### **Research Projects**



Presenting group research projects



Field

testing for

research

projects

To culminate the ENVISION experience, participants utilized the skills and content they learned during the institute to design and conduct an environmental research project.

Summer 2000 participants chose a variety of research topics ranging from water quality testing to a wetlands plant inventory and a comparison of the effectiveness of different types of septic systems. For the project, participants developed a research proposal, collected and analyzed data, and presented their research to their colleagues. Overall, the participants used the skills learned in the institute to make statements about the quality of their surrounding environment, which in turn, their students will do during the school year.

### **Classroom Activities**

ENVISION is not limited to outdoor field activities. Instead, the program includes examples of hands on activities that can be completed in the classroom. The institute focuses on the use of models in science to represent real-world phenomena. This summer, participants created models of water flowing through different soil types and of landfills with different types of liners. In addition to models, the participants explored the use of photographs in better understanding the environment. Specifically, they used aerial photos from different years to compare the changes in land uses and the impacts of those changes on the environment.

## Inquiry-based Laboratories

ENVISION engaged participants in inquiry-based laboratory activities to learn science content and content-related teaching strategies. The teaching strategies emphasized questions before answers and learning science processes and content within the environmental context. For example, teachers learned about drinking water quality standards and parameters as well as water testing procedures by designing and conducting a laboratory investigation of local drinking water.

### Summer 2001

Workshop Dates for the 2001-2002 Cohort Spring Pre-Institute: April 26 - April 28, 2001 Summer Institute: July 9-July 31, 2001 Application Deadline: February 15



Participants creating landfill models

# Leadership Teams

Minimally, teams should consist of two teachers participating at one of two levels, Level I and Level II. Preference is given to applicants from grades 4-9. However, any combination of grade levels will be reviewed. (For more information and an application, visit the website.)

> http://uval.eas.purdue.edu/geoed.html Email: envision@purdue.edu Phone: (765) 494-0803

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### **Professional Development**

Throughout ENVISION, participants created a staff development plan for encouraging the adoption of ENVISION concepts in their school district. In addition, teams wrote grants requesting funds from the EPA to support student research projects.

Reflecting on the summer institute, one participant informed ENVISION that:

"We have used ENVISION to work on a grant project. Our school received a grant to work an amphibian study, and we are using the water activities as well as water monitoring to monitor our pond and the amphibians this coming spring. We have had one inservice already with the whole staff and had our kick off guest speaker this past week. We are planning another inservice and our school seems to be excited about this."

-M.K.

### Science and Technology

ENVISION also aimed to expose participants to different forms of technology that could enhance their science instruction. For example, this summer, participants used Enviromapper to determine the potential environmental hazards in their hometowns. In addition, they utilized different computer software programs to create spreadsheets, graphs, presentations, and web pages. One participant displayed his ENVISION experiences on his school web page: http://edzone.net/~bnestle/.

## Terraserver and Enviromapper





Using aerial photos to analyze land uses