**SEIS 2012 Summer Program Portfolio Requirements**
Using Scientific Data for Multi-disciplinary Science Instruction
Ellwein and Nyman

**Introduction**

This portfolio is intended to help you assess your understanding of the course material. It is an opportunity to reflect upon what you are learning and analyze the impact of this knowledge upon previously acquired concepts and opinions about climate science content, data literacy, and the scientific process. It is also meant to encourage you to think about learning strategies that are effective for you and how you might incorporate your newfound knowledge and skills into your teaching. The completed portfolio should provide you with a permanent, meaningful record of your experience in this course.

You will take notes in your journal/science notebook to record new information as well as to make sense of your ideas and observations. This writing is a *main event* in the learning process used in this course. The evolution of your learning is recorded in your historical diary and for this class we will experiment with using a blog. The blog will contain new information and ideas, data you collect, what you believed, why you thought it reasonable, ideas you abandon, and why these ideas are left behind. Next year, you should be able to pick up your notes or access the blog, remember what you did, and get a good sense of course content, discussions, and activities.

At certain points in the course, before we explore new concepts through activities, we will ask you to record what you already know about the topic and what you want to know about the topic (this is a diguised KWL format, that you may be famaliar). At the end of that section we will ask you to reflect on your what you have learned from the activity.

**End of the Day Reflective Writing**

At the end of each day, please take a few minutes and reflect on the activities of the day and your comfort-level with them. Please type all of this information into the blog. You need to post using "anonymous", so it will be vital that you somehow differentiate your writing from the rest of the group. You may use your name, if you are comfortable with that. Or you can use a pseudonym if you don't want to be identified.

- Describe the main points you learned today providing specific examples. What did you learn today that surprised you? Be sure to write down any questions you have at the end of the day.
- Describe those activities you found most and least effective in terms of your learning of the course material and why.
- When did you feel uncomfortable and/or unprepared? Why?
- Brainstorm and record how you might use or modify today's content or activities for your students. Do you think the content and methods you are using in this course will help you to teach science more effectively? Explain.

***COURSE REQUIREMENTS: To receive credit for this course, you must earn a B or more as evaluated below.***

***I. Journal Evaluation in the Blog (50 points possible – includes all writing above)***
This qualitative evaluation of your journal will be based on:

- *completeness* – whether you have done the work and
- *conscientiousness* – whether you have demonstrated care, seriousness, and an investment of time as you put down your own ideas and thoughts

***II. Final Essay (points in parentheses are the maximum for each category)***

This end-of-the-course essay will require your review of the facts, concepts, and skills stressed in the course. Your blog entries and class notes, will be the most important resource in writing this paper. You will want to show what you know, how that knowledge affects your understanding of the specific course material and science in general, and how you plan to incorporate this new knowledge into your teaching.

**Format (10 points):** The final essay should be around 5-10 pages long, typed, and double-spaced using 12-point Times with one-inch margins. We are more interested in a complete essay than one that is exactly 5-10 pages long.

**Content (40 points):** The content of the essay should focus on 1) new content and old misconceptions, 2) activities that were particularly effective for you as a learner, and 3) how skills acquired or honed during this course have affected your thought processes.

- Content and misconceptions: This section summarizes what you learned in this course and how your views of the topic have changed. Please comment on how this course has increased your awareness and the personal relevance of earth systems and climate science or science in general.
- Effective Activities: Provide specific examples of how the activities in this course have increased your knowledge of the subject area or the process of science. Describe the activities that were particularly effective for you as a learner and why.
- New skills: Describe how your new and/or improved skills have affected your thinking and your ability to communicate scientific information and the nature of science more effectively.

**Classroom Applications (25 points):** This section should describe how you think the content and skills you've acquired in this course will affect your teaching of the course-specific content or science in general.

**Portfolio Assignment Evaluation (10 points):** Please provide a constructive evaluation of this portfolio assignment and suggestions for improvement. Would you consider using or have you used this type of assessment? If so, why?

**Writing Quality (15 points):** We are looking for well-organized, factually accurate essays that are interesting to read and have a minimum of spelling or grammatical errors.