SIMON FRASER UNIVERSITY

Summer Semester 2002

EDUC 476 - 4
Designs for Learning: Elementary Science

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Wednesday 8:30-12:20 in EDB 7500F **D01.00**

PREREQUISITES
Educ 401/402

DESCRIPTION
Outline of Topics:
- What is science, and why should it be taught anyway?
- Using philosophy of science to develop a sound conception of scientific process.
- What is the "scientific method "? Does it really exist?
- Are scientists "open-minded" and "objective"?
- What makes an experiment an experiment?
- What is the role of human purpose and interest in scientific inquiry?
- What programs and materials are available to elementary science teachers?
- How can we interpret what students say and do in the science classroom?
- How do young children think about particular scientific concepts?
- Parent and community involvement in science and technology.

OBJECTIVES
Setting realistic and defensible objectives.
Arguing for the defensibility of your own science program.
Constructing your own science curriculum materials.
Analyzing and improving science teaching.
Tapping the research on science learning.

This course is intended to provide a comprehensive conceptual framework for making sense of the events of curriculum and instruction in Elementary school science: it provides an introduction to thinking about science teaching and the practical skills required to do the job.

REQUIREMENTS
1. Midterm - 45%
   A mini-unit plan or theme study encompassing 5-6 lessons. This is to be accompanied by a short paper that links the specific subject-matter topic to a teaching strategy.

2. Final- 45%
   An analysis of a lesson, taught by you to a group of elementary school students. The lesson you choose should be part of your mini-unit plan or theme study that you develop for the mid-term.

Note: The remaining 10% of your grade will be based on my assessment of your performance in class.

REQUIRED READING
Xeroxed readings.