

**CORRELATION  
of  
the 10 UNDERSTANDING MATH PLUS PROGRAMS  
with  
ALABAMA COURSE OF STUDY : MATHEMATICS  
KINDERGARDEN**

**Note: a.** The Understanding Math PLUS series of programs consist of 10 programs written for Kindergarten to 10<sup>th</sup> Grade.

**The 10 programs are:**

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

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

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

Skill .. chosen from the list of specific learning expectations

Level .. indicates the levels of development for Kindergarten to 3<sup>rd</sup> grade.

Level	Upper Range of Number
<b>A</b>	<b>10</b>
<b>B</b>	<b>20</b>
<b>C</b>	<b>100</b>
<b>D</b>	<b>1000</b>

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

A detailed Lesson Synopsis on the website [www.neufeldmath.com](http://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 4<sup>th</sup> to 10<sup>th</sup> 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](http://www.neufeldmath.com)

**Students will:**

**1.) Demonstrate concepts of number sense by using one-to-one correspondence, counting in sequence by ones from 1 to 20, counting backward from 10, recognizing numerals 0-9, and comparing sets of objects up to 10 by using vocabulary terms including *more than*, *less than*, *most*, or *least*.**

<i>ALABAMA COURSE OF STUDY : MATHEMATICS</i> <b>Standard</b>	Understanding Math PLUS and/or Understanding Numeration PLUS Lessons
Example: one-to-one correspondence-objects paired with objects, objects paired with numbers.	<b><u>Understanding Numeration PLUS</u></b> <b><u>COUNTING</u></b> <b>Skill – 1 to 1 Correspondence of # to Objects</b> <b>Level A</b> Keep Track by Marking: Worksheets #1, #2

**2.) Demonstrate addition by using numbers totaling 5 or less and subtraction by using numbers less than or equal to 5.**

<i>ALABAMA COURSE OF STUDY : MATHEMATICS</i> <b>Standard</b>	Understanding Math PLUS and/or Understanding Numeration PLUS Lessons
Example: using objects, number stories, or real-life situations	<b><u>Understanding Numeration PLUS</u></b> <b><u>OPERATIONS</u></b> <b>Skill – Introduce Addition...concretely... “in all” &amp; “together”</b> <b>Level A</b> Addition Using Gumballs #1: Worksheets #1, #2 Addition Using Beans #1: Worksheets #1, #2 Add Number of Sides of Shapes #1: Worksheets #1, #2  <b><u>OPERATIONS</u></b> <b>Skill – Introduce Addition Concretely... “and”</b> <b>Level A</b> Addition Using Gumballs #2: Worksheets #1, #2 Addition Using Beans #2: Worksheets #1, #2 Add Number of Sides of Shapes #2: Worksheets #1, #2  <b><u>OPERATIONS</u></b> <b>Skill – Introduce the Symbolism...# + # =</b> <b>Level A</b> Addition Using Gumballs #3: Worksheets #1, #2 Addition Using Beans #3: Worksheets #1, #2 Add Number of Sides of Shapes #3: Worksheets #1, #2  <b><u>OPERATIONS</u></b> <b>Skill – Introduce the words... “plus” and “equals”</b> <b>Level A</b>

Addition Using Gumballs #4: Worksheets #1, #2  
Addition Using Beans #4: Worksheets #1, #2  
Add Number of Sides of Shapes #4: Worksheets #1, #2

**OPERATIONS**

**Skill – Demonstrate Addition Facts ... Making 5**

**Level A**

Ways to Make 5: Worksheets #1, #2  
Ways to Make 5 : Reverse Order worksheets #1, #2  
Make 5: Horizontal & Vertical worksheets #1, #2

**Skill – Introduce Subtraction Concretely... “take away”**

**Level A**

Introduction to Subtractions #1: Worksheets #1, #2  
Introduction to Subtractions #2: Worksheets #1, #2  
Introduction to Subtractions #3: Worksheets #1, #2  
Introduction to Subtractions #4: Worksheets #1, #2

**Skill – Introduce Subtraction Symbolism**

**Level A**

Introduce Vertical Subtraction : Worksheets #1, #2  
Subtraction Sentences

**3.) Recognize that a whole object can be divided into parts.**

<i>ALABAMA COURSE OF STUDY : MATHEMATICS</i> Standard	Understanding Math PLUS and/or Understanding Numeration PLUS Lessons
<ul style="list-style-type: none"> <li>Dividing a whole object into equal parts</li> </ul>	<p><b><u>Understanding Numeration PLUS</u></b> <b><u>COUNTING</u></b> <b>Skill – Introduce Fractions: Equal Parts</b> <b>Level B</b> Two Equal Parts Four Equal Parts</p>

**4.) Identify a penny, nickel, dime, and quarter.**

<i>ALABAMA COURSE OF STUDY : MATHEMATICS</i> Standard	Understanding Math PLUS and/or Understanding Numeration PLUS Lessons
	<p><b><u>Understanding Numeration PLUS</u></b> <b><u>COUNTING</u></b> <b>Skill – Counting Using Money</b> <b>Level B</b> “ Pennies, Nickels, Dimes”: worksheet #1, #2</p> <p><b>Skill – Counting Using Money</b> <b>Level C</b> Quarters: worksheet #1, #2</p>

**5.) Replicate patterns using concrete objects.**

<i>ALABAMA COURSE OF STUDY : MATHEMATICS</i> Standard	Understanding Math PLUS and/or Understanding Numeration PLUS Lessons
<ul style="list-style-type: none"> <li>Sorting objects by characteristics Examples: color, size, shape</li> </ul>	<p><b><u>Understanding Numeration PLUS</u></b> <b><u>PLACE VALUE</u></b> <b>Skill – Break Numbers into Groups</b> <b>Level B</b> Making Groups: worksheet #1, #2</p>
<ul style="list-style-type: none"> <li>Describing characteristics of patterns and/or objects</li> </ul>	

**6.) Create combinations of rectangles, squares, circles, and triangles using shapes or drawings.**

<i>ALABAMA COURSE OF STUDY : MATHEMATICS</i> <b>Standard</b>	<b>Understanding Math PLUS and/or Understanding Numeration PLUS Lessons</b>
<ul style="list-style-type: none"> <li>• Describing relative location of objects using positional terms</li> </ul> Examples: beside, inside, outside, above, below, between, on, over, under, near, far	

**7.) Identify rectangles, squares, circles, and triangles.**

<i>ALABAMA COURSE OF STUDY : MATHEMATICS</i> <b>Standard</b>	<b>Understanding Math PLUS and/or Understanding Numeration PLUS Lessons</b>
<ul style="list-style-type: none"> <li>• Recognizing like shapes in the environment</li> </ul> Examples: clock-circle, door-rectangle	<p><b><u>Understanding Numeration PLUS</u></b> <b><u>COUNTING</u></b></p> <p><b>Skill – Associating Numbers in a Real World Context</b> <b>Level A</b></p> <p style="padding-left: 40px;">The Street Scene: Worksheets #1, #2 The Zoo</p> <p><b>Skill – Recognize and Count Two-Dimensional Figures</b> <b>Level B/C</b></p> <p style="padding-left: 40px;">Counting 2-D Figures #1, #2</p>

**8.) Use vocabulary associated with length, height, volume, and weight to compare objects.**

<i>ALABAMA COURSE OF STUDY : MATHEMATICS</i> <b>Standard</b>	<b>Understanding Math PLUS and/or Understanding Numeration PLUS Lessons</b>
Examples: longer than, as long as, shorter than, as short as, taller than, as tall as, holds more, as heavy as	

**9.) Use vocabulary associated with the measurement of time, including words related to clocks and calendars.**

<p align="center"><i>ALABAMA COURSE OF STUDY : MATHEMATICS</i> Standard</p>	<p align="center">Understanding Math PLUS and/or Understanding Numeration PLUS Lessons</p>
<p>Examples: before, after, first, last, hours, days, weeks, months</p>	<p><b><u>Understanding Numeration PLUS</u></b> <b><u>COMPARING AND ORDERING</u></b> <b>Skill – Introduce “ Greater Than” &amp; “ Less Than”</b> <b>Level A</b> Greater Than Less Than “Greater Than, Less Than” #1 “Greater Than, Less Than, Equal To”</p> <p><b>Skill – Working with Whole Numbers &gt;, &lt;, =</b> <b>Level A</b> &gt; and &lt; on a Numberline #1 Make it True</p> <p><b>Skill – “Just Before”... “Just After” ... “Between”</b> <b>Level B</b> “Just Before” Machine #1: Worksheets #1, #2 “Just After” Machine #1: Worksheets #1, #2</p> <p><b>Skill – Understand Measurement of Time</b> <b>Level B</b> The Clock: An Introduction #1, #2 Times to the Hour: worksheet #1, #2</p>

**10.) Complete data displays such as single-loop Venn diagrams and yes/no charts using real objects, concrete representations, or pictorial representations.**

<p align="center"><i>ALABAMA COURSE OF STUDY : MATHEMATICS</i> Standard</p>	<p align="center">Understanding Math PLUS and/or Understanding Numeration PLUS Lessons</p>
<p>Example: recording "yes" or "no" responses to the question "Do you have a yellow pencil?" by placing students' names in the appropriate area of the Venn diagram</p>	