The Canadian Montessori Teacher Education Institute

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ELEMENTARY MONTESSORI
MATH ALBUM


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## ELEMENTARY MONTESSORI MATH ALBUM

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## WORK to do with 1 to 10

- Snake Game
- Associativity Property
- Dissassociativity Property


## LINKAGE to the DECIMAL SYSTEM

1. QUANTITIES

- Golden Beads: 1, 10, 100 And 1000
- Counting through-Golden Beads
- Bird's Eye View / Great Display

2. OPERATIONS WITH THE GOLDEN BEADS

- Static Addition
- Static Multiplication
- Static Division
- "House-Keeping"
- Dynamic Addition
- Dynamic Multiplication
- Dynamic Division

3. SYMBOLS

- Numerals: 1, 10, 100 And 1000
- Symbols: Counting through-Numerals
- Symbols: Bird’s Eye View / Great Display


## 4. COMBINATION: QUANTITIES AND SYMBOLS

- From Quantity to Symbols
- Formation of a Large Number
- From Symbols to Quantity
- Static Addition
- Static Multiplication
- Static Subtraction
- Static Division
- Dynamic Addition
- Dynamic Multiplication
- Dynamic Subtraction
- Dynamic Division

5. THE STAMP GAME

- Static Addition
- Static Multiplication
- Static Subtraction
- Static Division
- Dynamic Addition
- Dynamic Multiplication
- Dynamic Subtraction
- Dynamic Division
- Geometric Multiplication

6. PEGS GAME

- Static Addition
- Static Multiplication
- Static Subtraction
- Static Division
- Dynamic Addition
- Dynamic Multiplication
- Dynamic Subtraction
- Dynamic Division
- Geometric Multiplication

7. DOT GAME

- Static Addition
- Static Multiplication
- Static Subtraction
- Dynamic Addition
- Dynamic Multiplication
- Dynamic Subtraction

8. SMALL BEAD FRAME

- Static Addition
- Static Multiplication
- Static Subtraction
- Static Division
- Dynamic Addition
- Dynamic Multiplication
- Dynamic Subtraction


## QUANTITIES AND SYMBOLS: 11-99

9. SEGUIN BOARD: 11-19 (Teen Boards)

Quantities from 11 to 19
Symbols from 11 to 19
Combination Quantities and Symbols from 11 To 19
10. SEGUIN BOARDS 10-90 (Ten Boards)

Quantities from 10 to 90
Symbols from 10 to 90
Combination Quantities and Symbols from 10 to 90
Quantities from 11 to 99
Symbols from 11 to 99
Combination Quantities and Symbols from 11 to 99

## 11. SEQUENCE BOARD OF 100

## 12. SEQUENCE CHAIN OF 100 and 1,000

## 13. ADDITION TABLES

Addition Table \# 1
Addition Table \# 2
Addition Tables \# 1 and \# 2
Addition Table \# 3
Addition Table \# 4
Addition Table \# 5
Addition Table \# 6 (Blind Table)
Summary of Addition
14. SUBTRACTION TABLES

Subtraction Table \# 1
Subtraction Table \# 2
Subtraction Table \# 3 (Blind Table)
Summary of Subtraction
15. MULTIPLICATION TABLES

Multiplication Table \# 1
Multiplication Table \# 2
Multiplication Tables \# 3
Multiplication Table \# 4
Multiplication Table \# 5 (Blind Table)
Summary of Multiplication

## 16. DIVISION TABLES

Division Table \# 1
Division Table \# 2 (Blind Table)
Summary of Division

## 17. QUANTITY: HIERACHICAL MATERIAL

Quantities
Symbols
Combination Symbols \& Quantities

## 18. LONG MULTIPLICATION with the CHECKER BOARD

19. LARGE BEAD FRAME

Getting acquainted with quantity
Forming complex numbers which are dictated orally
Notation of numbers excluding zeros
Notation of numbers including zeros
Notating complex numbers with no zeros
20. LONG MULTIPLICATION WITH THE LARGE BEAD FRAME

Multiplication and notation of the partial products as well as the final product Multiplying with a zero in the multiplier

## 21. LONG MULTIPLICATION as in a REAL BANK

## 22. FLAT BEAD FRAME

## 23. RACKS AND TUBES

## 24. FRACTIONS

Presentation of addition of fractions with the same denominator Presentation of subtraction of fractions with the same denominator Presentation of division of fractions by a whole number

## 25. PROPER, IMPROPER, MIXED AND APPAERENT FRACTIONS

Apparent Fractions
Improper Fractions
Mixed Fractions

## 26. COINAGE

## 27. ROMAN NUMERALS

## 28. BINOMIAL CUBE

Presentation \# 1 (sensorial)
Presentation \#2 (mathematical)

## 29. TRINOMIAL CUBE

Presentation \# 1 (sensorial)
Presentation \#2 (mathematical)
Story of the Three Kings

## 30. DECANOMIAL SQUARE

Presentation of the formation of the ten tables of multiplication of the numbers 1 to 10 Vertical Presentation Horizontal Presentation
Presentation alternating Rows and Columns ("angular" or "diagonal")
Commuted Presentation
Numerical presentation

## 31. SQUARING

Presentation of the transformation of the square into a binomial Presentation of the transformation of the square into a trinomial

## 32. MULTIPLES

Forming multiples
Exploring common multiples
Finding common multiples

## 33. LEAST COMMON MULTIPLE

## 34. FACTORS

## 35. PRIME FACTORS

## 37. DIVISIBILITY

Divisibility by 2
Divisibility by 5

## 38. LONG GROUP DIVISION

Presentation with two-digit divisor
Presentation with three digit divisor
Presentation with first digit of the divisor greater than the first digit of the dividend
Presentation with zero in the quotient
Presentation with zero in the divisor
Presentation with zero in the units of the divisor

## 39. DECIMAL FRACTIONS

Presentation of quantities
Presentation of symbols
Presentation of combination of symbols and quantities
Presentation of reading quantities
Presentation of operations with decimal fractions / addition
Presentation of operations with decimal fractions / subtraction
Presentation of operations with decimal fractions / multiplication
Presentation of operations with decimal fractions / multiplication of a fraction by a fraction
Presentation of operations with decimal fractions / division

## 40. BEAD CHAINS - SKIP COUNTING

