

**SIMON FRASER UNIVERSITY
SUMMER INTERSESSION 2006**

**EDUC 416-4/476-4
DESIGNS FOR LEARNING: SECONDARY/ELEMENTARY
SCIENCE
(D05.00/D06.00)**

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Location: Dawson Creek

Pre-requisite: EDUC 401/2

Course Description:

This course is intended as an introduction to science teaching for pre-service and practicing educators. The course will have an environmental education emphasis and will model inquiry-based pedagogy with the development of a sense of place and the nurturing of curiosity about things in one's local environment. A weekend field experience is planned at an outdoor education centre.

Proposed Topics:

- The nature of science; the relevance of science
- Personal beliefs about learning and teaching science; current research
- Scientific method; experiments; objectivity
- The discovery approach; the role of playfulness; the teacher as facilitator
- Developing a personal definition of inquiry-based learning and teaching
- Science-technology-society-education; critical thinking; citizenship
- Integration of environmental education principles across the curriculum: ideas for 'sharing nature with children'; developing awareness and nurturing stewardship; nature journaling; science in the community; field research

Available Resources:

- Design your own inexpensive science tool box
- Funding opportunities
- Materials and programs for teachers
- The outdoor education centre beyond the school exit sign

Proposed evaluation:

- Participation - initiative, collaboration, class discussion 20%
- Reflection - on-line responses to readings and session ideas 20%
- Assignments - unit plan design, mini-lesson, group presentations 60%

Required Readings:

There is no assigned textbook. On-line resources will be used and a booklet of photocopied resource materials will be provided at a cost of \$20 payable at Session 1.

Class Dates:

Session 1: Friday, May 12 evening. Saturday, May 13, full day.

Session 2: Friday, May 26, evening. Saturday May 27, full day.

Session 3: Friday June 9, evening. Saturday June 10, full day.

Session 4: Friday, June 16, evening, Saturday, June 17 full day, Sunday, June 18, morning.

Reflections and some assignments will be submitted by FirstClass. Students need have access to the internet throughout the course.

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