

Summer Session 2003

**EDUC 476 - 4**  
**Designs for Learning:**  
**Elementary Science**  
**D03.00**

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Mondays/Wednesdays 8.30-12:20

**PREREQUISITE:**

Educ 401/2

**Course Description:**

How can we create a science culture in our classrooms? This course will explore theoretical and practical means of creating an environment that celebrates inquiry and exploration using science as its focus. We will examine the K-7 science curriculum as well as pedagogical tools of scientific inquiry, constructivism, cooperative learning, knowledge building, and critical thinking. Students themselves will use reflective practice and personal inquiry to examine their own scientific understandings as a means of investigating and building their own philosophy of science.

Some topics that will be explored include:

The science lesson: how to plan for inquiry  
The \$20.00 unit: science on a shoe string  
Science and citizenship  
Assessment and evaluation strategies for science  
Linking science and literature  
Cognitive tools for learning/using science  
Is the scientific method dead?  
Investigating personal interests about the teaching of science  
Science and technology

**Assessment:**

Each student will be required to complete a **portfolio of work** that will include:

Samples of reflective writing/thinking, class work  
A collection of 10-15 science demonstrations for classroom use  
A 6 lesson teaching unit on a science topic from the BC curriculum  
An article review from a Science Journal  
A science lesson that develops from a selection of children's literature  
Total portfolio value: (70%)

**One group presentation (20%)**

There are four assigned topics to choose from:  
Science and students with special needs  
Science and gender differences  
Science in the multicultural classroom  
Science and the gifted learner  
Integrating science across the curriculum

10% of your assignment grade will be based on my assessment of your **performance in class**.

Specific assessment criteria (rubric) will be developed with students in the class.

**Required text:**

*Learning to teach science: a model for the 21st Century (Canadian edition)*. (1999) J. V. Ebenezer and S. Connor. Prentice-Hall: Scarborough, Ontario.

Suggested readings from science journals.