**Ice Core Data Questions**

**Graph & Data Questions:** Please answer these questions using “full thoughts” (aka. complete sentences). Attach your answers for these questions to your graph and turn them both in next class period.

1. What does temperature anomaly mean?
2. What patterns / trends do you notice on your graph?
3. How many peaks (high points) can you identify on your graph for:
   1. Carbon Dioxide
   2. Temperature Anomoly
4. How many troughs (low points) can you identify on your graph for:
   1. Carbon Dioxide
   2. Temperature Anomoly
5. What is the approximate number of years in one cycle? (A cycle is the time between two peaks or between two troughs)
   1. Carbon Dioxide
   2. Temperature Anomoly
6. Do peaks represent glacial (cold) periods or do troughs?
   1. How do you know?
7. What can you infer about the glacial (colder) and interglacial (warmer) periods in Earth’s history using the patterns / trends you see in your graph?

**Data Table:** Use your Ice Core Data Table and your graph to fill in the blank boxes in the tables on the back of your graph.

1. Determine the length of time between 48,000 BC and 400 BC and write that number in the blank. (\_\_\_\_\_\_ years) above the first data table.
2. Using the ice core data table, determine the value (concentration) of CO2 in 48,000 BC and record the value in the table. Find the value at 400 BC and record in the table.
3. Determine the difference (subtract) between the two values and record in the “change” column.
4. Determine the rate of change by dividing the “change” by the “length of time”. Show your work in the box and remember to include units.
5. Repeat this process for Temperature Anomoly.
6. Determine the change, and rate of change for CO2 and Temperature Anomoly from 1901 to 2011 (the second data table)

**Questions:**

1. Do either table, both tables, or neither table show a warming trend? Explain.
2. Which time period is showing a more severe upward warming trend? Explain.
3. What do you infer is causing the much greater rate of change per year for both CO2 and temperature in the time period 1901-2011 versus 48,000 BC - 400 BC? List & explain as many reasons as you can.