

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. Consider the pros and cons of the mission and decide if it is worthwhile.
2. Study the results of planet searches done so far, and report in detail on what is being found. You may use the exoplanets encyclopedia to study the kinds of planets being found, or you may study a particular technique in more detail.
3. Look into some of the recent papers re-examining habitability of planets, describe the issues, and draw some conclusions about the effects on n_e .
4. Look into missions or projects underway or planned to study the formation of planets around other stars, or to study their properties. Describe the results so far.
5. 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, focused on the facts, and make a recommendation as if you were advising the State Board.
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. Perform a literary analysis on **Contact** (either the book or the movie); or do a comparative analysis between the book and movie. For the latter, consider why the filmmakers have made the particular choices they did when shortening the book into a movie.
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.

Remember that a research paper is neither a sales pitch nor a book report. The paper should contain evidence of research outside the class materials and focus on the facts rather than opinions. These guidelines will be less easy to follow for some topics, and if you use an unusual style, such as a short story, you may need to modify them. Consult with your TA about how to do this.