

Astronomy 104
Our Exploration of the Solar System

Portfolio Assignment

Spring 2004
MW 9:55 3425 Sterling
(Lecture 1)

Due Date: April 28, 2004

You are welcome and encouraged to turn in individual portfolio documents at any time in advance of the due date. They will be graded and returned to you in a timely way so that you may learn from them and improve your work on the next portfolio documents. If you choose this route, please turn in your entire portfolio (graded and ungraded documents) on April 28.

Introduction

Portfolios are a collection of evidence, prepared by the student, to demonstrate mastery, comprehension, application, and synthesis of a given set of concepts. Portfolios transfer much of the responsibility of demonstrating learning from the professor to the student, and thus are an opportunity for you to show your stuff your way!

This course has 6 major learning goals, as presented in the course information handout. The overarching goal is:

**To know the sky and the Solar System as a part of your environment to which you are connected
– physically, historically, and culturally/personally.**

Put simply, the goal of your portfolio is to demonstrate that you have achieved this learning goal.

Assignment

Your portfolio should contain 5 documents that demonstrate your connection to the Solar System along 5 dimensions (one for each document):

- 1) A cultural connection to the sky; you are encouraged (but not required) to explore non-European cultures.
- 2) A connection of Newton's laws of motion and/or gravity to experiences in your life.
- 3) A connection of the physics of light to experiences in your life.
- 4) A connection of the Sun's energy to your life, or the impact of the Second Law of Thermodynamics.
- 5) Your connection to the larger evolutionary processes of the Earth and Solar System.

A "document" is a personal creation that demonstrates mastery of the course material related to your chosen connection, application of that material to your life experience, and the ability to communicate your ideas effectively.

Each document should be no longer than one typed double-spaced page. Each document may have one additional page for figures or pictures, if you wish. While all of your documents may be essays, you are not constrained to this format. You may use your own creativity and personality to accomplish the goals of your portfolio. If you have concerns about whether an idea for a document will be "acceptable", please don't hesitate to talk it over with Marta or me.

Evaluation (over)

Evaluation

Each document will be evaluated on a 10 pt scale, as follows:

Demonstration of Connection (3 pts) Have you reflected deeply on what you are learning, and how it relates to your life? Have you thought broadly about connections? Have you seen connections to other courses you are taking, your job, your walk home, or something else in your life?

Note: The possibilities for connections are endless. Perhaps you saw an article in a newspaper and said, "Oh, now I understand this!" Or perhaps you made a personal decision related to something you have learned. Choosing connections that have been already been used as examples in lecture or discussion section will be deemed boring, unless an original or personal perspective is taken.

Demonstration of Understanding (4 pts) Have you correctly described the relevant phenomenon? Have you properly connected it to course material? Have you shown an understanding of the physical principles, if appropriate? Have you applied them correctly?

Note: It is YOUR responsibility to demonstrate understanding. A document that is error-free because it is content-free will not garner full credit.

Composition and Writing (3 pts) Is the document well-organized? Are the ideas precisely expressed without wordiness or excessive generality? Are sentences carefully crafted, and do they flow smoothly? Are the punctuation, spelling, grammar, and word usage error free? Put simply, is the document written respectfully by one person for another person?

Note: These criteria are given in the context of an essay. They will be modified as appropriate for other formats, if you so choose.

Portfolio Format

The final submission should be a bound set of 8x11 pages. The cover page should have a title of your choice, your name, and your discussion section. Each page of the portfolio should also show your name. All documents must be typed and double-spaced. Figures may be hand-drawn, but must be clear and neat.