Grade 6 Number Specific Outcomes	Key Understandings underpinning the Curriculum Outcomes from FSIM: Number Resource Books	Sample Diagnostic Tasks and Activities	Sample Learning Tasks Selected from FSIM: Number Resource Books	Math Station Ideas:
N6.1 Demonstrate understanding of place value including: • greater than one million • less than one thousandth with and without technology.	Whole and Decimal Numbers KU5: • There are patterns in the way that we write whole numbers that help us to remember their order. Whole and Decimal Numbers KU7: • We can extend the patterns in the way we write whole numbers to write decimals. Whole and Decimal Numbers KU8: • We can compare and order the numbers themselves. Patterns and Algebra KU5: Our numeration system has a lot of specially built-in patterns that make working with numbers easier. Operations KU8: 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. (see also Operations KU2 and KU5)	Read, Write and Say Numbers (Course Book pp. 188-189) 800 Game (Course Book pp. 195 - 196) What's Next (Course Book, pp. 178 - 179) Decimals (Course Book, pp. 197 - 200) Numbers (Course Book, pp. 201 - 202) Money (Course Book, pp. 203 - 204)	Number Sense: 70-1 • Counting crowds • 10 Times Smaller • Million Square • Changing Places • Words into Symbols Number Sense: 84 - 85 • Counting by Decimals • Place Invaders • Recording Measurements Did You Know? (Number Sense Book p. 81) Did You Know? (Number Sense Book p. 89) Number Sense: 92 - 93 • Bigger or Smaller • Number Line • True or False Case Study 4 (Number Sense Book pp. 94 – 96)	Powers of 10 (link to video and interactive) Powers of 10 Task Cards (link to printable) "Exploring Large Numbers in the *Guinness Book of World Records*" (document) Place Value and Decimals Chart (pdf printable) Decimal Cards for Place Value Spinner Games (link to printable) Adding and Subtracting Decimals: Word Problems (online interactive)

	Computations KU9: • To use a calculator well, we need to enter and interpret the information correctly and know about its functions. Computations KU10: • Thinking about what makes sense helps us to check and interpret the results of calculations.	Empty Boxes (Course Book, pp. 210 - 211) Calculator Number Sentences (Course Book, pp. 217-2181)	Operation Sense: 268-269 • Multiples of Tens and Tenths • Relationships • Grid Paper Operation Sense: Page 99-101 • Problem Solving • Rewriting Problems • Sorting Sentences • Exploring Word Problems Operation Sense: Page 199 • Compare Answers • Rounding Operation Sense: Pages 207 - 208 • Problems in Context • Reasonable Answers	"Decimal Places", in *Math Makes Sense 6 ProGuide ™ Unit 3: Decimals*, p. v "Spin and Change" in *Math Makes Sense 6 ProGuide ™ Unit 3: Decimals*, p. v

Grade 6 Number Specific Outcomes	Key Understandings underpinning the Curriculum Outcomes from FSIM: Number Resource Books	Sample Diagnostic Tasks and Activities	Sample Learning Tasks Selected from FSIM: Number Resource Books	Math Station Ideas:
N6.2 Demonstrate understanding of factors and multiples (concretely, pictorially, and symbolically) including: • determining factors and multiples of numbers less than 100 • relating factors and multiples to multiplication and division • determining and relating prime and composite numbers.	Computations KU3: • 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. Computations KU5: • There are strategies we can practice to help us do calculations in our head. Patterns and Algebra KU6: • Some numbers have interesting or useful properties. Investigating the patterns in these special numbers can help us to understand them better.	Finding Factors (Course Book, pp. 215 - 216)	Operation Sense: Pages 138-141 • Using Factors • Finding Multiples • Multiples of Three • Factor Bingo • Making Factor Trees • Divisibility • Strategies • Easier Multiplication • Divisibility Rules Operation Sense: Pages 159 - 161 • Factoring • Doubling • Factors of Two and Five • Strategies Operation Sense: Pages 274-277 • Investigating Primes • Factors • Is it a Multiple? • Venn Diagram • Factor Trees • Investigate Factors	"Finding Factors" p. 115 TS-CM 3-5 "Factor Patterns" p. 115 TS-CM 3-5 "Divide It Up" p. 119 TS-CM 3-5 "Rolling Multiples" document Factorize (online interactive) Factor Game (online interactive) Factors and Multiples Card Game (link to printable) The Factor Game (link to printable) Prime Factorization: Kahn Academy Tutorial (online Prime and Composite Numbers Game (link to printable)

Grade 6 Number Specific Outcomes	Key Understandings underpinning the Curriculum Outcomes from FSIM: Number Resource Books	Sample Diagnostic Tasks and Activities	Sample Learning Tasks Selected from FSIM: Number Resource Books	Math Station Ideas:
N6.3 Demonstrate understanding of the order of operations on whole numbers (excluding exponents) with and without technology.	Operations KU7: • Properties of operations and relationships between them can help us to decide whether number sentences are true. Computations KU9: • To use a calculator well, we need to enter and interpret the information correctly and know about its functions.		Operation Sense: ages 91 - 93 • What Do You Know? • Broken Keys • Calculating Area • Decimals • Scales • Choosing Operations Operation Sense: Page 196 • Order of Operations	Order of Operations Bingo (link to printable) Order of Operations Dice Game (link to printable) Order Ops: An Order of Operations Game (online interactive)

Grade 6 Number Specific Outcomes	Key Understandings underpinning the Curriculum Outcomes from FSIM: Number Resource Books	Sample Diagnostic Tasks and Activities	Sample Learning Tasks Selected from FSIM: Number Resource Books	Math Station Ideas:
N6.4 Extend understanding of multiplication and division to decimals (1-digit whole number multipliers and 1-digit natural number divisors).	Operations KU3: • Multiplying numbers is useful when we: - Repeat quantities - Use rates - Make ratio comparisons or changes (scales) - Make arrays and combinations - Need products of measures. Operations KU4: • Dividing numbers is useful when we: - Share or group a quantity into a given number of portions - Share or group a quantity into portions of a given size - Need products of measures. Operations KU7: • Properties of operations and relationships between them can help us to decide whether number sentences are true. Computations KU4: • Place value and basic number facts together allow us to calculate with any whole or decimal number.	Buying Apples (Course Book pp. 227 - 228) Chance Number Sentences (Operation Sense Book, p. 85) Decimals (Number Sense Book, p. 79)	Operation Sense: 54 - 55 • Rate Situations • Compare Quantities • Calculating Area • Decimals • Scales • Choosing Operations Operation Sense: 66 - 67 • Multiplication and Division • Sharing or Grouping • Measuring Metres • Fractions and Shape • Fraction Words Operation Sense: 92 - 93 • What do You Know? • Equivalent Statements Note: the other SLAs are all about multiplying by less than 1; the outcome is only with whole numbers Operation Sense: 148 – 149 • Decimals • Rewriting Multiplication (using decimals)	"Grocery Flyer" (document) "Make the Lesser Product" in *Math Makes Sense 6 ProGuide ™ Unit 3: Decimals*, p. 31; student book p. 115 Decimals Jeopardy (online interactive) Spy Guys: Multiplying and Dividing Decimals (online interactive) "Let's Divide Decimals : Dice Game" (document) Teaching Decimals With Menus (link to printables)

Grade 6 Number Specific Outcomes	Key Understandings underpinning the Curriculum Outcomes from FSIM: Number Resource Books	Sample Diagnostic Tasks and Activities	Sample Learning Tasks Selected from FSIM: Number Resource Books	Math Station Ideas:
N6.5 Demonstrate understanding of **percent** (limited to whole numbers to 100) concretely, pictorially, and symbolically.	Fractions KU7: • A fraction symbol may show a ratio relationship between two quantities. Percentages are a special kind of ratio we use to make comparisons easier. Operations KU3: • Multiplying numbers is useful when we: - Repeat quantities - Use rates - Make ratio comparisons or changes (scales) - Make arrays and combinations - Need products of measures Operations Background Notes: Multiplication and Division Problems (Operation Sense, p. 25)	Did You Know (Operation Sense Book, p. 59) Did You Know (Operation Sense Book, p. 81) Case Study 4 (Operation Sense Book, pages. 189 - 191) Sensible Fractions (Number Sense Book, p.165)	Number Sense: Pages 165 - 168 • Proportional Relationships • Discounts • Units of Measure • Ratio Relationships • Percentages • Finding Percentages Operation Sense: Pages 54 - 55 • Changes in Ratio • Rate Situations • Scales • Combination Problems • Multiplication • Rate Problems	Decention (online interactive) Match Fractions, Decimals, and Percentages (online interactive) The Legend of Dick and Dom: Percentages (online interactive) Dunk Tank!: Fractions, Decimals and Percents (online interactive) Memory Match (link to printable) The Menu Game at the Terribly Terrific Taco (link to printable, p. 17) “Letter Percents” in *Math Makes Sense 6 ProGuide ™ Unit 5: Fractions, Ratios, and Percents*, p. v. “Alternative Explore” in *Math Makes Sense 6 ProGuide ™ Unit 5: Fractions, Ratios, and Percents*, p. 33.

Grade 6 Number Specific Outcomes	Key Understandings underpinning the Curriculum Outcomes from FSIM: Number Resource Books	Sample Diagnostic Tasks and Activities	Sample Learning Tasks Selected from FSIM: Number Resource Books	Math Station Ideas:
N6.6 Demonstrate understanding of integers concretely, pictorially, and symbolically.	Whole and Decimal Numbers KU8: • We can compare and order the numbers themselves.		Number Sense: Pages 88 - 93 • Negative Numbers • Number Line • Correct Order • Skip Counting Backwards • Temperatures • Changing Values Wipeout p. 68 can be modified to include negative numbers	"What Is Her Net Worth?" p. 181 TS-CM 6-8 Kahn Academy Chapter 6: Integers (online interactive) Integers Spin Off Game (online interactive) Integer Posters (link to instructions and examples) Integers on a Number Line (online interactive)

Grade 6 Number Specific Outcomes	Key Understandings underpinning the Curriculum Outcomes from FSIM: Number Resource Books	Sample Diagnostic Tasks and Activities	Sample Learning Tasks Selected from FSIM: Number Resource Books	Math Station Ideas:
N6.7 Extend understanding of fractions to improper fractions and mixed numbers.	Fractions KU4: • The same fractional quantity can be represented with a lot of different fractions. We say fractions are equivalent when they represent the same number or quantity. Fractions KU 5: • We can compare and order fractional numbers and place them on a number line.	Fraction Tapes (Operation Sense Book, p, 140) Spending Money (Operation Sense Book, p, 148) Sorting Fractions (Operation Sense Book, p, 148) Fractions on a Number Line (Operation Sense Book, p, 148)	Operation Sense: Pages 140 - 141 • Bags of Marbles • Fraction Tapes • Equivalent Fractions Operation Sense: Pages 147 - 149 • Less than 100 • Places on a Number Line • Counting Fractions • Estimating Case Study 3 (Number Sense Book pp. 149 – 151)	"Fraction Train" in *Math Makes Sense 6 ProGuide ™ Unit 5: Fractions, Ratios, and Percents*, p. v. "Comparing Fractions" in *Math Makes Sense 6 ProGuide ™ Unit 5: Fractions, Ratios, and Percents*, p. v. "Alternative Explore" in *Math Makes Sense 6 ProGuide ™ Unit 5: Fractions, Ratios, and Percents*, p. 5. "Fraction Match Up" in *Math Makes Sense 6 ProGuide ™ Unit 5: Fractions, Ratios, and Percents*, p. 12; student book p. 170. Convert to Improper Fractions (online interactive) Convert to Mixed Numbers (online interactive) "Improper Fractions to Mixed Number Game" (document) "Spiral Card Game" (document) "Match the Fraction Game" (document)

Grade 6 Number Specific Outcomes	Key Understandings underpinning the Curriculum Outcomes from FSIM: Number Resource Books	Sample Diagnostic Tasks and Activities	Sample Learning Tasks Selected from FSIM: Number Resource Books	Math Station Ideas:
N6.8 Demonstrate an understanding of ratio concretely, pictorially, and symbolically.	Fractions KU7: • A fraction symbol may show a ratio relationship between two quantities. Percentages are a special kind of ratio we use to make comparisons easier. Operations KU3: • Multiplying numbers is useful when we: - Repeat quantities - Use rates - Make ratio comparisons or changes (scales) - Make arrays and combinations - Need products of measures Operations Background Notes: Multiplication and Division Problems (Operation Sense, p. 25)	Did You Know (Operation Sense Book, p. 59) Did You Know (Operation Sense Book, p. 81) Case Study 4 (Operation Sense Book, pages. 189 - 191) Sensible Fractions (Number Sense Book, p.165)	Number Sense: Pages 165 - 168 • Proportional Relationships • Discounts • Units of Measure • Ratio Relationships • Percentages • Finding Percentages Operation Sense: Pages 54 - 55 • Changes in Ratio • Rate Situations • Scales • Combination Problems • Multiplication • Rate Problems	Kahn Academy: Ratios, Rates, and Percentages (online interactive) Ratios are Sweet (link to printable) "Grocery Store Math Ratios" (document) "Ratio Scavenger Hunt" (document) "Pencil to Pencil" p. 205 TS-CM 6-8 "Great Middle-School Books for Ratio and Proportions" p. 206 TS-CM 6-8

Grade 6 Number Specific Outcomes	Key Understandings underpinning the Curriculum Outcomes from FSIM: Number Resource Books	Sample Diagnostic Tasks and Activities	Sample Learning Tasks Selected from FSIM: Number Resource Books	Math Station Ideas:
N6.9 Research and present how First Nations and Métis peoples, past and present, envision, represent, and use quantity in their lifestyles and worldviews.				Chekutnak: Stick Dice (link to instructions) Stick Game (link to instructions) Games Categorized by Mathematical Content (link to game instructions) Ancient Mi'kmaq game of Waltes (link to online article) Fur Trade for Elementary Students (link to activity) Fur Trade Text Reading (link to printable)