SIMON FRASER UNIVERSITY

Summer Session 2002

EDUC 476 - 4

Designs for Learning: Elementary Science

Tuesday, Thursday & Saturday
8:30-11:50 in EDB 7500B

D02.00

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PREREQUISITE

Educ 401/402

DESCRIPTION

Science education has been undergoing a revolution. Knowledge, student's learning, and how individuals make sense in the world in general have changed significantly over the past two decades. These ideas have contributed important dimensions to the teaching of elementary science in schools. Recent research suggests knowledge to be a *social construction* within community environments. Such a development includes the need to understand the notion of *tools*, *goals*, and *motive* as being important elements of a learning environment. A contemporary awareness of science education is crucial for teachers developing genuine curricula as well as understanding their own role as educator. The importance of this new role arises from the need to identify the learner as "being involved" in his or her own meaning-making process, as well as exchanging and building knowledge during social interactions.

Central to our agenda, will be modeling the theme of teacher as "facilitator," rather than teacher as "disseminator of knowledge." Guided by on-line readings as well as class needs, we will develop our own pedagogical and curricular program concerning *doing science, knowing science,* and *knowing about science.* Learning through various science activities, as well as understanding the philosophy of science, will shape classroom dialogues and writing projects. Teachers will learn to develop their own hands-on/minds-on curriculum materials and like the students we teach in schools, through writing and discussion we will sort and organize elements of our own experiences into personal frames of knowledge.

COURSE REQUIREMENTS:

PARTICIPANTS MUST BE ACTIVELY "ON LINE," PREFERABLY WITH INTERNET ACCESS FROM HOME.

- Most classes will be followed up with an appropriate internet reading. A subsequent one-page analysis reflecting how this might impact on one's classroom practice will be due the following class. Value: 25%
- Final assignment will include developing a series of science lessons plans based on a theme appropriate to a particular learning level. Value: 30%
- Group presentation of a science activity(s) taken from lesson plans above. Value: 25%
- Individual presentation of a discrepant event. Value: 20%

Very Important:

•*Before* the first class, all students must read and make notes on Gordon Wells' paper, "DIALOGIC INQUIRY IN EDUCATION: BUILDING ON THE LEGACY OF VYGOTSKY" Available for online reading at: **http://www.oise.utoronto.ca/~gwells/NCTE.html**
or in the EDUC 476/Cummings box in the CET for xeroxing purposes only.

(Crosslisted with EDUC 416 D02.00)