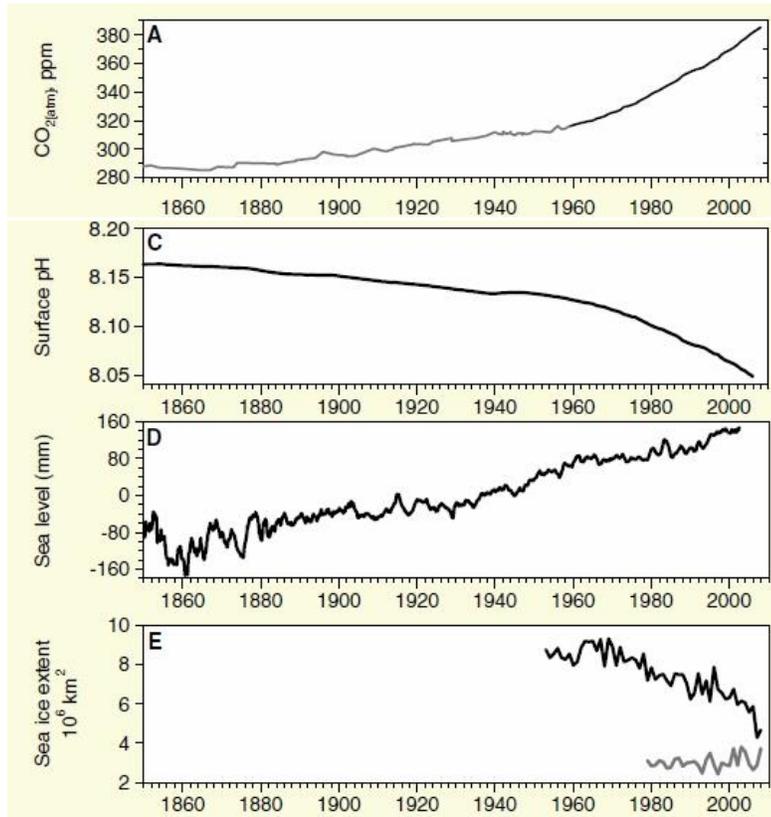


Thinking About Climate Change

Analyzing Multiple Signals Over the Last 150 Years



Graph A

1. According to this graph, what was the CO₂ level in the 1850's? _____
2. What was the CO₂ level in 2004? _____
3. How much has CO₂ changed since the 1850's? _____
4. Is the CO₂ level increasing or decreasing? _____

Graph C

The ocean's average pH have been recorded since the 1850s.

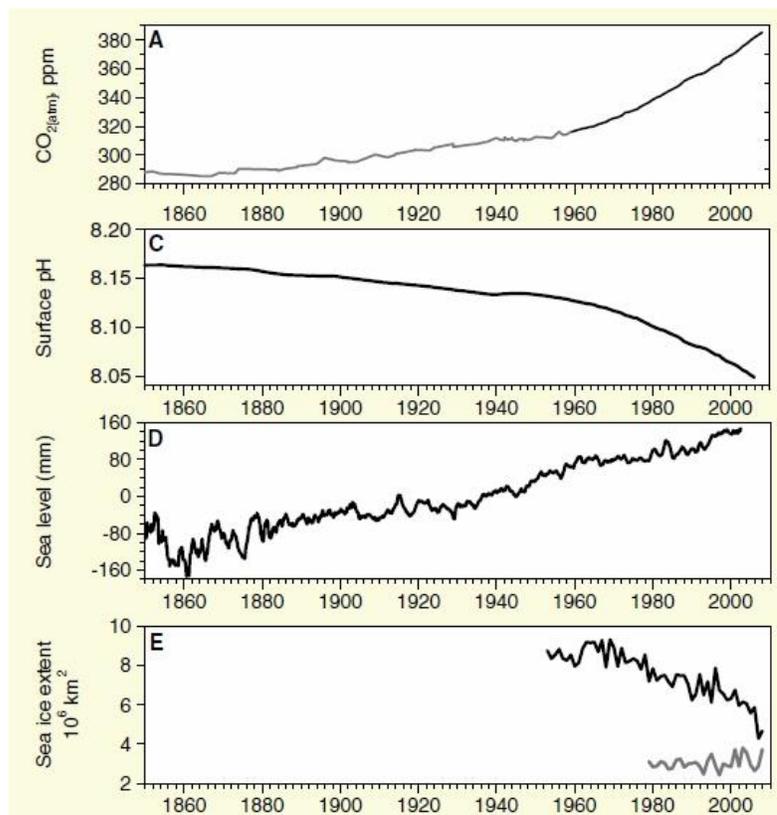
1. What is the trend of the ocean average pH since the 1860's? _____
2. The highest recorded pH was _____ and this occurred in the year _____.
3. The lowest recorded pH was _____ and this occurred in the year _____.
4. Higher pH values are called basic, lower pH values are called acidic and around 7 is called neutral. Is the ocean becoming more acidic or more basic? _____
5. Do you think that a change in pH can affect the ocean or animals living in it? Yes No
6. Can you think of a way that such a change might affect animals living in the ocean? _____

7. Why is the change in pH important for us to consider? _____

8. The above graphs show scientific data collected over the last150+ years. Based on this data, what are some conclusions you can draw?

Thinking About Climate Change

Analyzing multiple signals over the last 150 years



Graph A

1. According to this graph, what was the CO₂ level in the 1850's? **290 ppm**
2. What was the CO₂ level in 2004? **380+ ppm**
3. How much has CO₂ changed since the 1850's? **90+ ppm**
4. Is the CO₂ level increasing or decreasing? **Increasing**

Graph C The ocean's average pH have been recorded since the 1850s.

1. What is the trend of the ocean average pH since the 1860's? **Decreasing**
2. The highest recorded pH was **8.16** and this occurred in the year **1855-1860**.
3. The lowest recorded pH was **8.04** and this occurred in the year **2003**.
4. Higher pH values are called basic, lower pH values are called acidic and around 7 is called neutral. Is the ocean becoming more acidic or more basic? **acidic**
5. Do you think that a change in pH can affect the ocean or animals living in it? **Yes** No
6. Can you think of a way that such a change might affect animals living in the ocean? **larval development, development of CaCO₂ shells on forams and other animals developing shells**
7. Why is the change in pH important for us to consider?
8. The above graphs show scientific data collected over the last150+ years. Based on this data, what are some conclusions you can draw?