

Konza Prairie LTER Supplement Request - 2001

Supplemental Request for IBN 9632851 (Long-Term Ecological Research in Tallgrass Prairie: The Konza Prairie LTER Program)

Request for Konza Prairie Schoolyard LTER Supplement.

The Konza Prairie Schoolyard LTER (SLTER) program was initiated with supplemental funding from the LTER Program in 1998. Prior to this, the Konza Environmental Education Program (KEEP) had not included data collection activities for K-12 students, although the local school districts were taking advantage of the site to learn about the tallgrass prairie and the research projects carried out there. With development of the SLTER program, we moved towards offering more science-based activities, with increased input from teachers and researchers. The current Konza SLTER program emphasizes realistic and relevant science-based activities focused on long-term data collection. These activities were designed, with input from local elementary and high school teachers, to give students an appreciation of the activities of LTER researchers, and to provide them the opportunity to collect their own data, which can be taken back to the classroom and manipulated in ways that give them a better understanding of the process of science. In the initial three years, the SLTER Program has attracted the participation of 16 local and regional teachers, and served 1162 children from third grade through high school. In 2001, we anticipate introducing an additional 10 teachers to the SLTER Program through the Summer Teacher's Workshop, and involving 500 to 600 additional children in the hands-on science training activities promoted by SLTER.

The Konza SLTER Program is under the direction of Dr. Valerie Wright, who also serves as Konza Environmental Educator. The science-based activities, which form the core of the program, were developed based on early workshops involving Dr. Wright, a core group of LTER investigators and science teachers from area schools. The consensus of the workshop participants was that the program should be based on field-based activities and data collection at the Konza Prairie LTER site, and it should involve the development of unique, long-term SLTER datasets. In addition to providing a meaningful learning experience for the students, it was also felt that the scientific activities and datasets developed by the SLTER Program should have some potential value to the Konza Prairie research program. The value could be in the collection of unique data or additional information not being routinely collected due to personnel or time restrictions. This would allow the students to see themselves as participants in the scientific process, and their activities as more than just another class exercise. Some of the specific SLTER activities proposed included inventories of invertebrate populations, such as stream macroinvertebrates; photo documentation of changes in plant communities following a change in watershed-level fire treatments; and comparisons of plant and insect communities in native and restored prairie. Specific exercises associated with these activities were developed by the EE and a teacher/assistant (supported by LTER supplemental funding), along with input from teachers, researchers and docents (trained volunteers affiliated with the KEEP) at an on-site SLTER workshop in June 1999. Fourteen of the teachers involved in this initial workshop brought their classes to Konza to participate in the SLTER in the 1999-2000 school year. A second teachers' workshop was held in June 2000. Again teachers, researchers and education program personnel came together to learn about the science activities and evaluate them. We also invited the veteran teachers from 1999 for a discussion of how the activities worked for their classes, and how they might be improved. In the final evaluation, teachers were quite positive about the value of the SLTER. For a detailed report, see the KEEP web site at [HYPERLINK "http://www.ksu.edu/konza/keep" www.ksu.edu/konza/keep](http://www.ksu.edu/konza/keep).

To date, fourteen of the sixteen teachers that attended the SLTER workshops have brought their classes to Konza to participate in science-based activities, some of them more than once. In addition nine other teachers who did not attend the workshops also took advantage of the program. Nine Konza LTER investigators plus as many graduate students assisted with the workshops, and provided assistance with the SLTER activities.

For our present Schoolyard LTER supplement, we request funds (\$15,000) to continue and refine the student-based activities begun in 1999, and to conduct an additional teacher-training workshop in June 2001. This workshop will inform new teachers of the SLTER Program, and provide training in the SLTER activities being done at Konza. Our current goals are to add two to three new research-based activities at each workshop. The combined training of additional teachers and development of new activities will greatly increase the number of children influenced by the program. With supplemental funding, we also will recruit a summer teacher/intern, whose responsibilities will include enhancing and improving the Schoolyard LTER web site. We now have introductory material for each of the science activities ready for the internet. However, we are still developing the capabilities for teachers and students to access SLTER databases on line, and to input their data from the classroom. A grant proposal (Eisenhower Professional Development Program) submitted in October 2000 was funded for the purpose of supporting a computer technician to accomplish this. However, we feel it also important to involve teachers directly in this processes, and thus we request funds for a part-time teacher/intern with appropriate skills to work on refinement of the Konza SLTER website, and development of other educational materials (training, manuals, datasheets, etc.).

In summary, the 2001-2002 SLTER program will continue to offer an annual workshop for teachers who will bring their students to Konza for hands-on science activities. New activities will be developed and added to the list of those available to teachers. Workshop participants will incorporate these activities into their curricula, and their students will contribute to the SLTER databases. Our goal is to put these databases on line in an interactive form within the next 18 months. The website, and other SLTER materials, will be improved and updated each year by a teacher/intern. This LTER supplement will support the above activities by providing funds for a part-time teacher intern and workshop coordinator, stipends for teachers participating in the workshops, funds to defray the costs of transporting classes to the Konza LTER site, and materials and supplies necessary for the SLTER activities.