

**CORRELATION  
of  
the 10 UNDERSTANDING MATH PLUS PROGRAMS  
with  
Atlantic Provinces Math Outcomes**

**Grade 1**

**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)

<b>Grade 1 Math Outcomes</b>	
<b>GCO A Students will demonstrate number sense and apply number theory concepts.</b>	
A1	compare two sets for size in a variety of ways
A2	create equivalent sets and sets that differ by small amounts
A3	count in a variety of ways <b>NUM+ - Counting</b> <u>Reading and Printing Numerals</u> Counting 0 to 100 on a Grid, C <u>Counting Backwards</u> Counting Up & Down #2, B <u>Counting Using Money</u> Coins - Count by 10s, 5s and 1s
A4	sort sets based on number <b>NUM+ - Counting</b> <u>Counting Using Money</u> Pennies, Nickels, Dimes
A5	match quantities with numerals <b>NUM+ - Counting</b> <u>Reading and Printing Numerals</u>
A6	count beyond 10 in a variety of ways Introduction.. Counting 1-20, B Joining up to 20 Dots, B
A7	estimate amounts between 10 and 100 <b>NUM+ - Counting</b> <u>Locate Whole Numbers on a Grid</u> Numbers on 0 to 100 Grid, B
A8	demonstrate an understanding of simple fractional parts <b>NUM+ - Counting</b> <u>Introduce Common Fractions... Parts of a Whole</u> One Half of a Shape, B <u>Introduce Fractions... Part of a Whole</u> One Half, B One Third, B One Quarter, B
A9	order numbers and use ordinal language <b>NUM+ - Counting</b> <u>Use Ordinal Numbers</u> Ordering Ladybugs, A The Steps, B
A10	explore the meaning of the numbers between 10 and 20 <b>NUM+ - Comparing and Ordering</b> <u>Introduce... 'Greater Than', 'Less Than'</u> Greater Than, Less Than #1, #2, A, B <u>Working with Whole Numbers Greater Than, Less Than, Equal To</u> Greater Than and Less Than on a Numberline #1, #2, A
A11	model numbers grouped in tens and ones <b>NUM+ - Place Value</b> <u>Model Numbers Grouped in Packages</u> Ones and Groups of Tens, C
A12	compare 2-digit numbers <b>NUM+ - Comparing and Ordering</b> <u>Understanding 'Just After', 'Just Before', 'Between'</u> Just After Machine #1, #2, Just Before Machine #1, #2

<b>GCO B Students will demonstrate operation sense and apply operation principles and procedures in both numeric and algebraic situations.</b>		
B1	recognize that addition is used to represent the joining of two groups	<b>NUM+ – Operations</b> <u>Introduce Addition... Concretely... 'and'</u> Addition Using Beans #2, A <u>Introduce the Symbolism... # + # = #</u> Addition Using Beans #3, A Addition Strategies Tens and Doubles #2, B
B2	recognize that subtraction is used to represent separating situations	<b>NUM+ – Operations</b> <u>Introduce Subtraction Symbolism... # - # = #</u> Subtraction Sentences
B3	recognize the relationship between addition and subtraction	<b>NUM+ – Operations</b> <u>Fact Families... Add and Subtract</u> Fact Families #1, #2, A, B
B4	recognize that subtraction can be used to solve missing addend problems	
B5	recognize how to use addition or subtraction to solve comparison problems	<b>NUM+ – Operations</b> <u>Fact Families... Add and Subtract</u> Relate Addition and Subtraction, A
B6	move freely among representing an addition or subtraction situation with a picture, a model, or a number sentence	
B7	use mental strategies to find sums to 18 and differences from 18 or less	<b>NUM+ – Operations</b> <u>Add 3 or 4 Numbers</u> Add 3 Numbers - Chain Addition... #2, B Add 3 Numbers Horizontally... #2, B Add 3 Numbers Vertically... #2, B
B8	know simple addition facts from among those for which the total is 10 or less and know the corresponding subtraction facts.	<b>NUM+ – Operations</b> <u>Demonstrate Addition Facts... Making 10</u> <i>All Sections 1-10, A</i>
<b>GCO C Students will explore, recognize, represent, and apply patterns and relationships, both informally and formally.</b>		
C1	create and recognize physical configurations of numbers	<b>NUM+ – Place Value</b> <u>Identify Place Value Patterns (to 20)</u> Numbers to Picture #1, C
C2	reproduce, extend, and create simple patterns based on number	
C3	sequence events	
C4	create patterns with 3-D solids and 2-D shapes	<b>NUM+ – Comparing and Ordering</b> <u>Recognize and Count Solid</u> Counting Solids #2, C
C5	use number patterns to help solve addition and subtraction questions	

<b>GCO D Students will demonstrate an understanding of and apply concepts and skills associated with measurement.</b>		
D1	identify procedures (not involving units) to compare and/or order length, capacities, and areas	
D2	identify procedures (not involving units) to compare and/or order masses and durations of time	<b>NUM+ - Comparing and Ordering</b> Understand Measure of Time The Clock, An Introduction, B Times to the Hour, B
D3	identify and use non-standard units to estimate and measure length, capacity, time, mass, and area	
D4	read hours on an analog clock	
<b>GCO E Students will demonstrate spatial sense and apply geometric concepts, properties, and relationships.</b>		
E1	develop aspects of spatial sense, including visual memory	
E2	develop aspects of spatial sense, including figure ground perception	
E3	sort, build, and pattern with 2-D and 3-D shapes	
E4	recognize and represent angles	
E5	recognize, name, describe, and represent a variety of 2D and 3-D shapes	
E6	describe attributes of and sort and compare 2-D and 3D shapes	
E7	recognize 2-D figures in 3-D shapes	
E8	build, divide, and change 2-D shapes	
E9	recognize, name, describe, and represent slides and reflections of 2-D shapes	
E10	recognize and identify 2-D and 3-D shapes in the environment	
E11	cover figures and fill shapes with countable non-standard units	
<b>GCO F Students will solve problems involving the collection, display, and analysis of data.</b>		
F1	collect and organize data	<b>NUM+ – Problem Solving</b> <b>All Sections</b>
F2	interpret and create concrete and picture graphs	

F3	interpret and create pictographs and symbolic graphs	
F4	pose oral questions in relation to conducting surveys and/or interpreting data	
<b>GCO G Students will represent and solve problems involving uncertainty.</b>		
G1	predict whether an event can never occur, must always occur, or simply might occur sometimes	