

Marjorie Reaka's plans to incorporate sustainability into classroom curriculum during academic year 2010-11: Marine Biology (BSCI 398 H)

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I am Director of the Biology Honors Program, an advanced program of about 30 of the best and brightest students in the Biological Sciences. Their interests, and fields of expertise, range across the complete breadth of the biological sciences, often extending into biophysics, the health sciences, psychology, and related disciplines. In this program, junior and senior undergraduate students engage in advanced research in the laboratory of a faculty mentor. This research culminates in a public seminar presented by the student, and a written thesis (usually publishable in a scientific journal) that is defended in front of a faculty committee. I teach a Biology Honors Seminar (BSCI 398H) for these students, where we meet for 1-2 hours each week throughout the academic year. This seminar involves presentations of the students' own research, discussions of the literature, seminars delivered by distinguished speakers from inside and outside of the university, and occasional field trips.

In the coming year, I plan to (1) invite several guest speakers for a forum discussion on interdisciplinary aspects of "sustainability" to our weekly Biology Honors Seminar. These are bright, highly motivated students who engage in active discussion and who will challenge our speakers with needle-sharp questions. It should be a lively debate that likely will broaden the minds of our speakers as well as of our students. These should represent fruitful demonstrations of how perspectives from other disciplines can broaden our understanding of ecological sustainability and the converse. I will invite speakers from the Chesapeake Bay Institute, from the Campus Chesapeake Project, and/or speakers from other departments that I met during the discussions of the Chesapeake Project on May 24 and 25. The goal will be to foment discussion and new, creative ways of thinking about sustainability across the subdisciplines of biology that are represented in the Program.

(2) To make these discussions more real and experiential, I plan to take the Biology Honors students on a day field trip to the Chesapeake Bay Institute, arrange a guided explanatory tour through the Chesapeake Bay LEED building (as we had during our 2-day institute) to illustrate and generate discussion about sustainable practices, and arrange the remainder of the day as a field trip aboard the Chesapeake Bay Institute's skip jack. This should give the students a better appreciation of the ancient development of estuarine populations, especially oysters and crabs, as well as the oyster and crab fisheries by first the native Americans and then Europeans. There probably is not a better example of sustainable practices (or lack of them) than in these fisheries. I was not aware of this possibility for student education aboard a skip jack prior to the Workshop, and plan to take advantage of this opportunity.