



Montessori Leadership On Line: A Series of Weekly Talks

Simple Arithmetic Curriculum Plan for Montessori

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#	Lessons for Preschool and Kindergarten	Grade
1.	Number Rods	PK
2.	Sandpaper Numerals	PK
3.	Association of Rods and Numerals	PK
4.	Spindle Boxes	PK
5.	Zero Activity	PK
6.	Cards and Counters	PK
7.	The Memory Game	PK
8.	Snake Game for Tens	PK
9.	Golden Bead Quantity and Symbols	PK
10.	First Presentation of Quantity	PK
11.	First Presentation of Decimal Symbols	PK
12.	Association of Quantity and Symbol	PK
13.	The Nines Layout of Numerals	PK
14.	The Composition of Numbers	PK
15.	The Bird's Eye View	PK
16.	First Seguin Boards - The Teen Boards	PK
17.	Second Seguin Boards – The Tens Boards	PK
18.	The Hundred Chain	PK
19.	The Hundred Board	PK
20.	Linear Counting the Short Chains	PK
21.	The Thousand Chain	PK
22.	Skip Counting	PK
23.	Static Addition with the Golden Beads	PK
24.	Static Multiplication Golden Beads	PK

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#	Lessons for Preschool and Kindergarten	Grade
25.	Static Subtraction Golden Beads	PK
26.	Static Division Golden Beads	PK
27.	The Change Game	PK
28.	Dynamic Addition Golden Beads	PK
29.	Dynamic Multiplication Golden Beads	PK
30.	Dynamic Subtraction Golden Beads	PK
31.	Dynamic Division Golden Beads	PK
32.	Addition with the Stamp Game	PK
33.	Multiplication with the Stamp Game	PK
34.	Subtraction with the Stamp Game	PK
35.	Dot Game Addition	PK
36.	Addition Strip Board: Booklet of Combinations	PK
37.	Addition Strip Board: Cut Tables	PK
38.	Addition Strip Board: Families of Numbers	PK
39.	Finger Chart: The Whole Chart	PK
40.	Finger Chart:: The Half Chart	PK
41.	Ninth Exercise: The Addition Bingo Game	PK
42.	Subtraction Strip Board: Booklet of Combinations	PK
43.	Subtraction Strip Board: Cut Tables or Equations	PK
44.	Finger Chart: The Second Chart	PK
45.	Finger Chart: The Bingo Game	PK
46.	Memorization of Multiplication	PK
47.	Multiplication Board: The Booklet of Combinations	PK
48.	Cut Tables or Equations	PK
49.	Finger Chart: The Multiplication Bingo Game	PK
50.	Bead Bar Multiplication: Memorizing the Tables	PK
51.	Division Board: Families of Dividends	PK
52.	Division Finger Chart: Cut Tables	PK
53.	Fraction Skittles	PK
54.	The Small Bead Frame: The Composition of Numbers	PK
55.	The Small Bead Frame: Addition	PK
56.	The Small Bead Frame: Subtraction	PK
57.	The Small Bead Frame: Multiplication as Repeated Addition	PK

#	Lesson for Elementary School	Grade	Notes
NA	Spindle Boxes	1	Optional
NA	Zero Activity	1	Optional
NA	Cards and Counters	1	Optional
NA	The Memory Game	1	Optional
1.	Snake Game for the Research of Ten: Dynamic Snake	1	
2.	Golden Beads: First Presentation of Quantity First Presentation of Decimal Symbols Association of Quantity and Symbol	1	
3.	The Nines Layout of Numerals The Composition of Numbers	1	
4.	The Bird's Eye View The Change Game	1	
NA	First Seguin Boards - The Teen Boards	1	Optional
NA	Second Seguin Boards – The Tens Boards	1	Optional
5.	The Hundred Chain The Hundred Board	1	
6.	Linear Counting the Short Chains The Thousand Chain	1	
7.	Skip Counting	1	
8.	Golden Beads: Addition: Impressionistic Approach Addition with the Golden Beads: Usual Approach	1	
9.	Golden Beads: Multiplication	1	
10.	Golden Beads: Subtraction: Impressionistic Approach Subtraction: Usual Approach	1	
11.	Golden Beads: Dynamic Division	1	
12.	Dynamic Addition with the Stamp Game	1	
13.	Dynamic Multiplication with the Stamp Game	1	
14.	Dynamic Subtraction with the Stamp Game	1	
15.	The Dot Game	1	

#	Lesson for Elementary School	Grade	Notes
16.	Addition Strip Board: Using the Booklet of Combinations	1	
17.	Addition Strip Board: Families of Numbers The Doubles of Numbers	1	
18.	Cut Tables: The Whole Chart	1	
19.	Cut Tables: The Half Chart	1	
20.	Cut Tables: The Addition Bingo Game	1	
21.	Subtraction Strip Board: The Booklet of Subtraction Facts	1	
22.	Subtraction Strip Board: Decomposition of a Number (Families of Numbers)	1	
23.	Fifth Exercise: Halves of Numbers	1	
24.	Cut Tables: The Finger Charts	1	
25.	Finger Chart: The Bingo Game	1	
26.	Multiplication Board: The Booklet of Model Forms	1	
27.	Multiplication Game: Bead Bar Multiplication	1	
NA	Fraction Skittles	1	Optional
28.	Fraction Circles	1	
29.	Addition of Fractions with Same Denominator	1	
30.	Small Bead Frame: Numeration According to Position	1	
31.	Small Bead Frame: The Composition of Numbers	1	
32.	Multiplication Games: Multiplication by Ten Products to Factors Commutative Law – Inverse Products	1	
33.	<i>Insert additional Lessons</i>	1	
34.	Addition Finger Chart: The Simplified Chart	2	
35.	The Addition Snake Game	2	
36.	Addition Games: The Commutative Property Sums with Parentheses Sums with Several Parentheses Distributive Property	2	
37.	The Special Cases for Addition	2	

#	Lesson for Elementary School	Grade	Notes
38.	Subtraction Snake Game	2	
39.	The Special Cases for Subtraction	2	
40.	Multiplication Board: Cut Tables or Equations Multiplication Cut Tables: The Third Chart	2	
41.	Fourth Exercise: The Half Chart	2	
42.	Fifth Exercise: The Multiplication Bingo Game	2	
43.	Both Multiplication Snake Games	2	
44.			
45.	Multiplication Games: Bead Bar Squaring Multiplication Board Squaring The Snake Game of Squares	2	
46.	The Special Cases for Multiplication	2	
47.	Division Board: Families of Dividends	2	
48.	Division: Cut Tables	2	
49.	Division: Cut Tables Families of Divisors	2	
50.	Division: The Division Bingo Game	2	
51.	The Special Cases for Division	2	
52.	Golden Beads: Division -Two-Digit Divisor	2	
53.	Stamp Game: Distributive Division	2	
54.	Stamp Game: Distributive Division -Two-Digit Divisor	2	
55.	Stamp Game: Group Division	2	
56.	Fractional Equivalence	2	
57.	Subtraction of Fractions with Like Denominators		
58.	Small Bead Frame: The Decomposition of Numbers	2	
59.	Small Bead Frame Addition (Vertical Method)	2	
60.	Small Bead Frame Subtraction	2	
61.	Small Bead Frame: Multiplication as Repeated Addition	2	
62.	Small Bead Frame: Multiplication with Mental Calculation	2	
63.	Small Bead Frame: Multiplication by 1s, 10s, 100s, and 1000s Advanced Multiplication	2	

#	Lesson for Elementary School	Grade	Notes
64.	The Geometric Representation of the Decimal Hierarchies	2	
65.	Checkerboard: Value According to Position The Composition of Numbers	2	
66.	Checkerboard: Long Multiplication – Holistic Approach	2	
67.	Checkerboard: Long Multiplication with Mental Calculation	3	
68.	Large Bead Frame: Numeration According to Position Composition of Numbers The Decomposition of Numbers	3	
69.	Large Bead Frame: Addition with the Large Bead Frame Subtraction with the Large Bead Frame	3	
70.	Large Bead Frame: Multiplication with the Large Bead Frame	3	
71.	Large Bead Frame: Red Zero Game	3	
72.	Checkerboard Long Multiplication with Partial Products Long Multiplication with Mental Carrying	3	
73.	Checkerboard: Multiplication with the Checker Board and Related Drawing	3	
74.	Golden Bead Frame Composition of Numbers Multiplication with the Golden Bead Frame	3	
75.	Golden Bead Frame Multiplication (Advanced)	3	
76.	Bank Game: Multiplication with a One-Digit Multiplier Multiplication with a Two-Digit Multiplier	3	
77.	Bank Game: Multiplication with a Three-Digit Multiplier and more	3	
78.	Multiplication of a Fraction by a Whole Number	3	
79.	Division of a Fraction by a Whole Number:	3	

#	Lesson for Elementary School	Grade	Notes
80.	First Multiplication of Binomials and Trinomials The Analysis of the Square	3	
81.	The Passage from a Square to a Successive Square Passage from a Square to a Non-Successive Square	3	
82.	The Square of the Decanomial	3	
83.	The Square of the Decanomial (continued)	3	
84.	Test Tubes: Short Group Division	3	
85.	Odd Facts Uncommon Multiplication		
86.	Test Tubes: Abstract Short Group Division Technique	3	
87.	Test Tubes: Long Group Division		
88.	Test Tubes: Abstract Long Group Division	3	
89.	Test Tubes: Abstract Long Group Division (advanced)		
90.	Yellow Board: Decimal Numeration Formation and Reading of Quantities	3	
91.	Yellow Board: Forming and Reading the Symbols The Pinwheel The Association of Quantity and Symbol Progressive and Regressive Counting	3	
92.	Yellow Board: Decimal Addition	3	
93.	Second Exercise: Decimal Subtraction	3	
94.	The Hundredth Circle	3	
95.	<i>Insert additional Lessons</i>	3	
96.	<i>Insert additional Lessons</i>	3	
97.	<i>Insert additional Lessons</i>	3	
98.	<i>Insert additional Lessons</i>	3	
99.	<i>Insert additional Lessons</i>	3	
100.	The Multiples	4	
101.	The Multiple Charts	4	
102.	Tables A and B	4	
103.	Table C The first filling out	4	

#	Lesson for Elementary School	Grade	Notes
104.	The Search for the Lowest Common Multiple: LCM	4	
105.	The Search for the Greatest Common Factor: GCF	4	
106.	Towards Abstraction with GCF and LCM Second Filling Out of Table C	4	
107.	Search for Prime Factors on the Pegboard	4	
108.	Divisibility by Two Divisibility by Three Divisibility by Four Divisibility by Five	4	
109.	Divisibility by Twenty-five Divisibility by Nine	4	
NA	Considering Nine as Ten Minus One Considering Ten as Nine Plus One	4	Optional
110.	Casting Out Nines in Addition and Multiplication	4	
111.	Casting Out Nines in Subtraction and Division	4	
112.	The Board of Powers Nomenclature of the Powers	4	
113.	The Powers of One The Powers of Ten Expanded Notation	4	
114.	Geometrical Representation of the Hierarchies Last Filling in of Table C: Exponents	4	
115.	Powers of Two	4	
116.	Powers of Three	4	
117.	Passage from the Numerical Decanomial to the Algebraic Decanomial	4	
118.	The Passage to the Algebraic Decanomial Writing of the Booklet for the Algebraic Decanomial Reduction of the Algebraic Decanomial	4	
119.	Products of Binomials and Trinomials	4	
120.	From the Real Square to the Symbolic Square	4	
121.	Products of Binomials with Hierarchical Materials	4	
122.	Squaring the Binomial	4	
123.	Algebraic Square or Literal Notation	4	

#	Lesson for Elementary School	Grade	Notes
124.	Products of Trinomials	4	
125.	Cross Multiplication Introduction	4	
126.	Cross Multiplication Second Level	4	
127.	Cross Multiplication Third Level — Mental Carrying	4	
128.	Cross Multiplication Without Materials	4	
129.	Addition of Fractions with Unlike Denominators: Level 2	4	
130.	Subtraction of Fractions with Unlike Denominators: Level 2	4	
131.	Passage to Abstraction in Addition and Subtraction of Fractions: Level 2	4	
132.	Multiplication of a Whole Number by a Fraction	4	
133.	Division of a Whole Number by a Fraction	4	
134.	Addition of Fractions with Unlike Denominators: Level 3	5	
135.	Addition of Fractions with Unlike Denominators: Improper Problems Add Three Fractions	5	
136.	Addition of Fractions with Unlike Denominators: Using Rectangles	5	
137.	Addition of Fractions with Unlike Denominators Complete Abstraction	5	
138.	Subtraction of Fractions with Unlike Denominators: Level 3	5	
139.	Multiplication of a Fraction by a Fraction: Level 3	5	
140.	Division of a Fraction by a Fraction: Level 3	5	
141.	Group Division of Fraction by Fraction	5	
	The Problem of the Very Thirsty Man	5	Optional
142.	Multiplication of a Decimal by 1, 10, 100 and 1000 Multiplication of Decimal Numbers on the Yellow Board	5	
143.	Whole Numbers Times Decimal Numbers	5	

#	Lesson for Elementary School	Grade	Notes
144.	Introducing the Decimal Checkerboard Imposing Number Labels	5	
145.	Decimal Checkerboard Multiplication: Decimal Number times Whole Number	5	
146.	Decimal Checkerboard Multiplication: Whole number multiplied by a decimal number	5	
147.	Level Three: Decimal Number x Decimal Number	5	
148.	Multiplication With Related Drawing	5	
149.	Decimal Division	5	
150.	First Level: A whole number $\div$ whole number	5	
151.	Second Level: Decimal $\div$ Whole Number	5	
152.	Level Three: Whole Number $\div$ Decimal Number	5	
153.	Case Four: Decimal Number $\div$ Decimal Number	5	
154.	Introduction to Square Root Nomenclature of Square Root	5	
155.	First Presentation Second Presentation: The Chart of Squares	5	
NA	Square Root Third Presentation: Optional Presentation	5	Optional
156.	Square Root with the Golden Beads	5	
157.	Beginning the Subtraction Sensorial Square Root	5	
158.	Square Root Repeated Subtraction Counting the Subtractions	5	
159.	Square Root Beginning Division Comparing the Wings	5	
160.	Square Root: Three digit root	5	
161.	Square Root A Further Passage to Abstraction: A Drawing	5	
162.	<i>Insert additional Lessons</i>	5	
163.	<i>Insert additional Lessons</i>	5	
164.	<i>Insert additional Lessons</i>	5	
165.	<i>Insert additional Lessons</i>	5	
166.	<i>Insert additional Lessons</i>	5	

#	Lesson for Elementary School	Grade	Notes
167.	Changing Fractions to Decimals with the Hundredth Circle The Concept of Percentage	6	
168.	Changing Decimals to Percentages and Percentages to Decimals	6	
169.	Changing Fractions to Percentages	6	
170.	Changing Angles to Fractions, Decimals, and Percentages	6	
NA	Square Root of a Decimal Number	6	Optional
NA	Square Root of a Common Fraction	6	Optional
171.	The Study of Simple Interest Calculation of Interest	6	
172.	Calculation of Principal	6	
173.	Calculation of Time	6	
174.	The Negative Snake Game	6	
175.	Nomenclature of Integers Using Symbols with Integers Greater Than and Less Than	6	
176.	Addition and Subtraction of Integers	6	
177.	Multiplication and Division of Integers	6	
178.	The Additive Inverse	6	
179.	From a Number to Its Square (Review) From a Square to a Non-Successive Square (Review) From a Square to its Cube (Review)	6	
180.	Passage from a Cube to a Successive Cube	6	
181.	Passage from a Cube to a Non Successive Cube	6	
182.	The Cube of a Binomial	6	
183.	The Cube of a Trinomial	6	
184.	Binomial Cube to Trinomial Cube Binomial and Trinomial Hierarchical Cubes	6	
185.	Introductory Cubing of the Hierarchical Cubes	6	
186.	Cubing the Hierarchical Binomial	6	

#	Lesson for Elementary School	Grade	Notes
187.	Cubing the Hierarchical Trinomial	6	
188.	Algebraic Binomial Cube	6	
189.	Algebraic Trinomial Cube	6	
190.	Cube Root: One Digit Root Two Digit Root : A First Passage	6	
191.	Two Digit Cube Root: Second Passage	6	
192.	Two Digit Cube Root : Third Passage	6	
193.	Two Digit Cube Root: Last Passage with Material	6	
194.	Three Digit Cube Root: Trinomial	6	
195.	Three Digit Cube Root: Last Passage for Trinomial	6	
196.	Three Digit Root: Abstraction For Trinomial	6	
197.	Review All Cubing and Cube Root	6	
198.	<i>Insert additional Lessons</i>	6	