

Columbia Environmental Science Simulation Enhances Curricula at East Coast Colleges

Brownfield Action, an award-winning environmental science simulation developed by Barnard College Professor Peter Bower and the Columbia Center for New Media Teaching and Learning (CCNMTL), will be used at Connecticut College, Georgia State College and University, and Lafayette College this year.

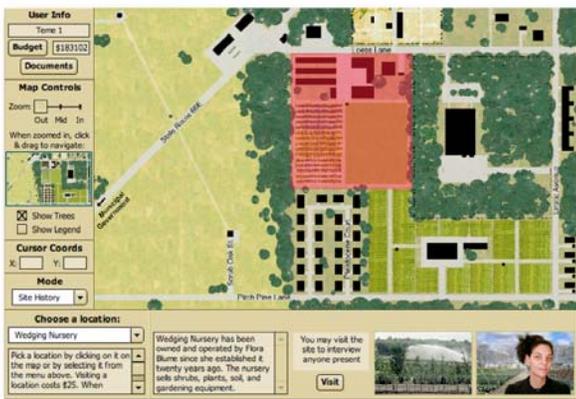
Professors from the three schools attended a conference this fall at Barnard College for in-depth training on Brownfield Action. This interactive, web-based digital space and simulation allows students form environmental consulting firms to conduct a site assessment of a suspected local contamination site. Each firm works with a fixed budget to deploy a sequence of investigative resources, reconstruct a detailed narrative, and confirm or disconfirm hypotheses about groundwater contamination through a suite of virtual scientific tests. The analysis leads to a final report on the feasibility of commercial construction.

“Like real-world environmental consultants, users of Brownfield Action must develop and apply expertise from a wide range of fields, including environmental science and engineering as well as journalism, medicine, public health, law, civics, economics, and business management,” stated Dr. Bower. “Students thus gain an unprecedented appreciation of the complexity, ambiguity, and risk involved in environmental assessments.”



Dr. Peter Bower

This model, where interdisciplinary scientific and social information is integrated within a constructivist-learning environment, improves student learning and has the ability to transform the teaching of environmental science throughout the country.



A closer look at the Brownfield Action simulation.

Dr. Douglas Thompson, professor of geology at Connecticut College, said, “The Brownfield Action program has revolutionized how groundwater contamination problems are approached and studied in my class and has provided a level of realism to the exercise. Given my personal work experience in the groundwater consulting industry, I am impressed with the realism contained in the Brownfield Action simulation.”

Brownfield Action has been nationally recognized as a model curriculum by the Association of American Colleges and Universities and was featured as a model curriculum at the Association's SENCER Institute (Science Education for New Civic Engagements and Responsibilities). Developed for use at

Barnard College in 1999, Brownfield Action is currently supported by a \$450,000 three-year grant from the National Science Foundation. This grant supports improvements to the technological infrastructure of Brownfield Action, making broad dissemination and future enhancements possible. Instructors across the country will be able to incorporate Brownfield Action into their syllabi or select the portions of the program that best complement their curricula.

For more information about Brownfield Action, please contact Dana Hoover at CCNMTL at 212-854-4407, or visit the Brownfield Action Web site at www.brownfieldaction.org.

*Written by Alice Cox, Dana Hoover, and Ryan Kelsey
September 28, 2007*