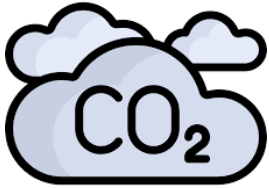


Name _____ Date _____

Global Warming Graphing Activity

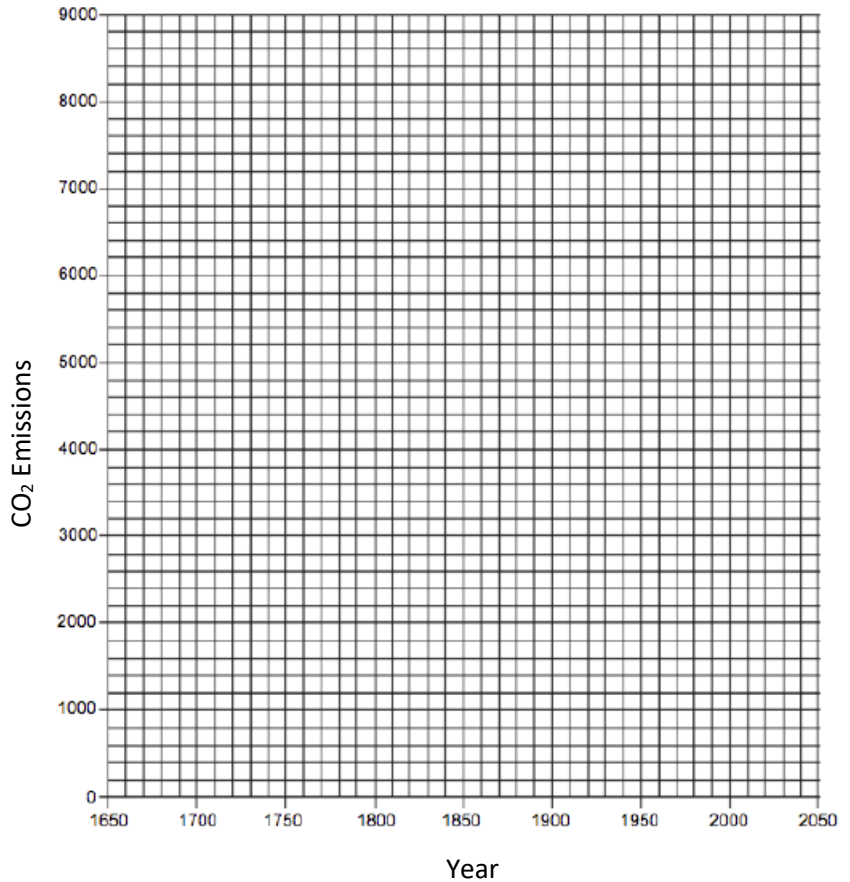


Global warming is a very controversial issue. Some people are convinced that the increase in average global temperature is directly related to the increase in atmospheric concentrations of carbon dioxide. Others argue that the changes in the climate that we are seeing are part of a natural pattern. In order to understand what is really happening at present, scientists need to understand the conditions in Earth's past atmosphere and the factors that affected its temperature.

Directions – Use the data table to create a graph and answer the questions that follow.

Year	CO ₂ Emissions (Million Metric Tons of Carbon)
1650	1
1700	2
1750	3
1800	8
1850	54
1900	534
1910	819
1920	932
1930	1053
1940	1299
1950	1630
1960	2569
1970	4053
1980	5316
1990	6151
2000	6750
2010	9000

Carbon Dioxide Concentrations in the Atmosphere over Time

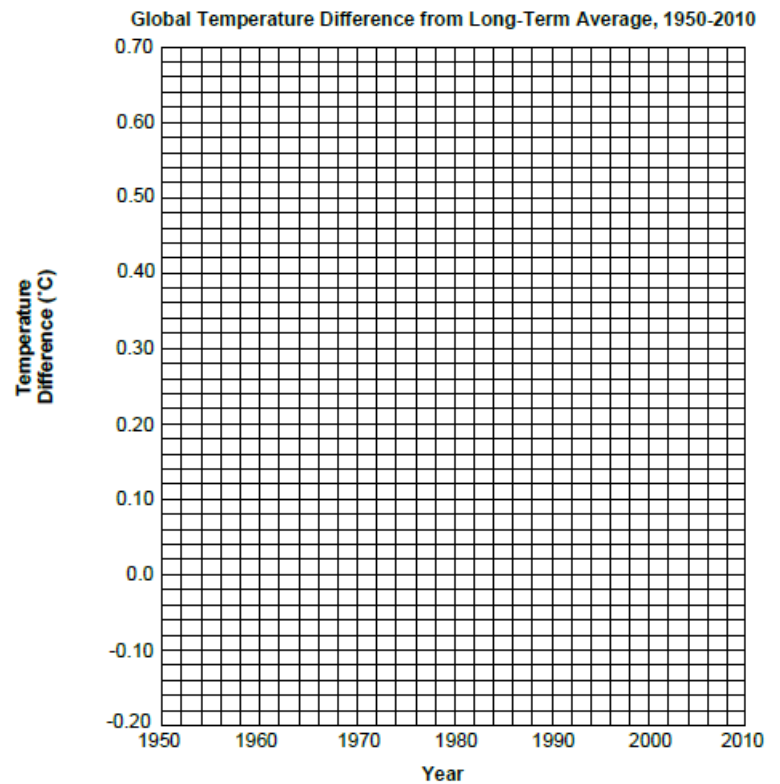


1. What happens to the amount of CO₂ in the atmosphere from 1650 to 2010?
2. When was the greatest change in CO₂ in the atmosphere?

The data table below shows the temperature difference from the long-term average in degrees Celsius between 1950 and 2010. On the grid below, construct a line graph by plotting the data in the data table. Connect the points with a smooth line. Use your graph to answer the questions on the next page.

Year	Temperature Difference (°C)
1950	-0.19
1960	-0.04
1970	0.04
1980	0.23
1990	0.39
2000	0.41
2010	0.67

- Describe the changes in temperature difference from 1950 to 2010.
- During which 10-year period was the greatest change in temperatures?



Analysis Questions

- Compare the graphs you have drawn. What do you notice?
- Is there a connection between change in temperature and the amount of CO₂ in the atmosphere?
- What pattern do you think will continue as more CO₂ is placed in the atmosphere?