Class Syllabus

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Course Title:

Mathematics for The Kindergarten Student

Course Foundation:

- **Common Core State Standards for Mathematics,** pages 11 through 88
- **Principles and Standards for School Mathematics, 2000,** pages 392, 394, 396, 398,400, 402
- Studies by authors such as Baroody, Hiebert, Clements, and others. See research.

Course Purpose: To teach fundamental math concepts and skills using:
1) a dictionary where terms are clearly and accurately defined and used in an example.
2) problem-solving activities for developing numerical concepts.
3) *hand's on methods* for modeling the meaning of mathematical concepts.

Course Texts: ✘ Dictionary of Mathematical Terminology for The Elementary Student

Modeling Tools: ✘ 72 dot cards, 5 five-frames, and 12 ten-frames with **266 problem-solving activities** written on the backs of the cards; connecting cubes, spiral bound five- and ten-frames

Learning Outcomes: With our dictionary, visuals, and hands-on modeling tools, your students will develop a deep understanding of the mathematical concepts deemed important in kindergarten. Concepts explored at the one- and two-day workshop will be selected from the dictionary and include but are *not limited to*:

1) meaning of numbers, questions numbers answer
2) three classifications of numbers and how they are used
3) number combinations, number recognition, writing numerals and expressions
4) meanings of the four operations and three representations for each meaning
5) sort and classify objects
6) counting by 1's, 2's, 5's, 10's, counting on, counting back, naming numbers between
7) writing stories for equations, writing and solving story problems and algebraic equations
8) meaning of place value through the ten's place
9) measurement: linear measure, time, temperature
10) recognize, describe, and extend patterns
11) spacial reasoning
12) recognizing and representing relations between numbers
13) transformations
14) prefixes for numbers
15) four strategies for estimating measures
16) symmetry
17) naming attributes of and identifying polygons and solids

Course Length: **One-day Workshop:** Selected topics from the dictionary.
Two-day Workshop: Selected topics from the dictionary.

Who Should Attend: kindergarten educators, special education teachers, teacher's aids, paraprofessionals

Graduate Credit: Minot State University, Minot, North Dakota
Minot State UNIVERSITY
With 15 contact hours, educators can receive one semester hour of graduate credit, Math 500, for $50; CEU's, $20.
• *Fee for graduate credit and CEU's are not a part of the workshop fee.*

Optional Materials: Dictionary, dot cards, five- and ten-frames, spiral bound five and ten-frame with activity booklet are $94.50.

Participants Bring: ✓ 3 by 5 Cards (25) ✓ Popsicle Sticks (50)
✓ Two, 2 inch three-ring binders if purchasing the dictionary