EOSC 112 MINI-ESSAY #2

You are a reporter. Your editor asks you to attend a scientific conference on effects globally of CO2 addition to the atmosphere. She then asks you to write a maximum 700 word article for the front page of your national newspaper, based on a keynote talk at the conference, that describes changes to marine sediments and coral reefs that are likely to happen as a result of the buildup of anthropogenic CO_2 in the atmosphere. Your task is to write the polished article, with an appropriate headline.

The editor is a stern taskmaster and wants a finished piece – she doesn't have time to futz about correcting grammar or spelling, and is depending on you to get all your facts right.

Note the following:

1. CO_2 addition to the surface ocean will increase the carbonic acid content slightly, thus increasing the acidity of the surface water. This will make it more difficult for corals to secrete their CaCO3 skeletons. In your article you need to explain this, in a way the lay public would understand.

2. CO_2 addition to the surface ocean at high latitudes where deep water forms will increase pCO_2 at depth (once the water sinks) and this will have an effect on the $CaCO_3$ content of the underlying sediments. Explain in your article what this effect will be and what it is likely to do to ocean chemistry.

3. The public will not be familiar with thermohaline circulation - make sure you make it clear in your article how this works, as it is critical if they are to understand point #2 above.

Sources of information:

Use the web – a good search engine (e.g. Google) will help you find key references. Type in "Corals and CO2" or similar phrases and conduct a search – this will lead you to a number of papers that have been written on the subject in the last 2 or 3 years. Please go to the original literature, all of which you will find in the library – do not depend just on the web synopses!