUT

just gave me helpful guidelines. In my classroom I know that it is important to be a lifejacket for students, but they can't get anywhere if they don't swim.

During professional Development on Friday's, I learned from many of the teachers and Eric and Maureen about the power of letting students guide their learning. I learned that their students wanted to learn more, once the subject was provide in a way that helped their curiosity. Students wanted to come to class, one teacher even remarked that she had a student who typically skipped, who showed up to every single class for that chapter. I want to be able to help students become interested in a topic, by incorporating what they want to learn about within the topic.

The teachers also helped show us REU's that there are many ways to help engage the students in the content (even if they don't want to learn about it). For example, you can have a question box, where students can ask questions about the subject, and you answer them in front of the whole class. Or you can allow the students to create a project/present their findings in a way that they want to. (examples would be like a speech, poster, photos, presentation, ect).

One thing that I will remember and want to share about my second day in lab. We left at 7:30 in the morning to drive two hours out to the field, and then ended up being there for about 8 hours. I didn't get back to my apartment till 8:00pm that night. While it was initially a shock, it taught me that things may not always go the way you planned, and that is ok! You just have to continue to keep a positive mindset, and everything will be ok. That day I learned more about my mentor, and I remembered the importance of sunscreen. Overall, that day really set the tone for my summer, and it helped me realize I was in the right place for this summer.

## MAKE CONNECTIONS

I will continue to keep in touch with my mentor Philip Rockson. I am very interested to see how the fields end up, and how he will be doing later in the year. He has been very kind to me, and listens to all of the stories I have to share with him. We talk about movies, and all the things we are both interested in. I will also keep up with Dan Anderson, and make sure to email him about Iowa state wrestling (and Wartburg wrestling). Finally, I will keep up with Dr. Raman,

and tell him that I am continuing to ride my bike.

## PREPARE FOR WHAT'S NEXT

To keep up with working next year I will tell people about things. That sounds weird but, as stated earlier, that is what helped me stick the information, and keep it in my head. I explained things out loud, and taught it in a way that made other people understand. If I am having a hard time understanding a subject, I will have someone who doesn't know the subject, and explain it in a way that they can understand it. That will help me understand it more, and will allow me to do better. I will also do my best to stay positive. Not everything will go my way, but all I can do is keep a positive mindset, and things will be ok.

In order to foster curiosity and growth in my future classroom I will encourage them to ask as many questions as they can. Because you won't know unless you ask. I will also show them it is ok to be wrong/not know. For example if I don't know something I will say "I don't know the answer, but lets see what we can figure out together." This will encourage students to find the answer they are seeking, and give them the chance to also be the teacher.

