2004 Denver Annual Meeting (November 7–10, 2004)

Paper No. 62-6

Presentation Time: 6:30 PM-8:30 PM

GEOLOGY IN THE FIELD: A WRITING-INTENSIVE INTRODUCTORY COURSE

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Landscapes, outcrops, and rocks have provided both the setting and the content for a first-year seminar taught at Smith College for several years. The class meets in the field for 4 hours on one afternoon each week in the fall at geologically interesting locations in the Connecticut River valley region of western Massachusetts. At each locality, students examine the rocks, typically in small groups, taking notes, making sketches, and photographing what they see. Small and large group discussions are held throughout the afternoon as the students try to make sense of their observations. As the instructor, my role has been to show students features to examine, but not to tell them what to think about those features or the geology in general. I answer most questions with questions. Initially, most students are frustrated by this approach, but it requires the students to think for themselves. Each week the students must write a "field report" that is clearly divided into two parts: (1) a description of the locality that includes photographs, and (2) a geological interpretation that must be based upon their descriptive data. Digital photographs taken by the students are posted a course web page (http://www.science.smith.edu/departments/Geology/Field/), which helps make (1) possible. Students learn quickly how to insert the photographs into their reports. However, they do find it hard to incorporate them as evidence for their interpretations. Reading is encouraged, but the principal goal is for students to gather field data and to make interpretations supported by the data they gather. Field reports and class discussions are very revealing about student thought processes because they cannot simply repeat what was learned in lecture. There is a high yield (~25%) of geology majors from this course. Based on their comments and on their success as geology majors, this course serves the students at least as well as a traditional lecture/lab course as an introduction to the geosciences.

2004 Denver Annual Meeting (November 7–10, 2004) General Information for this Meeting

Session No. 62--Booth# 155 Using Field Observations and Field Experiences to Teach Geoscience: An Illustrated Community Discussion (Posters) Colorado Convention Center: Exhibit Hall 6:30 PM-8:30 PM, Sunday, November 7, 2004

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