UWP 101 Progress Report 1

To	Bill Sewell
From	BB
Date	4/26
Research Topic	Quantifying Climate Change-Induced Glacial Retreat

Fill out the following to the best of your ability. Replace the text in the right-hand column with your text. As you enter text, the cells will expand to accommodate your text. Keep the table formatting. For this week, you are required to summarize only one article.

Activity	Explanation: Details
Work done the past week	This week, I organized sources and began writing summaries of them. I have compiled six sources so far and began noting useful data. I also began work on my introduction.
What problems have you encountered	I have struggled finding focused sources. I would like to provide good data, but there are many aspects to climate change and glacial retreat. As I have looked through sources, I occasionally go down rabbit holes that are not exactly what I am looking to research. Many research papers do not focus on the global geological scale and these articles are not useful to me.
What have you done to address those problems.	I have reminded myself of my goal for the research paper, which is to quantify glacial retreat with satellite imagery. With this in mind, I am better able to filter sources that offer analysis that are on a smaller more microscopic scale as opposed to the macro geological scale.
Optional	State anything that you would like to add
Research Topic	Quantifying Climate Change-Induced Glacial Retreat
First Article Information	
Article Genre or research type	Scientific Research Paper
Bibliographic entry of first article	Velicogna, I., Mohajerani, Y., A, G., Landerer, F., Mouginot, J., Noel, B., et al. (2020). Continuity of ice sheet mass loss in Greenland and Antarctica from the GRACE and GRACE Follow-On missions. *Geophysical Research Letters*, 47, e2020GL087291. https://doi.org/10.1029/2020GL087291
Discuss the first article.	This study looked at data from two different missions, GRACE and GRACE Follow-On (FO), which measure changes in the Earth's gravity field to understand how much ice is melting in Greenland and Antarctica. They used a method called the mass budget method to check if the data from both missions match up. It turns out they do match up, which means they can confidently use the data from both missions together. In Greenland, they found that in 2019, there was a big loss of 600 billion tons of ice, especially after two cold summers. In Antarctica, they found that certain areas, like the Amundsen Sea Embayment, the Antarctic Peninsula, and Wilkes Land, have been losing a lot of ice since 2002.

	However, in Queen Maud Land, there's been a gain of 980 billion tons of ice since 2009, which has slowed down the overall ice loss from Antarctica since 2016.
Immediate Research Plan	
What is next?	I would like to extract more data from this research article and pull data I would like to incorporate into my own paper. This would mean giving the article a closer inspection, making more annotations and comments, and then compiling the data.