

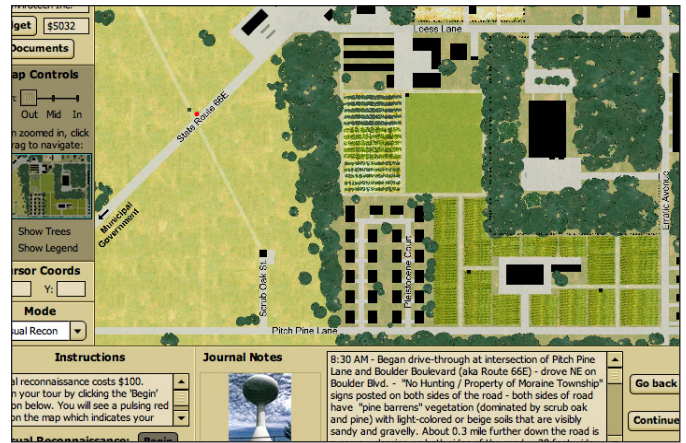
## FEATURED PROJECT: BROWNFIELD ACTION 3.0

Brownfield Action is an interactive, Web-based simulation that combines scientific expertise, constructivist educational philosophy, and multimedia to advance the teaching of environmental science. In this simulation, students form geotechnical consulting companies, conduct environmental site assessment investigations, and work collaboratively to explore and solve problems in environmental forensics.

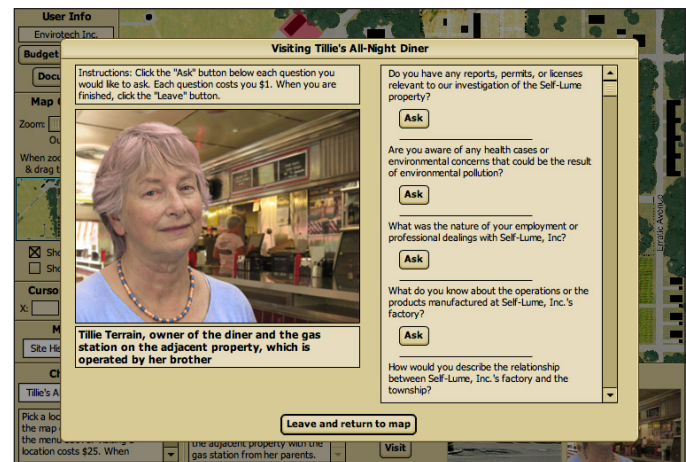
Used as a central component of Dr. Peter Bower's Introduction to Environmental Science course at Barnard College, Brownfield Action has established itself as a highly successful pedagogical model for teaching environmental science. This model, whereby interdisciplinary scientific and social information is integrated within a digital learning environment, encourages students to construct their own knowledge as they learn by doing. This approach improves the depth and coherence of students' understanding of the course material.

Brownfield Action models the physical evidence and historical background of a suspected contamination event. Students assume the role of environmental consulting firms with a fixed budget to accumulate evidence about the condition of a parcel of land and report on the feasibility of commercial construction. Through the integration of maps, documents, videos, and an extensive network of scientific data, students engage with a virtual town of residents, business owners, and local government officials as well as a suite of geological testing tools in the simulation. Like real-world environmental consultants, students 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. Students thus gain an unprecedented appreciation of the complexity, ambiguity, and risk involved in environmental crises.

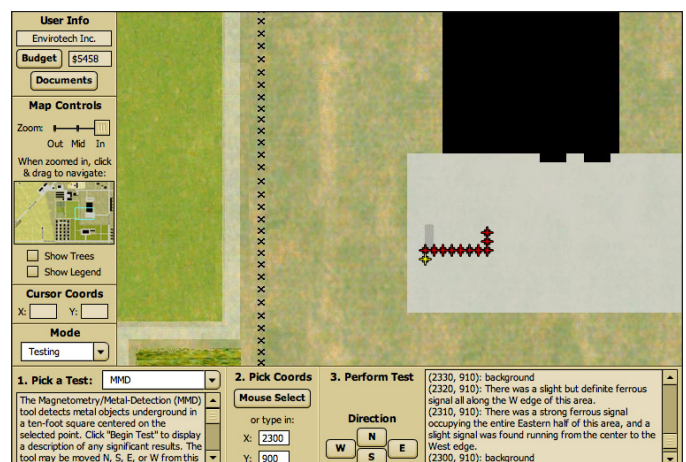
First developed as a CD-ROM in 1999 by Dr. Peter Bower and CCNMTL, Brownfield Action has been nationally recognized by the Association of American Colleges and Universities and was featured as a model curriculum at the Association's SENCER Institute (Science Education for New Civic Engagements and Responsibilities). Brownfield Action has since been expanded for use in upper level hydrology and environmental site assessment courses at other colleges and universities. Through a grant from the National Science Foundation, improvements to the technological infrastructure of Brownfield Action now makes broad dissemination possible.



*Brownfield Action is an interactive, Web-based, environmental science simulation.*



*Students visit and interview over forty characters in the virtual town.*



*A suite of scientific tools is available for assessing the geological features of the town and test for groundwater contamination.*