

## SCIENCE EDUCATION

Chair: WALTER A. CORY, JR.  
3512 Windcrest Drive  
Bloomington, Indiana 47401 (812) 339-4738

Chair-Elect: CHERYL L. MASON  
#216 Chemistry Building  
Purdue University  
West Lafayette, Indiana 47907 (317) 494-8524

### ABSTRACTS

**Friends with Fins: Using Fish as an Educational Tool.** CLAUDE D. BAKER, Indiana University Southeast, New Albany, Indiana 47150.—At most academic levels, fish study provides an excellent avenue for developing an understanding and appreciation of a variety of science concepts. Information and handouts will be presented on a variety of subjects, including: setting up freshwater and marine aquaria, anatomy, fish watching, use of taxonomic keys, ecological concepts, audiovisual materials and fish tasting.

**Experiential Training: Evaluation and Grading of Extended Field Trip Courses.** CARL CHRISTENSON, JACQUELINE CHRISTENSON AND CLAUDE D. BAKER, Indiana University Southeast, New Albany, Indiana 47150.—Experiential training involving field trip courses has been incorporated into many disciplines. Art classes often visit the museums in Europe; language classes visit a country where the language is spoken. In biology, personal visits to distant locations provide a fuller appreciation of earth's biomes. Despite the widespread popularity of academic credit for field trip courses, little information is available on evaluation and testing procedures used in this instructional modality. Our approach in creating performance referencing criteria has included use of "search images," on-site field notes, pre-trip classes and testing, post-trip objective exams, and rating of attitude and participation. Point totals for some seven areas provided an evaluation scheme which was translated into letter grades.

**Project Map: An Evaluation of a Community.** KARL K. KING, Muncie Central High School, Muncie, Indiana 47306 AND ROSALIE J. KRAMER, Indiana University East, Richmond, Indiana 47374.—Project Map illustrates how a lab exercise can be adapted to different age groups of students (middle school, high school, and college) to teach the basic concepts of topographical mapping and community evaluation. The project stresses group participation and cooperation as well as develops skills in using instruments such as a compass, transit, and scientific keys.

**The Purdue Atmospheric Science Education Program for Junior High Science Teachers.** JOHN T. SNOW, DAVID R. SMITH AND SHAWN B. HARLEY, Department of Earth and Atmospheric Sciences, Purdue University, West Lafayette, Indiana 47907.—A description is given of an atmospheric science program for junior high school (grades 5-9) science teachers that is being developed at Purdue University. The goals of the project include improving the atmospheric science background of 24 Indiana junior high science teachers and assisting the teachers in applying this acquired information in the classroom. Videotapes dealing with eight selected topics in the atmospheric sciences also are being developed with the intent to disseminate the tapes and supporting written materials on a nationwide basis.

In July, 1987, a four week instructional course in meteorology and education will be conducted at the Purdue West Lafayette campus. The 24 teachers selected to participate in the program will become familiar with the physical laws which govern meteorology and how these principles relate to other physical sciences. Through daily lab work, they also will gain "hands on" experience in making weather observations, doing weather analyses, and in making simple forecasts. Other activities planned for the program include education applications seminars, field trips, and talks given by guest speakers from the national atmospheric sciences and science education communities.