

SIMON FRASER UNIVERSITY

**EDUCATION 476-4
DESIGNS FOR LEARNING: NATURAL SCIENCES
(Elementary)
(D2.00)**

Intersession, 1992
(May 4 – June 22)
Monday & Wednesday, 6:00 – 10:00 p.m.
Location: Northern Lights College
Fort St. John Campus
AHCOTE Program

Instructor: Waldo Dahl

PREREQUISITES: Education 401/402.

COURSE DESCRIPTION

This course will focus on:

How to teach Elementary school science — methods and theory
A review of the science knowledge needed to teach elementary school science
Laboratory experiences involving investigations and activities teachers can adapt to
their elementary science programs

EVALUATION

Lab Work and Lab Records (P/F)	40%
Assignments and Quizzes	30%
Final Exam	30%

ASSIGNMENTS

Lesson plans to suit various teaching styles used in elementary science classrooms.
A Unit plan.

REQUIRED TEXT

Cega, Peter C. (1990). Science in Elementary Education. New York: MacMillan
Publishing Company.

COURSE CONTENT

Week 1 — May 4 & 6

May 4	Methods and theory
	Science in Elementary Education, pp. 3–18
	Content
	Light Energy and Colour, pp. 178–187
	Lab
	Selected investigations and activities, pp. 187–222

May 6 Methods and theory
 How Children Learn Science, pp. 19–46
Content
 Heat and Energy, pp. 224–233
Lab
 Selections from pp. 233–256

Week 2 — May 11 & 13

May 11 Methods and theory
 How to Use Closed-Ended and Open-Ended Activities, pp. 49–64
Content
 Sound Energy, pp. 259–268
Lab
 Selections from pp. 268–296

May 13 Methods and theory
 How to Improve Children's Thinking, pp. 67–96
Content
 Magnetic Interactions, pp. 298–303
Lab
 Selections from pp. 303–321

Week 3 — May 18 & 20

May 18 Victoria Day (no class)

May 20 Methods and theory
 How to Use Different Resources to Teach Science, pp. 99–103
Content
 Electrical Energy, pp. 323–334
Lab
 Selections from pp. 334–363

Week 4 — May 25 & 27

May 25 Methods and theory
 How to Arrange and Manage Complementary Experiences, pp. 126–146
Content
 Simple Machines and How They Work, pp. 366–373
Lab
 Selections from pp. 373–402

May 27 Field Trip
 Trees, shrubs, and flowers of the northeast

Week 5 — June 1 & 3

- June 1 Methods and theory
 How to Organize and Evaluate Science Teaching, pp. 149–171
Content
 Plant Life and Environment, pp. 404–414
Lab
 Selections from pp. 415–442
- June 3 Guest Lecture
 Animal Ecology — Dr. David Hamer
Content
 Animal Life and Environment, pp. 445–465
Lab
 Selections from pp. 467–495

Week 6 — June 8 & 10

- June 8 Content
 The Human Body & Nutrition, pp. 498–508
Lab
 Selections from pp. 509–541
- June 10 Content
 The Earth's Changing Surface, pp. 543–555
Lab
 Selections from pp. 555–580

Week 7 — June 15 & 17

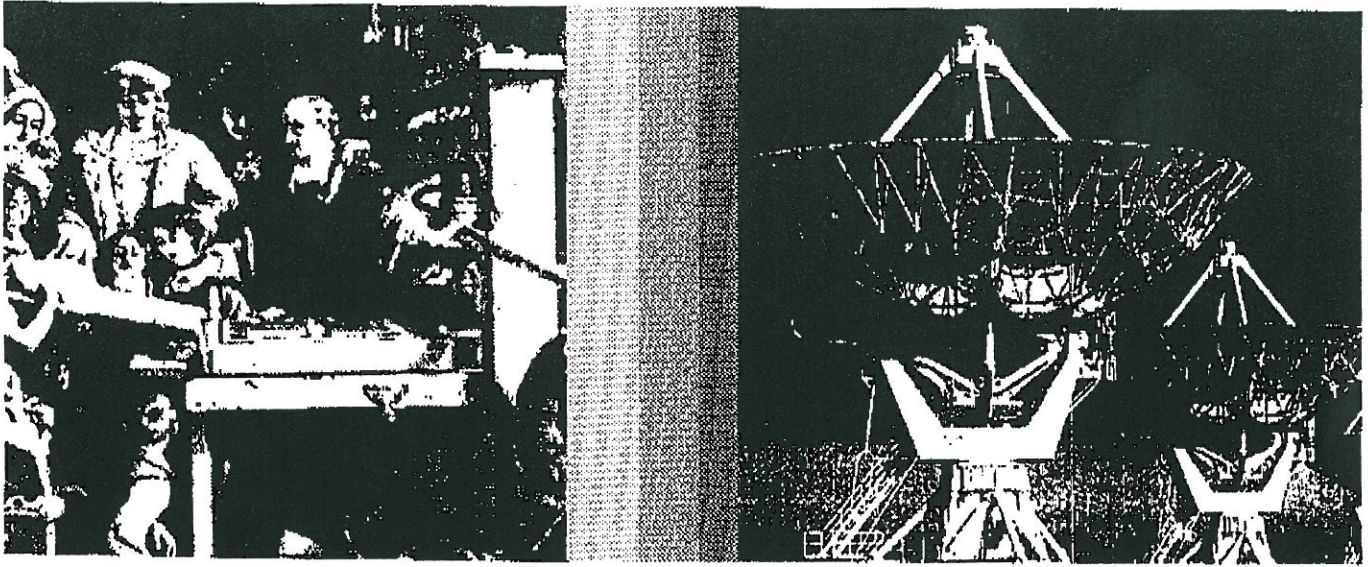
- June 15 Guest Lecture
 The Charlie Lake Water Study
Content
 Water, Air, and Water, pp. 583–595
Lab
 Selections from pp. 596–631
- June 17 Guest Lecture
 Astronomy
Content
 The Earth in Space, pp. 634–646
Lab
 Selections from pp. 647–673

Week 8 — June 22

Final Exam

8V

SCIENCE EDUCATION IN A WORLD OF CHANGE.



Education 476. Designs for Learning, Natural Science.

*Simon Fraser University Tele-Learning Centre, Kelowna.
January-April, 1992.*

