

SCIENCE EDUCATION

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ABSTRACTS

The Value of Literature for Teaching Science to Science Majors. SANDRA WINICUR, Department of Biological Sciences, Indiana University at South Bend, South Bend, Indiana 46615.—The use of literature is encouraged to aid science majors in understanding the values of science and scientists. Because of the difficulty of the discipline, science students tend to lack first-hand experience with the human and the creative side of science. This need can be approached by a seminar course using well-written fictional and semi-fictional works by authors who demonstrate good insight into the scientific process.

The use of literature in this interdisciplinary manner to develop humanistic attitudes towards science on the part of the science majors, and the use of strong science background in discussing the basic ideas of these literary works, will hopefully tend to counteract the extreme specialization that one sees all too often in college students.

Changing Elementary Teachers' Attitudes Toward Science Process Skill-Oriented Instruction. HAROLD H. JAUS, Assistant Professor of Science Education, Purdue University, West Lafayette, Indiana 47907.—The purpose of this study was to determine if inservice elementary teachers' science teaching attitudes could be altered toward acceptance of a science process skill-oriented mode. Thirty-three teachers enrolled in a four-week summer NSF Implementation Program were involved in the study. This summer program consisted of training the teachers in the science process skills. Upon completion of this training, the teachers taught ESS and S-APA science lessons to groups of 8-10 children for a period of two weeks. At the onset and completion of the NSF Program the teachers were administered the Jaus Science Teaching Attitude Scale. This Likert-type instrument was designed to measure teachers' attitudes toward teaching science as a body of knowledge or as a process. Pre- and post-test scores from this instrument were analyzed by t-tests. Significant results indicated that elementary teachers' science teaching attitudes can be changed toward a more process skill-oriented mode.

Soil Section of an Adult Class in Agriculture. JAMES MITCHELL SMITH, Instructor, Veteran Agricultural Class, New Castle Area Vocational School, New Castle, Indiana 47362.—Soils information for an upland farm in Henry County, Indiana was presented using, in this order:

- 1) Dunreith Quadrangle 7.5' sheet.
- 2) Air photo N.C. 1-KK 1969—66 and a mate for a stereo pair.

- 3) Completed soils map of the farm. Explanation of Great Soil Group, catena, soils type, soils texture, slope and erosion. (Mapping Unit).
- 4) A similar upland area in Madison County, Indiana was studied on a finished Soil Survey Report. No such report is now available in Henry County.
- 5) A visit to the farm over a period of several hours with the above material and a soils auger. Detailed study of Crosby, Brookston and Miami soils.

The farm was that of Mr. Russell Bridges, a man greatly interested in education, and is near the junction of highways 3 and 70 and easily reached from any point in the state.

This method of presenting soils information can be used in many parts of the United States.

A Biomes Survey Trip of the South and Southwestern U.S. JACKSON L. MARR, MARLENE V. SHAW, and JOHNNY W. REISING, Life Science Department, Indiana State University Evansville, Evansville, Indiana 47712. —An inexpensive 5800-mile, 23-day field trip was taken by 22 people through the southeast pine timber, Texas gulf coast, southwest desert, Rocky Mountain coniferous forest, tundra, and short and long grassland prairies. The logistics and organization in addition to the trip will be discussed.

Viscosity Determination. ROLLA M. DYER and JACKSON L. MARR, Division of Science and Mathematics, Indiana State University Evansville, Evansville, Indiana 47712. —An extension of the settling sphere technique for the determination of viscosity of liquids to accommodate a wider range of substances, making possible the use of water as a standard has been developed. By using 5 mesh or smaller aluminum shot it has been possible to extend the elapsed time of the sphere settling.

Science Education and the Right Side of the Brain. H. MARVIN BRATT, Assistant Professor, Early and Middle Childhood Education, The Ohio State University, Marion, Ohio. —A series of pilot studies were conducted to determine whether left-handed children were more able to perform on tasks of visuo-spatial activity than right-handed children. Tangrams, a set of puzzles developed by the Webster Division, McGraw-Hill Publishing Co. were used as visuo-spatial tasks. Left-handed children were able to do a set of twenty-seven (27) puzzles in less time than right-handed children. University students were able to do the same tasks in less time. Young children (left handed) seemed to have more difficulty drawing certain objects with their right hands.

There may be differences in ability to solve tasks as well as a developmental scheme for these abilities. Further research along these lines is forthcoming.

The Geosciences Today—An Introductory Seminar. GERALD H. KROCK-OVER, Associate Professor of Education and Geosciences, Purdue University, West Lafayette, Indiana 47907. —The Purdue University Department of Geosciences has initiated an undergraduate seminar for freshmen expressing an interest in the geosciences. The seminar is de-

signed to acquaint entering university students with the opportunities available in the geosciences in general and with specific departmental programs. Thirteen sessions were conducted during the fall semester, 1974, and an evaluation instrument was administered to the students enrolled. Seminars such as these can serve as a valuable adjunct to the undergraduate science program and can provide many benefits to both the student and science faculty.