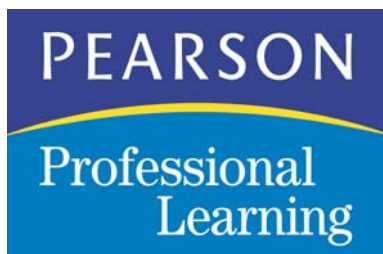




**A Sample Correlation Between
First Steps in Mathematics
and the WNCP
Common Curriculum
Framework (2006)
Grade 7**



A Sample Correlation between *First Steps in Mathematics* and



The Common Curriculum Framework, 2006

Students in Grade 7 are typically moving into the OPERATING phase

STRAND: Number		General Expectation: Develop number sense	
GRADE 7 Number Specific Outcomes	Key Understandings underpinning the Curriculum Outcomes from <i>FSIM: Number Resource Books</i>	Sample Diagnostic Tasks and Activities	Sample Learning Tasks Selected from <i>FSIM: Number Resource Books</i>
<p>1. Determine and explain why a number is divisible by 2, 3, 4, 5, 6, 8, 9 or 10, and why a number cannot be divided by 0.</p>	<p>Operations KU5:</p> <ul style="list-style-type: none"> Repeating equal quantities and partitioning a quantity into equal parts helps us relate multiplication and division and understand their properties. <p>Computations KU3:</p> <ul style="list-style-type: none"> We can think of a number as a multiplication or division in different ways. We can rearrange the factors of a multiplication without changing the quantity. <p>Patterns and Algebra KU6:</p> <ul style="list-style-type: none"> Some numbers have interesting or useful properties. Investigating the patterns in these special numbers can help us understand them better. 	<ul style="list-style-type: none"> Finding Factors (<i>Course Book</i>, pp. 215 - 216) 	<p><i>Operation Sense:</i> Pages 78 - 80</p> <ul style="list-style-type: none"> Multiplication and Division Arrays Factors <p><i>Operation Sense:</i> Pages 139 -141</p> <ul style="list-style-type: none"> Using Factors Finding Multiples Using Shapes Multiple Slices Factor Bingo Divisibility <p>Divisibility Rules p. 141</p> <p><i>Operation Sense:</i> Pages 276-277</p> <ul style="list-style-type: none"> Venn Diagrams (extended)

<p>2. Demonstrate an understanding of the addition, subtraction, multiplication and division of decimals (for more than 1-digit divisors or 2-digit multipliers, the use of technology is expected) to solve problems.</p>	<p>Whole and Decimal Numbers KU7:</p> <ul style="list-style-type: none"> We can extend the patterns in the way we write whole numbers to write decimals. <p>Did You Know? (<i>Number Sense Book p. 81</i>)</p> <p>Computations KU4:</p> <ul style="list-style-type: none"> Place value and basic number facts together allow us to calculate with any whole or decimal number. <p>Computations KU6:</p> <ul style="list-style-type: none"> There are some special calculating methods that we can use for calculations we find hard to do in our head. <p>Computations KU9:</p> <ul style="list-style-type: none"> To use a calculator well, we need to enter and interpret the information correctly and know about its functions. <p>Background Notes: <i>Operation Sense</i>, pages 22 – 29, 108-109, 113-115</p>	<ul style="list-style-type: none"> Decimals (<i>Course Book</i>, pp. 197 - 200) Numbers (<i>Course Book</i>, pp. 201 – 202) Money (<i>Course Book</i>, pp. 203 - 204) <ul style="list-style-type: none"> Buying Apples (<i>Course Book</i>, pp. 227 - 228) 	<p><i>Number Sense:</i> Pages 84 - 85</p> <ul style="list-style-type: none"> Place Invaders Decimal Fractions Lengths as Decimals <p><i>Operation Sense:</i> Pages 148 - 149</p> <ul style="list-style-type: none"> Decimals Rewriting Multiplication Division Number Sentences <p><i>Operation Sense:</i> Pages 170 - 171</p> <ul style="list-style-type: none"> Total Scores Rules Rule! Multiplication Grids Grids and Base Ten Blocks Which is Easier? <p>Case Study 3 (<i>Operation Sense Book pp. 172 - 175</i>)</p> <p><i>Operation Sense:</i> Pages 198 - 199</p> <ul style="list-style-type: none"> Complex Calculations 1 and 2 Compare Answers Rounding
<p>3. Solve problems involving percents from 1% to 100%.</p>	<p>Fractions KU7:</p> <ul style="list-style-type: none"> A fraction symbol may show a ratio relationship between two quantities. Percentages are a special kind of ratio we use to make comparisons easier. <p>Operations KU3:</p> <ul style="list-style-type: none"> Multiplying numbers is useful when we: <ul style="list-style-type: none"> Repeat quantities Use rates Make ratio comparisons or changes (scales) Make arrays and combinations Need products of measures. <p>Operations KU8:</p> <ul style="list-style-type: none"> Thinking of a problem as a number sentence often helps us solve it. Sometimes we need to rewrite the number sentence in a different but equivalent way. <p>Computations KU5:</p> <ul style="list-style-type: none"> There are strategies we can practice to help us do calculations in our head. <p>Operations Background Notes: Multiplication and Division Problems (<i>Operation Sense</i>, p. 25)</p>	<ul style="list-style-type: none"> Did You Know (<i>Operation Sense Book</i>, p. 59) Did You Know (<i>Operation Sense Book</i>, p. 81) 	<p><i>Number Sense:</i> Pages 165 - 168</p> <ul style="list-style-type: none"> Proportional Relationships Discounts Units of Measure Ratio Relationships Percentages Finding Percentages <p><i>Operation Sense:</i> Pages 54 - 55</p> <ul style="list-style-type: none"> Changes in Ratio Rate Situations Scales Combination Problems Multiplication Rate Problems <p><i>Operation Sense:</i> Pages 99 – 101 (substitute with percents)</p> <ul style="list-style-type: none"> Everyday Problems Exploring Word Problems <p><i>Operation Sense:</i> Pages 99 – 101</p> <ul style="list-style-type: none"> Partitioning with Fractions Sale Time Converting

<p>4. Demonstrate an understanding of the relationship between positive repeating decimals and positive fractions, and positive terminating decimals and positive fractions.</p>	<p>Patterns and Algebra KU6:</p> <ul style="list-style-type: none"> Some numbers have interesting or useful properties. Investigating the patterns in these special numbers can help us understand them better. 		<p><i>Operation Sense:</i> Pages 276-277</p> <ul style="list-style-type: none"> Fraction Patterns Terminating Decimals
<p>5. Demonstrate an understanding of adding and subtracting positive fractions and mixed numbers, with like and unlike denominators, concretely, pictorially and symbolically (limited to positive sums and differences).</p>	<p>Computations KU5:</p> <ul style="list-style-type: none"> There are strategies we can practice to help us do calculations in our head <p>Computations KU7:</p> <ul style="list-style-type: none"> We can calculate with fractions. Sometimes renaming fractions is helpful for this. <p>Computations KU8:</p> <ul style="list-style-type: none"> Thinking of a problem as a number sentence often helps us solve it. Sometimes we need to rewrite the number sentence in a different but equivalent way. 	<ul style="list-style-type: none"> Sensible Fractions (<i>Number Sense Book</i>, p. 165) 	<p><i>Operation Sense:</i> Pages 159-161</p> <ul style="list-style-type: none"> Compensating with Fractions More Compensating with Fractions <p><i>Operation Sense:</i> Pages 178-181</p> <ul style="list-style-type: none"> Making a Whole Equivalent Fractions Check for Sense Pattern Blocks 1 and 2 Pattern Blocks 2 <p><i>Operation Sense:</i> Pages 187-188</p> <ul style="list-style-type: none"> Adding Fractions Other Strategies
<p>7. Compare and order positive fractions, positive decimals (to thousandths) and whole numbers by using:</p> <ul style="list-style-type: none"> benchmarks place value equivalent fractions and/or decimals. 	<p>Whole and Decimal Numbers KU7:</p> <ul style="list-style-type: none"> We can extend the patterns in the way we write whole numbers to write decimals. <p>Whole and Decimal Numbers KU8:</p> <ul style="list-style-type: none"> We can compare and order the numbers themselves. <p>Fractions KU5:</p> <ul style="list-style-type: none"> We can compare and order fractional numbers and place them on a number line. <p>Fractions KU6:</p> <ul style="list-style-type: none"> A fractional number can be written as a division or as a decimal. 	<ul style="list-style-type: none"> Decimals (Course Book, p. 197-200) Spending Money (<i>Number Sense Book</i>, p.148) Sorting Fractions (<i>Number Sense Book</i>, p. 148) Fractions on a Number Line (<i>Number Sense Book</i>, p. 148) 	<p><i>Number Sense:</i> Pages 84-85</p> <ul style="list-style-type: none"> Counting by Decimals Decimal Number Line <p><i>Number Sense:</i> Pages 92-93</p> <ul style="list-style-type: none"> Tenths Decimal Sequences <p><i>Number Sense:</i> Pages 147-148</p> <ul style="list-style-type: none"> Comparing Fractions Sorting Fractions Fractions on a Number Line <p><i>Number Sense:</i> Pages 157-159</p> <ul style="list-style-type: none"> Fractions to Decimals Decimal Fractions Matching Games Ordering Collections Measurements Fractional Measures
<p>6. Demonstrate an understanding of addition and subtraction of integers, concretely, pictorially and symbolically.</p>	<p>Whole and Decimal Numbers KU8:</p> <ul style="list-style-type: none"> We can compare and order the numbers themselves. <p>Computations KU9:</p> <ul style="list-style-type: none"> To use a calculator well, we need to enter and interpret the information correctly and know about its functions. 		<p><i>Number Sense:</i> Pages 88 - 93</p> <ul style="list-style-type: none"> Negative Numbers Number Line Correct Order Skip Counting Backwards Temperatures Changing Values <p><i>Operation Sense:</i> Page 199</p> <ul style="list-style-type: none"> Change of Sign