

CORRELATION
of
Understanding Numeration PLUS & Understanding Math PLUS programs
with
Louisiana Department of Education: Comprehensive Curriculum
Grade 6 Mathematics
January 2007

Note: a. The Understanding Math PLUS series of programs consist of 10 programs written for Kindergarten to 10th Grade.

The 10 programs are:

Understanding Fractions	Understanding Whole Numbers and Integers
Understanding Probability	Understanding Percent
Understanding Exponents	Understanding Equations
Understanding Algebra	Understanding Graphing
Understanding Numeration	
Understanding Measurement and Geometry	

Note: b. The Understanding Numeration software for K to 3 is set up so that the teacher selects items in the following order:

Concept .. from 5 concepts .. Counting, Comparing & Ordering, Place Value, Operations and Problem Solving.

Skill .. chosen from the list of specific learning expectations

Level .. indicates the levels of development for Kindergarten to 3rd grade.

Level	Upper Range of Number
A	10
B	20
C	100
D	1000

Lesson .. 250 lessons are sequenced to build understanding of concepts.

A detailed Lesson Synopsis on the website www.neufeldmath.com to assist the teacher by stating the lesson contents but also by giving lesson suggestions.

Worksheet .. off computer worksheets are selected from the CD by a code.

Note: c. The remaining 9 Understanding Math programs for 4th to 10th grade are set up so that they can be used in a variety of teaching and learning environments ranging from a teacher centered approach with 1 computer to a student centered lab approach. The lessons can also be used in remediation, tutorial, intervention, resource, fast-tracking.

Each topic has:

..an interactive concept introduction, usually with a variety of graphic approaches.

..a number of particular examples

..practice questions with random questions but particular feedback

..a topic test with random questions and tracking

..off computer worksheets selected from the website .. www.neufeldmath.com

Unit 1: Whole Numbers, Factors, and Primes

This unit focuses on fundamental skills that are basic to operations with fractions and decimals. It provides opportunities for modeling and identifying perfect squares and working with operations involving powers of 10.

Expectation or Standard	Understanding Math PLUS and/or Understanding Numeration PLUS Lessons
<p>Activity 1: Daily Warm-Up Activity- First 100 days (GLE: 1)</p> <p>Activity 2: Game Time - Working with Factors (GLE: 1)</p>	<p><u>Understanding Math PLUS</u> <u>Understanding Algebra</u> Topic 3. Patterns, Patterns, Patterns Factor Pairs in Arrays Factors of 8, 12, 16, 20, 5, 15, 18 Prime and Composite Prime Numbers Composite Numbers Common Factors/GCF Examples 1, 2 Patterns in the Multiplication Table Sieve of Eratosthenes Patterns With 9</p>
<p>Activity 3: Game Time - Working with Products (GLE: 2)</p>	<p><u>Understanding Math PLUS</u> <u>Understanding Whole Numbers and Integers</u> Topic 3. Multiplying and Dividing Whole Numbers The 10 x 10 Multiplication Table User Picks Computer Picks The 12 x 12 Multiplication Table Associative Property Examples 1, 2 Multiples of 10, 100, 1000 Patterns in Multiplication by 10 Patterns in Multiplication by 100 Patterns in Multiplication by 1000 Examples 1,2,3</p>
<p>Activity 4: Prime Arrays (GLEs: 1, 14)</p> <p>Activity 5: Factors (GLE: 2)</p> <p>Activity 6: Greatest Common Factor (GLE: 3)</p>	<p><u>Understanding Math PLUS</u> <u>Understanding Algebra</u> Topic 3. Patterns, Patterns, Patterns Factor Pairs in Arrays Factors of 8, 12, 16, 20, 5, 15, 18 Prime and Composite</p>

Activity 7: Prime factorization revisited (GLE: 1)	Prime Numbers Composite Numbers Common Factors/GCF Examples 1, 2 Patterns in the Multiplication Table Sieve of Eratosthenes Patterns With 9
Activity 8: Powers of 10 (GLE: 11)	<u>Understanding Math PLUS</u> <u>Understanding Whole Numbers and Integers</u> Topic 3. Multiplying and Dividing Whole Numbers Multiples of 10, 100, 1000 Patterns in Multiplication by 10 Patterns in Multiplication by 100 Patterns in Multiplication by 1000 Examples 1,2,3 <u>Understanding Exponents</u> Topic 1. The Meaning of Exponents Introduction... Bacteria Doubling Introduction... Paper Folding Experiment Pattern Exponents, Powers, Bases Powerful Explosions Introductory Examples Examples 1, 2, 3, 4, 5 Examples – Substitution Examples 1, 2, 3, 4
Activity 9: Place Value (GLE: 11)	<u>Understanding Math PLUS</u> <u>Understanding Fractions</u> Topic 5. An Introduction to Decimals Introduction to Decimals Tenths and Decimals Examples 1, 2, 3, 4 Ones and Tenths Examples 1, 2, 3, 4 Decimals on a Number Line Examples 1, 2, 3, 4, 5 Place Value

	<p>Ones and Tenths 1 Ones and Tenths 2 Tens, Ones and Tenths Decimals on a Number Line Hundreds and Tenths Greater and Less Than Ones, Tenths, Hundreds, Thousandths Decimals to Tenths Examples 1, 2, Decimals to Hundredths Examples 1, 2, 3, 4, 5 Decimals to Thousandths Examples 1, 2, 3, 4, 5 Understanding Place Value Examples 1, 2, 3, 4</p>
<p>Activity 10: Applications of GCF and LCM (GLE: 3)</p>	<p><u>Understanding Math PLUS</u> <u>Understanding Algebra</u> Topic 3. Patterns, Patterns, Patterns Factor Pairs in Arrays Factors of 8, 12, 16, 20, 5, 15, 18 Prime and Composite Prime Numbers Composite Numbers Common Factors/GCF Examples 1, 2</p>
<p>Activity 11: Sequences and Expressions (GLE: 38)</p>	<p><u>Understanding Math PLUS</u> <u>Understanding Algebra</u> Topic 3. Patterns, Patterns, Patterns Introduction... Math is Patterns Geometric Patterns Examples 1, 2, 3, 4, 5, 6, 7, 8 Number Patterns Examples 1, 2, 3, 4, 5, 6 Number and Geometric Patterns Examples 1, 2</p>

Unit 2: Data and Decisions

This unit examines the selection and use of appropriate statistical methods to analyze data in numerical and graphical ways, including use of an input-output table. Venn diagrams are used to solve problems involving counts of objects classified in multiple ways.

Expectation or Standard	Understanding Math PLUS and/or Understanding Numeration PLUS Lessons
Activity 1: Daily Warm-up Activity - First 100 days (GLE: 32)	<u>Understanding Math PLUS</u> <u>Understanding Graphing</u> Topic 2. Statistics Measures of Central Tendency Introduction The Mean Average The Median average The Mode Summary Another Example Adding Data Points
Activity 2: Frequency Tables (GLE: 29, 32)	<u>Understanding Math PLUS</u> <u>Understanding Graphing</u> Topic 2. Statistics Examples of Data Example 1... Fast Food Earnings Example 2... Infant’s Walk Example 3... Canada and U.S.A. Forecast Example 4... King of the Strike Out Example 5... U.S.A. Stake in India Example 6... Allergy Troubles A Summary: Examples Statistics... What is it? Collecting Data Throw a Die Throw 2 Dice Voting Primary Data - Gathering Methods Secondary Data - Gathering Methods
Activity 3: Stem-and-Leaf Plots (GLEs: 29, 30)	<u>Understanding Math PLUS</u> <u>Understanding Graphing</u> Topic 2. Statistics Presenting Data Stem-and-Leaf Diagram

	<p>Example 1... Ages of Fans Example 2... Heights of Students</p>
<p>Activity 4: Measures of Central Tendency (GLEs: 30, 32)</p>	<p><u>Understanding Math PLUS</u> Topic 2. Statistics Measures of Central Tendency Introduction The Mean Average The Median average The Mode Summary Another Example Adding Data Points</p>
<p>Activity 5: Comparing Data (GLEs: 29, 30, 32)</p> <p>Activity 6: Looking at Data (GLEs: 29, 30, 32)</p>	<p><u>Understanding Math PLUS</u> <u>Understanding Graphing</u> Topic 2. Statistics Examples of Data Example 1... Fast Food Earnings Example 2... Infant’s Walk Example 3... Canada and U.S.A. Forecast Example 4... King of the Strike Out Example 5... U.S.A. Stake in India Example 6... Allergy Troubles A Summary: Examples Statistics... What is it? Collecting Data Throw a Die Throw 2 Dice Voting Primary Data - Gathering Methods Secondary Data - Gathering Methods</p>
<p>Activity 7: Input-Output Table (GLE: 37)</p>	
<p>Activity 8: Scatter Plots (GLEs: 29, 30)</p>	<p><u>Understanding Math PLUS</u> <u>Understanding Graphing</u> Topic 2. Statistics Scatter Plot Example 1... The T-Shirt Tailor Example 2... Matching</p>

Activity 9: Venn Diagrams (GLEs: 30, 33) Activity 10: Using Venn Diagrams to solve problems (GLE: 33)	
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Unit 3: Fractions, Decimals, and Parts

The focus of this unit is on concepts and basic relationships of fractions and decimals. There is an emphasis on estimating outcomes prior to developing the computation algorithms that give the exact answers. Focus is also given to writing fractions in lowest terms. The development of the concept of rate, ratio, proportion, and percent continues by representing and working with miles/hour, dollar/pound, miles/gallon, and other derived rates and percents.

Expectation or Standard	Understanding Math PLUS and/or Understanding Numeration PLUS Lessons
Activity 1: Daily warm-up activity - First 100 days (GLEs: 4, 6)	<p><u>Understanding Math PLUS</u> <u>Understanding Fractions</u></p> <p>Topic 4. Percent...A Special Fraction Percent Means... Introduction Ex. 1 - School Ex. 2 - Money Percent Strips Concepts 1, 2, 3 Examples 1. Barrel Example 2. Red Squares 3. Blue Squares 4. Green Blocks 5. Ruler</p> <p>Topic 6. Percent...Fractions...Decimals Expressing a Percent as a Fraction Introduction without Graphics Introduction with Graphics Expressing a Fraction in Simplest Form Greatest Common Factor Examples 1, 2 Simplifying Fractions Method 1, 2 Examples Examples 1, 2, 3, 4 The Watering Can</p>

<p>Activity 2: A Measuring We Go... (GLEs: 5, 18, 31)</p>	<p><u>Understanding Math PLUS</u> <u>Understanding Measurement and Geometry</u> Topic 1. An Introduction to Measurement Metric and U.S.A Standard Measurement Systems Searching for the Standard Unit Related Units from Metric Prefixes Metric Prefixes at Work Converting Between Metric Units The Ruler Benchmarks Establishing Benchmarks Meter Benchmarks Foot Benchmarks Centimeter Benchmarks Inch Benchmarks Yard Benchmarks Our Benchmarks Using Benchmarks</p>
<p>Activity 3: Reading and Writing Decimals (GLE: 7)</p>	<p><u>Understanding Math PLUS</u> <u>Understanding Fractions</u> Topic 5. An Introduction to Decimals Ones, Tenths, Hundreds, Thousandths Decimals to Tenths Examples 1, 2, Decimals to Hundredths Examples 1, 2, 3, 4, 5 Decimals to Thousandths Examples 1, 2, 3, 4, 5 Understanding Place Value Examples 1, 2, 3, 4 Equivalent Decimals Examples 1, 2, 3, 4 Comparing Decimals Examples 1, 2, 3, 4 Ordering Decimals Introduction Examples 1, 2, 3, 4</p>

<p>Activity 4: Fraction Strips (GLEs: 4, 6, 18, 31)</p>	<p><u>Understanding Math PLUS</u> <u>Understanding Fractions</u> Topic 1. The Meaning of Fractions Fraction Strips Concepts 1, 2, 3, 4</p> <p>Topic 3. Equivalent Fractions Fraction Strips Concepts 1, 2</p>
<p>Activity 5: Same or Different? (GLEs: 4, 6)</p>	<p><u>Understanding Math PLUS</u> <u>Understanding Fractions</u> Topic 15. Fractions and Decimals Compare Fractions... Method 1 Compare Fractions... Method 2 Fractions to Decimals Repeating Decimals An Example How to Write Them Decimals to Fractions Place Value Examples 1, 2, 3, 4, 5</p>
<p>Activity 6: Box Scores (GLE: 6) Activity 7: Rolling for Decimals (GLE: 7)</p>	<p><u>Understanding Math PLUS</u> <u>Understanding Fractions</u> Topic 5. An Introduction to Decimals Comparing Decimals Examples 1, 2, 3, 4 Ordering Decimals Introduction Examples 1, 2, 3, 4</p>
<p>Activity 8: Grocery Math (GLEs: 10, 13, 20)</p>	<p><u>Understanding Math PLUS</u> <u>Understanding Percent</u> Topic 5. Percent of a Number In This Topic The Concept Examples 1. Money Example 2. Service Charge 3. Bird Example</p>

	<p>4. Marathon Race 5. Freezing 6. Pie Chart</p> <p>Topic 6. Problems Involving Percent Steps in Solving Problems Finding the Whole Recall Proportion School Population: Method 1... Using Proportions School Population: Method 2 Grades Problem: Method 1... Using Proportions Grades Problem: Method 2 Bike Sale: Method 1... Using Proportions Bike Sale: Method 2 Finding the Percent Theatre Problem Car Problem Percent of a Number Earnings Problem Nickel Ore</p>
<p>Activity 9: Tangram Ratio (GLE: 13)</p>	<p><u>Understanding Math PLUS</u> <u>Understanding Fractions</u> Topic 7. Ratios and Proportions Ratios in the News What is a Ratio? Example 1 - Fraction Strip Example 2 - Balls Example 3 - Students Example 4 - Gears Writing Ratios Concept Examples 1, 2, 3, 4</p>
<p>Activity 10: Estimating with Positive Fractions and Decimals (GLE: 10)</p>	<p><u>Understanding Math PLUS</u> <u>Understanding Fractions</u> Topic 8. Adding Fractions Pattern Blocks Hexagon 1, 2, 3 Summary Fraction Strips</p>

Concepts 1, 2
Percent Strips
Examples 1, 2
Decimal Strips
Examples 1, 2
The Clock
Examples 1, 2
Adding Fractions on a Number Line
Examples 1, 2, 3
The Lowest Common Denominator
Examples 1, 2
Word Problems
Alexander's Friends
Eating Candy
Goal Scoring
Taking a Walk

Topic 9. Subtracting Fractions

Pattern Blocks
Hexagons 1, 2, 3
Summary
The Clock
Examples 1, 2
Fraction Strips
Concepts 1, 2
Percent Strips
Examples 1, 2
Decimal Strips
Examples 1, 2
Subtracting Fractions on a Number Line
Examples 1, 2, 3
The Lowest Common Denominator
Examples 1, 2
Word Problems
Pedro and Alex Race
Washing the Cars
Planting a Garden

Topic 14. Addition and Subtraction of Decimals

Adding Decimals
Tenths... The Pencil

Examples 1, 2, 3, 4, 5
 Tenths... The Line
 Examples 1, 2, 3, 4
 Hundredths... The Town
 Examples 1, 2, 3, 4
 Method 1... Partial Sums
 Example 1 - With Grids
 Example 2 - With Grids
 Example 3 - Without Grids
 Example 4 - Without Grids
 Example 5 - Without Grids
 Example 6 - Without Grids
 Method 2... Columns
 Example 1 - With Grids
 Example 2 - With Grids
 Example 3 - Without Grids
 Example 4 - Without Grids
 Example 5 - Without Grids
 Example 6 - Without Grids
 Method 3... Right to Left
 Example 1 - With Grids
 Example 2 - With Grids
 Example 3 - Without Grids
 Example 4 - Without Grids
 Example 5 - Without Grids
 Example 6 - Without Grids
 Subtracting Decimals
 Tenths...The Pencil
 Examples 1, 2, 3, 4, 5
 Hundredths... The Field
 Examples 1, 2, 3, 4
 Method 1... Right to Left
 Example 1 - With Grids
 Example 2 - With Grids
 Example 3 - Without Grids
 Example 4 - Without Grids
 Example 5 - Without Grids
 Example 6 - Without Grids
 Method 2... Trade First
 Example 1 - With Grids
 Example 2 - With Grids

	<p>Example 3 - Without Grids Example 4 - Without Grids Example 5 - Without Grids Example 6 - Without Grids</p>
<p>Activity 11: Vacation Math (GLE: 20)</p>	<p><u>Understanding Math PLUS</u> <u>Understanding Fractions</u> Topic 7. Ratios and Proportions Ratios in the News What is a Ratio? Example 1 - Fraction Strip Example 2 - Balls Example 3 - Students Example 4 - Gears Writing Ratios Concept Examples 1, 2, 3, 4</p>

Unit 4: Geometry, Perimeter, Area, and Measurement

This unit focuses on analyzing characteristics and properties of 2- and 3-dimensional shapes and developing mathematical arguments about geometric relationships. It provides students opportunities to make and test predictions regarding tessellations and to extend their work to plotting points in all four quadrants of the coordinate plane. Area formulas are extended and include giving reasonable estimates of objects in the classroom or everyday real-life environments. Evaluating simple and two-step algebraic equations, modeling of squares up to 144, and the matching of equations and expressions to their verbal statements are addressed as they relate to geometry and measurement.

Expectation or Standard	Understanding Math PLUS and/or Understanding Numeration PLUS Lessons
Activity 1: Daily Warm-Up Activity- First 100 days (GLE: 19)	<u>Understanding Math PLUS</u> <u>Understanding Measurement and Geometry</u> Topic 2. Perimeter and Area of Polygons Walk Around a Polygon Joan Walks Length of the Metal Strip Find the Perimeter Amount of Surface The Driveway... An Introduction to Area Area – Estimation Area of a Rectangle Concept Examples 1, 2
Activity 2: Body Measurement (GLE: 21) Activity 3: String Lengths (GLE: 21) Activity 4: Room Measurement (GLEs: 22, 23) Activity 5: Measure It! (GLE: 18)	<u>Understanding Math PLUS</u> <u>Understanding Measurement and Geometry</u> Topic 1. An Introduction to Measurement Establishing Benchmarks Meter Benchmarks Foot Benchmarks Centimeter Benchmarks Inch Benchmarks Yard Benchmarks Our Benchmarks Using Benchmarks Converting Between Metric Units My Body Rudy's Run
Activity 6: Calculating Perimeter and Area of Triangles, Parallelograms, and Trapezoids (GLEs: 15, 19)	<u>Understanding Math PLUS</u> <u>Understanding Measurement and Geometry</u> Topic 2. Perimeter and Area of Polygons Walk Around a Polygon Joan Walks

	<p>Length of the Metal Strip Find the Perimeter Amount of Surface The Driveway... An Introduction to Area Area – Estimation Area of a Rectangle Concept Examples 1, 2 Area of a Parallelogram Concept Examples 1, 2 Area of a Triangle Concept Examples 1, 2</p>
Activity 7: Missing Measures (GLEs: 14, 16, 17)	
Activity 8: Estimating Area and Perimeter of 2-D Shapes (GLEs: 21, 22, 23)	<p><u>Understanding Math PLUS</u> <u>Understanding Measurement and Geometry</u> Topic 2. Perimeter and Area of Polygons Relationship – Area and Perimeter The Information The Graph Given Area and Perimeter – Create Shape Example 1 Example 2 Example 3 Example 4</p>
Activity 9: 3-D Measurement (GLEs: 24, 25)	<p><u>Understanding Math PLUS</u> <u>Understanding Measurement and Geometry</u> Topic 4. Solids...Volume and Surface Area In This Topic Classifying Solids A Solid is... Recall Polygons A Polyhedron is... A Prism is... Some Special Pyramids A Cylinder is... A Cone is...</p>

	Platonic Solids
Activity 10: 3-D Construction (GLE: 25)	<p><u>Understanding Math PLUS</u> <u>Understanding Measurement and Geometry</u> Topic 8. Projective Geometry An Introduction Toothpicks on Isometric Dot Paper Toothpick to Cube The Views Using Isometric Grid Paper Orthographic Projections: Introduction The Cube Tool Introduction Tutorial Play with Tool Given Solid – Build it Examples 1, 2, 3, 4, 5, 6 Given Views – Build it Examples 1, 2, 3, 4, 5, 6</p>
Activity 11: Sliding Shapes (GLE: 27)	<p><u>Understanding Math PLUS</u> <u>Understanding Graphing</u> Topic 4. Transformations Translations Object to Image We Say We Write Reflection Mapping Rule Examples Examples 1, 2, 3 Rotations Object to Image We Say We Write Rotation Mapping Rule Examples Examples 1, 2 Dilatations Object to Image We Say We Write</p>

<p>Activity 12: Long Side—Large Angle (GLE: 26)</p>	<p><u>Understanding Math PLUS</u> <u>Understanding Measurement and Geometry</u> Topic 6. Angles and Polygons Angles in Triangles Exploration An Explanation Exterior Angles – Example</p>
<p>Activity 13: Ray Time (GLE: 26)</p>	<p><u>Understanding Math PLUS</u> <u>Understanding Measurement and Geometry</u> Topic 5. Angles and their Measure In This Topic Lines and Rays</p>
<p>Activity 14: Picture It! (GLEs: 24, 25, 26)</p>	
<p>Activity 15: The Fly On The Ceiling (GLE: 28) Activity 16: Plotting Shapes (GLEs: 19, 28)</p>	<p><u>Understanding Math PLUS</u> <u>Understanding Graphing</u> Topic 3. Points on a Grid In This Topic Josh’s Neighborhood Concept Number Houses Grids on Maps Ordered Pairs Axis Quadrants and Cartesian Plane Find a Point Order is Important Examples</p>

Unit 5: Operating with Fractions and Decimals

This unit focuses on the refinement of understandings of addition and subtraction as students use concrete materials to model these operations with fractions and decimals. Activities provide opportunities to develop an understanding of fraction transformations, common denominators, and lowest terms in terms of equivalences. Precision is explored on real-life situations.

Expectation or Standard	Understanding Math PLUS and/or Understanding Numeration PLUS Lessons
Activity 1: Activity 1: Daily warm-up activity - First 100 days (GLE: 3)	<u>Understanding Math PLUS</u> <u>Understanding Fractions</u> Topic 3. Equivalent Fractions Greatest Common Factor 12 and 18 30 and 40 70 and 42
Activity 2: Mental Giants (GLEs: 3, 9) Activity 3: Adding and Subtracting Unlike Denominators (GLEs: 3, 9)	<u>Understanding Math PLUS</u> <u>Understanding Fractions</u> Topic 8. Adding Fractions Word Problems Alexander’s Friends Eating Candy Goal Scoring Taking a Walk Fraction Card Game Magic Square Topic 9. Subtracting Fractions Word Problems Pedro and Alex Race Washing the Cars Planting a Garden Practice Questions Topic Test
Activity 4: Numbers in the News (GLE: 9) Activity 5: Real-World Decimals and Fractions (GLEs: 5, 9)	<u>Understanding Math PLUS</u> <u>Understanding Fractions</u> Topic 15. Fractions and Decimals My Day Fraction to Decimal Division Practice Questions Topic Test

<p>Activity 6: Landscaping (GLE: 3)</p>	<p><u>Understanding Math PLUS</u> <u>Understanding Measurement and Geometry</u> Topic 2. Perimeter and Area of Polygons Problems Section Length of Fence Area of a Wall The Tablecloth Practice Questions Topic Test</p>
<p>Activity 7: Adding and Subtracting Decimals (GLE: 9)</p>	<p><u>Understanding Math PLUS</u> <u>Understanding Fractions</u> Topic 14. Adding and Subtracting Fractions Decimals Around Us Length in Metric Units The Tools Examples 1, 2, 3, 4, 5 Pencils Examples 1, 2, 3, 4, 5 Money Examples 1, 2, 3, 4, 5 Track Meet Examples 1, 2, 3, 4, 5 School Supplies Practice Questions</p>
<p>Activity 8: Let's Be Precise or At Least Accurate (GLEs: 9, 18, 31)</p>	<p><u>Understanding Math PLUS</u> <u>Understanding Measurement and Geometry</u> Topic 1. An Introduction to Measurement Benchmarks Establishing Benchmarks Meter Benchmarks Foot Benchmarks Centimeter Benchmarks Inch Benchmarks Yard Benchmarks Our Benchmarks Using Benchmarks</p>
<p>Activity 9: Precision Instruments (GLE: 31)</p>	

Unit 6: Taking a Chance

The focus of this unit is to further the development of the fundamental counting principle. Opportunities are provided for students to organize and list possible outcomes to solve real-life situations. The extension of probability settings includes complementary events and recognition of equally likely (equally probable) events in experiments.

Expectation or Standard	Understanding Math PLUS and/or Understanding Numeration PLUS Lessons
<p>Activity 1: Daily warm-up activity - First 100 days (GLEs: 34, 36)</p>	<p><u>Understanding Math PLUS</u> <u>Understanding Probability</u> Topic 1. An Introduction to Probability The Language of Chance Impossible to Certain Activity 1, 2 Probability Lines Line 1,2 Possible Outcomes...Examples What are They? 1. Coin 2. Picking One Ball 3. Picking Two Balls 4. Eye Test 5. Coin and Die 6. Travel 7. Rabbits 8. Forest</p> <p>Topic 2. What's the Chance? The Probability Scale Examples Summary Follow Up Soccer Example Experimental Probability Introduction Examples 1, 2 Practice Questions</p>
<p>Activity 2: On a Roll! (GLE: 34) Activity 3: A Lunch Combo (GLE: 34) Activity 4: Paper Pull (GLE: 35)</p>	<p><u>Understanding Math PLUS</u> <u>Understanding Probability</u> Topic 3. Dice Probabilities Roll One Die Your Experiment Computer's Experiment</p>

	<p>Theoretical Experiment Patterns Summary Roll Two Dice Your Experiment Computer's Experiment Theoretical Experiment Patterns Summary</p>
<p>Activity 5: How Likely? (GLEs: 35, 36)</p>	<p><u>Understanding Math PLUS</u> <u>Understanding Probability</u> Topic 2. What's the Chance? Probability Examples 1. Coin Toss 2. Picking One Ball 3. Picking Two Balls 4. Travel Example 5. Number Example 6. Rabbit Example 7. Mailing Letters 8. Forest 9. Ahmed's Maze The Probability Scale Examples Summary Follow Up Soccer Example</p>

<p>Activity 6: Figure This! (GLEs: 34, 35, 36)</p>	<p><u>Understanding Math PLUS</u> <u>Understanding Probability</u> Topic 7. Independent Events In This Topic What Are They? Examples 1. Toss Two Coins 2. Replacing Marbles Probability 1. Coin and Die 2. Balls 3. Letter Tiles</p> <p>Topic 8. Dependent Events In This Topic What Are They? Independent Events Dependent Events Examples 1. Keep the First Marble 2. Choose the Flowers Probability 1. Keep the First Ball 2. Keep the First Tile 3. Plant the First Flower</p>
<p>Activity 7: Probability and Literature (GLEs 34, 35, 36)</p>	

Unit 7: Strengthening Whole Numbers

This unit focuses on reviewing multiplication and division algorithms for whole numbers that involves various representations of the remainder. The scope of problems extends to dividing a 4-digit by a 2-digit number.

Expectation or Standard	Understanding Math PLUS and/or Understanding Numeration PLUS Lessons
<p>Activity 1: Daily warm-up activity (GLE: 12)</p> <p>Activity 2: Understanding Division (GLE: 12)</p> <p>Activity 3: Remainder Game (GLE: 12)</p> <p>Activity 4: Dealing with Remainders (GLE: 12)</p> <p>Activity 5: Division Problems (GLE: 12)</p> <p>Activity 6: I Have; Who Has? (GLE: 12)</p>	<p><u>Understanding Math PLUS</u> <u>Understanding Whole Numbers and Integers</u></p> <p>Topic 3. Multiplying and Dividing Whole Numbers The Standard Method - Questions 1, 2, 3 Divide by a Single Digit Divisor Fair Sharing Fair Sharing - Example 1 - With Blocks Fair Sharing - Example 2 - Without Blocks Fair Sharing - Questions 1, 2, 3, 4, 5, 6</p> <p>Whole Numbers Around Us Example 1 - Orange Example 2 - Bananas Example 3 - Cycling Example 4 - Baseball Cards Example 5 - Cookies Example 6 - Running</p> <p>Topic 8. Dividing Integers Division to Multiplication The Division Table Instructions Patterns Practice The Inverse of Multiplication Examples 1, 2 Summary #1... Signs Summary #2... Signs Example Questions Examples 1, 2, 3, 4 Word Problems Casino Plant Graham's Walk</p>

Unit 8: Integers, Patterns, and Algebra

The focus of this unit is on working with integers, patterns, and variables. A number line is used to represent integers and inverses. Opportunities to represent, analyze, and generalize a variety of patterns with tables, graphs, words, and when possible, symbolic rules are provided.

Expectation or Standard	Understanding Math PLUS and/or Understanding Numeration PLUS Lessons
<p>Activity 1: Daily warm-up activities (GLE: 14)</p> <p>Activity 2: Graphing Perfect Squares (GLE: 14)</p>	<p><u>Understanding Math PLUS</u> <u>Understanding Exponents</u> Topic 5. Square Roots Squaring Numbers Square Roots Radical Signs Square Roots of Negative Numbers Example Questions 1. Radicals First 2. The Four Equations 3. Lawn Question 4. Make a Square</p>
<p>Activity 3: Below Zero Temperatures (GLE: 8)</p> <p>Activity 4: Newspaper Comparisons (GLEs: 6, 8)</p>	<p><u>Understanding Math PLUS</u> <u>Understanding Whole Numbers and Integers</u> Topic 4. The Meaning of Integers Integers Around Us Temperature Helicopter Submarine Elevator The Integer Line Opposite Integers Examples 1, 2 Absolute Values Examples 1, 2 Comparing Integers Examples 1, 2, 3, 4 Example Questions Examples 1, 2, 3, 4, 5, 6</p>
<p>Activity 5: Equal Concentration (GLE: 15)</p> <p>Activity 6: Substituting Numbers (GLE: 16)</p> <p>Activity 7: Two-Step Math (GLE: 17)</p>	<p><u>Understanding Math PLUS</u> <u>Understanding Algebra</u> Topic 4. Patterns, Formulas, Substitution Introduction... Math is Patterns Expressions, Terms, Variables</p>

	<p>Definitions Summary Patterns to Formulas Example... Hockey Standings Example... Counting Money Example... Angles in a Polygon Substitution is... Math Scrabble Scrabble 1, 2, 3 Challenge Substitution Examples Examples 1, 2, 3, 4</p>
<p>Activity 8: Sequence Counting (GLE: 38) Activity 9: Pumping Gas Rules! (GLE: 38)</p>	<p><u>Understanding Math PLUS</u> <u>Understanding Algebra</u> Topic 3. Patterns, Patterns, Patterns Geometric Patterns Examples 1, 2, 3, 4, 5, 6, 7, 8 Number Patterns Examples 1, 2, 3, 4, 5, 6 Number and Geometric Patterns Examples 1, 2 Patterns to Formulas Examples 1, 2, 3 Factor Pairs in Arrays Factors of 8, 12, 16, 20, 5, 15, 18</p>
<p>Activity 10: Fibonacci (GLE: 38)</p>	
<p>Activity 11: Input-Output (GLE: 37)</p>	