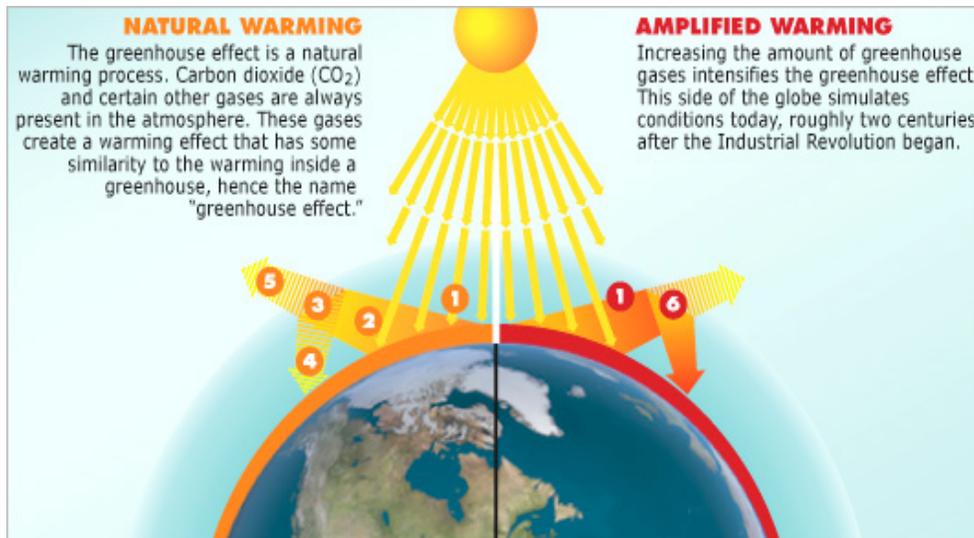


GREENHOUSE EFFECT DEMONSTRATION

This demonstration is meant to show the effect of a higher concentration of greenhouse gases in the atmosphere with the consequent rise in the temperature and relative faster melting of glaciers. The greenhouse effect is a natural occurrence that maintains Earth's average temperature at approximately 60 degrees Fahrenheit. Under normal conditions some of the sun's heat is radiated back into space. The 'Greenhouse Effect' occurs when heat is trapped in the atmosphere by gases. The greenhouse effect is a necessary phenomenon that keeps all Earth's heat from escaping to the outer atmosphere. Temperatures on Earth would be much lower than they are now, and the existence of life on this planet would not be possible. The global average temperature would drop precipitously 33 degrees from its current 15° to -18°C. The Earth would become an ice planet. However, too many greenhouse gases in Earth's atmosphere could increase the greenhouse effect. This could result in an increase in mean global temperatures as well as changes in precipitation patterns. Carbon dioxide and water vapor are the most important gases in creating the insulating or "greenhouse effect" of the atmosphere.



Glaciers along the southeastern coast of Greenland are thinning by more than 3 feet a year, possibly because of global warming, according to a new study by NASA scientists. Sea level has already risen due to warming and is projected to rise much more. Many people are under the mistaken impression that only if the polar ice caps melt will sea level rise. In fact, average sea level around the world has already risen 4 to 8 inches in the past 100 years due to global warming and is expected to rise another 4 to 35 inches (with a best guess of around 19 inches) by 2100. The primary reason for this rise is that water expands as it warms. The second reason is that **glaciers** all over the world are melting, and when land-based ice melts, the water runs to the sea and increases its level. Thousands of small islands are threatened by the projected sea-level rise for the 21st century, as are low-lying coastal areas such as southern Florida. Of course, if there is any significant melting of the polar ice sheets, the additional rise in sea level would be enormous (measured in feet not inches). This is projected to occur on a time scale of millennia rather than centuries.

