

## Paper Topics

1. Research one of the missions currently exploring the solar system or one that is planned. Report on what the mission has learned or what it proposes to learn. Construct an argument either for or against this mission as being worthwhile.
2. Study the results of planet searches done so far, and report in detail on what is being found.
3. Look into missions planned to study the formation of planets or to find existing planets around other stars, or to study their properties.
4. When the State Board of Education last revised science curricula, there were pressures to add intelligent design or to discuss the “weaknesses” of evolutionary science. Discuss this issue in a balanced way, and make a recommendation as if you were advising the State Board.
5. Discuss the different forms of evolution (cosmic, chemical, biological, cultural) that we have discussed in the class. How are they different and how similar?
6. Pick one of the plans for searching for extraterrestrial intelligence (e.g., those described in Chapter 9) and explain how it works and why it is set up the way it is. Express your opinion about whether this particular search is worth the cost.
7. Analyze the differences between Contact, the book, and Contact, the movie. Speculate on why the movie-makers made the changes that they did.
8. You are explaining to a climate change skeptic the facts about greenhouse gas, global warming, and climate change. Using facts about other planets in the solar system, explain the greenhouse effect. Describe the facts about human effects on greenhouse gases and the Earth’s climate in general.
9. Imagine that you are living after the end of the age of fossil fuels. You are writing about the age of fossil fuels from the perspective of people living in that future time. You can write this as an essay, a section in a high school history text, a short short story, or whatever form you like. Make it clear what the date is, at least roughly, and also what kind of life people are living in the time that you write (e.g., still technological, but reliant on solar and wind power, or more agrarian, with a much smaller population, or, ...)
10. Propose your own topic. You will have to get approval from your TA.