

Semple Math Scope and Sequence

Level	ONE	TWO	THREE
Materials	<p>Level One Teacher's Manual Level One Teacher Cards Level One Workbook A Level One Workbook B Level One Workbook C Semple Math Place Value Kit Supplementary Work Sheets M1A and M1B (for K-1 from Draft List) Teacher-made games and activities (described in manual)</p>	<p>Level Two Teacher's Manual Level Two Teacher Cards Level Two Workbook A Level Two Workbook B Level Two Workbook C Semple Math Place Value Kit (from Level I) Commercial sets of addition and subtraction facts cards Teacher-made games and activities (described in manual)</p>	<p>Level Three Teacher's Manual Level Three Workbook A Level Three Workbook B Semple Math Place Value Kit (from Level 1) Commercial sets of addition, subtraction and multiplication facts cards Teacher-made flash cards, games and activities (described in manual)</p>
Areas	<p>Numeration: Base 10 numbers 1-999, amounts \$.01 - \$999.99, Cardinal vs. Ordinal numbers, meaning and function of zero in addition.</p> <p>Operations: Concept of addition, addition facts to 18, single and multi-digit column addition, regrouping in addition and the commutative property of addition.</p> <p>Place Value: Chip trading in Base 10; counting, trading and recording pennies, dimes, ones, tens and hundreds; meaning, placement, structures and functions of ones, tens and hundreds in the Base 10 whole and rational number systems.</p> <p>Organizational Skills: Formation, orientation and alignment of numerals; procedure for setting up single and multi-digit additions; sequence for attacking word problems.</p> <p>The Checkbook: Sub-skills necessary for keeping a check book.</p> <p>Word Problems: Hierarchical introduction of one-sentence word problems involving concrete language to three-sentence problems involving abstract language (addition).</p> <p>Money: Reading, writing (to dictation) and making amounts from \$.01 to \$999.99.</p> <p>Base 10 Structures: Visual and auditory discrimination exercises that enable pupils to generate an image of the inner and outer structures of the whole and rational number system.</p> <p>Rounding and Estimating: Bigger vs. smaller, and ordering 0-9.</p> <p>Fractions: Pennies and dimes as part of a dollar. Separation of whole and rational numbers concretely.</p>	<p>Numeration: Expansion of skills from Level I. Numbers 1,000-999,999,999 and amounts \$1,000-\$999,999,999.99, the complements, Base 10 numbers 001-100, and the meaning and function of zero in subtraction.</p> <p>Operations: Concept of subtraction, subtraction facts to 18, multi-digit subtractions, regrouping in subtraction and subtraction with zero. Review of Level I addition.</p> <p>Place Value: Meaning and function of ones, tens, hundreds, one thousand, ten thousands, hundred thousands, one millions, ten millions and hundred millions. Review of Level I.</p> <p>Organizational Skills: The setting up of multi-digit subtractions and attacking the word problems involving subtraction. Review and expansion of Level I procedures.</p> <p>The Checkbook: Use of checks, deposit slips, checkbooks and the language of the banking system.</p> <p>Word Problems: Hierarchical introduction of problems involving concrete and abstract language (subtraction). Teachers clues for determining operation (+ and -). Review of Level I.</p> <p>Money: Reading, writing (to dictation) and making amounts to \$999,999,999.99 and making change from \$1.00, \$10.00 and \$100.00. Review of Level I.</p> <p>Base 10 Structures: Continued development of visual and auditory discrimination of inner and outer structures of Base 10 to millions. Review of Level I.</p> <p>Rounding and Estimating: Introduction of concept of rounding, rounding to the nearest ten, hundred and thousand.</p> <p>Fractions: Concept of part vs. whole as it applies to money.</p>	<p>Numeration: Review and expansion of skills from Levels I and II.</p> <p>Operations: Concept of multiplication, multiplication facts, long multiplication regrouping in multiplication, multiplication with zero and commutative property of multiplication. Review of addition and subtraction.</p> <p>Place Value: Concepts applied to addition, subtraction and multiplication.</p> <p>Organizational Skills: Procedures for setting up long multiplications and attacking word problems involving multiplication. Review of Level I and II.</p> <p>The Checkbook: Expanded use of the checkbook and language of banking system.</p> <p>Word Problems: Hierarchical introduction of word problems involving multiplication. Clues for determining operation (+, -, x). Development of language. Review of Level I and II.</p> <p>Money: Introduction of nickels, half dollars and five dollar bills in the change-making process. Inter-relation of nickels, half dollars and five dollar bills with the Base 10 place value structures. Review of Level I and II.</p> <p>Base 10 Structures: Visual and auditory discrimination exercises to identify inner and outer structures of whole and rational number systems continued to \$999,999,999.99.</p> <p>Rounding and Estimating: Review and reinforcement of rounding off skill and concept.</p> <p>Fractions: Introduction of concept of one-half as it relates to money, shape and Base 10. Review of Level I and II.</p> <p>Building Self Esteem: Continued employment of success as a motivator with a built-in reward system.</p> <p>Developing Thinking Skills: Questioning techniques in the form of dialogues require students to think and make decisions.</p>
Content	<p>Numeration: Base 10 numbers 1-999, amounts \$.01 - \$999.99, Cardinal vs. Ordinal numbers, meaning and function of zero in addition.</p> <p>Operations: Concept of addition, addition facts to 18, single and multi-digit column addition, regrouping in addition and the commutative property of addition.</p> <p>Place Value: Chip trading in Base 10; counting, trading and recording pennies, dimes, ones, tens and hundreds; meaning, placement, structures and functions of ones, tens and hundreds in the Base 10 whole and rational number systems.</p> <p>Organizational Skills: Formation, orientation and alignment of numerals; procedure for setting up single and multi-digit additions; sequence for attacking word problems.</p> <p>The Checkbook: Sub-skills necessary for keeping a check book.</p> <p>Word Problems: Hierarchical introduction of one-sentence word problems involving concrete language to three-sentence problems involving abstract language (addition).</p> <p>Money: Reading, writing (to dictation) and making amounts from \$.01 to \$999.99.</p> <p>Base 10 Structures: Visual and auditory discrimination exercises that enable pupils to generate an image of the inner and outer structures of the whole and rational number system.</p> <p>Rounding and Estimating: Bigger vs. smaller, and ordering 0-9.</p> <p>Fractions: Pennies and dimes as part of a dollar. Separation of whole and rational numbers concretely.</p>	<p>Numeration: Expansion of skills from Level I. Numbers 1,000-999,999,999 and amounts \$1,000-\$999,999,999.99, the complements, Base 10 numbers 001-100, and the meaning and function of zero in subtraction.</p> <p>Operations: Concept of subtraction, subtraction facts to 18, multi-digit subtractions, regrouping in subtraction and subtraction with zero. Review of Level I addition.</p> <p>Place Value: Meaning and function of ones, tens, hundreds, one thousand, ten thousands, hundred thousands, one millions, ten millions and hundred millions. Review of Level I.</p> <p>Organizational Skills: The setting up of multi-digit subtractions and attacking the word problems involving subtraction. Review and expansion of Level I procedures.</p> <p>The Checkbook: Use of checks, deposit slips, checkbooks and the language of the banking system.</p> <p>Word Problems: Hierarchical introduction of problems involving concrete and abstract language (subtraction). Teachers clues for determining operation (+ and -). Review of Level I.</p> <p>Money: Reading, writing (to dictation) and making amounts to \$999,999,999.99 and making change from \$1.00, \$10.00 and \$100.00. Review of Level I.</p> <p>Base 10 Structures: Continued development of visual and auditory discrimination of inner and outer structures of Base 10 to millions. Review of Level I.</p> <p>Rounding and Estimating: Introduction of concept of rounding, rounding to the nearest ten, hundred and thousand.</p> <p>Fractions: Concept of part vs. whole as it applies to money.</p>	<p>Numeration: Review and expansion of skills from Levels I and II.</p> <p>Operations: Concept of multiplication, multiplication facts, long multiplication regrouping in multiplication, multiplication with zero and commutative property of multiplication. Review of addition and subtraction.</p> <p>Place Value: Concepts applied to addition, subtraction and multiplication.</p> <p>Organizational Skills: Procedures for setting up long multiplications and attacking word problems involving multiplication. Review of Level I and II.</p> <p>The Checkbook: Expanded use of the checkbook and language of banking system.</p> <p>Word Problems: Hierarchical introduction of word problems involving multiplication. Clues for determining operation (+, -, x). Development of language. Review of Level I and II.</p> <p>Money: Introduction of nickels, half dollars and five dollar bills in the change-making process. Inter-relation of nickels, half dollars and five dollar bills with the Base 10 place value structures. Review of Level I and II.</p> <p>Base 10 Structures: Visual and auditory discrimination exercises to identify inner and outer structures of whole and rational number systems continued to \$999,999,999.99.</p> <p>Rounding and Estimating: Review and reinforcement of rounding off skill and concept.</p> <p>Fractions: Introduction of concept of one-half as it relates to money, shape and Base 10. Review of Level I and II.</p> <p>Building Self Esteem: Continued employment of success as a motivator with a built-in reward system.</p> <p>Developing Thinking Skills: Questioning techniques in the form of dialogues require students to think and make decisions.</p>

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Content Areas	<p><u>Building Self Esteem</u>: Special skills sequence and memory aids enable students to succeed consistently. Reward system involving chip trading, money and place value provides <u>Building Self Esteem</u>. Special skills sequence and memory aids enable students to succeed consistently. Reward system involving chip trading, money and place value provides immediate and long term gratification.</p> <p><u>Developing Thinking Skills</u>: Participation in Simple Math dialogues requires students to think, compare, analyze and make decisions at every step of the learning process.</p>	<p><u>Building Self Esteem</u>: Special sequence and memory clues enable students to succeed. A built-in reward system includes the teaching of money, place value and the checkbook.</p> <p><u>Developing Thinking Skills</u>: Dialogues in each lesson require students to think, compare and make decisions.</p>	
Methods	<p style="text-align: center;">Mnemonic Techniques For Eliminating Problems</p> <ul style="list-style-type: none"> * Cognitive level teaching strategies for introducing spotting, naming, symbolizing, printing, recording and interpreting number. * Specific images, familiar to students, that bridge the gap between concrete and abstract. * Questioning techniques that lead students to discover. * Hands-on materials for teaching the whole and rational number systems. * Experiential stories that involve students in the learning process. * Specific spatial and directional clues for preventing (and correcting) reversals, rotations and inversions of numerals. * Separate work sheets for left-handed and right-handed students that contain the clues each needs for accurate performance. * Associational clues to connect numeral shape with numberness. * Specific dialogues for teaching students how to set up single and multi-digit additions, subtractions and multiplications. * Three step procedure designed to organize and sequence the student's approach to solving mathematical problems. * Music, rhythm and rhyme to aid the retrieval process in memory. * Grouping and clustering of information to expand the amount learned. * Unique sequence and integration of skills and sub-skills so that skills build on skills. * Continuous built-in review of all skills. * Hierarchical approach to introduction of all skills. * Development of arithmetic language from concrete to abstract. * A step-by-step approach to teaching the interpretation of word problems. * Special techniques for addressing problems with memory and attention. * Built-in behavior modification program at all levels based on success as the motivator. 		