

CORRELATION
of
the Understanding Numeration PLUS & Understanding Math PLUS programs
with
Louisiana Department of Education: Comprehensive Curriculum
Grade 7 Mathematics
March 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 Probability
- Understanding Exponents
- Understanding Algebra
- Understanding Numeration
- Understanding Measurement and Geometry
- Understanding Whole Numbers and Integers
- Understanding Percent
- Understanding Equations
- Understanding Graphing

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: Fractions, Measures, and Models

The focus of this unit is connecting and extending the relationships of fractions, decimals, integers and percents to enable deeper understanding and flexibility in thinking. Proportionality is explored.

Expectation or Standard	Understanding Math PLUS and/or Understanding Numeration PLUS Lessons
<p>Activity 1: Decimal Comparisons - Where's the Best Place? (GLE: 2)</p>	<p><u>Understanding Math PLUS</u> <u>Understanding Fractions</u> Topic 5. 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</p>
<p>Activity 2: Fraction Comparisons (GLEs: 1, 2)</p>	<p><u>Understanding Math PLUS</u> <u>Understanding Fractions</u> Topic 1. The Meaning of Fractions Comparison of Fractions The Symbol Greater Than - Ex. 1, Ex. 2 Less Than - Ex. 1, Ex. 2 Greater and Less Than - Ex. 1, Ex. 2 Concept 1 - Fraction Strips Concept 2 - Circles Examples 1, 2, 3, 4</p>
<p>Activity 3: Number Line Placement (GLE: 1,2)</p>	<p><u>Understanding Math PLUS</u> <u>Understanding Fractions</u> Topic 1. The Meaning of Fractions Fractions on a Number Line Halves Thirds Quarters Summary Pattern Blocks</p>

	Examples 1, 2, 3, 4
<p>Activity 4: Representation of Equivalent Fractions, Decimals, and Percents (GLE: 1)</p> <p>Activity 5: Compare Fractions, Decimals, and Percents (GLE: 2)</p> <p>Activity 6: Equivalent Fractions, Decimals, and Percents (GLEs: 1, 2)</p> <p>Activity 7: Is it Reasonable? (GLEs: 7, 8)</p> <p>Activity 8: What Is Needed? (GLE: 9)</p>	<p><u>Understanding Math PLUS</u> <u>Understanding Fractions</u> Percents...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 Expressing a Percent as a Decimal Introduction Examples 1, 2, 3 Number Line #1 Decimal Strips Concepts 1, 2, 3 Expressing a Decimal as a Percent Examples 1, 2, 3 Summary and Pattern % Nitrogen in the Air Batting Averages Expressing a Fraction as a Percent An Example Method 1 Examples 1, 2 Method 2 Examples 1, 2 Lightning Example Number Line #2</p>
<p>Activity 9: Simple Percent Problems (GLEs: 6, 8)</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</p>

	<ul style="list-style-type: none"> 3. Bird Example 4. Marathon Race 5. Freezing 6. Pie Chart <p>The Bouncing Ball Grades What if? Calculate Pass or Fail? Practice Questions</p>
Activity 10: Tipping at a Restaurant (GLEs: 6, 8, 9)	<p><u>Understanding Math PLUS</u> <u>Understanding Percent</u> Topic 6. Problems Involving Percent Mental Calculation Number Problem Tipping</p>
Activity 11: Rates (GLE: 10)	
Activity 12: Ratio Patterns (GLEs: 10, 11)	<p><u>Understanding Math PLUS</u> <u>Understanding Percent</u> Topic 4. Ratios and Proportions Ratios in the News What is a Ratio? Examples</p> <ul style="list-style-type: none"> 1. Fraction Strip 2. Balls 3. Students 4. Gears <p>Writing Ratios Concept Examples 1, 2, 3, 4</p>
Activity 13: What's the Recipe? (GLEs: 7, 11)	<p><u>Understanding Math PLUS</u> <u>Understanding Percent</u> Topic 4. Ratios and Proportions What is a Proportion? Proportions Example 1 Example 2 – Lemonade Example 3 – Marbles Example 4 – Trout</p>

<p>Activity 14: Number Line with Integers (GLE: 2)</p> <p>Activity 15: Integers All Around (GLE: 7)</p>	<p><u>Understanding Math PLUS</u> <u>Understanding Whole Numbers and Integers</u> Topic 4. The Meaning of Integers The Integer Line Opposite Integers Examples 1, 2</p>
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Unit 2: Computation with Fractions, Decimals, and Proportions

This unit extends the work of the previous unit to include the operational understandings of multiplication and division of fractions and decimals and their connections to real-life situations. Extending order of operation situations to higher levels will also be addressed.

Expectation or Standard	Understanding Math PLUS and/or Understanding Numeration PLUS Lessons
<p>Activity 1: Patterns with Fractions, Decimals and Percents (GLE: 40)</p>	<p><u>Understanding Math PLUS</u> <u>Understanding Fractions</u> Percents...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 Expressing a Percent as a Decimal Introduction Examples 1, 2, 3 Number Line #1 Decimal Strips Concepts 1, 2, 3 Expressing a Decimal as a Percent Examples 1, 2, 3 Summary and Pattern % Nitrogen in the Air Batting Averages Expressing a Fraction as a Percent An Example Method 1 Examples 1, 2 Method 2</p>

	Examples 1, 2
<p>Activity 2: The Meaning of Multiplication of Fractions (GLEs: 5, 40)</p> <p>Activity 3: Multiplication of Fraction Using Arrays (GLEs: 5, 40)</p>	<p><u>Understanding Math PLUS</u> <u>Understanding Fractions</u> Topic 10. Multiplying Fractions Pattern Blocks Hexagons 1, 2, 3 Fraction Strips Concepts 1, 2 Word Problems Boris' Money Maria's Trip Developing the Rule Example 1 Example 2 A Summary The Meaning of "OF" Order in Multiplying Examples 1, 2 Multiplying Fractions with Large Numbers Examples 1, 2 Practice Questions</p>
<p>Activity 4: The Meaning of Division of Fractions (GLEs: 5, 40)</p>	<p><u>Understanding Math PLUS</u> <u>Understanding Fractions</u> Topic 11. Division of Fractions Understanding Division Recall from Whole Numbers Introduction Examples with Diagrams Soda Pop Ice Cream Shape 1 Shape 2 Patterns from Examples Another Explanation Examples 1, 2 Examples without Diagrams Numerical Examples 1, 2 Central High School Practice Questions</p>

<p>Activity 5: Decimal Positioning (GLE 5)</p>	<p><u>Understanding Math PLUS</u> <u>Understanding Fractions</u> Topic 5. Introduction to Decimals 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 6: Decimal Division (GLE: 5)</p>	<p><u>Understanding Math PLUS</u> <u>Understanding Fractions</u> Topic 15. Multiplication and Division of Decimals Preliminaries to Division Graphic Example Multiplication Table Summary of Decimals Partial Quotients Example 1 Example 2 Example 3 Example 4 Fair Sharing – Long Division Example 1 Example 2 Question 1 Question 2 Question 3 Question 4</p>
<p>Activity 7: Order of Operations—Is It Possible? (GLEs: 3, 5)</p> <p>Activity 8: Solve Order of Operations Problems Using Symbols and Multiple Operations (GLE: 3)</p> <p>Activity 9: Problem Solving Triangle Puzzle (GLEs: 5, 7, 10, 11)</p>	<p><u>Understanding Math PLUS</u> <u>Understanding Fractions</u> Topic 12. Order of Operations Order in Addition Trials 1, 2 Conclusion Examples 1, 2 Order in Multiplication Trials 1, 2 Conclusion Examples 1, 2</p>

	<p>Why Use Order of Operations? BEDMAS Example Questions Examples 1, 2, 3</p>
<p>Activity 10: Map It! (GLEs: 5, 7, 9)</p>	
<p>Activity 11: Cooperative Problem Solving (GLEs: 5, 7, 10, 11)</p>	<p><u>Understanding Math PLUS</u> <u>Understanding Whole Numbers and Integers</u> Topic 3. Multiplying and Dividing Whole Numbers Whole Numbers Around Us Example 1 - Orange Example 2 - Bananas Example 3 - Cycling Example 4 - Baseball Cards Example 5 - Cookies Example 6 - Running Example 7 - Apples Example 8 - Saving Example 9 - Sit-ups Example 10 - Taxi Example 11 - Skipping Practice Questions</p>
<p>Activity 12: Common Ratios (GLEs: 5, 10, 11)</p>	<p><u>Understanding Math PLUS</u> <u>Understanding Percent</u> Topic 4. Ratios and Proportions Ratios in the News What is a Ratio? Examples</p> <ul style="list-style-type: none"> 1. Fraction Strip 2. Balls 3. Students 4. Gears <p>Writing Ratios Concept Examples 1, 2, 3, 4</p>
<p>Activity 13: In Another World! (GLEs: 5, 11)</p>	<p><u>Understanding Math PLUS</u> <u>Understanding Percent</u> Topic 4. Ratios and Proportions What is a Proportion? Proportions Example 1</p>

	<p>Example 2 – Lemonade Example 3 – Marbles Example 4 – Trout</p>
<p>Activity 14: Additive and Multiplicative Patterns (GLE 40)</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 Patterns to Formulas Examples 1, 2, 3 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</p>

Unit 3: Computation and Algebra

This unit ties numerical problem solving to algebraic problem solving. Starting with computations using the distributive property, the unit moves into solving and graphing solutions to equations and inequalities and graphing on a coordinate grid. Function machines will be used to analyze and discover the relationships of changing growths and patterns. Relationships among units and conversions between units within the same system will be addressed.

Expectation or Standard	Understanding Math PLUS and/or Understanding Numeration PLUS Lessons
<p>Activity 1: Developing the Distributive Property (GLE: 4)</p> <p>Activity 2: Distribute It With Candy Bars! (GLE: 4)</p>	<p><u>Understanding Math PLUS</u> <u>Understanding Whole Numbers and Integers</u> Topic 3. Multiplying and Dividing Whole Numbers The Distributive Method Distributive Method - Examples 1, 2, 3 Distributive Method - Questions 1, 2, 3</p>
<p>Activity 3: Perimeter of a Corral (GLE: 4)</p>	<p><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</p>
<p>Activity 4: Building a Cube (GLE: 22, 39)</p>	<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</p>
<p>Activity 5: Area of a Corral (GLE: 4, 12)</p>	<p><u>Understanding Math PLUS</u> <u>Understanding Measurement and Geometry</u> Topic 2. Perimeter and Area of Polygons Amount of Surface The Driveway... An Introduction to Area Area – Estimation Area of a Rectangle</p>

	<p>Concept Examples 1, 2</p>
<p>Activity 6: Place Your Order! (GLEs: 12, 13, 39)</p>	<p><u>Understanding Math PLUS</u> <u>Understanding Exponents</u> Topic 1. The Meaning of Exponents Introduction... The Money Game Money Grab Game Show Graphs – Game Show Results Graphs – Comparing the Two Results Introduction... Bacteria Doubling Introduction... Paper Folding Experiment Pattern</p>
<p>Activity 7: Number Line Square Roots (GLE: 13)</p>	<p><u>Understanding Math PLUS</u> <u>Understanding Exponents</u> Topic 5. Square Roots Squaring Numbers Square Roots</p>
<p>Activity 8: Four in a Row (GLEs: 3, 12, 13, 29)</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>
<p>Activity 9: What’s My Value? (GLE: 12)</p>	<p><u>Understanding Math PLUS</u> <u>Understanding Algebra</u> Topic 4. Patterns, Formulas, Substitution Expressions, Terms, Variables Definitions Summary Patterns to Formulas Example... Hockey Standings Example... Counting Money</p>

	<p>Example... Angles in a Polygon Substitution is... Math Scrabble Scrabble 1, 2, 3</p>
<p>Activity 10: Situations with Equations (GLEs: 14, 16)</p> <p>Activity 11: Equation Match (GLE: 16)</p>	<p><u>Understanding Math PLUS</u> <u>Understanding Equations</u> Topic 2. Solving One-Step Equations Our Problem Concepts – Examples with Tiles Examples 1, 2, 3, 4 Concepts – Examples without Tiles Practice Questions Topic Test</p>
<p>Activity 12: Inequality Bingo (GLE: 15)</p> <p>Activity 13: Who Has? (GLEs: 14, 15, 16, 17)</p>	<p><u>Understanding Math PLUS</u> <u>Understanding Equations</u> Topic 7. Solving Inequalities Comparing Integers The Integer Line Example 1... Greater Than; Example 2... Less Than Explanation Example 3... Greater Than; Example 4... Less Than Greater Than or Less Than Inequalities What Are They? Inequality vs. Equation Summary of Relationships Inequality on the Number Line Examples 1, 2, 3, 4 Solving Inequalities Examples 1, 2, 3, 4, 5, 6</p>
<p>Activity 14: Patterns to Investigate (GLEs: 18,19, 39)</p> <p>Activity 15: More Patterns! (GLEs: 18,19, 39)</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 Patterns to Formulas Examples 1, 2, 3</p>

	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
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Unit 4: Surveys, Statistics, and Patterns

This unit focuses on the analysis and interpretation of data. Reasoning numerical or logical problems will be expanded to include three-circle Venn diagrams.

Expectation or Standard	Understanding Math PLUS and/or Understanding Numeration PLUS Lessons
Activity 1: Circle Graphs All Around (GLE: 31, 32) Activity 2: Circle Graph M & M's[®] (GLE 31)	<u>Understanding Math PLUS</u> <u>Understanding Graphing</u> Topic 2. Statistics Circle or Pie Graphs Example 1... Radio Station Example 2... Health Survey
Activity 3: Describing Data (GLE: 32)	<u>Understanding Math PLUS</u> <u>Understanding Graphing</u> Topic 2. Statistics Data... What is it? 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
Activity 4: Discrete and Continuous Data (GLE: 33)	<u>Understanding Math PLUS</u> <u>Understanding Graphing</u> Topic 1. Reading and Sketching Graphs Discrete Data Continuous Data
Activity 5: Venn Diagrams (GLE: 34)	

Activity 6: Logic Problems with Venn Diagrams (GLE: 34)	
Activity 7: Probability Using Spinners (GLEs: 37, 38)	<u>Understanding Math PLUS</u> <u>Understanding Probability</u> Topic 1. Introduction to Probability Experiments with Spinners Experiments 1 Experiments 2 Experiments 3 Experiments 4 Experiments 5 Experiments 6 The Spinner Game Board 1 Board 2
Activity 8: Probability Using Markers (GLEs: 37, 38) Activity 9: Sums Game (GLEs: 37, 38)	<u>Understanding Math PLUS</u> <u>Understanding Probability</u> Topic 2. What's the Chance Probability What is it? Introduction 1 Introduction 2 Probability Examples <ol style="list-style-type: none"> 1. Coin Toss 2. Picking One Ball 3. Picking Two Balls 4. Travel Example 5. Number Example
Activity 10: Fundamental Fun! (GLE 36)	
Activity 11: Relationship of Length of Sides to Area of Polygons (GLE: 41)	<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

Unit 5: Geometry: Focus on Angles and Circles

This unit investigates and develops the relationships between the circumference and area of a circle and circumference, diameter, and radius of a circle. An understanding of angle relationships in triangles will be developed. Using elementary logic of if/then statements, students will solve geometric problems.

Expectation or Standard	Understanding Math PLUS and/or Understanding Numeration PLUS Lessons
<p>Activity 1: Graphing Ordered Pairs (GLE: 29)</p>	<p><u>Understanding Math PLUS</u> <u>Understanding Graphing</u> Topic 3. Points on a Grid Ordered Pairs Axis Quadrants and Cartesian Plane Find a Point Order is Important Examples Shapes Battleship Topic Test</p>
<p>Activity 2: Reflections and Translations (GLEs: 25, 29)</p>	<p><u>Understanding Math PLUS</u> <u>Understanding Graphing</u> Topic 4. Transformations Translations - An Introduction Slide #1, #2, #3, #4 Reflections - An Introduction Flip #1, #2, #3 Translations Object to Image We Say We Write Reflection Mapping Rule Examples Examples 1, 2, 3</p>
<p>Activity 3: Area vs Perimeter (GLE 41)</p>	<p><u>Understanding Math PLUS</u> <u>Understanding Measurement and Geometry</u> Topic 2. Perimeter and Area of Polygons Given Area and Perimeter – Create Shape Example 1 Example 2 Example 3 Example 4</p>

	Problems Section Length of Fence Area of a Wall The Tablecloth Practice Questions Topic Test
Activity 4: $\pi!$ (GLEs: 5, 10, 26, 28, 40)	<u>Understanding Math PLUS</u> <u>Understanding Measurement and Geometry</u> Topic 3. The Circle Circles All Around Us! Radius, Circumference, Diameter PI... A Special Number Introduction How do we Measure Circumference? Measuring Circles Summary
Activity 5: Real Life Measures (GLEs: 26, 28)	<u>Understanding Math PLUS</u> <u>Understanding Measurement and Geometry</u> Topic 3. The Circle Circumference of a Circle Circumference Example 1 – Egg Example 2 – The Well Example 3 – The Rolling Coin Example 4 – The Semi-Circle
Activity 6: Understanding Area of a Circle (GLEs: 28, 35) Activity 7: Circumference and Area (GLEs: 24, 27, 28)	<u>Understanding Math PLUS</u> <u>Understanding Measurement and Geometry</u> Topic 3. The Circle Area of a Circle Recall Area Area Exploration #1 Area Exploration #2 Example 1 – Wheel Example 2 – Pizza Example 3 – The Semi-Circle Example 4 – The Dog’s Run Example 5 – The Hockey Rink
Activity 8: What’s Your Angle? (GLEs: 24, 30)	<u>Understanding Math PLUS</u> <u>Understanding Measurement and Geometry</u> Topic 5. Angles and their Measure

	<p>In This Topic</p> <ul style="list-style-type: none"> Lines and Rays Angles... An Introduction The Degree Classifying Angles Classifications Memory Game Measuring Angles Practice Questions
<p>Activity 9: Interior Angles of a Triangle (GLE: 30)</p> <p>Activity 10: Triangle Fun! (GLEs: 27, 30, 41)</p>	<p><u>Understanding Math PLUS</u></p> <p><u>Understanding Measurement and Geometry</u></p> <p>Topic 6. Angles and Polygons</p> <p>In This Topic</p> <ul style="list-style-type: none"> Parallel Lines Example with Parallel Lines Examples 1, 2 Angles in Triangles Exploration An Explanation Exterior Angles – Example
<p>Activity 11: If, Then! (GLE: 35)</p>	

Unit 6: Geometry and Measurement

This unit extends the work with angles to more precise measurement and the application of perimeter and area concepts to irregular as well as regular polygons. Comparisons between metric and U.S. measures for area, weight/mass, and temperature are made.

Expectation or Standard	Understanding Math PLUS and/or Understanding Numeration PLUS Lessons
<p>Activity 1: Calculate Perimeter and Area of a Plane Figure (GLEs: 5, 7, 20, 22)</p> <p>Activity 2: Pool and Hot Tub Addition (GLEs: 20, 22)</p>	<p><u>Understanding Math PLUS</u> <u>Understanding Measurement and Geometry</u> Topic 2. Perimeter and Area of Polygons Given Area and Perimeter – Create Shape Example 1 Example 2 Example 3 Example 4 Problems Section Length of Fence Area of a Wall The Tablecloth Practice Questions Topic Test</p>
<p>Activity 3: Measuring Scavenger Hunt (GLE: 22)</p> <p>Activity 4: Metric Madness (GLEs: 21, 22, 40)</p> <p>Activity 5: Compare U.S. and Metric Systems of Length (GLE: 21)</p>	<p><u>Understanding Math PLUS</u> <u>Understanding Measurement and Geometry</u> Topic 1. An Introduction to Measurement Measurement in the News A Glimpse into the Past 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</p>
<p>Activity 6: Compare U.S. and Metric Systems of Capacity (GLE: 21)</p>	
<p>Activity 7: Compare U.S. and Metric Systems of Weight (GLE: 21)</p>	
<p>Activity 8: Compare U.S. and Metric Systems of Measurements (GLE: 21)</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</p>

	Inch Benchmarks Yard Benchmarks Our Benchmarks Using Benchmarks Converting Between Metric Units My Body Rudy's Run Practice Questions
Activity 9: What's the Temp? (GLE: 21, 23) Activity 10: Temperature in the Newspaper (GLE 23)	<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

Unit 7: Chance

This unit solidifies basic counting by involving students in computing probabilities from collected data and recording the data in the form of tables and charts to help analyze the outcomes of experiments. These experiments are both theoretical and experimental in nature.

Expectation or Standard	Understanding Math PLUS and/or Understanding Numeration PLUS Lessons
<p>Activity 1: Determine Probability from Data (GLE: 37)</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 2: It’s Theoretical! (GLE: 38)</p> <p>Activity 3: How Do the Chips Fall? (GLEs: 37, 38)</p> <p>Activity 4: Number Cubes (GLEs: 7, 36, 37, 38)</p>	<p><u>Understanding Math PLUS</u> <u>Understanding Probability</u> Topic 3. Dice Probabilities Roll One Die Your Experiment Computer’s Experiment Theoretical Experiment Patterns Summary Roll Two Dice Your Experiment Computer’s Experiment Theoretical Experiment Patterns Summary</p> <p>Topic 4. Binomial Probabilities What are They? Flipping a Coin... Once</p>

	Flipping a Coin... Twice Flipping a Coin... Three Times Summary Practice Questions Topic Test
Activity: 5 (GLEs: 32, 37, 38)	<u>Understanding Math PLUS</u> <u>Understanding Graphing</u> Topic 2. Statistics Presenting Data Stem-and-Leaf Diagram Example 1... Ages of Fans Example 2... Heights of Students
Activity 6: Uses of Experimental Probabilities (GLE: 38)	
Activity 7: Probability with <i>Jumanji</i> (GLEs: 37,38)	
Activity 8: It's Fundamental! (GLE: 36)	
Activity 9: How Many Choices! (GLE: 36)	

Unit 8: Integers and Algebra

This unit connects equation solving to representation of problem situations from an algebraic standpoint. While these problems may often be solved numerically or through mental math methods, this unit develops algorithmic methods of algebra and the related techniques that are used to solve problems involving growth, change, variation, and numerical relationships:

Expectation or Standard	Understanding Math PLUS and/or Understanding Numeration PLUS Lessons
Activity 1: Solve Order of Operations Problems Using Symbols and Multiple Operations (GLE: 3)	<u>Understanding Math PLUS</u> <u>Understanding Whole Numbers and Integers</u> Topic 9. Order of Operations BEDMAS Example Questions Examples 1, 2, 3, 4, 5, 6, 7, 8, 9, 10 Word Problems Shipping Babysitting Garbage Practice Questions Topic Test
Activity 2: Game of 24 (GLE: 3)	
Activity 3: Solving Equations (GLEs: 14, 16)	<u>Understanding Math PLUS</u> <u>Understanding Equations</u> Topic 3. Solving Two-Step Equations Our Problem Concepts – Examples with Tiles Examples 1, 2, 3, 4 Concepts – Examples without Tiles Examples 1, 2, 3, 4, 5, 6 Practice Questions
Activity 4: Greater Than, Less Than (GLEs: 16, 17, 33)	<u>Understanding Math PLUS</u> <u>Understanding Whole Numbers and Integers</u> Topic 4. The Meaning of Integers Comparing Integers Examples 1, 2, 3, 4
Activity 5: Interpret Function Machines (GLEs: 7, 19)	<u>Understanding Math PLUS</u> <u>Understanding Algebra</u> Topic 1. Introduction to Algebraic Thinking Function Machine Introduction Find Output

	<p>Find Input Find The Rule Rules 1, 2, 3, 4 Summary</p>
<p>Activity 6: Graphing Ordered Pairs (GLE: 25, 27, 29)</p>	<p><u>Understanding Math PLUS</u> <u>Understanding Graphing</u> Topic 3. Points on a Grid Ordered Pairs Axis Quadrants and Cartesian Plane Find a Point Order is Important Examples Shapes Battleship Topic Test</p>
<p>Activity 7: Find the Pattern (GLEs: 14, 18, 19, 40)</p> <p>Activity 8: Patterns (GLEs: 14, 18, 19, 40)</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 Patterns to Formulas Examples 1, 2, 3</p>