

The STEAM City of Women - Week 4

Sofia, student

Monday 8/2

Rise and shine everyone, it's Monday of Week 4! This morning, after some daily polls, Amina led us into our Flower Power project. Amina taught us how to use Google Sheets to track our data for our zinnias. We learned that we can record the average of all our data, whether that is of each individual seed, or the average of the seeds in one week. It's up to us to decide within our group! Amina showed us her spreadsheet which was very organized. It was a great example to show us how to arrange our data. After getting all our data ready and averages set, we will be making graphs. In our small groups, we discussed how our plants are doing and began calculating the averages for Destiny's plants.

Next, for the second half of today's meeting, we had guest speaker Tammy Jo, who has her own fashion business! She is now located in Savannah, Georgia, but lived in Florida and New York in the past. Tammy Jo went to school for acting and began working for Lucky Brand. There, she treated her job as school and maximized her experience for personal benefit later on. She began her own company after learning the structure of business and having the desire to do more on her own. Right now, a lot of her business is online but she has many popups and commercial events. Whether it's social media or marketing, learn to do it yourself before you hire, so you know what to expect. Tammy has interns to help her, especially with technology, which she made clear she does not like. Same! Technology is definitely not my favorite of the STEM disciplines. To make your own designs, use your creativity and go with what you feel in the moment, as that is an authentic way to start your process. Tammy proceeded to give the most important piece of advice which was, whatever your desire is, you can do it. Don't let the thought of school or outside pressures get in your way. People will always try to get in your way or give their opinions on what you should or shouldn't do. Tammy's parents were very supportive of her decision to get into the fashion business. Outside family did not encourage her, but that fueled her fire even more! Even if you don't have a lot of support, do what you love, you yourself are all the motivation that you need. Tammy Jo stated that fear is what drives you and it will teach you whether that is a good lesson or a bad one. Try not to be afraid of failure, as it is one of the most valuable lessons you could ever learn. Failure makes you stronger and it will lead you one step closer to success. We learned what sustainable materials are, as well as how they affect the environment. In fact, these materials produce less waste, consume less energy, and have a lower negative impact on the earth. It was interesting to learn that there is science behind fashion, as can be learned from this simple example of clothing material. Thank you, Tammy Jo, today's session was absolutely fabulous.

Tuesday 8/3

It's Tuesday Morning! Today, we kickoff with Morningstar, a company for investors where employees help clients see investments from their angle and aid in financial development. We had a lovely and diverse panel; Nicole Thomas, Samantha Lamas, Jennifer Oseitutu, Hatice Halac, and Jeongmin Jenny (Jenn) Lee. These panelists have a wide range of jobs within the

company, from manager in HR to quantitative analyst. Like many of our previous panelists, these beautiful ladies had much to say about career paths, the ways of life, and advice in success. For example, Nicole told us about her high school career, how she took writing and psychology courses in college, found a job that incorporated psychology, but ultimately fell in love with training and has stayed within Training & Development where she and her teams create successful course curricula. Not exactly the route she planned, but it was the route that best suited her. Similarly, Samantha, who is a behavioral researcher, works to create surveys, collect data, and study people in order to release insights through articles and presentations. She never thought she would enjoy her position as it was never her intended route. As Dr. C so gracefully brought to light, Diversity, Equity, and Inclusion (DEI) are three qualities that are essential in the workplace and all companies as a whole. We see here that Morningstar is very diverse! To highlight some of the other amazing panelists today, Jennifer, a senior software developer, is from Ghana and Jenny, product manager, is from Korea! We learned that on Morningstar's website, there are resources and detailed information on these three topics (DEI) and how the company works to reach its highest level of excellence through them. We see that Morningstar has many cultural niches, such as the small yet unified Latinx one, to make employees comfortable and content. The company also has structured interviews to avoid biases, as answers are predetermined to make sure interviews are as authentic and fair as possible. The panel was very communicative, which is key because they are a team! It is clear they all work very well together. Speaking of communication, a big part of Morningstar is public speaking. Hatice, who leads the Credit Ratings Modeling team, gave us some good tips on how to relax and perform better when speaking to groups, superiors, etc. From her personal experience, she practices her speeches beforehand and even asks her son to help her improve. I thought this was a very unique way to practice, but also a wonderful way to bond. Sometimes you may freeze when doing presentations or public speaking, but it is all about getting prepared and remaining calm/confident. It's ok to make mistakes and have to take steps back to explain things well and be as professional as possible. We're all human! It's okay to mess up once in a while.

As we have learned from some of the previous panels, volunteer work is great for experience. To take it a step further, paid internships are better for your resume and give you a hands-on look into what you want to do. Many times interns can be hired by the companies they are working for, so take the chance! One of our counselors totally agreed: Alex said "volunteering feels great all, I volunteered when I first started here! You get to build your skills and practice :)" I had to include the exact quote because I loved it. We can be our own biggest critics and it is up to us to determine our actions and outcomes. Just because you struggle in a class doesn't mean you should let it discourage you; always ask for help! There are always people who will support you on your journey, so be sure to appreciate and cherish them. Do not listen to those who do not support you, because that can mess with you and your motivation. Remain resistant and go for anything you desire. It's always too soon to give up. You will always learn in life, even after school and you have to be open to new knowledge. Believe in yourself.

Wednesday 8/4

Good morning steamers! Are you hungry? This morning, our projects involved food. Yum! Talk about making me want a snack. Bright and early, Dr. C led us in our M&M projects. First we gathered all our materials: graph paper, M&M's, markers, a paper plate, and a ruler. We began to count all our candies and placed them in groups according to their colors. We noticed as a group that we all had a variety of colors and amounts; while some of us had more blues and greens, others had more reds and some didn't even have browns! We created a bell curve at first to understand exactly what it is and why they are so important when collecting data. Next, we made individual bar graphs to record our quantity of colored M&Ms. What I liked most about this project is that all of our graphs were unique and pertained to the person making them. My style of coloring and writing only pertains to me, as the other participants decided to take their own approaches to creating their projects. That's the beauty of creativity! Next, still working with the M&Ms, we made a quadrant graph by using the plastic plate as a base. After carefully indicating measurements, we added 4 M&Ms, one in each quadrant, recorded their placements on the plane, and took pictures of our work. Then came the fun part. We took water and added it to the plate with the M&Ms inside. Without wetting the paper, we all watched as our candies began to discolor in the water and the colors began to spread. We noticed that the colors did not merge, even though for many of us, they did touch. Dr. C explains that this has everything to do with chemical bonds! Look at us, on this project, not only did we calculate data mathematically, we also talked about chemistry! I had a lot of fun making time lapses of my M&Ms in the water. For our individual projects, we are to do the same project again, but on entirely on our own, with fruit snacks. I can't wait to see what the others make! Mine is already done and submitted, I couldn't wait to start that project!

For the second half of today, we had our favorite recurring guests: Renata and Olney! After some warmups and brainstorming about what we have learned about dance so far, we watched a video on different dance styles and art. My favorite part was the beatboxer. I think that is a skill that requires immense talent and practice. We talked about the different movements we saw and how they correlate with BEST, which we have been using to learn about dance since the very first session with the Victory Dance team. Then, it was actually dancing time! The pair led us through some moves and grooves. I had a great time and I know many of the other participants did as well: we were laughing, collaborating, and enjoying the session! It was nice to see how we all turned such specific movements into our own. We all have our own styles and preferences, as we also saw in the first project. Creativity and individuality were two focuses today, as we continue to learn how to embrace these in ourselves and shine.

Thursday 8/5

Team Thursday with Destiny, one of our counselors. In the first workshop Destiny talked with us about how to visualize data which we needed to know for our second workshop "Where the Winds Blow". This is our second team project, in which we work with real weather data collected by the EDsnaps weather station. Destiny explained Big Data in her workshop Big Data 101, how we need to automate this process, what the difference is between observational and experimental data. I liked that she connected our project Flower Power lead by our counselor

Amina, with her lead project. This made me better understand the difference between the different types of data. It was interesting to find out where all the big data are used for. Destiny also did a questionnaire in which we needed to write or say which types of graphs we recognized. Then she showed us what data visualization is. Colors, 2-D, 3D, pie charts, and rings. And guess what? Data visualization is all around you. In our program we had already a lot of data visualization, the digital humanities workshop with Elena, word clusters in the financial workshop with Leah, the candy cracker workshop with Dr. C, and the flower power project with Amina. We also use data visualization in storytelling. That reminds me of the story telling workshop with Angela. She also used data visualization. I guess I had already much more exposure to data visualization than I realized. After Destiny explained the dos and don'ts of data visualization, we went into our team workrooms and discussed how we could use certain types of graphs for our team projects. After a short break, Destiny explained what we needed to do to create our science poster "Where the Winds Blow". She showed us which types of graphs we can use. I liked it a lot that she showed us one of the projects she worked on last year at her university (UC Boulder). She worked on Solar Flare Analysis and showed us a scatter plot with energy and frequency on the axis. We already learned in the Candy Cracker workshop about the importance of the units. For our weather project, we will need to work with different units such as altitude (meters), humidity (percentage), temperature (Fahrenheit or Celsius) and pressure (millibars). Destiny told us that millibars is a unit very often used in the engineering field and it is a very important one. And that we also need to get used to working in Celsius when we speak about temperature. For the last part of the day, we worked with our team and needed to come up with a hypothesis for our Where the Winds Blow project, which we will present during the showcase event. It was fun discussing with the team what we would like to focus on. Never guessed that weather has so many components and that I will be able to work with real data, which is awesome.

Friday 8/6

Woah, it's Friday? There's no way that's possible already! I can't believe I only get to write five blogs in a week, I wish it was more! Anyways, hello again and thanks for tuning in. We finished the week with two workshops: first, Dr. C ran us through all of our individual assignments, gave us their descriptions and due dates, talked to us about our group projects, and about the judging event at the end of the program. We were all encouraged to interrupt and ask questions. Dr. C wanted to hear our voices today! Not only to get to know us all better, but also to push us to not be afraid of asking questions and speaking up. Even though it was hard for me to interrupt her, I did, as most of the participants also did, a couple times. It was a good way to start my morning, as I was sharp and attentive, even at 10 am. I'll keep the main judging event a surprise for now, but just know that big and exciting things are coming! The next couple of weeks before the end of the program are going to be a blast, I know it.

For the second half of today's session, we all jumped onto another Zoom to visit the New York Transit Museum in Brooklyn with Ramona and Marie. The museum, more than 100 years old, has photos, antiques, furniture, and collections of vintage subway trains. In case you are interested after reading this post, the museum plans to reopen later this month after being

closed for over 1 year because of the pandemic! Anyways, we learned about some of the different vintage trains and saw the changes made each time which eventually led to the subway all New Yorkers are familiar with now. First was the BTR standard 1914 train. It is the oldest subway train at the museum. Did you know there were female train conductors – conductorettes in 1914. This was due to World War I when not enough men were around to do this job. We were all shocked to hear this, especially because in the 1900s, biases and prejudice against women were very evident in society. It still is today, but not on the same scale as before. Before the war, women were mostly ticket agents as it was the most “acceptable” job for females in a previously male dominated field. Female conductors changed the term motormen to train operator. I think train operator is more broad and fluid, two qualities that are so important for inclusivity! We learned that it was not always easy for women in this field, as they experienced much prejudice and obstacles, such as the Lockwood Caulfield Act, which temporarily ended many jobs for women working in the train-related industry. Regardless, as we always do, women prevailed! In the 1970s, the first woman to be trained to actually operate a train was Marion McAllister. She moved up the ranks after becoming a train dispatcher. Even though there are more women in transit today than in the 1900s, the gender difference still remains. Maybe after today, some of our participants will discover their dream job! We then saw the R15 car train and met some Miss Subways. It was interesting to see the different interests of each Miss. As we brainstormed our own descriptions for the ads, we all had very different things to focus on. Some focused on positivity, while others focused on awareness. I loved that! I’m not sure what my Miss Subway ad would say, as I have too much to say to fit into a couple sentences! There is so much history behind the train system, its employees, and how trains are actually made that I did not know before. This session today opens my eyes to a new field, that even though I was already aware of, had no knowledge on whatsoever. As a subway lover, I had an amazing time with Marie and Ramona, they truly put a smile on my face. Not only are they a winning duo, they were also so kind and understanding about all our questions and comments. Their attitudes really encouraged us all, as Dr. C did on Wednesday, to engage as much as possible and ask away! I will for sure be visiting this museum soon, I’d love to see these train cars live. What an amazing way to end week 4. See you all Monday! Stay safe.