

Correlation of the Understanding Numeration 2008© Programs With the Everyday Math for Grade 3

The Understanding Numeration 2008© program consists of the following five concepts written for kindergarten through third grade:

Counting
Operations
Comparing and Ordering

Place Value
Problem Solving

The program is designed for use in a variety of teaching and learning environments ranging from a teacher-centered approach with one computer to a student-centered lab approach. The lessons may also be used in remediation, tutorials, intervention, resource, and fast tracking.

Each concept in the program covers several skills. Every skill has up to four different levels of difficulty with corresponding lessons for each level. The lessons are sequenced to build an understanding of concepts. Each concept also has the following:

- 1) an interactive concept introduction, usually with a variety of graphic approaches;
- 2) a number of particular examples;
- 3) a skill test with random questions and tracking;
- 4) worksheets with visual demonstrations on how to complete each worksheet;
- 5) teaching strategies including Math Circles Overview, Flight Plan Overview, Flight Plan Roles, and Flight Plan Navigation Sheet may be found on our website (www.neufeldmath.com).

Lesson Guide:

Unit One:	pages two to four
Unit Two:	pages five to six
Unit Three:	pages seven to eight
Unit Four:	pages nine to twelve
Unit Five:	pages twelve to fourteen
Unit Six:	pages fourteen to fifteen
Unit Seven:	pages sixteen to seventeen
Unit Eight:	page eighteen to nineteen
Unit Nine:	pages nineteen to twenty
Unit Ten:	pages twenty-one
Unit Eleven:	page twenty-two

Unit 1. Routines, Review, and Assessment

Title & Activity Number	Understanding Numeration 2008© Concept/Skill/Level/Lessons	Curriculum Lesson
1.1 Numbers and Number Sequences To review types and uses of numbers.	UNDERSTANDING NUMERATION ALL SECTIONS	
1.2 Number Grids To introduce the Math Message routine; to review patterns on number grids.	COMPARING AND ORDERING Locate Whole Numbers on a Grid C... Numbers on 0 to 100 Grid: Worksheet #1, Worksheet #2 C... Missing Numbers to 100: Worksheet #1, Worksheet #2 C... Do Skill Test - 10 questions (randomly generated)	
1.3 Introducing the Student Reference Book To introduce the <i>Student Reference Book</i> ; and to establish a set of work rules.	NOT INCLUDED	
1.4 Tools for Mathematics To review telling time, measuring lengths, and using calculators; to guide children as they identify and draw 2-dimensional shapes.	COUNTING Recognize and Count two-Dimensional Figures C... Counting 2-D Figures #2: Worksheet #1, Worksheet #2 C... Do Skill Test - 5 questions (randomly generated) COMPARING AND ORDERING Understand Measurement of Time C... Times to Five Minutes: Worksheet #1 C... Do Skill Test - 5 questions (randomly generated) D... Times to the Minute: Worksheet #1 D... Do Skill Test - 5 questions (randomly generated) Describe Elapsed Time... Hours, 5 Minutes C... Elapsed Time in Hours...#:Worksheet #1 C... Elapsed Time in Hours...#2:Worksheet #1 C... Do Skill Test - 5 questions (randomly generated) D... Elapsed Time – 5 Minutes... #1 : Worksheet #1 D... Elapsed Time – 5 Minutes... #2 : Worksheet #1 D... Times Goes By - Analog : Worksheet #1 D... Times Goes By – Digital: Worksheet #1	



Title & Activity Number	Understanding Numeration 2008© Concept/Skill/Level/Lessons	Curriculum Lesson
<p>1.5 Analyzing and Displaying Data To review data concepts; to provide opportunities to find data landmarks and use graphs to draw conclusions.</p>	<p>OPERATIONS Given Graph... Perform Operations C... Operations with Tally Charts: Worksheet #1, Worksheet #2 C... Operations with Pictographs: Worksheet #1, Worksheet #2 C... Operations with Bar Graphs: Worksheet #1, Worksheet #2 C... Do Skill Test - 10 questions (randomly generated)</p>	
<p>1.6 Equivalent Names To review the idea that there are many names for a number.</p>	<p>NOT INCLUDED</p>	
<p>1.7 The Language of Chance Events To introduce the vocabulary of chance.</p>	<p>UNDERSTANDING MATH Understanding Probability</p>	
<p>1.8 Finding Differences To guide children as they identify number-grid patterns and use them to find differences between pairs of numbers.</p>	<p>OPERATIONS Introduce Subtraction Concretely... # - # = # C... Subtraction Sentences: Worksheet #1 C... Do Skill Test - 5 questions (randomly generated)</p>	
<p>1.9 Calculator Routine To review calculator skills; adding, subtracting, and skip counting forward and backward; to provide practice for place-value skills.</p>	<p>COUNTING Skip Counting and Patterns C... Patterns in Rows : Worksheet #1, Worksheet #2 C... Skip Counting to 100: Worksheet # C... Skip Count by 2s to 100 : Worksheet #1, Worksheet #2 C... Next by 2s : Worksheet #1, Worksheet #2 C... Next by 5s : Worksheet #1 C... Do Skill Test - 10 questions (randomly generated)</p>	
<p>1.10 Money To review money amounts with coins; to guide children as they write dollars-and-cents notation and compare money amounts.</p>	<p>COUNTING Counting Using Money D... Do Skill Test - 5 questions (randomly generated) USA</p>	



Title & Activity Number	Understanding Numeration 2008© Concept/Skill/Level/Lessons	Curriculum Lesson
1.11 Solving Problems with Dollars and Cents To guide children as they solve problems involving money; to provide opportunities to determine when a situation needs an exact answer or an estimate; and to provide practice for estimation skills.	<i>NOT INCLUDED</i>	
1.12 Patterns To guide children as they explore number patterns,	UNDERSTANDING NUMERATIONS ALL SECTIONS	
1.13 The Length-of-Day Project To review telling time and finding elapsed time; and to introduce the Length-of-Day project.	<i>NOT INCLUDED</i>	
1.14 Progress Check 1 To assess children's progress on mathematical content through the end of Unit 1.		



Unit 2. Adding and Subtracting Whole Numbers

Title & Activity Number	Understanding Numeration 2008© Concept/Skill/Level/Lessons	Curriculum Lesson
2.1 Fact Families To review fact families and number families; and to review the inverse relationship between addition and subtraction.	OPERATIONS Fact Families... Add and Subtract C... Check Subtraction by Addition: Worksheet #1 C... Do Skill Test - 5 questions (randomly generated)	
2.2 Extensions of Addition and Subtraction Facts To review ways in which basic addition and subtraction facts are used to solve problems with larger numbers.	OPERATIONS Add 3 Digit Numbers... Concretely D... Do Skill Test - 10 questions (randomly generated)	
2.3 “What’s My Rule?” To provide opportunities to review and solve “What’s My Rule?” problems.	NOT INCLUDED	
2.4 Parts-and-Total Number Stories To guide children as they use parts-and-totals diagrams to help solve parts-and-total number stories.	NOT INCLUDED	
2.5 Change Number Stories To guide children as they use change diagrams to help solve change number stories.	NOT INCLUDED	
2.6 Comparison Number Stories To guide children as they use comparison diagrams to help solve comparison number stories.	NOT INCLUDED	



Title & Activity Number	Understanding Numeration 2008© Concept/Skill/Level/Lessons	Curriculum Lesson
<p>2.7 The Partial-Sums Algorithm To guide children as they make ballpark estimates; and to provide opportunities to model and practice the partial-sums algorithm for 2- and 3-digit numbers.</p>	<p>OPERATIONS Add 3 Digit Numbers... Abstractly D... Addition Without Regrouping: Worksheet #1 , Worksheet #2 D... Addition With Regrouping #1: Worksheet #1, Worksheet #2 D... Addition With Regrouping #2: Worksheet #1 , Worksheet #2 D... Addition With Regrouping #3: Worksheet #1 , Worksheet #2 D... Do Skill Test - 10 questions (randomly generated)</p>	
<p>2.8 Subtraction Algorithms To review making ballpark estimates; and to review the counting-up and trade-first subtraction algorithms.</p>	<p>OPERATIONS Subtract 2 Digit Numbers... Concretely C... Subtraction Without Regrouping: Worksheet #1, Worksheet #2 C... Subtraction With Regrouping: Worksheet #1 , Worksheet #2 C... Do Skill Test - 5 questions (randomly generated)</p>	
<p>2.9 Addition with Three or More Addends To guide children as they solve number stories having three or more addends.</p>	<p>OPERATIONS Add 3 or 4 Numbers C ... Magic Square : Worksheet #1 C... Do Skill Test - 5 questions (randomly generated)</p>	
<p>2.10 Progress Check 2 To assess children's progress on mathematical content through the end of Unit 2.</p>		



Unit 3. Linear Measure and Area

Title & Activity Number	Understanding Numeration 2008© Concept/Skill/Level/Lessons	Curriculum Lesson
3.1 A “Class Shoe” Unit of Length To discuss the need for standard units of measure; and to guide children as they create a unit of length and measure with it.	UNDERSTANDING MATH Understanding Measurement and Geometry	
3.2 Measuring with a Ruler To guide children as they measure line segments to the nearest inch, ½ inch, ¼ inch, centimeter, ½ centimeter, and millimeter.	UNDERSTANDING MATH Understanding Measurement and Geometry	
3.3 Standard Linear Measures To review U.S. customary and metric units of length; and to guide children as the estimate and measure lengths to the nearest inch and nearest centimeter.	UNDERSTANDING MATH Understanding Measurement and Geometry	
3.4 Perimeter To review polygons and the concept of perimeter.	OPERATIONS Finding the Perimeter of a Shape C... Perimeter of a Rectangle: Worksheet #1, Worksheet #2 C... Do Skill Test - 5 questions (randomly generated) D... Perimeter of a 2D Shape: Worksheet #1, Worksheet #2 D... Do Skill Test - 5 questions (randomly generated)	
3.5 A Pattern-Block Toss Experiment To guide children as they collect, tabulate, and interpret experimental data.	PROBLEM SOLVING Make a Table... Johnny’s Pennies: Worksheet #1 Make a Table... Muffins: Worksheet #1 Make a Graph... Classroom Shoes: Worksheet #1 Make a Graph... Animals: Worksheet #1	



Title & Activity Number	Understanding Numeration 2008© Concept/Skill/Level/Lessons	Curriculum Lesson
<p>3.6 EXPLORATIONS: Exploring Perimeter and Area To guide children as they make rectangles with given perimeters, relate tiling to area, and construct triangles using given lengths and then find their perimeters.</p> <p>3.7 Area To guide children as they develop the concept of area, to demonstrate the measure of area by using 1-foot and 1-yard squares, and find areas by counting squares.</p> <p>3.8 Number Models for Area To guide children as they develop the concept of area by measuring with identical squares; and to demonstrate how to calculate the area of rectangles using number models.</p>	<p>OPERATIONS Finding the Perimeter of a Shape C... Perimeter of a Rectangle: Worksheet #1, Worksheet #2 C... Do Skill Test - 5 questions (randomly generated) D... Perimeter of a 2D Shape: Worksheet #1, Worksheet #2 D... Do Skill Test - 5 questions (randomly generated)</p> <p>Finding the Area of a Shape D... Area of a Shaded Region #1: Worksheet #1, Worksheet #2 D... Area of a Shaded Region #2: Worksheet #1, Worksheet #2 D... Do Skill Test - 5 questions (randomly generated)</p>	
<p>3.9 Diameter and Circumference To guide children as they relate circumference and diameter through the <i>about 3 times</i> rule.</p>	<p>UNDERSTANDING MATH Understanding Measurement and Geometry</p>	
<p>3.10 Progress Check 3 To assess children's progress on mathematical content through the end of Unit 3.</p>		



Unit 4. Multiplication and Division

Title & Activity Number	Understanding Numeration 2008© Concept/Skill/Level/Lessons	Curriculum Lesson
<p>4.1 Multiples of Equal Groups To review multiplication and equal groups; and to provide opportunities to solve and write number stories involving equal groups.</p>	<p>OPERATIONS Introduce Multiplication Concretely C... Grouping Eggs in Bowls: Worksheet #1, Worksheet #2 C... Grouping Chairs in Rows: Worksheet #1, Worksheet #2 C... Eggs in Bowls... Introduce \times: Worksheet #1, Worksheet #2 C... Chairs in Rows ... Introduce \times: Worksheet #1, Worksheet #2 C... Multiplication – Repeated Addition: Worksheet #1 C... Do Skill Test - 10 questions (randomly generated)</p>	
<p>4.2 Multiplication Arrays To provide opportunities to use arrays, multiplication/division diagrams, and number models to represent and solve multiplication number stories.</p>	<p>OPERATIONS Introduction to Arrays C... Introduction to Arrays: Worksheet #1, Worksheet #2 C... Build Arrays: Worksheet #1, Worksheet #2 C... Introduction to Arrays with Multiplication: Worksheet #1, Worksheet #2 C... Build Arrays with Multiplication: Worksheet #1, Worksheet #2 C... Do Skill Test - 10 questions (randomly generated)</p>	
<p>4.3 Equal Shares and Equal Groups To review division as equal sharing and equal grouping.</p> <p>4.4 Division ties to Multiplication To provide opportunities to model division number stories with arrays, multiplication/division diagrams, and number models.</p>	<p>OPERATIONS Introduction to Division C... Equal Groups of Eggs: Worksheet #1, Worksheet #2 C... Sharing Oranges Equally: Worksheet #1, Worksheet #2 C... Division Introduction – Eggs: Worksheet #1, Worksheet #2 C... Division Introduction – Oranges: Worksheet #1, Worksheet #2 C... Division – How many Groups: Worksheet #1, Worksheet #2 C... Do Skill Test - 10 questions (randomly generated)</p>	



Title & Activity Number	Understanding Numeration 2008© Concept/Skill/Level/Lessons	Curriculum Lesson
<p>4.5 Multiplication Fact Power and Shortcuts To discuss multiplication facts and the importance of fact power; and to review fact shortcuts.</p>	<p>OPERATIONS Introduce Multiplication Facts... 2, 3, 4, 5 C... Multiplication: Groups of 2 Worksheet #1 C... Multiplication: Groups of 3 Worksheet #1 C... Multiplication: Groups of 4 Worksheet #1 C... Multiplication: Groups of 5 Worksheet #1 C... Do Skill Test - 5 questions (randomly generated)</p> <p>Introduce Multiplication by 1 and by 0 C... Multiplication: Groups of 1: Worksheet #1 C... Multiplication: Groups of 0: Worksheet #1 C... Do Skill Test - 5 questions (randomly generated)</p> <p>Introduce Multiplication Facts... 6, 7, 8, 9 D... Multiplication: Groups of 6: Worksheet #1 D... Multiplication: Groups of 7: Worksheet #1 D... Multiplication: Groups of 8: Worksheet #1 D... Multiplication: Groups of 9: Worksheet #1 D... Do Skill Test - 10 questions (randomly generated)</p> <p>Patterns in Multiplication C... × table – Groups of 2: Worksheet #1 C... × table – Groups of 3: Worksheet #1 C... × table – Groups of 4: Worksheet #1</p> <p>C... × table – Groups of 5: Worksheet #1 C... × table – Groups of 5 to 0: Worksheet #1</p> <p>C... Do Skill Test - 10 questions (randomly generated) D... × table – Groups of 6: Worksheet #1 D... × table – Groups of 7: Worksheet #1 D... × table – Groups of 8: Worksheet #1 D... × table – Groups of 9: Worksheet #1 D... × table – Groups of 10: Worksheet #1 D... Do Skill Test - 10 questions (randomly generated)</p>	



Title & Activity Number	Understanding Numeration 2008© Concept/Skill/Level/Lessons	Curriculum Lesson
<p>4.6 Multiplication and Division Fact Families To review fact families and the Multiplication/Division Facts Table; and to guide children as they practice multiplication and division facts.</p>	<p>OPERATIONS Introduction Division Facts... 2, 3, 4, 5 C... Division –Groups of 2: Worksheet #1 C... Division –Groups of 3: Worksheet #1 C... Division –Groups of 4: Worksheet #1 C... Division –Groups of 5: Worksheet #1 C... Do Skill Test - 10 questions (randomly generated)</p> <p>Introduction Division Facts... 6, 7, 8, 9 D... Division –Groups of 6: Worksheet #1 D... Division –Groups of 7: Worksheet #1 D... Division –Groups of 8: Worksheet #1 D... Division –Groups of 9: Worksheet #1 D... Do Skill Test - 10 questions (randomly generated)</p>	
<p>4.7 Baseball Multiplication To practice multiplication facts.</p>	<p>OPERATIONS Note Patterns in a 10×10 Multiplication Table D... × table – Patterns in Rows: Worksheet #1 D... × table – Patterns in Columns: Worksheet #1 D... × table – Other Patterns : Worksheet #1 D... × table – User Picks: Worksheet #1 D... × table – Computer Picks: Worksheet #1 D... Do Skill Test - 10 questions (randomly generated)</p>	
<p>4.8 EXPLORATIONS: Exploring Arrays and Facts To provide opportunities for children to estimate the number of dots in a large array, solve a problem involving factors of whole numbers, and practice multiplication facts.</p>	<p>OPERATIONS Introduction to Arrays C... Introduction to Arrays: Worksheet #1, Worksheet #2 C... Build Arrays: Worksheet #1, Worksheet #2 C... Introduction to Arrays with Multiplication: Worksheet #1, Worksheet #2 C... Build Arrays with Multiplication: Worksheet #1, Worksheet #2 C... Do Skill Test - 10 questions (randomly generated)</p>	



Title & Activity Number	Understanding Numeration 2008© Concept/Skill/Level/Lessons	Curriculum Lesson
4.9 Estimating Distances with a Map Scale To introduce the use of a map scale to estimate distances.	<i>NOT INCLUDED</i>	
4.10 A Coin-Toss Experiment To guide children as they develop intuition about equally likely events.	UNDERSTANDING MATH Understanding Probability	
4.11 Progress Check 4 To assess children's progress on mathematical content through the end of Unit 4.		

Unit 5. Place Value in Whole Numbers and Decimals

Title & Activity Number	Understanding Numeration 2008© Concept/Skill/Level/Lessons	Curriculum Lesson
5.1 Place Value Through Ten-Thousands to review place value through ten-thousands.	PLACE VALUE	
5.2 Reading, Writing, and Ordering Numbers To provide practice for reading, writing, comparing, and ordering numbers less than 100, 000.	UNDERSTANDING MATH Understanding Whole Numbers and Integers	
5.3 Place Value to Millions To guide children as they extend place value to millions; and to guide children as they read and write numbers through millions.	UNDERSTANDING MATH Understanding Whole Numbers and Integers	
5.4 Application: The U.S. Census To guide children as they read, write, and compare large numbers; and to guide children as they express relationships as differences and ratios.	<i>NOT INCLUDED</i>	
5.5 Very Large Numbers To guide children as they develop a sense of very large numbers.	UNDERSTANDING MATH Understanding Whole Numbers and Integers	
5.6 EXPLORATION: Exploring Estimates and Polygons To provide opportunities to count base-10 blocks, identify polygons, and compare perimeters and areas.	OPERATIONS	



Title & Activity Number	Understanding Numeration 2008© Concept/Skill/Level/Lessons	Curriculum Lesson
<p>5.7 Model Decimals with Base-10 blocks To model decimals with base-10 blocks; and to review decimals with money.</p>	<p>COUNTING Introduce Decimals D... Tenth and Decimals: Worksheet #1 D... Ones and Tenth: Worksheet #1 D... Do Skill Test - 5 questions (randomly generated)</p>	
<p>5.8 Tenths and Hundredths To model tenths and hundredths with base-10 blocks; and to model exchanges between tenths and hundredths.</p>	<p>PLACE VALUE Finding the Perimeter of a Shape C... Perimeter of a Rectangle: Worksheet #1, Worksheet #2 C... Do Skill Test - 5 questions (randomly generated) D... Perimeter of a 2D Shape: Worksheet #1, Worksheet #2 D... Do Skill Test - 5 questions (randomly generated)</p> <p>Finding the Area of a Shape D... Area of a Shaded Region #1: Worksheet #1, Worksheet #2 D... Area of a Shaded Region #2: Worksheet #1, Worksheet #2 D... Do Skill Test - 5 questions (randomly generated)</p>	
<p>5.9 Tenths and Hundredths of a Meter To demonstrate the use of decimal notation for metric measures and the conversion of centimeters to meters.</p>	<p>UNDERSTANDING MATH Understanding Measurement and Geometry</p>	
<p>5.10 Application: Rainfall To introduce thousandths by revisiting millimeters; and to provide opportunities to interpret data from a map.</p>	<p>NOT INCLUDED</p>	



Title & Activity Number	Understanding Numeration 2008© Concept/Skill/Level/Lessons	Curriculum Lesson
5.11 Place Value in Decimals To provide practice for decimal place value to thousandths.	COMPARING AND ORDERING Compare Decimals D... Compare Decimals : Worksheet #1 D... Do Skill Test - 5 questions (randomly generated)	
5.12 Sunrise-Sunset Line Graphs To guide children as they analyze data from the sunrise-sunset routine; and to demonstrate how to make and read a line graph.	NOT INCLUDED	
5.13 Progress Check 5 To assess children's progress on mathematical content through the end of Unit 5.		

Unit 6. Geometry

Title & Activity Number	Understanding Numeration 2008© Concept/Skill/Level/Lessons	Curriculum Lesson
6.1 Investigating Line Segments, Rays, and Lines To review line segments; and to introduce rays and lines.	UNDERSTANDING MATH Understanding Measurement and Geometry	
6.2 Parallel & Intersecting Line Segments, Rays, and Lines To guide children as they model and draw polygons, parallel and intersecting line segments, rays, and lines.	UNDERSTANDING MATH Understanding Measurement and Geometry	
6.3 Angles and Turns To guide children as they use angles to record turns (rotations).	UNDERSTANDING MATH Understanding Measurement and Geometry	
6.4 Triangles To provide opportunities to explore various types of triangles.	NOT INCLUDED	
6.5 Quadrangles To provide opportunities to explore various types of quadrangles.	NOT INCLUDED	
6.6 Polygons To review the characteristics of polygons, emphasizing regular polygons.	COUNTING Recognize and Count two-Dimensional Figures C... Do Skill Test - 5 questions (randomly generated)	



Title & Activity Number	Understanding Numeration 2008© Concept/Skill/Level/Lessons	Curriculum Lesson
6.7 Drawing Angles To guide children as they draw angles as records of rotations.	UNDERSTANDING MATH Understanding Measurement and Geometry	
6.8 Measuring Angles To guide children as they measure angles.	UNDERSTANDING MATH Understanding Measurement and Geometry	
6.9 Symmetry to review symmetry; and to provide opportunities to explore properties of symmetric shapes.	UNDERSTANDING MATH Understanding Graphing	
6.10 EXPLORATIONS: Exploring Congruence, Line Segments, and Decimals To provide opportunities to explore the concept of congruence; to guide children as they draw line segments; and to practice naming decimals.	NOT INCLUDED	
6.11 Polyhedrons, Part 1 To review 3-dimensional shapes; and to guide children as they identify bases of pyramids and prisms.	UNDERSTANDING MATH Understanding Measurement and Geometry	
6.12 Polyhedron, Part 2 To provide opportunities to explore the characteristics of prisms.	NOT INCLUDED	
6.13 Progress Check 6 To assess children's progress on mathematical content through the end of Unit 6.		

Unit 7. Multiplication and Division

Title & Activity Number	Understanding Numeration 2008© Concept/Skill/Level/Lessons	Curriculum Lesson
<p>7.1 Patterns in Products To review square-number facts, multiplication, and division patterns,</p> <p>7.2 Multiplication Facts Survey To guide children as they determine which multiplication facts they still need to learn.</p> <p>7.3 Fact Power To guide children as they practice multiplication and division facts.</p>	<p>OPERATIONS Patterns in Multiplication D... × table – Groups of 6: Worksheet #1 D... × table – Groups of 7: Worksheet #1 D... × table – Groups of 8: Worksheet #1 D... × table – Groups of 9: Worksheet #1 D... × table – Groups of 10: Worksheet #1 D... Do Skill Test - 10 questions (randomly generated)</p> <p>Introduction Division Facts... 6, 7, 8, 9 D... Division –Groups of 6: Worksheet #1 D... Division –Groups of 7: Worksheet #1 D... Division –Groups of 8: Worksheet #1 D... Division –Groups of 9: Worksheet #1 D... Do Skill Test - 10 questions (randomly generated)</p>	
<p>7.4 Number Models with Parentheses To introduce parentheses in number models.</p>	NOT INCLUDED	
<p>7.5 Scoring in Basketball: An Application To provide opportunities to express numbers as sums of products using number models that contain parentheses.</p>	NOT INCLUDED	
<p>7.6 Extended Facts: Multiplication and Division To guide children as they multiply 1-digit numbers by multiples of 10, 100, and 1,000 and divide such multiples by 1-digit numbers.</p>	<p>OPERATIONS Note Patterns in a 10×10 Multiplication Table D... × table – Patterns in Rows: Worksheet #1 D... × table – Patterns in Columns: Worksheet #1 D... × table – Other Patterns : Worksheet #1 D... × table – User Picks: Worksheet #1 D... × table – Computer Picks: Worksheet #1 D... Do Skill Test - 10 questions (randomly generated)</p>	
<p>7.7 Estimating Costs To guide children as they determine when an estimate is appropriate and as they practice making estimates.</p>	NOT INCLUDED	



Title & Activity Number	Understanding Numeration 2008© Concept/Skill/Level/Lessons	Curriculum Lesson
<p>7.8 Extended Facts: Products of Tens To guide children as they multiply multiples of 10 by multiples of 10.</p>	<p>OPERATIONS Note Patterns in a 10×10 Multiplication Table D... × table – Patterns in Rows: Worksheet #1 D... × table – Patterns in Columns: Worksheet #1 D... × table – Other Patterns : Worksheet #1 D... × table – User Picks: Worksheet #1 D... × table – Computer Picks: Worksheet #1 D... Do Skill Test - 10 questions (randomly generated)</p>	
<p>7.9 EXPLORATIONS: Exploring Ratios and Geometric Figures To provide experiences with exploring similar polygons, solving ratio problems, and exploring geometric configurations.</p>	<p>NOT INCLUDED</p>	
<p>7.10 Progress Check 7 to assess children's progress on mathematical content through the end of Unit 7.</p>		



Unit 8. Fractions

Title & Activity Number	Understanding Numeration 2008© Concept/Skill/Level/Lessons	Curriculum Lesson
<p>8.1 Naming Parts with Fractions to guide children as they use fractions to name a of b equal parts.</p>	<p>COUNTING Introduce Common Fractions... Parts of a Whole B... One Half of a Shape: Worksheet #1 B... Two Thirds of a Shape: Worksheet #1 B... Three Quarters of a Shape: Worksheet #1 B... Cut in Half Worksheet #1, Worksheet #2 B... Fifths to Tenths #1: Worksheet #1 B... Do Skill Test - 10 questions (randomly generated) C... Fifths to Tenths #2: Worksheet #1 C... Write the Fraction #1: Worksheet #1 C... Write the Fraction #2: Worksheet #1 C... Do Skill Test - 5 questions (randomly generated)</p>	
<p>8.2 Blocks-in-a-Bag Experiment To guide children as they make predictions based on outcomes and construct situations that meet given conditions.</p>	<p>NOT INCLUDED</p>	
<p>8.3 EXPLORATIONS: Exploring Fractions, Re-Forming Squares, and Combinations To provide opportunities to explore fractional relationships, spatial relationships, and combinations.</p>	<p>COUNTING Introduce Fraction of a Set C... Fraction of a set: Worksheet #1, Worksheet #2 C... Do Skill Test - 10 questions (randomly generated)</p>	
<p>8.4 Number-Line Posters for Fractions To introduce the number line as a model for fractions.</p>	<p>NOT INCLUDED</p>	
<p>8.5 Equivalent Fractions To guide children as they find equivalent fractions.</p>	<p>UNDERSTANDING MATH Understanding Fractions</p>	
<p>8.6 Comparing Fractions To guide children as they compare fractions using region models.</p>	<p>COMPARING AND ORDERING Compare Fractions D... Compare Fractions : Worksheet #1 D... Do Skill Test - 5 questions (randomly generated)</p>	



Title & Activity Number	Understanding Numeration 2008© Concept/Skill/Level/Lessons	Curriculum Lesson
8.7 Fractions Greater than ONE To demonstrate naming quantities greater than 1 with fractions and mixed numbers.	<i>NOT INCLUDED</i>	
8.8 Fractions in Number Stories To provide experiences with solving number stories involving fractions.	<i>NOT INCLUDED</i>	
8.9 Progress Check 8 to assess children's progress on mathematical content through the end of Unit 8.		

Unit 9. Multiplication and Division

Title & Activity Number	Understanding Numeration 2008© Concept/Skill/Level/Lessons	Curriculum Lesson
9.1 Multiply and Divide with Multiples of 10, 100, and 1,000 To guide children as they multiply and divide with multiples of 10, 100, and 1,000. 9.2 Using Mental Math to Multiply To guide children as they use mental math to multiply 1-digit numbers by multidigit numbers. 9.4 A Multiplication Algorithm To guide children as they multiply 1-digit numbers by multidigit numbers using a partial-products algorithm. 9.5 Buying at the Stock-Up Sale To guide children as they multiply using mental math and the partial-products algorithm.	OPERATIONS Note Patterns in a 10×10 Multiplication Table D... × table – Patterns in Rows: Worksheet #1 D... × table – Patterns in Columns: Worksheet #1 D... × table – Other Patterns : Worksheet #1 D... × table – User Picks: Worksheet #1 D... × table – Computer Picks: Worksheet #1 D... Do Skill Test - 10 questions (randomly generated)	
9.3 EXPLORATIONS: Exploring Arrays, Areas, and Fractions To provide opportunities for children to model multiplication with base-10 blocks, explore area relationships, and find fractions of fractions.	OPERATIONS Introduction to Arrays C... Do Skill Test - 10 questions (randomly generated)	
9.6 Factors of a Whole Number To guide children as the identify whole-number factors of whole numbers.	<i>NOT INCLUDED</i>	



Title & Activity Number	Understanding Numeration 2008© Concept/Skill/Level/Lessons	Curriculum Lesson
9.7 Sharing Money To guide children as they share whole-dollar amounts equally.	NOT INCLUDED	
9.8 Broken-Calculator Division To guide children as they explore computational strategies for division and interpret remainders.	NOT INCLUDED	
9.9 Lattice Multiplication To introduce the lattice method of multiplication.	UNDERSTANDING MATH Understanding Whole Numbers and Integers	
9.10 EXPLORATIONS: Exploring Arrays, Equilateral Triangles, and strength of Paper To provide opportunities for children to explore 2-digit multiplication, number patterns, and the rigidity of triangles.	NOT INCLUDED	
9.11 Products of 2-Digit Numbers, Part 1 To guide children as they extend the partial-products method to products of 2-digit numbers and 2-digit multiples of 10.	OPERATIONS Note Patterns in a 10×10 Multiplication Table D... × table – Patterns in Rows: Worksheet #1 D... × table – Patterns in Columns: Worksheet #1 D... × table – Other Patterns : Worksheet #1 D... × table – User Picks: Worksheet #1 D... × table – Computer Picks: Worksheet #1 D... Do Skill Test - 10 questions (randomly generated)	
9.12 Products of 2-Digit Numbers, Part 2 To guide children as they extend the partial-products algorithm to products of any two 2-digit numbers.	UNDERSTANDING MATH Understanding Whole Numbers and Integers	
9.13 Positive and Negative Numbers To guide children as they investigate positive and negative numbers.	UNDERSTANDING MATH Understanding Whole Numbers and Integers	
9.14 Progress Check 9 To assess children's progress on mathematical content through the end of Unit 9.		



Unit 10. Measurement and Data

Title & Activity Number	Understanding Numeration 2008© Concept/Skill/Level/Lessons	Curriculum Lesson
10.1 Review: Length To provide a review of units, tools, and measuring length in U.S. customary and metric systems.	UNDERSTANDING MATH Understanding Measurement and Geometry	
10.2 Volume To guide children as they explore the volume of rectangular prisms.	UNDERSTANDING MATH Understanding Measurement and Geometry	
10.3 Weight To provide a review of metric and U.S. customary units of weight; and to guide children as they examine different kinds of scales and read weights on scales.	NOT INCLUDED	
10.4 Explorations: Exploring Weight and Volume To provide experiences ordering objects by volume, building rectangular prisms having the same volume but different dimensions, and measuring weight using various kinds of scales.	NOT INCLUDED	
10.5 Capacity To explore the concept of capacity; and to demonstrate equivalencies between measures of capacity.	NOT INCLUDED	
10.6 The Mean and the Median To introduce the mean of a set of data; and to review the median of a set of data.	UNDERSTANDING MATH Understanding Graphing	
10.7 Calculating the Mean To guide children as they calculate the mean of a set of data; and to review the median of a set of data.	UNDERSTANDING MATH Understanding Graphing	
10.8 Calculator Memory To introduce the memory keys on a calculator.	NOT INCLUDED	
10.9 Frequency Distributions To guide children as they make frequency tables, and as they find the median, mean, and mode of data sets.	UNDERSTANDING MATH Understanding Graphing	
10.10 Coordinate Grids To introduce plotting coordinates on coordinate grids.	UNDERSTANDING MATH Understanding Graphing	
10.11 Progress Check 10		



To assess children's progress on mathematical content through the end of Unit 10.		
---	--	--

Unit 11. Probability: Year-Long Project, Revisited

Title & Activity Number	Understanding Numeration 2008© Concept/Skill/Level/Lessons	Curriculum Lesson
11.1 The Length-of-Day Project Revisited To guide children as they read and interpret line and bar graphs.	NOT INCLUDED	
11.2 National High/Low Temperatures Summaries To guide children as they organize, graph, and interpret data.	PROBLEM SOLVING Make a Table... Johnny's Pennies: Worksheet #1 Make a Table... Muffins: Worksheet #1 Make a Graph... Classroom Shoes: Worksheet #1 Make a Graph... Animals: Worksheet #1	
11.3 Spinner Experiments To guide children as they collect and interpret data from spinner experiments with outcomes that are equally likely and not equally likely.	UNDERSTANDING MATH Understanding Probability	
11.4 Designing Spinners To guide children as they represent the likelihood of outcomes with visual models.	UNDERSTANDING MATH Understanding Probability	
11.5 Using Data to Predict Outcomes To guide children as they organize and analyze survey data; to predict outcomes; and to estimate the make-up of populations of people and objects.	UNDERSTANDING MATH Understanding Probability	
11.6 Progress Check 11 To assess children's progress on mathematical content through the end of Unit 11.		

