**Document C**

**Carbon Dioxide Levels over Geologic Time**

Sources: <http://scrippsco2.ucsd.edu/history_legacy/keeling_curve_lessons>

http://www.antarcticglaciers.org/glaciers-and-climate/ice-cores/ice-core-basics/

The Mauna Loa record can now be placed in the context of the variations in CO2 over the past 400,000 years, based on reconstructions from polar ice cores. During ice ages, the CO2 levels were around 200 ppm, and during the warmer interglacial periods, the levels were around 280 ppm. The levels in 2005 were around 378 ppm.

Ice coring has been around since the 1950s. Ice cores have been drilled in ice sheets worldwide, but notably in Greenland and Antarctica. Ice cores are cylinders of ice about 4 inches thick that are retrieved using a hollow drill. High rates of snow accumulation provide excellent time resolution, and bubbles in the ice core preserve actual samples of the world’s ancient atmosphere. Through analysis of ice cores, scientists learn about glacial-interglacial cycles, changing atmospheric carbon dioxide levels, and climate stability over the last 10,000 years. Many ice cores have been drilled in Antarctica.

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