Physics 100 – Fall 2007 - Presentation project

For the P100 presentation project, I will split the class into approximately 7 groups of roughly 7 students and assign a physics topic to each group. Each group is to prepare and present a twenty minute lesson to the class on their assigned topics. You can use any mode (or combination of modes) of presentation you desire (speaking, PowerPoint, chalkboard, demonstration, video, class readings, etc.). The length of presentation is intended to give you the opportunity to have some depth to your presentation. I want to form the groups early so you can make a plan and have the time to explore options and acquire resources.

Each group will supply the class with a review sheet of the essential points from their presentation. (Note: I did not say an "outline".) I would like to be supplied with the electronic version of that file so that I can place it on the web. Each group will also provide me with 3 potential exam questions based on the material from their presentation.

The point of the presentation is *not* to impress everyone with your mathematical prowess or your ability to use scientific lingo. I would like you to know your audience and convey the essential history/necessary background/science/scientific significance/excitement of each topic. Try to keep everyone from falling asleep if you can. I want you to go through the experience of learning about the topic and organizing the presentation at the appropriate level. I want the rest of the class to learn something from each presentation. It is important to be clear and to make sure that all A/V equipment to be used actually works with your files.

Every member of the class will grade each presentation other than their own. Every member of each group will provide me with a rough breakdown of responsibilities in the group and give me a measure of participation for the other members in each group. I will use the class ranking and participation measures to assign individual grades. I will act as a safety valve in the grading, primarily so that a group that does a decent job but is rather boring does not get overly penalized. I will not adjust individual grades for participation unless there is a fairly consistent picture coming from the other members of the group.

You have until October 1 to petition me to add a topic to the list that is of particular interest to you. I invite you to do that, though the invitation is not open-ended and the topic will need to be relevant/appropriate. At the October 3 class I will hand out topic lists and request that you hand the paper back to me with your name on it and an ordered list of topic preferences. From this information I will assign topics/groups trying to satisfy preferences as much as possible.

Grading sheet for group _____ Date _____

My name _____ My group _____

My signature _____

Grade on a scale of 0-3, where
3=superb, 2=average and acceptable, 1=poor, 0=exceedingly poor

Appropriateness of presentation for audience _____
(Did it speak to you? Or was it too mathematical or more appropriate for kindergarten?)

Organization of presentation _____
(Was there a coherent progression of ideas from background and motivation to conclusion?)

Clarity of presentation _____
(Could you follow the presentation? Hear it? Understand the words?)

Entertainment value of presentation _____

Appropriateness of length _____

Interest generated about topic in you _____

Scientific significance of topic conveyed to you _____ x 2 = _____

Total (out of 24) **_____**

Comments for Prof. Manly (only) about this presentation:

Anonymous feedback for the presenting group (bottom portion will be removed and shown to the presenting group):

Internal participation
Grading sheet for group _____ Date _____

My name _____ My group _____

My signature _____

Grade on a scale of 0-3, where
3=person played a leading role in project
2=person participated in an average and acceptable fashion
1=person participated but did little to help the project/group
0=this person basically did not participate

Name	what person did on project	my evaluation of participation
1.		
2.		
3.		
4.		
5.		
6.		

Comments or circumstances Prof. Manly should consider in making participation adjustments to the grades:

P100 Presentation topics

1. The discovery of neutrino oscillations
2. The making of nuclear bombs
3. The potential for controlled nuclear fusion as a source of energy
4. Microscopy
5. Astronomical observatories/telescopes
6. Global Positioning System
7. Quantum computers/computation
8. Particle accelerators
9. The discovery of the charmed quark
10. The discovery of the top quark
11. Bose-Einstein condensates
12. The search for gravity waves
13. Lasers
14. String theory
15. Supersymmetry
16. Nuclear power – how it works and pros and cons
17. Solar system formation
18. The search for extra-terrestrial life
19. Radioactive dating techniques
20. The history of the study of the cosmic microwave background
21. Nuclear terrorism
22. Superconductivity
23. Radiation: dangers and uses
24. Life and scientific contributions of a great physicist (such as Newton, Einstein, Plank, Bohr, Feynman, Galileo, Hubbell, Schrodinger, etc.)
25. The case for comets/asteroids causing massive extinctions on earth
26. Music