Name:

Sea Level Rise Historical and Projected

Historical information:

Massive ice sheets covered parts of North America, northern Europe, and several other regions during the last ice age. This huge volume of ice lowered global sea level by around 120 meters as compared to today.

Current information:

As we have already learned this year, greenhouse gases like CO2 are trapping more and more solar energy causing the climate to warm. Ocean warming (thermal expansion) and the melting of mountain glaciers has caused an observed increase in sea level of about 1.7-1.8 mm/yr. Many scientists expect an increase in sea level around 1 meter in the next century.

Lab activity:

In this lab activity you will use Google Earth to make a new map of the Annapolis peninsula in Maryland *(*Broadneck Peninsula)*.* Assume the Ocean rises 1 meter by 2100.

Procedure:

1. Open Google Earth and travel to Annapolis Maryland.
2. Zoom in or out until you can see the entire peninsula.
3. Click the “ruler” button and select “path”
4. As you scroll the curser over the land you should notice the elevation or “elev” given in the lower right portion of your screen.
5. Begin on the North West of the peninsula and click on the area of land where 1 meter meets 2 meters of elevation.
6. Continue clicking this border between 1 and 2 meters elevation until you travel around all 3 sides of the peninsula.
7. Raise your hand and have Mr. Wagner initial your paper.

Procedure part II

1. Now repeat this process for any coastal area of your choice.
2. Pick any coastal area (USA or other country) and map the projected 2100 coastline (The current border between 1 and 2 meters elevation).
3. Show your finished map to at least 1 other classmate and have them initial your paper.

Analysis:

1. What are people to do who currently live, go to school, own businesses in areas expect to be Ocean by 2100?
2. Could we just build a wall around these areas? Any other ideas?
3. What are some economic challenges this sea level increase may cause for both the local and the national economy?
4. Will this be Worldwide? If so, what are some of the social, political, and economic challenges we will face in the future?
5. Can this be stopped? Slowed Down? Lessened?
6. What are some things you can do in your lifetime to reduce CO2 emissions? (list as many things as you can)