



**Correlation of the Understanding Numeration 2008© and the Understanding Math 2008© Programs
With the Texas Essential Knowledge and Skills For Mathematics
2nd Grade**

The programs are 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.

Organization of the Understanding Numeration 2008© Program

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

Counting Operations Place Value Comparing and Ordering Problem Solving

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 are found on our website (www.neufeldmath.com).

Organization of the Understanding Math 2008© Programs

The Understanding Math 2008© series of programs consists of the following nine programs written for fourth to tenth grade:

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

Each program contains several sections with several topics. Every topic has the following:

- 1) an interactive concept introduction, usually with a variety of graphic approaches;
- 2) a number of particular examples;
- 3) practice questions with random questions, but specific feedback;
- 4) a topic test with random questions and tracking;
- 5) on-line worksheets selected from our website (www.neufeldmath.com).

Teachers may also search for specific topics using our search engine at <http://www.corr.neufeldmath.com>.



Correlation of the Understanding Numeration 2008© and the Understanding Math 2008© Programs
With the Texas Essential Knowledge and Skills For Mathematics
2nd Grade

The TEKS have been correlated to the Understanding Numeration 2008© and Understanding Math 2008© programs. The location is listed below:

Number, operation, and quantitative reasoning

- | | |
|---|---------------|
| (1) The student understands how place value is used to represent whole numbers. | Pages 3 - 6 |
| (2) The student describes how fractions are used to name parts of whole objects or sets of objects. | Pages 6 - 8 |
| (3) The student adds and subtracts whole numbers to solve problems. | Pages 8 - 12 |
| (4) The student models multiplication and division. | Pages 13 - 13 |

Patterns, relationships, and algebraic thinking

- | | |
|---|---------------|
| (5) The student uses patterns in numbers and operations. | Pages 14 - 15 |
| (6) The student uses patterns to describe relationships and make predictions. | Pages 15 - 16 |

Geometry and spatial reasoning

- | | |
|---|---------------|
| (7) The student uses attributes to identify two- and three-dimensional geometric figures. The student compares and contrasts two-and three-dimensional geometric figures or both. | Pages 17 - 18 |
| (8) The student recognizes that a line can be used to represent a set of numbers and its properties. | Pages 19 - 19 |

Measurement

- | | |
|---|---------------|
| (9) The student directly compares the attributes of length, area, weight/mass, and capacity, and uses comparative language to solve problems and answer questions. The student selects and uses nonstandard units to describe length, area, capacity, and weight/mass. The student recognizes and uses models that approximate standard units (from both SI, also known as metric, and customary systems) of length, weight/mass, capacity, and time. | Pages 20 - 20 |
| (10) The student uses standard tools to estimate and measure time and temperature (in degrees Fahrenheit). | Pages 21 - 21 |

Probability and statistics

- | | |
|---|---------------|
| (11) The student organizes data to make it useful for interpreting information. | Pages 22 - 24 |
|---|---------------|

Underlying processes and mathematical tools

- | | |
|---|---------------|
| (12) The student applies Grade 2 mathematics to solve problems connected to everyday experiences and activities in and outside of school. | Pages 25 - 28 |
| (13) The student communicates about Grade 2 mathematics using informal language. | Pages 29 - 30 |
| (14) The student uses logical reasoning. | Pages 30 - 31 |

TEKS that are ***not included*** in the current Understanding Numeration 2008© and Understanding Math 2008© programs are noted as ***not yet correlated***.

**Correlation of the Understanding Numeration 2008© and the Understanding Math 2008© Programs
With the Texas Essential Knowledge and Skills For Mathematics
2nd Grade**

**Texas Essential Knowledge and Skills for Mathematics
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2nd Grade**

Grade 2... Number, operation, and quantitative reasoning

(1) The student understands how place value is used to represent whole numbers. The student is expected to:

(A) use concrete models of hundreds, tens, and ones to represent a given whole number (up to 999) in various ways;

<p>Understanding Numeration: Place Value</p> <p>Skill 2: Model Numbers Grouped in Packages Level C 1) Ones and Groups of Ten Do Skill Test - 5 questions (randomly generated)</p> <p>Skill 3: Identify Place Value Patterns (to 20) Level C 1) Pictures to Numbers #1 2) Tens & Ones to Pictures #1 3) Numbers to Pictures #1 Do Skill Test - 10 questions (randomly generated)</p> <p>Skill 4: Identify Place Value Patterns (to 100) Level C 1) Pictures to Numbers #2 2) Tens & Ones to Pictures #2 3) Numbers to Pictures #2 4) 2 Digit Numbers - Different Ways Do Skill Test - 5 questions (randomly generated)</p> <p>Skill 5: Identify Place Value Patterns (to 1000) Level D 1) Expanded Notation Do Skill Test - 5 questions (randomly generated)</p>	<p>Notes</p>
<p>Understanding Whole Numbers and Integers 2008</p> <p>Section 1: The Meaning of Whole Numbers Seeing the Number</p>	<p>Notes</p>

To Tens- Example 1
To Tens- Example 2

Correlation of the Understanding Numeration 2008© and the Understanding Math 2008© Programs
With the Texas Essential Knowledge and Skills For Mathematics
2nd Grade

<p>Expanded Notation</p> <p>Represent Numbers in Many Ways</p>	<p>To Hundreds- Example 1 To Hundreds- Example 2 To 999- Example 1 To 999- Example 2 Example 1 Example 2 Example 3 Example 4</p>	<p align="right">Notes</p>
<p>(B) use place value to read, write, and describe the value of whole numbers to 999; and</p>		
<p>Understanding Numeration: Place Value</p> <p>Skill 2: Model Numbers Grouped in Packages Level C 1) Ones and Groups of Ten Do Skill Test - 5 questions (randomly generated)</p> <p>Skill 3: Identify Place Value Patterns (to 20) Level C 1) Pictures to Numbers #1 2) Tens & Ones to Pictures #1 3) Numbers to Pictures #1 Do Skill Test - 10 questions (randomly generated)</p> <p>Skill 4: Identify Place Value Patterns (to 100) Level C 1) Pictures to Numbers #2 2) Tens & Ones to Pictures #2 3) Numbers to Pictures #2 4) 2 Digit Numbers - Different Ways Do Skill Test - 5 questions (randomly generated)</p> <p>Skill 5: Identify Place Value Patterns (to 1000) Level D 1) Expanded Notation Do Skill Test - 5 questions (randomly generated)</p>		<p align="right">Notes</p>
<p>Understanding Whole Numbers and Integers 2008</p> <p>Section 1: The Meaning of Whole Numbers Seeing the Number</p>		
<p>To Tens- Example 1 To Tens- Example 2 To Hundreds- Example 1 To Hundreds- Example 2</p>		

Correlation of the Understanding Numeration 2008© and the Understanding Math 2008© Programs
With the Texas Essential Knowledge and Skills For Mathematics
2nd Grade

Expanded Notation	To 999- Example 1 To 999- Example 2
Represent Numbers in Many Ways	Example 1 Example 2 Example 3 Example 4

(C) use place value to compare and order whole numbers to 999 and record the comparisons using numbers and symbols (<, =, >).

Understanding Numeration: Comparing & Ordering	Notes
<p>Skill 3: Introduce... "Greater Than"; "Less Than"</p> <p>Level A 1) Greater Than 2) Less Than 3) Greater Than, Less Than #1 4) Greater Than, Less Than, Equal To Do Skill Test - 10 questions (randomly generated)</p> <p>Level C 1) To the Nearest Ten Do Skill Test - 5 questions (randomly generated)</p> <p>Skill 4: Working with Whole Numbers > , < , =</p> <p>Level A 1) > and < on a number line #1 2) > and < on a number line #2 3) Make It True #1 4) Ordering... Horizontal #1 5) Ordering... Vertical #1 Do Skill Test - 10 questions (randomly generated)</p> <p>Level B 1) Make It True #2 2) Greater Than, Less Than #2 3) Ordering... Horizontal #2 4) Ordering... Vertical #2 Do Skill Test - 5 questions (randomly generated)</p> <p>Level C 1) Compare Numbers #1 Do Skill Test - 5 questions (randomly generated)</p> <p>Level D 1) Compare Numbers #2 Do Skill Test - 5 questions (randomly generated)</p>	

**Correlation of the Understanding Numeration 2008© and the Understanding Math 2008© Programs
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2nd Grade**

<p>Skill 5: Understanding "Just After"; "Just Before"; "Between"</p> <p>Level B 1) "Just Before" Machine #1 2) "Just After" Machine #1 3) In Between #1 Do Skill Test - 10 questions (randomly generated)</p> <p>Level C 1) "Just Before" Machine #2 2) "Just After" Machine #2 3) In Between #2 Do Skill Test - 10 questions (randomly generated)</p> <p>Understanding Whole Numbers and Integers 2008</p> <p>Section 1: The Meaning of Whole Numbers</p> <p>Comparing Large Numbers Example 1</p>	<p align="center">Notes</p>
<p>(2) The student describes how fractions are used to name parts of whole objects or sets of objects. The student is expected to:</p>	
<p>(A) use concrete models to represent and name fractional parts of a whole object (with denominators of 12 or less);</p>	
<p>Understanding Numeration: Counting</p> <p>Skill 9: Introduce Fractions... Equal Parts</p> <p>Level B 1) Two Equal Parts 2) Three Equal Parts 3) Four Equal Parts Do Skill Test - 10 questions (randomly generated)</p> <p>Skill 10: Introduce Fractions... Part of a Whole</p> <p>Level B 1) One Half 2) One Third 3) One Quarter Do Skill Test - 10 questions (randomly generated)</p>	<p align="center">Notes</p>

**Correlation of the Understanding Numeration 2008© and the Understanding Math 2008© Programs
 With the Texas Essential Knowledge and Skills For Mathematics
 2nd Grade**

Skill 11: Introduce Common Fractions... Parts of a Whole

- Level B
- 1) One Half of a Shape
 - 2) Two Thirds of a Shape
 - 3) Three Quarters of a Shape
 - 4) Cut in Half
 - 5) Fifths to Tenths #1
- Do Skill Test - 10 questions (randomly generated)

- Level C
- 1) Fifths to Tenths #2
 - 2) Write the Fraction #1
 - 3) Write the Fraction #2
- Do Skill Test - 5 questions (randomly generated)

Understanding Fractions 2008

Section 1: The Meaning of Fractions

Fractions in the News

Introduction.. Think, Write, Say

Circle
 Squares
 Balls
 Examples

Parts of a Fraction

Part of a Whole

One Half
 One Third
 One Quarter

Parts of a Whole

Two Fifths
 Three Eighths
 Seven Tens

Write the Fraction

Question 1
 Question 2
 Question 3
 Question 4

Fractions on a Number Line

Halves
 Thirds
 Quarters
 Summary

Notes

**Correlation of the Understanding Numeration 2008© and the Understanding Math 2008© Programs
With the Texas Essential Knowledge and Skills For Mathematics
2nd Grade**

(B) use concrete models to represent and name fractional parts of a set of objects (with denominators of 12 or less); and		
Understanding Numeration: Counting		Notes
Skill 12: Introduce Fraction of a Set		
Level C 1) Fraction of a set		
Do Skill Test - 10 questions (randomly generated)		
Understanding Fractions 2008		Notes
Section 1: The Meaning of Fractions		
Fraction of a Set	Example 1 - Marbles Example 2 - Candies Example 3 - Birthday Cake	
(C) use concrete models to determine if a fractional part of a whole is closer to 0, $\frac{1}{2}$, or 1.		
Understanding Fractions 2008		Notes
Section 1: The Meaning of Fractions		
Fractions on a Number Line	Summary Place Them- Example 3	
Estimation on the number line	10 questions (randomly generated)	
(3) The student adds and subtracts whole numbers to solve problems. The student is expected to:		
(A) recall and apply basic addition and subtraction facts (to 18);		
Understanding Numeration: Operations		Notes
Skill 1: Introduce Addition... Concretely... "in all" and "altogether"		
Level A 1) Addition Using Gumballs #1		
2) Addition Using Beans #1		
3) Add the Number of Sides of Shapes #1		
Do Skill Test - 10 questions (randomly generated)		

Correlation of the Understanding Numeration 2008© and the Understanding Math 2008© Programs
With the Texas Essential Knowledge and Skills For Mathematics
2nd Grade

Skill 2: Introduce Addition... concretely... "and"

- Level A
- 1) Addition Using Gumballs #2
 - 2) Addition Using Beans #2
 - 3) Add the Number of Sides of Shapes #2
- Do Skill Test - 10 questions (randomly generated)

Skill 3: Introduce the Symbolism... # + # = #

- Level A
- 1) Addition Using Gumballs #3
 - 2) Addition Using Beans #3
 - 3) Add the Number of Sides of Shapes #3
- Do Skill Test - 10 questions (randomly generated)

Skill 4: Introduce the Words... "plus" and "equals"

- Level A
- 1) Addition Using Gumballs #4
 - 2) Addition Using Beans #4
 - 3) Add the Number of Sides of Shapes #4
- Do Skill Test - 10 questions (randomly generated)

Skill 5: Demonstrate Addition Facts... Making 5

- Level A
- 1) Ways to Make 5
 - 2) Ways to Make 5 - Reverse Order
 - 3) Ways to Make 5 - Vertical
 - 4) Make 5: Horizontal and Vertical
- Do Skill Test - 10 questions (randomly generated)

Skill 6: Demonstrate Addition Facts... Making 6

- Level A
- 1) Ways to Make 6
 - 2) Ways to Make 6 - Reverse Order
 - 3) Make 6 - Horizontal and Vertical
- Do Skill Test - 10 questions (randomly generated)

Skill 7: Demonstrate Addition Facts... Making 7

- Level A
- 1) Ways to Make 7
 - 2) Ways to Make 7 - Reverse Order
 - 3) Make 7: Horizontal and Vertical
- Do Skill Test - 10 questions (randomly generated)

Correlation of the Understanding Numeration 2008© and the Understanding Math 2008© Programs
With the Texas Essential Knowledge and Skills For Mathematics
2nd Grade

Skill 8: Demonstrate Addition Facts... Making 8

- Level A 1) Ways to Make 8
2) Ways to Make 8 - Reverse Order
Do Skill Test - 5 questions (randomly generated)

Skill 9: Demonstrate Addition Facts... Making 9

- Level A 1) Ways to Make 9
2) Ways to Make 9 - Reverse Order
Do Skill Test - 5 questions (randomly generated)

Skill 10: Demonstrate Addition Facts... Making 10

- Level A 1) Ways to Make 10
2) Ways to Make 10 - Reverse Order
Do Skill Test - 5 questions (randomly generated)

Skill 11: Demonstrate Addition Facts... Patterns

- Level A 1) Bar Machine
2) Decomposition Tree #1
3) Adding Along the number line
Do Skill Test - 10 questions (randomly generated)
- Level B 1) Decomposition Tree #2
Do Skill Test - 5 questions (randomly generated)

Skill 18: Introduce Subtraction Concretely... "Take Away"

- Level A 1) Introduction to Subtraction #1
2) Introduction to Subtraction #2

Skill 19: Introduce Subtraction Concretely... # - # = #

- Level A 1) Introduction to Subtraction #3
2) Introduction to Subtraction #4
3) Introduce Vertical Subtraction
Do Skill Test - 10 questions (randomly generated)
- Level C 1) Subtraction Sentences
Do Skill Test - 5 questions (randomly generated)

Skill 20: Fact Families... Add and Subtract

- Level A 1) Doubles - Add and Subtract
2) Relate Addition and Subtraction
3) Fact Families #1
Do Skill Test - 10 questions (randomly generated)

**Correlation of the Understanding Numeration 2008© and the Understanding Math 2008© Programs
With the Texas Essential Knowledge and Skills For Mathematics
2nd Grade**

Level B 1) Doubles - Add and Subtract
2) Fact Families #2
Do Skill Test - 5 questions (randomly generated)

(B) model addition and subtraction of two-digit numbers with objects, pictures, words, and numbers;

Understanding Numeration: Operations

Notes

Skill 16: Add 3 Digit Numbers... Concretely

Level D 1) Addition Without Regrouping
2) Addition With Regrouping
3) Addition With Regrouping - Any Column
Do Skill Test - 10 questions (randomly generated)

Skill 23: Subtract 3 Digit Numbers... Concretely

Level D 1) Subtraction Without Regrouping
2) Subtraction With Regrouping #1
3) Subtraction With Regrouping #2
4) Subtraction With Regrouping #3
5) Subtract With Regrouping - Any Column
Do Skill Test - 10 questions (randomly generated)

Understanding Whole Numbers and Integers 2008

Notes

Section 2 : Adding and Subtracting Whole Numbers

Add... Partial Sums	Example 1 - With Blocks Example 2 - With Blocks
Add... Trade First	Example 1 - With Blocks Example 2 - With Blocks
Add... Right to Left	Example 1 - With Blocks Example 2 - With Blocks
Subtract... Right to Left	Example 1 - With Blocks Example 2 - With Blocks
Subtract... Trade First	Example 1 - With Blocks Example 2 - With Blocks
Subtract... Add Up	Example 1 - With Blocks Example 2 - With Blocks Example 3 - With Blocks Example 4 - With Blocks

**Correlation of the Understanding Numeration 2008© and the Understanding Math 2008© Programs
With the Texas Essential Knowledge and Skills For Mathematics
2nd Grade**

<p>(C) select addition or subtraction to solve problems using two-digit numbers, whether or not regrouping is necessary;</p> <p>Understanding Whole Numbers and Integers 2008</p> <p>Section 2 : Adding and Subtracting Whole Numbers</p> <p>Whole Numbers Around Us</p> <p>Example 2 - quarters Example 3 - baseball cards Example 4 - dollars Example 7 - coins Example 8 - jelly beans Example 9 - photographs Example 10 - minutes walking</p>	<p>Notes</p>
<p>(D) determine the value of a collection of coins up to one dollar; and</p> <p>Understanding Numeration: Counting</p> <p>Skill 7: Counting Using Money</p> <p>Level B 1) Pennies, Nickels, Dimes (USA/Canadian) 2) Coins - Count by 10s, 5s and 1s (USA/Canadian) Do Skill Test - 5 questions (randomly generated)</p> <p>Level C 1) Quarters (USA/Canadian) Do Skill Test - 5 questions (randomly generated) USA</p>	<p>Notes</p>
<p>(E) describe how the cent symbol, dollar symbol, and the decimal point are used to name the value of a collection of coins.</p> <p>Understanding Numeration: Counting</p> <p>Skill 7: Counting Using Money</p> <p>Level D 1) Dollars (USA/Canadian) Do Skill Test - 5 questions (randomly generated)</p>	<p>Notes</p>

**Correlation of the Understanding Numeration 2008© and the Understanding Math 2008© Programs
With the Texas Essential Knowledge and Skills For Mathematics
2nd Grade**

(4) The student models multiplication and division. The student is expected to:

(A) model, create, and describe multiplication situations in which equivalent sets of concrete objects are joined; and

Understanding Numeration: Operations

Skill 25: Introduce Multiplication Concretely

- Level C
- 1) Grouping Eggs in Bowls
 - 2) Grouping Chairs in Rows
 - 3) Eggs in Bowls... Introduce \times
 - 4) Chairs in Rows... Introduce \times
 - 5) Multiplication - Repeated Addition
- Do Skill Test - 10 questions (randomly generated)

Skill 26: Introduce Multiplication Sentences

- Level C
- 1) Multiplication Sentences #1
 - 2) Multiplication Sentences #2

Notes

(B) model, create, and describe division situations in which a set of concrete objects is separated into equivalent sets.

Understanding Numeration: Operations

Skill 34: Introduction to Division

- Level C
- 1) Equal Groups of Eggs
 - 2) Sharing Oranges Equally
 - 3) Division Introduction - Eggs
 - 4) Division Introduction - Oranges
 - 5) Division - How many Groups?
- Do Skill Test - 10 questions (randomly generated)

Notes

**Correlation of the Understanding Numeration 2008© and the Understanding Math 2008© Programs
With the Texas Essential Knowledge and Skills For Mathematics
2nd Grade**

Grade 2... Patterns, relationships, and algebraic thinking

(5) The student uses patterns in numbers and operations. The student is expected to:

(A) find patterns in numbers such as in a 100s chart;

Understanding Numeration: Counting

Skill 8: Skip Counting and Patterns

- Level C 1) Patterns in Rows
- 2) Skip Counting to 100
- 3) Skip Count by 2s to 100
- 4) Next by 2s
- 5) Next by 5s
- Do Skill Test - 10 questions (randomly generated)

Notes

(B) use patterns in place value to compare and order whole numbers through 999; and

Understanding Numeration: Comparing & Ordering

Skill 4: Working with Whole Numbers $>$, $<$, $=$

- Level A 4) Ordering... Horizontal #1
- 5) Ordering... Vertical #1
- Do Skill Test - 10 questions (randomly generated)
- Level B 1) Make It True #2
- 2) Greater Than, Less Than #2
- 3) Ordering... Horizontal #2
- 4) Ordering... Vertical #2
- Do Skill Test - 5 questions (randomly generated)
- Level C 1) Compare Numbers #1
- Do Skill Test - 5 questions (randomly generated)
- Level D 1) Compare Numbers #2
- Do Skill Test - 5 questions (randomly generated)

Notes

Understanding Whole Numbers and Integers 2008

Section 1: The Meaning of Whole Numbers

Comparing Large Numbers Example 1

Notes

**Correlation of the Understanding Numeration 2008© and the Understanding Math 2008© Programs
With the Texas Essential Knowledge and Skills For Mathematics
2nd Grade**

(C) use patterns and relationships to develop strategies to remember basic addition and subtraction facts. Determine patterns in related addition and subtraction number sentences (including fact families) such as $8 + 9 = 17$, $9 + 8 = 17$, $17 - 8 = 9$, and $17 - 9 = 8$.

Understanding Numeration: Operations	Notes
<p>Skill 11: Demonstrate Addition Facts... Patterns Level C 2) Patterns in Addition</p> <p>Skill 20: Fact Families... Add and Subtract Level A 1) Doubles - Add and Subtract 2) Relate Addition and Subtraction 3) Fact Families #1 Do Skill Test - 10 questions (randomly generated) Level B 1) Doubles - Add and Subtract 2) Fact Families #2 Do Skill Test - 5 questions (randomly generated)</p>	

(6) The student uses patterns to describe relationships and make predictions. The student is expected to:

(A) generate a list of paired numbers based on a real-life situation such as number of tricycles related to number of wheels;

Not yet correlated

(B) identify patterns in a list of related number pairs based on a real-life situation and extend the list; and

Not yet correlated

(C) identify, describe, and extend repeating and additive patterns to make predictions and solve problems.

Understanding Numeration: Counting	Notes
<p>Skill 8: Skip Counting and Patterns Level C 1) Patterns in Rows 2) Skip Counting to 100 3) Skip Count by 2s to 100 4) Next by 2s 5) Next by 5s Do Skill Test - 10 questions (randomly generated)</p>	

**Correlation of the Understanding Numeration 2008© and the Understanding Math 2008© Programs
With the Texas Essential Knowledge and Skills For Mathematics
2nd Grade**

Understanding Algebra 2008	Notes
Section 3: Patterns, Patterns, Patterns	
Introduction... Math is Patterns	
Geometric Patterns	Example 1
	Example 2
	Example 3
	Example 4
Number Patterns	Example 1
	Example 2
	Example 3
	Example 4

Correlation of the Understanding Numeration 2008© and the Understanding Math 2008© Programs
With the Texas Essential Knowledge and Skills For Mathematics
2nd Grade

Grade 2... Geometry and spatial reasoning

(7) The student uses attributes to identify two- and three-dimensional geometric figures. The student compares and contrasts two- and three-dimensional geometric figures or both. The student is expected to:

(A) describe attributes (the number of vertices, faces, edges, sides) of two- and three-dimensional geometric figures such as circles, polygons, spheres, cones, cylinders, prisms, and pyramids, etc.;

Understanding Measurement and Geometry 2008

Section 2: Perimeter and Area of Polygons

Polygons... What are They?

Concept
 A Triangle is
 A Quadrilateral is
 A Pentagon is
 A Hexagon is
 An Octagon is
 Classify Polygons

Classify Polygons with Venn Diagrams

Notes

Understanding Measurement and Geometry 2008

Section 4: Solids.. Volume and Surface Area

Classifying Solids

A Solid is...
 A Polyhedron is...
 A Prism is...
 Some Special Prisms
 A Pyramid is...
 Some Special Pyramids
 A Cylinder is...
 A Cone is...

Notes

(B) use attributes to describe how 2 two-dimensional figures or 2 three-dimensional geometric figures are alike or different; and

Understanding Numeration: Counting

Skill 6: Recognize and Count Solids

Level B 1) Counting Solids #1

Do Skill Test - 5 questions (randomly generated)

Notes

**Correlation of the Understanding Numeration 2008© and the Understanding Math 2008© Programs
With the Texas Essential Knowledge and Skills For Mathematics
2nd Grade**

<p>Level C 1) Counting Solids #2 Do Skill Test - 5 questions (randomly generated)</p>	
<p>Skill 15: Recognize and Count Two-Dimensional Figures Level B 1) Counting 2-D Figures #1 Do Skill Test - 5 questions (randomly generated) Level C 1) Counting 2-D Figures #2 Do Skill Test - 5 questions (randomly generated)</p>	
<p>Understanding Measurement and Geometry 2008</p>	<p>Notes</p>
<p>Section 2: Perimeter and Area of Polygons Polygons... What are They? A Triangle is A Quadrilateral is A Pentagon is A Hexagon is An Octagon is</p>	
<p>Understanding Measurement and Geometry 2008</p>	<p>Notes</p>
<p>Section 4: Solids.. Volume and Surface Area Classifying Solids A Prism is... Some Special Prisms A Pyramid is... Some Special Pyramids A Cylinder is... A Cone is...</p>	
<p>(C) cut two-dimensional geometric figures apart and identify the new geometric figures formed.</p>	
<p>Not yet correlated</p>	

Correlation of the Understanding Numeration 2008© and the Understanding Math 2008© Programs
With the Texas Essential Knowledge and Skills For Mathematics
2nd Grade

(8) The student recognizes that a line can be used to represent a set of numbers and its properties. The student is expected to

use whole numbers to locate and name points on a number line.

Understanding Numeration: Counting

Notes

Skill 1: Reading and Printing Numerals

- Level A 4) Building a Numberline
 - 5) Building a Vertical Numberline
- Level C 1) Counting 0 to 100 on a Grid
 - Do Skill Test - 5 questions (randomly generated)

Understanding Numeration: Comparing & Ordering

Notes

Skill 1: Locate Numbers on a Numberline

- Level A 1) Find One Missing Number
 - 2) Find two Missing Numbers
 - Do Skill Test - 5 questions (randomly generated)

Skill 2: Locate Whole Numbers on a Grid

- Level C 1) Numbers on 0 to 100 Grid
 - 2) Missing Numbers to 100
 - Do Skill Test - 10 questions (randomly generated)

Skill 14: Understand "MORE" and "LESS"

- Level A 4) More or Less on the Numberline

**Correlation of the Understanding Numeration 2008© and the Understanding Math 2008© Programs
With the Texas Essential Knowledge and Skills For Mathematics
2nd Grade**

(10) The student uses standard tools to estimate and measure time and temperature (in degrees Fahrenheit). The student is expected to:

(A) read a thermometer to gather data;

Understanding Numeration: Comparing & Ordering

Skill 15: Reading and Comparing Temperatures

- Level C 1) Fahrenheit and Celsius temperatures
2) Compare Temperatures in a Day
Do Skill Test - 5 questions (randomly generated)

Notes

(B) read and write times shown on analog and digital clocks using five-minute increments; and

Understanding Numeration: Comparing & Ordering

Skill 9: Understand Measurement of Time

- Level B 1) The Clock - An Introduction
2) Times to the Hour
3) Analog and Digital
4) Times to the Half Hour
Do Skill Test - 10 questions (randomly generated)
Level C 1) Times to Five Minutes
Do Skill Test - 5 questions (randomly generated)

Notes

(C) describe activities that take approximately one second, one minute, and one hour.

Not yet correlated

**Correlation of the Understanding Numeration 2008© and the Understanding Math 2008© Programs
With the Texas Essential Knowledge and Skills For Mathematics
2nd Grade**

Grade 2... Probability and statistics

(11) The student organizes data to make it useful for interpreting information. The student is expected to:

(A) construct picture graphs and bar-type graphs;

Understanding Numeration: Operations

Skill 39: Given Graph... Perform Operations

- Level C 1) Operations with Tally Charts
- 2) Operations with Pictographs
- 3) Operations with Bar Graphs
- Do Skill Test - 10 questions (randomly generated)

Notes

Understanding Numeration: Problem Solving

Skill 5: Make a Graph

- Level A,B,C,D 1) Classroom Shoes
- 2) Animals

Notes

Skill 7: Birthday Party

- Level A,B,C,D 1) Birthday Party

Skill 8: Brick Path

- Level A,B,C,D 1) Brick Path

Skill 9: Step Up

- Level A,B,C,D 1) Step Up

Skill 10: The Track Team

- Level A,B,C,D 1) The Track Team

Understanding Graphing 2008

Section 2: Statistics

An Introduction

- Tally Chart
- Pictograph #1
- Pictograph #2
- Bar Graph #1
- Bar Graph #2

Notes

**Correlation of the Understanding Numeration 2008© and the Understanding Math 2008© Programs
With the Texas Essential Knowledge and Skills For Mathematics
2nd Grade**

(B) draw conclusions and answer questions based on picture graphs and bar-type graphs; and

Understanding Graphing 2008		Notes
Section 1: Reading And Sketching Graphs		
Graphs Without a Scale	Concept... Age and Weight Example 1... Height and Weight Example 2... Errors and Years Example 3... Pushups and Situps	
Graphs With a Scale	Example 10... Age and Height Example 1... Wins in Soccer Example 2... Books and Days Example 3... The Travel Log	
Understanding Graphing 2008		Notes
Section 2: Statistics		
An Introduction	Pictograph #2 Bar Graph #2	

(C) use data to describe events as more likely or less likely such as drawing a certain color crayon from a bag of seven red crayons and three green crayons.

Understanding Probability 2008		Notes
Section 1: Introduction to Probability		
The Language of Chance		
Impossible to Certain	Activity 1	
Probability Lines	Activity 2 Line 1 Line 2	
Possible Outcomes	What Are They? 2. Pick 1 Ball	
Experiment with Spinners	Experiment 1	
The Spinner Game	Board 1- Single Player Board 1- 2 player Board 2- Single Player Board 2- 2 player	
IT's in the Bag	Board 2	

Correlation of the Understanding Numeration 2008© and the Understanding Math 2008© Programs
With the Texas Essential Knowledge and Skills For Mathematics
2nd Grade

Understanding Probability 2008

Notes

Section 2: What's the Chance

Probability

Probability Examples

Introduction 1

2. Picking 1 Ball

4. Spinner #1

5. Spinner #2

6. The Bag

**Correlation of the Understanding Numeration 2008© and the Understanding Math 2008© Programs
 With the Texas Essential Knowledge and Skills For Mathematics
 2nd Grade**

Grade 2... Underlying processes and mathematical tools

(12) The student applies Grade 2 mathematics to solve problems connected to everyday experiences and activities in and outside of school. The student is expected to:

(A) identify the mathematics in everyday situations;

Identifying mathematics in everyday situations is embedded in Understanding Numeration 2008© and Understanding Math 2008©. The programs emphasize understanding, learning from the concrete to the abstract, and thinking and doing rather than memorizing by rote. A mistake is an opportunity to learn.

The following are some examples:

Understanding Numeration: Counting

Notes

Skill 8: Skip Counting and Patterns

- Level C
- 1) Patterns in Rows
 - 2) Skip Counting to 100
 - 3) Skip Count by 2s to 100
 - 4) Next by 2s
 - 5) Next by 5s

Understanding Numeration: Operations

Notes

Skill 25: Introduce Multiplication Concretely

- Level C
- 1) Grouping Eggs in Bowls
 - 2) Grouping Chairs in Rows

Understanding Numeration: Comparing & Ordering

Notes

Skill 9: Understand Measurement of Time

- Level B
- 1) The Clock - An Introduction
 - 2) Times to the Hour
 - 3) Analog and Digital
 - 4) Times to the Half Hour
- Level C
- 1) Times to Five Minutes

Correlation of the Understanding Numeration 2008© and the Understanding Math 2008© Programs
With the Texas Essential Knowledge and Skills For Mathematics
2nd Grade

(B) solve problems with guidance that incorporates the processes of understanding the problem, making a plan, carrying out the plan, and evaluating the solution for reasonableness;

Solving problems with guidance that incorporates the processes of understanding the problem, making a plan, carrying out the plan, and evaluating the solution for reasonableness is embedded in Understanding Numeration 2008© and Understanding Math 2008©. The programs emphasize understanding, learning from the concrete to the abstract, and thinking and doing rather than memorizing by rote. A mistake is an opportunity to learn.

The following are some examples:

Understanding Numeration: Problem Solving

Notes

Skill 1: Draw a Picture

Level A,B,C,D 1) Eating Apples

Skill 2: Find a Pattern

Level A,B,C,D 2) Toy Animals

Skill 3: Number Sentence

Level A,B,C,D 1) Oranges

Skill 4: Make a Table

Level A,B,C,D 2) Muffins

Skill 5: Make a Graph

Level A,B,C,D 1) Classroom Shoes
 2) Animals

Skill 6: Guess and Check

Level A,B,C,D 2) The Gravy Spill

Skill 7: Birthday Party

Level A,B,C,D 1) Birthday Party

(C) select or develop an appropriate problem-solving plan or strategy including drawing a picture, looking for a pattern, systematic guessing and checking, or acting it out in order to solve a problem; and

Understanding Numeration: Problem Solving

Notes

Skill 1: Draw a Picture

Level A,B,C,D 1) Eating Apples

**Correlation of the Understanding Numeration 2008© and the Understanding Math 2008© Programs
With the Texas Essential Knowledge and Skills For Mathematics
2nd Grade**

Skill 2: Find a Pattern

Level A,B,C,D 2) Toy Animals

Skill 3: Number Sentence

Level A,B,C,D 1) Oranges

Skill 4: Make a Table

Level A,B,C,D 2) Muffins

Skill 5: Make a Graph

Level A,B,C,D 1) Classroom Shoes
2) Animals

Skill 6: Guess and Check

Level A,B,C,D 2) The Gravy Spill

Skill 7: Birthday Party

Level A,B,C,D 1) Birthday Party

Skill 9: Step Up

Level A,B,C,D 1) Step Up

(D) use tools such as real objects, manipulatives, and technology to solve problems.

Using tools such as real objects, manipulatives, and technology to solve problems is embedded in Understanding Numeration 2008© and Understanding Math 2008©. The programs emphasize understanding, learning from the concrete to the abstract, and thinking and doing rather than memorizing by rote. A mistake is an opportunity to learn.

The following are some examples:

Understanding Numeration: Counting

Skill 8: Skip Counting and Patterns

- Level C 1) Patterns in Rows
- 2) Skip Counting to 100
- 3) Skip Count by 2s to 100
- 4) Next by 2s

Notes

**Correlation of the Understanding Numeration 2008© and the Understanding Math 2008© Programs
With the Texas Essential Knowledge and Skills For Mathematics
2nd Grade**

5) Next by 5s
Do Skill Test - 10 questions (randomly generated)

Skill 10: Introduce Fractions... Part of a Whole

Level B 1) One Half
2) One Third
3) One Quarter
Do Skill Test - 10 questions (randomly generated)

Skill 12: Introduce Fraction of a Set

Level C 1) Fraction of a set
Do Skill Test - 10 questions (randomly generated)

Understanding Fractions 2008

Section 1: The Meaning of Fractions

Introduction.. Think, Write, Say

Circle
Squares
Balls
Examples
One Half
One Third
One Quarter
Question 1
Example 1 - Marbles
Halves
Example 1
Example 1

Part of a Whole

Write the Fraction
Fraction of a Set
Fractions on a Number Line
Pattern Blocks
Fraction of a Pie
The Clock

Notes

**Correlation of the Understanding Numeration 2008© and the Understanding Math 2008© Programs
With the Texas Essential Knowledge and Skills For Mathematics
2nd Grade**

(13) The student communicates about Grade 2 mathematics using informal language. The student is expected to:

(A) explain and record observations using objects, words, pictures, numbers, and technology; and

Explaining and recording observations using objects, words, pictures, numbers, and technology is embedded in Understanding Numeration 2008© and © and Understanding Math 2008© program strategies such as the Flight Plan located on our website (<http://www.neufeldmath.com/strategies/index.html>)

(B) relate informal language to mathematical language and symbols.

Relating everyday language to mathematical language and symbols is embedded in Understanding Numeration 2008© and Understanding Math 2008©. The programs emphasize understanding, learning from the concrete to the abstract, and thinking and doing rather than memorizing by rote. A mistake is an opportunity to learn. Our Word Bank located on our website supports this standard (<http://www.neufeldmath.com/wordbank/index.html>)

The following are some examples:

Understanding Numeration: Counting

Notes

Skill 9: Introduce Fractions... Equal Parts

- Level B 1) Two Equal Parts
- 2) Three Equal Parts
- 3) Four Equal Parts
- Do Skill Test - 10 questions (randomly generated)

Skill 10: Introduce Fractions... Part of a Whole

- Level B 1) One Half
- 2) One Third
- 3) One Quarter
- Do Skill Test - 10 questions (randomly generated)

Understanding Numeration: Operations

Notes

Skill 39: Given Graph... Perform Operations

- Level C 1) Operations with Tally Charts
- 2) Operations with Pictographs
- 3) Operations with Bar Graphs
- Do Skill Test - 10 questions (randomly generated)

**Correlation of the Understanding Numeration 2008© and the Understanding Math 2008© Programs
With the Texas Essential Knowledge and Skills For Mathematics
2nd Grade**

<p>Understanding Numeration: Comparing & Ordering Skill 5: Understanding "Just After"; "Just Before"; "Between" Level B 1) "Just Before" Machine #1 2) "Just After" Machine #1 3) In Between #1 Do Skill Test - 10 questions (randomly generated)</p>	<p>Notes</p>
<p>(14) The student uses logical reasoning. The student is expected to</p>	
<p>justify his or her thinking using objects, words, pictures, numbers, and technology.</p>	
<p>Justifying his or her thinking using objects, words, pictures, numbers, and technology is embedded in Understanding Numeration 2008© and Understanding Math 2008©. The programs emphasize understanding, learning from the concrete to the abstract, and thinking and doing rather than memorizing by rote. A mistake is an opportunity to learn.</p>	
<p>The following are some examples:</p>	
<p>Understanding Numeration: Counting Skill 7: Counting Using Money Level B 1) Pennies, Nickels, Dimes (USA/Canadian) 2) Coins - Count by 10s, 5s and 1s (USA/Canadian) Level C 1) Quarters (USA/Canadian) Level D 1) Dollars (USA/Canadian)</p>	<p>Notes</p>
<p>Understanding Numeration: Operations Skill 16: Add 3 Digit Numbers... Concretely Level D 1) Addition Without Regrouping 2) Addition With Regrouping 3) Addition With Regrouping - Any Column Skill 23: Subtract 3 Digit Numbers... Concretely Level D 1) Subtraction Without Regrouping 2) Subtraction With Regrouping #1 3) Subtraction With Regrouping #2 4) Subtraction With Regrouping #3 5) Subtract With Regrouping - Any Column</p>	<p>Notes</p>



Correlation of the Understanding Numeration 2008© and the Understanding Math 2008© Programs
With the Texas Essential Knowledge and Skills For Mathematics
2nd Grade

Understanding Numeration: Problem Solving	Notes
<p>Skill 3: Number Sentence Level A,B,C,D 1) Oranges</p> <p>Skill 6: Guess and Check Level A,B,C,D 2) The Gravy Spill</p>	

