

A World of Change

Background Information:

The climate experienced by any location on Earth is influenced by a number of major factors. When you think about the vast differences in the places on Earth, it is surprising that there are as few different kinds of climates as there are. Human activities seem to be linked to rising temperatures worldwide, and a possible changing of climates that might occur as a result of these.

The issue of climate change is a politically and emotionally charged one. If you believe the reports you see in the media, you might be led to believe anything from “there is nothing wrong at all” to “the end of the world is in sight”. As usual, the truth is somewhere in between these two extremes.

Purpose: In this project you are to:

- i) use climate data from the website <<http://www.worldclimate.com>> prepare climate graphs for each of two locations that represent different biomes.
- ii) use your knowledge of the factors that influence plant and animal life to predict the effect that changing one of those factors would have on the biome of any region.
- iii) describe how each graph supports your prediction making reference to the climate graphs that you have prepared.
- iv) Answer the questions that follow.

Assignment: At the end of your research and experimentation you will hand in:

- I) A write up of your findings including:
 - (a) The climate graphs
 - (b) A map showing the locations of the places you chose
 - (c) The biome associated with each place (a national park is a good way to find this.)
 - (d) An adaptation that a plant and an animal would need to survive a climate change.)

- II) Answers to the following questions:
 - a) Define the terms: greenhouse effect, global warming, and climate change.
 - b) How are tree rings and pollen distributions used to study past climates? How do these methods compare to those involving isotopic geochemistry?
 - c) Outline three (2) global effects that are predicted to result from a runaway greenhouse effect.
 - d) Find an article written about global warming. Summarize the article. Try to find out who the author of the article is, what that person does for living, and whether that person really does, know what they're talking about. Is this person a credible source of information? (One way to answer this question is to ask yourself whether this person stands to make money if they convince you that their argument is valid.)
 - e) Complex issues like this one can be looked at from a number of perspectives - economic, political, scientific, technological, or environmental. Choose one perspective and find or sketch a cartoon that illustrates the issue from that perspective.