

ABOVE AND BEYOND with DIGI-BLOCK MATHEMATICS
A Base-10 Mathematics Program for Learners with Significant Cognitive Disabilities

SCOPE AND SEQUENCE

STRANDS	NUMBER SETS
A: Counting, Comparing, Ordering	0-10
B: Numeral Reading/Writing	0-19
C: Modeling	0-99
D: Equivalence	0-999
E: Addition/Subtraction	Decimals
F: Multiplication/Division	
G: Money	

Unit 1: Ones

Chapter / Number Set	Strand	Objective	Lesson
1 Exploring 1-Blocks 0-10	Pre-math	Show an interest in 1-blocks.	1. What are 1-blocks?
		Copy a given block design.	2. Copy Cat
		Place blocks in varied patterns.	3. Shapes
		Demonstrate concept of “more,” “one more.”	4. What Has More? 5. One More 6. Two Towers 7. New Collection 8. Stackers
		Demonstrate concept of “none.”	9. I Have None
		Use 1-blocks to trace the drawing of a figure.	10. Tracing a Figure 11. Tracing a Letter
2 Counting to 10 0-10	A	Demonstrate number concepts “one,” “two,” and “three.”	12. First Time Counting to 3 13. Number Cards 14. Number Symbols and Blocks 15. Circle the Number 16. How Many Blocks?
		Count to 10 using concrete objects.	17. First Time Counting to 10 18. Round Robin 19. Counting Pairs 20. Bean Bag Toss 21. Block Letters 22. Counting Pennies 23. Counting Objects with Blocks 24. Counting Pictures 25. Paper Plates 26. Hands-On 27. Copy Cat 2
	B	Read written numerals 0-10	28. Count and Match 29. Reverse Count and Match 30. Read and Say 31. Spinner Game 32. Go Fish 33. Number Symbols
	D	Match a number name to a given quantity. Match the number of objects to the number symbol.	34. Match a Number 35. Filling Shapes 36. Bingo Blocks 37. Picture Cards 38. Two-Rows Matching 39. Block Collections

			40. Classroom Scavenger Hunt 41. Count and Check 42. Number Line Predictions
		Match groups having equal numbers of objects.	43. Matching Picture Collections 44. Block Designs
	A	Demonstrate understanding of “more, “less.”	45. More and Less 46. Equal Stacks 47. Comparing Collections 48. Number-Line Measure 49. Take a Peek
		C	Recognize a quantity by its formation on the ten-frame.
3 Relationships among Numbers 1-10 0-10	C E	Model addition (sums no greater than 10) with manipulatives.	57. Introduction to Lessons 58-68 58. Adding on the Number Line 59. Adding on the Top Row of the Ten-Frame 60. Adding on Both Rows of the Ten-Frame 61. Drawing-Supported Numeral Addition
		Model subtraction (sums no greater than 10) with manipulatives.	62. Subtracting on the Number Line 63. Subtracting on the Top Row of the Ten-Frame 64. Subtracting on Both Rows of the Ten-Frame 65. Drawing-Supported Numeral Subtraction 66. Ten-Frame Riddles
		Add and subtract numbers when sums and minuends are no greater than 10.	67. Practicing Addition and Subtraction.
		Using a model of sets up to 10, complete partial sets.	68. How Many Do I Add? 69. How Many Do I Take Away?
	A	Count out requested number of items up to 10.	70. Match the Number
		Distribute or indicate distribution of items into equal sets.	71. Dottie Digis
		Associate ordinal words (first, second, third, etc., next, last) with position.	72. Pick the Place 73. Line-Up 74. Ordinal Bingo 75. Ordinal Spin

Unit 2: Tens

Chapter	Big Idea	Objective	Lesson
1 Ten Ones Make One Ten 0-10	D	Know that a block –of-10 contains ten 1-blocks.	1. Packing 10 2. Large and Small 3. Copy the Pattern 4. Ten Fingers 5. Using the Ten-Frame 6. Tub o’ Blocks 7. Around and Around 8. Sliding Holders / Locking Holders 9. Making Predictions 10. Build and Draw
	C	Determine the number of 1-blocks in an empty, partially full, and full holder without counting the individual 1-blocks.	11. Empty, Full, or Half-Full 12. Color in the Blocks 13. Using the Half-mark 14. How Many Blocks? Part 1 15. How Many Blocks? Part 2 16. Ways to Make 10 17. Block Money
2 Blocks and Bills 0-10	C	Understand the relationship between \$1 bills and \$10 bills.	18. Matching Blocks and Bills 19. Collecting “Tens” 20. The \$10 Store
	D G	Understand the various relationships among \$1 bills, \$5 bills, and \$10 bills.	21. Halving a \$10 Bill 22. Exchanging Blocks for Bills 23. First to Five!
3 Counting Backward 0-10	A	Count Backward from 10 to 0.	24. Counting Backward on the Number Line 25. Coloring to Count Backward 26. Using Block Models to Count 27. Backward Steps 28. Jumping Jacks 29. Check Yourself
4 Getting Ready to Regroup 0-10	C E	Complete partial sets of 10.	30. Completing partial sets. 31. How Many 1-Blocks Are Missing? 32. Go Fish
		Subtract a number between 0 and 10 from 10.	33. Removing 1-Blocks 34. Take-Away Fill-Ins 35. What’s the Difference?
		Structure addition and subtraction around 10 fro sums and minuends 11-19.	36. Adding with 1-Blocks: Structuring around 10, Part 1 37. Adding with 1-Blocks: Structuring around 10, Part 2 38. Adding with 1-Blocks: Structuring around 10 39. Practicing Addition and Subtraction around 10 40. Subtracting with Drawings instead of with Blocks

			36. Drawing-Supported Numeral Addition (regrouping) 37. Addition Solitaire (regrouping) 38. Using Place Value to Subtract on the Two-Place Counter (regrouping) 39. Using Place Value to Subtract on the Place Value Mat (regrouping) 40. Drawing Place Value Subtraction (regrouping) 41. Drawing-Supported Numeral Subtraction (regrouping) 42. Subtraction Solitaire (regrouping) 43. Connecting Addition and Subtraction (regrouping) 44. Practicing Drawing-Supported Numeral Addition and Subtraction (regrouping)
	C F	Perform single-digit multiplication within the set of numbers 0-19.	45. Introduction to Lessons 46-53 46. Defining Multiplication 47. Developing Multiplication Facts for 1-9 48. Visualizing Multiplication of Zero 49. Factor Pairs 50. Match the Product 51. Drawing Place Value Multiplication 52. Drawing supported Numeral Multiplication 53. Practicing Multiplication
	C F	Divide by 1-9 when dividends do not exceed 18.	54. Introduction to Lesson 55-63 55. Defining Division 56. Developing Division Facts for 1-9 57. Divisor / Quotient Pairs 58. Matching Problem and Quotient 59. Modeling Division on the Place Value Mat 60. Drawing Place-Value Division 61. Drawing-Supported Numeral Division 62. Connecting Multiplication and Division 63. Practicing Division
	C D G	Use combinations of bills to designate any quantity up to \$19.	64. Building Equivalent Block Models: Part 1 65. Building Equivalent Block Models: Part 2 66. From Blocks to Bills: Part 1 67. From Blocks to Bills: Part 2 68. Money Matches 69. Food Fun
2 Up to 100 0-99	A	Count by Tens from 10-90	70. Counting by Tens on the Two-Place Counter 71. Using Two-Place Drawings to Count by Tens 72. Block Models and Numeral Cards 73. Counting by Tens from 10 to 90 74. Sad Sam
	A B C D	For 20-99, associate count, number name, number symbol, and place value meaning.	75. Pattern of the Count 76. Count I-Blocks by Tens and Ones 77. Race to 99! 78. Two Views of the Same Number 79. Two-Digit Bingo 80. Blocks-at-a-Glance

	A C	Order and compare numbers 0-99.	81. The Powerful Tens' Place 82. Comparing block Drawings 83. Switching Digits 84. War! 85. Two-Digit Spin 86. 0-99 Race 87. More and Less
	C D	Construct equivalent forms of whole numbers.	88. Organizing 1-Blocks 89. Building Equivalent Block Models 90. Matching Equivalent Representations
	C E	Add and subtract within the set of numbers 0-99 when sums and minuends do not exceed 99.	91. Introduction to Lessons 92-101 92. Adding Two-Digit Numbers on the Counter and on the Mat (no regrouping) 93. Subtracting Two-Digit Numbers on the Counter and on the Mat (no regrouping) 94. Adding Two-Digit Numbers on the Two-Place Counter (regrouping) 95. Subtracting Two-Digit Numbers on the Two-Place Counter (regrouping) 96. Adding Two-Digit Numbers on the Place Value Mat (regrouping) 97. Subtracting Two-Digit Numbers on the Place Value Mat (regrouping) 98. Drawing-Supported Two-Digit Addition (regrouping) 99. Drawing-Supported Two-Digit Subtraction (regrouping) 100. Connecting Two-Digit Addition and Subtraction 101. Practicing Two-Digit Addition and Subtraction
	F	Multiply two-digit numbers by one-digit numbers when products do not exceed 99.	102. Introducing Lessons 103-112 103. Developing More Multiplication Facts for 1-9 104. Learning to Use the Multiplication Table 105. Practicing Basic Multiplication Facts 106. Multiplying with Blocks 107. Multiplying with Numerals
	F	Divide two-digit numbers by one-digit divisors when the dividend does not exceed 81.	108. Developing More Division Facts 1-9 109. Learning to Use the Division Table 110. Division Bingo 111. Dividing with Blocks 112. Dividing with Numerals
	D G	Use combinations of bills (\$1, \$5, \$10, \$20) to designate values from \$20-\$99.	113. Building Equivalent Block Models 114. Representing Equivalent Block Models 115. From Blocks to Bills: Part 1 116. From Blocks to Bills: Part 2
	3 100 and Beyond 0-999	B C	Model, read, and write whole numbers up to 1000.

	A C	Compare and order numbers up to 1000.	123. Comparing Three-Digit Numbers
			124. War!
			125. Three-Digit Spin
	C D	Construct equivalent forms of whole numbers up to 1000.	126. Four in a Row
			127. Same Number – Different Models: Part 1
	C E	Add and subtract within the set of numbers 0-1000.	128. Same Number – Different Models: Part 2
			129. What Number Am I?
			130. Introduction to Lessons 131-140
			131. Adding and Subtracting 1, 10, 100
			132. Adding Three Digit Numbers on the Three-Place Counter
			133. Subtracting Three-Digit Numbers on the Three-Place Counter
			134. Adding Three-Digit Numbers on the Place Value Mat
			135. Subtracting Three-Digit Numbers on the Place Value Mat
			136. Drawing-Supported Numeral Addition
			137. Drawing-Supported Numeral Subtraction
F	Multiply by two-digit numbers when products do not exceed 999.	138. Over the Top	
		139. Down to the Bottom	
		140. How Far Is It from Here to There?	
		141. Introduction to Lessons 142-148	
		142. Using Blocks to Multiply by 1, 10, 100	
		143. Multiplying Single-Digit Numbers by Multiples of 1, 10, 100	
		144. Place Value Bingo	
F	Divide by single-digit numbers when dividends do not exceed 1000.	145. Shifting Blocks	
		146. Shifting Digits	
		147. Multiplying by Two-Digit Numbers	
		148. Dividing with Blocks	
			149. Dividing with Numerals: Part 1
			150. Dividing with Numerals: Part 2
			151. Using the Division Table to Find Quotients

Unit 4: Between Whole Numbers

Decimals

Big Idea	Objective	Lesson
A B C D G	Associate number name, number symbol, and place value meaning for dimes and pennies.	1. Unpacking Blocks
		2. Modeling Decimals
		3. Money Names for Decimals Under \$100
		4. Modeling Money with Block Drawings
		5. Dollars-and-Cents Bingo
		6. Block Money at a Glance
		7. Making the Connection between Blocks and Dollars, Dimes, and Pennies
		8. Modeling with Play Money
		9. Counting Money
A C	Compare and order amounts of money up to \$100.	10. Who Has More Money?
		11. War!
		12. Eight in a Row
		13. Number Line Locations
C E	Add and subtract dollars and cents.	14. Putting Amounts of Money in Order
		15. Adding Money on the Decimal Place Value Mat
16. Subtracting Money on the Decimal Place Value Mat		
A B C D G	Associate name, symbol, and place value meaning for nickels quarters, and half dollars.	17. Dollar Puzzle
		18. Coin Puzzle
		19. Coin Equivalences
		20. Race to One Dollar
A G	Count bills and coins to \$50	21. Counting Money to \$50
		22. Starburst Game