

Final exercise  
SMT503: Integrated Approaches to Earth Science education  
Fall 2014

The purpose of this exercise is to come full circle at the level of the lesson: to demonstrate a consistency of approach among your philosophy, instructional strategies, learning goals, and assessments, while employing strategies most likely to lead to significant student learning.

**Part I**

In paragraph or list form, identify what teaching and learning Earth Sciences has in common with other sciences with which you are familiar, and what is unique or noteworthy about the field.

**Part II**

Revisit your teaching philosophy. Revise and update to reflect your current view of the way you would approach instruction. Either within your philosophy or separately, explicitly address:

- What are the characteristics of a successful lesson?
- What are the characteristics of a successful unit?
- What are the characteristics of a successful teacher?

**Part III**

Choose one of the lessons in the FirstClass “final exercise” folder.

1. Give an overall critique of the lesson: what do you perceive as its goals? Does it accomplish those goals? Explicitly identify what parts of the lesson allow the students to meet the outcome.
2. Annotate the lesson, identifying parts of the lesson you think will work well or poorly (and why).
3. For what you consider to be poor-performing parts of the lesson, suggest an alternative approach consistent with your philosophy. In other words, what changes do you think necessary to strengthen the lesson? (This includes aligning the lesson with actual or perceived goals.)
4. Create an assessment to measure one of the main lesson goals. Explain how the assessment accurately measures the targeted learning.

You will present your responses to Parts I and III to the rest of the class on December 15<sup>th</sup>. The presentation should be ~8 minutes, so plan to focus the presentation on what you consider to be the most important points.