

SIMON FRASER UNIVERSITY

EDUCATION 476-4

DESIGNS FOR LEARNING

NATURAL SCIENCES (Elementary)

Interession, 1991
(May 6 - June 14)
Monday & Wednesday, 5:30 - 9:20 p.m.
Location: MPX 7500F

Instructors: Barbara Moon &
Glenn Brown

PREREQUISITES: Educ 401/402, or equivalent

COURSE DESCRIPTION

This course is designed for all; no special knowledge of science is required. The course will review what science is and why we teach it. It will introduce a series of models of teaching appropriate for science lessons. Participants will learn a range of specific activities that they will be able to use in the classroom, and will be introduced to a variety of other resources they can call upon in the future. The course will balance theoretical considerations with practical classroom concerns. Activities will be from the physical, biological and earth sciences.

During the course we will:

- review major ideas and controversies in the field of science teaching
- review and practice using different models of teaching
- practise using "hands-on" science activities
- review some existing science education programs
- provide a theoretical framework within which teachers can plan, execute and evaluate their own science programs
- link science teaching with the objectives of the Year 2000 program

TOPICS

- What are science and science education
- What are the objectives of science education
- What are the merits and problems of activity based science teaching
- How to use different teaching techniques with science subjects
- How commercially available science programs can be used in the classroom
- How to design your own science units
- How to evaluate science units
- How to teach science with a limited budget
- How to integrate science with other subjects

EVALUATION

Details of evaluation will be settled the first week of class.
Several small (one or two page) papers during the semester, a final paper/unit plan and participation in class activities will be criteria for evaluation.

REQUIRED TEXT

Carin, A., & Sund, R. 1989. Teaching Science Through Discovery. Sixth Edition.
Merrill Publishing Company. ISBN 0-675-20972-2

RECOMMENDED TEXT

Joyce, B., & Weil, M. 1986. Models of Teaching. Third Edition. Prentice-Hall. ISBN 0-13-586348-1