



**Correlation of the Understanding Numeration 2008©Programs
With the Texas Essential Knowledge and Skills For Mathematics
1st 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).

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



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

Number, operation, and quantitative reasoning

- | | |
|---|-------------|
| (1) The student uses whole numbers to describe and compare quantities. | Pages 3 - 4 |
| (2) The student uses pairs of whole numbers to describe fractional parts of whole objects or sets of objects. | Pages 5 - 5 |
| (3) The student recognizes and solves problems in addition and subtraction situations. | Pages 6 - 9 |

Patterns, relationships, and algebraic thinking

- | | |
|--|---------------|
| (4) The student uses repeating patterns and additive patterns to make predictions. | Pages 10 - 10 |
| (5) The student recognizes patterns in numbers and operations. | Pages 10 - 11 |

Geometry and spatial reasoning

- | | |
|---|---------------|
| (6) 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 12 - 12 |
|---|---------------|

Measurement

- | | |
|--|---------------|
| (7) The student directly compares the attributes of length, area, weight/mass, capacity, and temperature. The student uses comparative language to solve problems and answer questions. The student selects and uses nonstandard units to describe length. | Pages 13 - 13 |
| (8) The student understands that time can be measured. The student uses time to describe and compare situations. | Pages 14 - 14 |

Probability and statistics

- | | |
|--|---------------|
| (9) The student displays data in an organized form. | Pages 15 - 15 |
| (10) The student uses information from organized data. | Pages 16 - 16 |

Underlying processes and mathematical tools

- | | |
|---|---------------|
| (11) The student applies Grade 1 mathematics to solve problems connected to everyday experiences and activities in and outside of school. | Pages 17 - 19 |
| (12) The student communicates about Grade 1 mathematics using informal language. | Pages 19 - 20 |
| (13) The student uses logical reasoning. | Pages 21 - 21 |

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

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**Texas Essential Knowledge and Skills for Mathematics
Correlated to Understanding Numeration 2008 ©
1st Grade**

Grade 1... Number, operation, and quantitative reasoning

(1) The student uses whole numbers to describe and compare quantities. The student is expected to:

(A) compare and order whole numbers up to 99 (less than, greater than, or equal to) using sets of concrete objects and pictorial models;

Understanding Numeration: Comparing & Ordering

Notes

Skill 3: Introduce... "Greater Than"; "Less Than"

- Level A
- 1) Greater Than
 - 2) Less Than
 - 3) Greater Than, Less Than #1

(B) create sets of tens and ones using concrete objects to describe, compare, and order whole numbers;

Understanding Numeration: Place Value

Notes

Skill 2: Model Numbers Grouped in Packages

- Level C
- 1) Ones and Groups of Ten
- Do Skill Test - 5 questions (randomly generated)

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)

(C) identify individual coins by name and value and describe relationships among them; and

Understanding Numeration: Counting

Notes

Skill 7: Counting Using Money

- 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)

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Level C 1) Quarters (USA/Canadian)
Do Skill Test - 5 questions (randomly generated) USA

(D) read and write numbers to 99 to describe sets of concrete objects.

Understanding Numeration: Counting

Notes

Skill 1: Reading and Printing Numerals

Level A 1) Introduction - Counting 1 to 10
3) Things in a Square #1

Level B 1) Counting 1 to 20
3) Things in a Square #2
Do Skill Test - 10 questions (randomly generated)

Skill 2: Associating Numbers in a Real World Context

Level A 1)The Street Scene
2)The Zoo
Do Skill Test - 5 questions (randomly generated)

Skill 3: 1 to 1 Correspondence of #s to Objects

Level A 1) Keep Track by Marking
Do Skill Test - 5 questions (randomly generated)

Skill 6: Recognize and Count Solids

Level B 1) Counting Solids #1
Do Skill Test - 5 questions (randomly generated)
Level C 1) Counting Solids #2
Do Skill Test - 5 questions (randomly generated)

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)

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(2) The student uses pairs of whole numbers to describe fractional parts of whole objects or sets of objects. The student is expected to:

(A) separate a whole into two, three, or four equal parts and use appropriate language to describe the parts such as three out of four equal parts; and

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)

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

(B) use appropriate language to describe part of a set such as three out of the eight crayons are red.

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)

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(3) The student recognizes and solves problems in addition and subtraction situations. The student is expected to:

(A) model and create addition and subtraction problem situations with concrete objects and write corresponding number sentences; and

Understanding Numeration: Operations	Notes
<p>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)</p> <p>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)</p> <p>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)</p> <p>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)</p> <p>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)</p> <p>Skill 6: Demonstrate Addition Facts... Making 6 Level A 1) Ways to Make 6 2) Ways to Make 6 - Reverse Order</p>	

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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)

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

Level A 1) Introduction to Subtraction #1
2) Introduction to Subtraction #2
Do Skill Test - 5 questions (randomly generated)

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)

Understanding Numeration: Problem Solving

Skill 1: Draw a Picture

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

Notes

(B) use concrete and pictorial models to apply basic addition and subtraction facts (up to $9 + 9 = 18$ and $18 - 9 = 9$).

Understanding Numeration: Operations

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)

Notes

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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)

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

- Level A
- 1) Introduction to Subtraction #1

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- 2) Introduction to Subtraction #2
- Do Skill Test - 5 questions (randomly generated)

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

- Level A
 - 1) Introduction to Subtraction #3
 - 2) Introduction to Subtraction #4
- Level C
 - 1) Subtraction Sentences

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)

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Grade 1... Patterns, relationships, and algebraic thinking

(4) The student uses repeating patterns and additive patterns to make predictions. The student is expected to

identify, describe, and extend concrete and pictorial patterns in order to make predictions and solve problems.

Not yet correlated

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

(A) use patterns to skip count by twos, fives, and tens;

Understanding Numeration: Counting

Skill 8: Skip Counting and Patterns

- Level C
- 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) find patterns in numbers, including odd and even;

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

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<p>(C) compare and order whole numbers using place value; Not yet correlated</p>	<p>(D) use patterns to develop strategies to solve basic addition and basic subtraction problems; and</p> <table border="0"> <tr> <td> <p>Understanding Numeration: Operations 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)</p> <p>Skill 13: Addition Strategies Level A 1) Tens and Doubles #1 Do Skill Test - 5 questions (randomly generated)</p> </td> <td style="text-align: right; vertical-align: top;"> <p>Notes</p> </td> </tr> </table>	<p>Understanding Numeration: Operations 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)</p> <p>Skill 13: Addition Strategies Level A 1) Tens and Doubles #1 Do Skill Test - 5 questions (randomly generated)</p>	<p>Notes</p>
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<p>(E) identify patterns in related addition and subtraction sentences (fact families for sums to 18) such as $2 + 3 = 5$, $3 + 2 = 5$, $5 - 2 = 3$, and $5 - 3 = 2$.</p>	<table border="0"> <tr> <td> <p>Understanding Numeration: Operations 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)</p> <p>Level B 1) Doubles - Add and Subtract 2) Fact Families #2 Do Skill Test - 5 questions (randomly generated)</p> </td> <td style="text-align: right; vertical-align: top;"> <p>Notes</p> </td> </tr> </table>	<p>Understanding Numeration: Operations 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)</p> <p>Level B 1) Doubles - Add and Subtract 2) Fact Families #2 Do Skill Test - 5 questions (randomly generated)</p>	<p>Notes</p>
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Grade 1... Geometry and spatial reasoning

(6) 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 and identify two-dimensional geometric figures, including circles, triangles, rectangles, and squares (a special type of rectangle);

Understanding Numeration: Counting

Notes

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)

(B) describe and identify three-dimensional geometric figures, including spheres, rectangular prisms (including cubes), cylinders, and cones;

Understanding Numeration: Counting

Notes

Skill 6: Recognize and Count Solids

- Level B 1) Counting Solids #1
- Level C 1) Counting Solids #2

(C) describe and identify two- and three-dimensional geometric figures in order to sort them according to a given attribute using informal and formal language; and

Understanding Numeration: Counting

Notes

Skill 6: Recognize and Count Solids

- Level B 1) Counting Solids #1
- Level C 1) Counting Solids #2

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)

(D) use concrete models to combine two-dimensional geometric figures to make new geometric figures.

Not yet correlated

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Grade 1... Measurement
(7) The student directly compares the attributes of length, area, weight/mass, capacity, and temperature. The student uses comparative language to solve problems and answer questions. The student selects and uses nonstandard units to describe length. The student is expected to:
(A) estimate and measure length using nonstandard units such as paper clips or sides of color tiles; Not yet correlated
(B) compare and order two or more concrete objects according to length (from longest to shortest); Not yet correlated
(C) describe the relationship between the size of the unit and the number of units needed to measure the length of an object; Not yet correlated
(D) compare and order the area of two or more two-dimensional surfaces (from covers the most to covers the least); Not yet correlated
(E) compare and order two or more containers according to capacity (from holds the most to holds the least); Not yet correlated
(F) compare and order two or more objects according to weight/mass (from heaviest to lightest); and Not yet correlated
(G) compare and order two or more objects according to relative temperature (from hottest to coldest). Not yet correlated

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(8) The student understands that time can be measured. The student uses time to describe and compare situations. The student is expected to:

(A) order three or more events according to duration; and

Not yet correlated

(B) read time to the hour and half-hour using analog and digital clocks.

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
- Do Skill Test - 10 questions (randomly generated)

**Correlation of the Understanding Numeration 2008©Programs
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Grade 1... Probability and statistics

(9) The student displays data in an organized form. The student is expected to:

(A) collect and sort data; and

Not yet correlated

(B) use organized data to construct real-object graphs, picture graphs, and bar-type graphs.

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)

Understanding Numeration: Problem Solving

Notes

Skill 5: Make a Graph

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

**Correlation of the Understanding Numeration 2008©Programs
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(10) The student uses information from organized data. The student is expected to:

(A) draw conclusions and answer questions using information organized in real-object graphs, picture graphs, and bar-type graphs; and

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)

Understanding Numeration: Problem Solving

Notes

Skill 5: Make a Graph

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

(B) identify events as certain or impossible such as drawing a red crayon from a bag of green crayons.

Not yet correlated at this level

Grade 1... Underlying processes and mathematical tools

(11) The student applies Grade 1 mathematics to solve problems connected to everyday experiences and activities in and outside of school. The student is expected to:

(A) identify mathematics in everyday situations;

Identifying mathematics in everyday situations is embedded in Understanding Numeration 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: 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
- Do Skill Test - 10 questions (randomly generated)

Understanding Numeration: Place Value

Notes

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)

Understanding Numeration: Problem Solving

Notes

Skill 7: Birthday Party

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

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(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©. 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 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

(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

Skill 2: Find a Pattern

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

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

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(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©. 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: Operations

Notes

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)

Skill 39: Given Graph... Perform Operations

- Level C 1) Operations with Tally Charts
- 2) Operations with Pictographs
- 3) Operations with Bar Graphs

Understanding Numeration: Problem Solving

Notes

Skill 1: Draw a Picture

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

Skill 5: Make a Graph

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

(12) The student communicates about Grade 1 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© strategies such as the Flight Plan located on our website (<http://www.neufeldmath.com/strategies/index.html>)

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

Relating everyday language to mathematical language and symbols is embedded in Understanding Numeration 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: Operations

Notes

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

- Level A 1) Introduction to Subtraction #1
- 2) Introduction to Subtraction #2
- Do Skill Test - 5 questions (randomly generated)

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

- Level A 1) Introduction to Subtraction #3
- 2) Introduction to Subtraction #4

Understanding Numeration: Comparing & Ordering

Notes

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)

Skill 14: Understand "MORE" and "LESS"

- Level A 1) More, More!!
- 2) Less, Less!!
- 3) More or Less... Dots
- 4) More or Less on the Numberline
- Do Skill Test - 10 questions (randomly generated)

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(13) The student uses logical reasoning. The student is expected to

justify his or her thinking using objects, words, pictures, numbers, and technology.

Justifying his or her thinking using objects, words, pictures, numbers, and technology is embedded in Understanding Numeration 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 1) Johnny's Pennies

Skill 3: Number Sentence

Level A,B,C,D 1) Oranges

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