Education 475 Designs in Learning: Mathematics

Endorsed NONTEP Spring, 1981 Jane Srivastava

Class assignments and discussion re: development of the following mathematical topics in the elementary grades, including lesson ideas and introduction to appropriate teaching/learning materials:

whole number concepts
equivalence
place value
properties of operations on numbers
addition, subtraction, multiplication, division ---- of whole numbers, concepts and algorithms
fractional numbers (algorithms, operations on fractions related to whole numbers, decimals)
geometry, metric measurement (linear, area, volume, mass, capacity, temperature)
number theory (odds/evens, factors, primes)

Other topics:

Diagnostic and remedial mathematics teaching
Evaluation of mathematics learning
Evaluation of B.C. prescribed textbooks

Objectives:

Using the above topics,
- to aid the prospective teacher to perceive a mathematical learning experience as a progression from investigative experiences to the forming of generalizations and the learning of facts and skills followed by the utilization and extension of generalizations, facts and skills;
- to prepare the prospective teacher for providing this type of mathematical learning experience for elementary students.

Reading assignments from:

Today's Mathematics, Heddens, S.R.A., 1974
Investigating Mathematics Learning, O'daffer, Eicholz, Fleenor, Addison-Wesley, 1973
Didactics and Mathematics, Mathematics Resource Project, University of Oregon, Creative Publications, 1978
Arithmetic Teacher, 1977 to present (journal, National Council of Teachers of Mathematics)

Students also introduced, through assignments, to:

B.C. Mathematics Curriculum Guide
Vector (journal, BCAMT)
B.C. prescribed texts (Investigating School Mathematics, Project Mathematics, Heath Elementary Mathematics)
other print and film resource material