

Konza Prairie/ Jornada Cross-Site Educational Program

Proposal Outline

1) Audience --K-12 teachers and students general public (very diverse: urban, U.S. & Mexico border, high minority, rural/agriculture)

2)Goals -- A) sustained curriculum contributions to K-12 science education, tailored to knowledge of local environments

Content area: 1. Monitoring

2. Remediation

Mission Area: Understanding general ecological phenomena

B) Community understanding of desert and grassland ecosystems, and of the application of science-based resource management to these systems

Content area: 1. Resource management

Mission area: Information for identification and solution of societal problems

3) Alignment with LTER Content

We propose to address three scientific issues that are related to the five core areas of the LTER, and that are linked to two components of the LTER mission statement.

4) Alignment with content standards using Middle school (5-8) National Science Education Standards,

Goal A will address the following Standards:

Life Science Content Standard C:

Develop an understanding of populations and ecosystems, and diversity and adaptation of organisms.

Science in Social Perspectives: Content Standard F:

Develop an understanding of populations, resources and environments; science and technology and society.

History and Nature of Science: Content Standard G:

Develop an understanding of science as a human endeavor, and the nature of science.

5) Approaches:

Models

- 1) Parallel research projects
- 2) Curriculum development
- 3) Scientists as guests in classrooms

Cross-Site efforts

- 1) Utilize parallel research projects be using student-sharing-of-data (experimental and ancillary)
- 2) Share curricula
- 3) Virtual field trips, with students as guides

Mentoring

Community education will involve use of undergraduate, graduate, and post-graduate students as teachers.

Workshops

Special efforts involving university students and scientists for teacher training

Summer Camps

University students as camp personnel in support of existing environmental education infrastructure present at both sites.

6) Linkages-collaborators

Jornada LTER/Konza Prairie Research Natural Area

Chihuahuan Desert Nature Park (CDNP)/Friends of Konza Prairie

This model will work if we create a sustained educational infrastructure associated with LTER through the CDNP/Friends organizations

7) Assessment

- Quantified evaluation of curriculum use
- Scientists as guest evaluators of student-based science activities
- Enrollment in community-based education programs
- Pre- and post- surveys to measure knowledge of adult participants
- Controlled studies to compare student knowledge and retention of concepts
- Teacher surveys on the value of materials and activities