Semester Project Types

You can choose any of the following four project types to go along with your chosen project topic. Or you can make up your own creative project! (Song, interpretive dance, you name it.) You need to use at least 3 sources in researching your project. You should choose a project that matches your skills and that you can do well. You will submit your outline detailing what your project type will be and how you plan on executing it on **Wednesday, October 15th (Wednesday labs) and Friday, October 17th (Friday lab).**

Paper: If you choose to write a paper, it should be 5 (full) pages (not including citations or title page), 12 pt font, double spaced, etc. It should include parenthetical citation (e. g. MLA, APA, Chicago). Don't try to mess with the margins to make your paper appear longer since that will stand out against the other papers. Please do not exceed 6 pages. I will be a little lenient if you write a very good paper in 4 pages, but don't attempt to turn in a two page paper. Your citation of the sources should be on an additional page and should be done in the same format as your parenthetical citation.

PowerPoint Presentation: Your presentation should last 10 minutes, and so you will need however many slides is necessary to accomplish that (most likely about 10 slides). By choosing this project type, you will be required to present the presentation on Wednesday, November 19th (Wednesday labs) or Friday November 21st (Friday lab), before the end of labs, but you will also receive the 3 extra credit points for presenting. Your PowerPoint should contain both text and images, but it should contain bullet points rather than full wordy paragraphs. You fill in the words when you present. You should cite your sources at the end of the presentation.

Poster: If you choose a more hands-on/creative topic like a poster, craft project, etc, you should still write a 1-2 page (1 page absolute minimum) "paper" describing your creation that includes any relevant scientific information. Basically, include everything you would want to say about it if you presented it in person. You should also cite your sources. Paste it all on the back of the poster. If you choose a poster, make sure it is a larger cardboard poster or the miniature trifold kind, not the kind that can be easily rolled up.

Craft/Creative Project: If you choose a more hands-on/creative topic like a poster, craft project, etc, you should still write a 1-2 page (1 page absolute minimum) "paper" to turn in with your project describing your creation that includes any relevant scientific information. Basically, include everything you would want to say about it if you presented it in person. You should also cite your sources. Below is some specific instruction for specific craft/creative project types:

- *Children's Book:* Writing a children's book does not mean that you can make things up or include less information. You will need a thorough understanding of the material (and some creativity) to accomplish this. You must convey accurate scientific information in a clear, engaging, fun way that a child would enjoy and

understand. Do not just list the facts about your topic, try to tell a story that includes that information instead. You should construct the book so that it is easy to open and easy to read (consider your colors carefully). You will be graded on the quality of your book and your ability to convey accurate information. Your citation of the sources should be included along with your 1-2 page paper.

- ***Sundial Project:*** There are several types of sundials that you can choose to make. Be sure to use materials that will not fall apart easily. You should keep a log of your attempts to use the sundial, at least 10 entries spanning over 2 weeks. In your 1-2 page paper, you must describe your project, any relevant scientific information (like how and why these work), and some information on the history of sundials. Citations must be included.

When citing sources, Wikipedia does not count. It can be a good place to start in order to get big picture concepts and to get you thinking, but you should seek out more reliable sources: published works (textbooks such as your 1020 text *The Cosmic Perspective* and others, scholarly papers, even science journalism for a general audience -- e.g., Scientific American, Popular Science, etc.). Public outreach websites from academic institutions and places like NASA and ESA are good, too, but they shouldn't be your only sources. Remember that this is a research project and the quality of your work should reflect that.

If you would like to present your project, one that isn't a PowerPoint presentation, you must present for a full 5 minutes to receive the extra credit. You don't have to make a PowerPoint for these extra credit presentations unless you want; you can just stand up in front of the class and talk. The presentation of all projects, including PowerPoint Type choices, will be on **Wednesday, November 19th (Wednesday labs) and Friday, November 21st (Friday lab).**

All other projects will be due on the last day of lab, **Wednesday, December 3rd (Wednesday labs) and Friday, December 5th (Friday lab).**