Linking Scientists, Teachers, Children and the Community

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Program Beginnings

- CAP LTER engages the K-12 community in numerous projects through the LTER Explorers program. Students and teachers located in the Phoenix metropolitan area are collecting data on birds, trees, and plants, and testing hypotheses about the impacts of development on local ecosystems. This approach not only improves scientific literacy, but also contributes to the long-term monitoring of our local ecosystems.

Schoolyard studies

- The schoolyard studies are relatively simple, enabling students to collect reliable bird, arthropid, and plant data, particularly at the middle and high school levels. Students conduct point counts in their schoolyards, collecting scale-level data on their schools. They then submit the data in the CAP LTER 200 point survey, which can be modified for school use. The data sheets can be downloaded through the Web site and students work with CAP LTER researchers to improve them. We have contacted local informal education facilities to host the project. To this end, we have contacted local informal education facilities to host the project. We are also working with one community resource to develop a protocol to monitor the impact of various urban plants on the local ecosystem.

Teachers in the Researcher’s World

- In 1999, 19 teachers participated in our program, and over 20 in 1998. This year, we have 80 teachers interested in developing their own science curricula to enhance relevance to the curriculum. Teachers can contribute easily to the project. We will continue to develop education outreach components of the CAP LTER project so that teachers can be innovative in their teaching and contribute easily to the project. We have a “Take a Scientist to School” feature on our Web site to help teachers and researchers, and overall conduct valuable data for the scientists.

Technology

- Students are linked to other schools and the CAP LTER curriculum through the descriptive and instructural portion of our Web site. The Web site clearly outlines each of the protocols and provides teaching guides through the cumulative project. The CAP LTER Researcher’s World project allows students to develop their own data sheets (PDF files), share their data with other students, and enhance their own learning. Lessons are also presented to meet the needs of all students and grade levels. Students may also use the “Ask-A-Scientist” feature to get direct feedback from CAP LTER researchers.

Community

- Students have been invited to the annual CAP LTER meetings to present their research and discuss their findings. Students may be involved in the overall project. We have a “Take a Scientist to School” feature on our Web site to help teachers and researchers, and overall conduct valuable data for the scientists.

Future

- We will continue to develop protocols that focus on the connection of local ecology to classroom science. The survey protocols are used in our teacher education courses to assess students’ understanding of ecological concepts. These protocols can also be modified for school use. We are also working with the CAP LTER researchers to develop a protocol to monitor the impact of various urban plants on the local ecosystem.

“Research is exactly what I’ve been looking for. It will provide relevance to the curriculum. Thank you.” —CAP LTER Teacher