

JOURNALS, MATH 391
REQUIRED READING & FOLLOW UP REFLECTIVE WRITING ASSIGNMENTS

- See the *Course Schedule* for due dates
 - See the *Journal Reading and Reflection Directions Handout* for specific directions
 - See *Accessing the Journal Articles* to find the readings
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JOURNAL REFERENCES

These articles have been chosen from

NCTM: TEACHING CHILDREN MATH (formally ARITHMETIC TEACHER)

- ❖ This journal focuses on topics related to elementary school students

NCTM: MATHEMATICS TEACHING IN THE MIDDLE SCHOOL (MTMS)

- ❖ This journal focuses on topics related to middle school students
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LAB TWO READINGS

HANDS-ON TOPIC: NUMERATION SYSTEMS

- The Inka Quipu: Positional Notation on a Knotted Cord, Claudia Zaslavsky and Bianka Crespo, November 2000, 164 - 166, 180 - 184

HANDS-ON TOPIC: PLACE VALUE (ADDITION / SUBTRACTION)

- Let's Do It: The Power of 10, Arithmetic Teacher, November 1984, 6-11

LAB FIVE READINGS

HANDS-ON TOPICS: MEASUREMENT

- By the Unit or Square Unit? Bellasanta B. Ferrer, et. al., MTMS, November 2001, 132 - 137
- Assessment in Action: Mrs. Grant's Measurement Unit, Diana F. Steele, MTMS, January 2002, 266 - 272

LAB SIX READINGS

HANDS-ON TOPIC: FRACTIONS

- Let's Do It: Fractions with Fraction Strips, Arithmetic Teacher, Dec. 1984, 4-9

THEORY TOPIC: ABOUT MANIPULATIVES AND MANIPULATIVE USE

- Maximizing Implementation of Manipulatives, Arithmetic Teacher, May 1990, 27

LAB NINE READINGS

HANDS-ON TOPIC: FRACTIONS

- Divide and Conquer: Unit Strips to the Rescue, Arithmetic Teacher, December 1987, 6-12

THEORY TOPIC: ABOUT MANIPULATIVES AND MANIPULATIVE USE

- Manipulatives: One Piece of the Puzzle, Mary Kay Stein and Jane W. Bovalino, MTMS, February 2001, 356 - 359

(NOT REQUIRED) EXTRA CREDIT JOURNAL READINGS & REFLECTIONS

EXTRA CREDIT DUE DATES: Any time prior to the end of class (Wednesday, Week 10). There are 3 EC Journal Reflection cover sheets in your NB Journal section.

- ***YOU MAY DO UP TO A TOTAL OF TWO EC JOURNAL ASSIGNMENTS.***
- ***Choose from the following list of 7 articles OR find HANDS-ON articles of your own—bring a complete copy to your professor for approval prior to writing up your reflection.***

HANDS-ON TOPIC: VIRTUAL MANIPULATIVES

- ***What Are Virtual Manipulatives? Teaching Children Mathematics, February 2002, 372 -377***

Abstract: This article establishes a definition for virtual manipulatives, provides examples of virtual manipulative Web sites, and discusses their potential uses for teaching mathematics in K-12 classrooms.

HANDS-ON TOPIC: GEOMETRY

- ***A Dynamic Way to Teach Angle and Angle Measure, Arithmetic Teacher, January 1992, 6-13***

HANDS-ON TOPIC: ALGEBRA

- ***Lima Beans, Paper Cups, and Algebra, Arithmetic Teacher, April 1991, 34-37***

HANDS-ON TOPIC: FUNCTIONS

- ***Using Models to Build an Understanding of Functions, Kathleen Cramer, MTMS, January 2001***

Abstract:

This article shows how to plan and organize instruction to help students understand the function concept and to make the mathematics explicit. Linear, quadratic, and exponential functions are explored through use of manipulatives and data collection. This is all done with simple, easy to make manipulatives--string, paper, etc. Wow!

HANDS-ON TOPIC: NUMBER LINES

- ***Developing Number Sense on the Number Line, Jennifer M. Bay, MTMS, April 2001***

Abstract:

A life-sized number line helps students visualize number relationships. Simple, yet helpful for whole number as well as fractional number concepts and understanding.

HANDS-ON TOPICS: ALGEBRAIC THINKING

- *Creating Connections: Promoting Algebraic Thinking with Concrete Models*, Michael F. Chappell and Marilyn E. Strutchens, *MTMS*, September 2001

Abstract:

Using concrete models to teach conventional algebraic topics, with emphasis on connections to other mathematical concepts, such as notion of variable, number properties, and geometry.

- *Helping Students Make Sense of Algebraic Expressions: The Candy Shop*, Diana Underwood Gregg and Erna Yackel, *MTMS*, May 2002

Abstract:

This article describes a sequence of activities designed to help middle school students develop a conceptual understanding of addition and subtraction of algebraic expression.