Studying Local Land Use
Middle School Students Performing CAP LTER Research
Shea Lemar, Charlene Saltz, Monica Elser

Project Overview
Lowell School
Lowell School is a K-8 school in Phoenix Elementary School District, Phoenix, Arizona. In the fall of 2004, it was one of the 16 schools selected to participate in the 7th & 8th grade science classes’ first GIS-based data science project. These classrooms used the ArcView (ArcGIS) software package from ESRI to study the land use of three areas near to where they live.

Service Learning
The ASU Service Learning Program coordinates a GIS internship which allows ASU interns to travel to Lowell and teach the Lowell students how to use GIS to study their world. Service learning is “experiential learning.” It uses service as a vehicle to enhance the educational process. For information concerning the ASU Service Learning Program go to: http://www.asu.edu/blue/serviceslearning.

AuThenTICY

CAP LTER

The ASU interns used the AuThenTICY curriculum to teach the Lowell students how to use GIS. AuThenTICY is a service learning curriculum which incorporates Geographic Information System technology. It is designed to actively engage youth in community problem solving through three modules: Community Awareness, Community Research, and Community Action.

Learning to use Geographic Information Systems
The students used the AuThenTICY curriculum as a resource for learning ArcView, a GIS software package. The City of Phoenix and ESRI provided GIS data for the lessons. The lessons begin with the most basic GIS functionalities and progress to more intense exercises.

Learning About Aerial Imagery and Land Use
The students used lessons developed by Ecology Explorers Education team to learn how to interpret aerial photos. The activity is based on lessons from the CAP 1205-300 Field Survey. To learn more about Ecology Explorers and to download the lesson, go to http://ecolines.asu.edu/explorers.

Presenting the Findings to CAP LTER Researchers
The students worked in groups and developed land use data for their study areas. They created maps to help convey their findings and then put their work into a power point presentation.

The Lowell students came to ASU one Monday, December 1st to present their findings to researchers from the International Institute for Sustainability. They gave a 30 minute presentation and fielded questions from the researchers. The students had many questions and were quite impressed by the student’s work. The Lowell students were proud to be doing such high level work and thoroughly enjoyed the experience.

Shea Lemar - IT/IIS, Charlene Saltz - IIS, Monica Elser - IIS