Award Abstract #0836566

Geology of National Parks: Spreadsheets, Quantitative Literacy, and Natural Resources

**NSF Org:** DUE
Division of Undergraduate Education

**Initial Amendment Date:** September 5, 2008

**Latest Amendment Date:** September 5, 2008

**Award Number:** 0836566

**Award Instrument:** Standard Grant

**Program Manager:** Jill K. Singer
DUE Division of Undergraduate Education
EHR Directorate for Education & Human Resources

**Start Date:** January 1, 2009

**Expires:** December 31, 2011 (Estimated)

**Awarded Amount to Date:** $197688

**Investigator(s):**
- Henry Vacher vacher@chuma1.cas.usf.edu (Principal Investigator)
- Mark Rains (Co-Principal Investigator)
- Ellen Iverson (Co-Principal Investigator)
- Thomas Juster (Co-Principal Investigator)
- Judy Harden (Co-Principal Investigator)

**Sponsor:**
University of South Florida
3650 Spectrum Blvd
Tampa, FL 33612 813/974-5465

**NSF Program(s):**
- CCLI-Phase 1 (Exploratory),
- S-STEM:SCHLR SCI TECH ENG&MATH

**Field Application(s):**
- 0116000 Human Subjects

**Program Reference Code(s):**
- SMET, 9178

**Program Element Code(s):**
- 7494, 1536

**ABSTRACT**

Geology (42) This project is adapting a CCLI Phase 2 "Spreadsheets Across the Curriculum (SSAC)" (NSF DUE 0442629) to focus on a specific course, "Geology of National Parks", taught at USF and at institutions across the country. A collection of educational materials (16 SSAC modules) is being developed that couples elementary mathematical problem solving with National Parks geology context. The activities are short, PowerPoint...
presentations from which the students build one or more spreadsheets to perform calculations to answer specific questions about the environmental geology and ecosystem health of the park. The guiding concept for the geology context is alignment of the "Geology of National Parks" course with "The Natural Resource Challenge", the National Park Service (NPS) initiative to integrate science, park planning, and management. This project is: 1) building a collaboration between eight NPS Research Learning Centers (RLCs) and geology faculty of USF; 2) helping students become more aware of the kinds of environmental-geological work that informs the management of parklands; and 3) promoting quantitative literacy (QL) in an introductory geology course. SSAC is a partner in SERC's Pedagogical Services project and this project is adding a new collection ("Geology of National Parks") to the SSAC library. This project promotes quantitative literacy and aims to add a form of scientific literacy - the "science-in-action" realization that data-based science is crucial in making decisions that society cares about: in this case, the preservation of treasured parklands.

Please report errors in award information by writing to: awardsearch@nsf.gov.