# **Montessori Mathematics Curriculum**

## Presentations on Preparation for Math

One-to-One Correspondence Books – Counting Songs – *3 Little Speckled Frogs* Sorting/Classification Sequence/Patterns – Do As I Do Sequence/Seriation – Bead after Bead

# **Presentations on Numeration Sets – Number Rods**

Introduction – First Period of 3 Period Lesson Introduction – Second Period of 3 Period Lesson Memory – Order to Order Memory – Order to Mixed-Order Memory Concept of Larger and Smaller Memory – Concept of One More and One Less Memory – Concept of Two More and Two Less Memory – Concept of Greater Than and Less Than Addition – The Making of 10 Addition – The Making of ? Subtraction Counting Backward Presentations on Numeration Sets – Sandpaper Numerals (0-9)

Introduction – General

Write – Sand

Association to Numeral Cards

Memory – Go Fetch

Memory – Surprise and Go Fetch

## Presentations on Numeration Sets – Number Rods and Numerals

Introduction – Association with Numerals – Both Numerals and Rods in Order

Numerals in Order and Rods in Mixed-Order

Numerals in Mixed-Order and Rods in Order

Go Fetch Symbol and Quantity

Memory – Order to Order

Memory - Numerals in Mixed-Order and Rods in Order

Memory – Numerals and Rods in Mixed-Order

Addition – The Making of 10

Addition – The Making of ?

Subtraction

## **Presentations on Numeration Sets – Spindle Rods**

Introduction – General

**Different Objects** 

Number Jumping Game

# **Presentations on Numeration Sets – Numerals and Counters**

Introduction – Numeral Cards

Introduction – Cut-out Numerals

### Association – Numeral Cards and Cut-out Numerals

Even and Odd

Pick-up Even and Odd

Quantity – Even or Odd?

Symbol – Even or Odd?

Memory Game

# **Presentations on Linear Counting – Short Bead Stairs**

Introduction – 1 to 9 Short Bead Bars

**Bead Design Cards** 

## Presentations on Linear Counting – Snake Game – Search for Ten

Snake Building – Even Number that Equals 10

Snake Building – Random

### **Presentations on Linear Counting – Teen Boards**

Introduction – Quantity

Introduction – Symbols (Order)

Introduction – Symbols (Mixed-Order)

Quantity and Symbol – Order

Quantity and Symbol – Mixed-Order

Random Numeral – Go Fetch Quantity

Random Quantity – Go Fetch Numeral

Making numeral and Quantity Pictures

## Presentations on Linear Counting – Number Rods – Teen Presentation

Introduction – Number Rods (Only)

Introduction - Number Rods and Numeral Cards

### **Presentations on Linear Counting – Ten Boards**

Introduction – Quantity

Introduction – Symbols

Introduction – Quantity and Symbols – (10-99 with Unit Beads)

Making Numeral and Quantity Pictures

# Presentation on Linear Counting – 100 Chain and Labels

Introduction – 100 Chain and Labels

# Presentations on Linear Counting – 1000 Chain and Labels

Introduction – 1000 Chain and Labels

Compare 100 Chain to 1000 Chain

# Presentations on Linear Counting – 100 Board and Numerals

Introduction – Order

Introduction – Mixed-Order

Go Fetch – Mixed-Order

# Presentations on Linear Counting – Squaring Chains – 1-10

Introduction – Comparison to Squared Chain/Use of Labels

Go Fetch

# Presentations on Linear Counting – Cubing Chains – 1-10

Introduction – One through Ten

Complete Layout

# Presentations on Base 10 – Decimal System – Quantity (Golden Beads)

Introduction – Unit, Ten Bar, Hundred Square and Thousand Cube

Hide and Go Seek

Relationship of Materials

Complete Layout

Go Fetch

## Presentation on Base 10 – Decimal System – Symbol

Introduction - 1-10-100-1000

Complete Layout

Go Fetch

## Presentations on Base 10 – Decimal System – Quantity and Symbol

Introduction – General

Birds Eye View Layout

Crisis of Ten

Go Fetch – Symbol

Go Fetch – Quantity

# Presentations on Base 10 – Decimal System – Formation of Numerals

Introduction – General

# **Presentations on Golden Beads**

Addition

Introduction (Static)

Introduction Elementary (Static)

Regrouping (Dynamic)

3 or More Addends (Static/Dynamic)

Addition & Multiplication – Regrouping (Dynamic)

### Subtraction

Introduction (Static)

2 Subtrahends (Static)

Regrouping (Dynamic)

Remainder of One (Dynamic)

Regrouping – Subtraction & Division – Presentation Order

### Multiplication

Introduction (Static)

Multiplication Sign

Regroup or Exchange (Dynamic)

Order of Presentation

Product as Zero

# Division

Introduction (Static)

**Division Sign** 

Regroup or Exchange (Dynamic)

Remainders

2-Digit Divisor

# **Presentations on Stamp Game**

Introduction – General

Formation of Quantity (Stamps)

### Addition

Regrouping

3 Addends

Checking Work

## Subtraction

Regrouping

2 Subtrahends

**Checking Work** 

## Multiplication

Regrouping

## 2-Digit Multiplier

# Division (1-Digit Division)

Regrouping

# Division (2-Digit Divisor)

Zero in Dividend

Zero in Divisor

Zero at the Unit of Divisor

# Group Division

## **Presentations on Addition**

## Addition Dot Board

**Multiple Addends** 

### **Addition Bead Frame**

**Golden Beads** 

Notation Paper

Reading & Writing Numbers

Addition

Addition – Regrouping Activity

Addition in Columns Activity

Subtraction

Subtraction – Regrouping

## **Addition Strip Board**

Introduction – General

Booklet

Equation Control Chart 1

Combination of Numbers – Control Chart 1 & 2 – Recording

Combination of Numbers with Zero

Addition Control Chart 2 – Doubles of Numbers

Addition Working Chart 3 – Sum in Each Square

Addition Working Chart 3 – Doubles of Numbers

Addition Working Chart 4 – Half Table

Addition Working Chart 5 – Simplified

### Oral Memorization Game – Equation then Sum

Oral Memorization Game – Sum and Possible Equations

# Addition Snake Game

## **Addition Colored Bead Bars**

Memorization of Addition

Commutative Law

Multiple Addends

Addends Larger Than 10

Exchanges

Associative Law

Parenthesis

Parenthesis in All Positions

Two Parentheses

Three Addends

# **Formats – Introduction**

### **Story Problems – Introduction**

**Presentations on Subtraction** 

# **Subtraction Strip Board**

Booklet

Equation Control Chart 1

Analysis of Number: Unit

Analysis of Number: Teens

Zero

Subtraction Working Chart 2

Bingo Game

Bingo Game 2

Bingo Game 3

Oral Memorization Game – Equation then Remainder

Oral Memorization Game – Remainder and Possible Equations

**Formats – Introduction** 

**Story Problems - Introduction** 

# **Subtraction Snake Game**

## **Presentations on Multiplication**

# **Multiplication Bead Board**

Introduction

Booklet

Prepared Equation Slips

Combinations of Numbers

Working Chart 3

Working Chart 4

Working Chart 5 – Bingo/Blank

Working Chart 5 – Bingo/Blank 2

Stacks of Products (Stamps)

Oral Memorization – Equation then Product

Oral Memorization – Product and possible Equations

## **Formats – Introduction**

# **Story Problems – Introduction**

### **Multiplication Snake Game**

# **Cubing Chains**

Activity 1 – Introduction

Activity 2

## **Cubing and Squaring Chains**

**Geometric Forms** 

# **Colored Bead Bars**

One Multiplicand

Multiplication by Ten

All Factors for One Product

No More than 10

**Reverse Factors Same Product** 

Square of Numbers

Binomial by One Number

## **Presentations on Division**

# **Division Bead Board**

Introduction – General

**Recording Division** 

Booklet

Equations

Control Chart 1

Control Chart 2

Bingo

Stacks of Quotients (Stamps)

Oral Memorization Game – Equation then Quotient

Oral Memorization Game – Quotient and Possible Equations

# **Formats – Introduction**

**Story Problems – Introduction** 

**Multiplication and Division – Relationship**