

**2005 Mosal Award Application**  
**I. Project Proposal**

1. **Title of the project:** Ecology of the Colorado Plateau
2. **Purpose of the project:** To enhance the curricula of environmental science and general biology. Recognized as an essential part of the general education curriculum, environmental science is a means of promoting a sustainable-earth worldview to both major and non-major science students. The core of the project would be an ecological, geomorphologic, and natural history investigation into the Colorado Plateau region of New Mexico, Arizona, and Utah. The rich history of cultural interaction in the area will also be examined.
3. **A summary of the proposed activity with clearly defined objectives and methods. The summary should be stated so that a non-specialist can appreciate the significance of the project:**
  - ❖ Enhancement of established curricula in environmental-oriented courses
  - ❖ Examination of the ecological patterns and processes in the Colorado Plateau ecosystems
    - Evidence of geologic processes
    - Survey of the zoological and botanical species of the Colorado Plateau
    - To reconstruct a time line for the geological and biological events of the Colorado Plateau
    - To compare and contrast the destructional processes and constructional process which tear down and build up the Earth's surfaces, respectively
    - To gain experience in the use of topographic maps and aerial photographs to identify Colorado Plateau landforms
  - ❖ Examination of the feasibility for a cross-disciplined environmental class using biological and geological aspects of the field
  - ❖ Establishment of articulation with fellow environmental science programs in the Colorado Plateau area
  - ❖ Bring the experience into the classroom and the community by sharing it with others in the expanded learning community by the use of video and camera equipment, web paging and journal recordings
  - ❖ To develop a field log for use in exploring the Colorado Plateau
4. **A project statement which includes the reasons you wish to be considered for the award, the relationship of the award to your teaching and professional experience, the impact your project will have on your professional development, the impact that your participation will have on your institution and community, and the ways you will share what you have gained with others:**

Recent curriculum and textbook formats re-emphasize the interdependence of once isolated academic fields. Perhaps no other course of study better illustrates this new synergism of the scientific disciplines than environmental science. As the general public becomes more aware and thus more concerned about the impact of man on the biotic and abiotic environment, it is imperative that instructors be able to supplement the commercial text with practical and personal experience. This first-hand experience better enables instructors to construct and present curricula that is meaningful to the students. This shared experience fosters creative cooperation among instructors and advances the mission of higher education to provide an institutional environment that integrates scientific knowledge. This area of the Colorado Plateau represents biomes not represented in East Texas yet impacting the study of biology and geology significantly. Having developed and taught a Colorado subalpine and alpine field course for several years, I have observed the positive impact of hands-on learning for most students with the

actual observation of the fauna (animals) and flora (plants) and geological processes of the area. This award would allow me to expand by my exploration of the Southwest into the area of the Colorado Plateau and gather materials from areas that I have not visited in person. With the technology available, I would be able to create teaching materials that could be used both in-class and on-line, as well as for both credit and non-credit purposes.

5. **The proposed length of the project. To justify the length, include the proposed starting date, the implementation steps and timeline and any extenuating circumstances that could lengthen the process. The starting date should be soon after the stipend is granted if the project has not already begun. The project should be completed within 3 years of the date that the stipend is provided:**

Length: 12 weeks in Summer 2005 or Summer 2006

- 3 weeks for preliminary research and preparation time (May 16- June 3)
- 3 weeks of field experience in New Mexico, Arizona, and Utah (June 6-25)
  - Day 1 Tyler to Amarillo
  - Day 2 Amarillo to Carlsbad Caverns
  - Day 3 Carlsbad Caverns
  - Day 4 Carlsbad Caverns
  - Day 5 White Sands National Monument
  - Day 6 Petrified Forest National Park
  - Day 7 Petrified Forest National Park
  - Day 8 Grand Canyon
  - Day 9 Grand Canyon
  - Day 10 Grand Canyon
  - Day 11 Bryce National Park
  - Day 12 Bryce National Park
  - Day 13 Bryce National Park
  - Day 14 Zion National Park
  - Day 15 Zion National Park
  - Day 16 Zion National Park
  - Day 17 Travel
  - Day 18 Dinosaur National Monument
  - Day 19 Dinosaur National Monument
  - Days 20-21 Return home
- 6 weeks to organize curriculum for an eight hour field experience (June 27- August 8)

6. **A budget, which includes a line item listing of all major expenditures for the project:**

Travel Expense	4000 miles x \$ .37	=	\$1480
Lodging	\$70- \$100 / night for 20 nights	=	\$1400- \$2000
Food	\$30 /day for 20 days	=	\$600
Field guides			\$250
Videos			\$100
Digital camera and memory sticks			\$350
Topographical Maps			\$250
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Total			\$4430 - \$5030