

ENV 2073
Global Warming: Science and Politics of a Contemporary Issue

University of South Florida
Writing Assignment #1

Fall 2011
Prof J.A. Cunningham

Assignment Statement

Work in teams of three students to answer *one* of the following questions:

- (1) Has the average temperature of the earth's surface increased significantly since the start of the 20th century?
- (2) To what extent are human activities responsible for any changes to the earth's climate since the start of the 20th century?

For whichever question you choose to answer, be sure to support your opinion with evidence and a logical, convincing line of reasoning.

Deliverables and Due Dates

The final product of this assignment will be a *written report* that your group submits by Thursday, October 13. To produce this report, you will be required to meet the following deadlines.

- Thursday, Sept 1: Inform me (via e-mail) of the *members of your group* (three students per group).
- Thursday, Sept 8: Submit a rough draft of the *opening paragraph(s) of your paper*. This opening should have a clear statement of your paper's main point or main thesis. (10% of grade)
- Thursday, Sept 15: Submit a *reference list* (with full bibliographic information) of at least 10 sources of information that you will use. Web sites are not allowed. However, reports or documents that you download from the web are acceptable. (10% of grade)
- Thursday, Sept 22: Submit an *outline* of your paper indicating what evidence you will use to support your paper's thesis. (10% of grade)
- Thursday, Sept 29: Submit a *complete rough draft* of your paper, including reference list. (10% of grade)
- Thursday, Oct 6: Complete a *peer review* of one of the other groups' drafts. (10% of grade)
- Thursday, Oct 13: Submit your *final report*. (50% of grade)

Additional details on each of these steps will be provided as the semester proceeds.

Some Requirements for the Format of the Report

- Type your report in a standard word-processing program (Microsoft Word or similar).
- Follow format requirements of the *Publication Manual of the American Psychological Association*, 6th edition. See especially pages 238–231 of the publication manual.

- There is no set length requirement. I expect most of the reports will be somewhere around 10 pages (double-spaced). If you can complete the assignment thoroughly with fewer pages than that, it is fine. Please don't exceed 15 pages because it will take too long for me to read and grade it.
- Use appropriate citations and provide a list of your references (with complete bibliographic information) at the end of your report.
- Ask me if you have other questions about the format of the report.

Grading Guidelines

Your final report will be graded on the following ten characteristics. The first seven of these are based on the requirements of the Written Language Skills “dimension” of USF’s Foundations of Knowledge and Learning Core Curriculum (also known as the General Education or Gen Ed program).

1. Systematic organization
2. Effective use of detail
3. Compelling treatment of evidence
4. Demonstration of reasoning skills
5. Appropriate consideration of audience
6. Language use (style) appropriate to discipline and audience
7. Construction and analysis of valid and sound arguments
8. Correct grammar, spelling, and mechanics
9. Appropriate and mature vocabulary and sentence construction
10. Proper use of references and citations

Note that these characteristics focus predominantly on the quality of your *critical thinking*, and secondarily on mechanical issues such as spelling and punctuation.

A Few Tips for Success

- Start early. I really mean it!
- Visit the library. It is the building with all the books in it. A “book” is what we employed to convey information back before they invented the Internet. Some books are still useful.
- Make use of your instructor. I want to help you write a great paper! Visit me in office hours, show me samples of your writing, lead me through your reasoning, etc.
- You will need to find your own sources of information beyond what we discuss in class. In class, we will touch on both of the potential topics of this assignment, but you will need to do additional reading and research outside of class. The library can be helpful for locating materials to help you complete this assignment. This is part of “inquiry-based learning” and turning you into independent critical thinkers who are capable of developing your own well-informed opinions.
- Go into the assignment with an open mind. Most of us have biases and prejudices on the topic of global warming, often based on our political inclinations (liberal vs conservative, Democrat vs Republican, love Al Gore vs can't stand the guy, etc.). Try to put your

prejudices aside while you read and learn about global warming, then make up your own mind based on the quality of the evidence that you read. If your mind is made up when you start the assignment, you are less likely to develop a compelling line of evidence to support your opinions, and your paper will suffer.

- In your paper, spend a little time refuting the counter-arguments to your viewpoint. For instance, if you argue that the earth has not warmed significantly since the start of the 20th century, then consider some of the arguments of those who claim it has. Why are you not convinced by their arguments? What evidence exists that their arguments are not valid (or, are less valid than the arguments of “your” side of the debate)?

Critical Thinking and Bloom’s Taxonomy

This assignment is intended to engage you in critical thinking, one of the “dimensions” of USF’s Gen Ed program. The Gen Ed program defines critical thinking as “the ability to engage in analytical, reflective, and critical thought -- that is, to go beyond verbatim learning of factual information.” We can place this definition in the context of Bloom’s Taxonomy: over 50 years ago, Benjamin Bloom and his colleagues developed a “taxonomy” to characterize different types of thinking in which we engage when learning. These levels are:

1. Knowledge (Exhibit memory of previously-learned materials by recalling facts, terms, basic concepts and answers)
2. Comprehension (Demonstrate understanding of facts and ideas by organizing, comparing, translating, interpreting, giving descriptions, and stating main ideas)
3. Application (Use new knowledge; solve problems by applying acquired knowledge, facts, techniques, and rules in a different way)
4. Analysis (Examine and break information into parts by identifying motives or causes; make inferences and find evidence to support generalizations)
5. Synthesis (Compile information together in a different way by combining elements in a new pattern or proposing alternative solutions)
6. Evaluation (Present and defend opinions by making judgments about information, validity of ideas, or quality of work based on a set of criteria)

In this writing assignment, I am asking you to formulate an opinion on whether the earth is warming and/or the extent to which we are responsible for that warming. This requires you to go through a series of steps: read about climate science to gain *knowledge* on the subject; *comprehend* what you have read; *analyze* the evidence or arguments presented by the different authors; compile and mentally *synthesize* the different arguments that you read; and *evaluate* the merits of the conflicting arguments that you will encounter. In other words, you are being asked to achieve the highest level of Bloom’s taxonomy! In some senses, this is a little bit unfair; the highest levels of Bloom’s taxonomy are typically achieved only by experts in any particular field, and I cannot reasonably expect you to become experts on global warming science in only half-a-semester. But we will try it anyway! Remember, USF expects you (and I expect you) to “engage in analytical, reflective, and

critical thought -- that is, to go beyond verbatim learning of factual information.” That means, we expect you to achieve the higher level of Bloom’s taxonomy.

Global warming is an ideal topic with which to challenge you to achieve this type of thinking, because we are frequently exposed to conflicting evidence regarding whether global warming is “real” and who is responsible for it. In order for you to make up your own mind on these questions, you will have to engage in *critical thinking* by *evaluating* the arguments on multiple sides of the issues.