











Grade Six – Suggested Math Instructional Resources



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here.

Number Sense

(Mixed [numbers](#) and decimal numbers represent quantities that can be decomposed into parts and wholes.)

Curricular Content	Curricular Competencies (The student can...)	Online Resources	Print Resources (all are available in the DLC or in schools)
Place value understanding from thousandths to billions	<p>Represent and decompose numbers from thousandths to billions.</p> <p>Count in various ways (by various multiples, starting points, increasing/decreasing) with decimal numbers and numbers to the billions.</p> <p>Compare and order numbers from thousandths to billions, demonstrating understanding of place value.</p> <p>Use greater than and less than symbols.</p>	<p> Place Value Jeopardy (Decimals)</p> <p> Place Value Jeopardy (6-digit)</p> <p> Math Antics - Decimal Place Value</p>	<p><i>All Hands on Deck</i> (Felling, 2022)</p> <ul style="list-style-type: none"> • "Your Place or Mine" (pp. 84-85) <p><i>Elementary and Middle School Mathematics</i> (Van de Walle, 2022)</p> <ul style="list-style-type: none"> • Chapter 16 (pp. 400-414)
Fraction and decimal concepts and relationships	<p>Compare and order fractions (greater than 1) and decimal numbers (focus on thousandths).</p>	<p> Math Antics - Fractions and Decimals (Focus on Fraction/decimals begins 3:50)</p> <p> Exploring fractions with Cuisenaire Rods</p> <p> Clothesline activities</p> <p> Clothesline Intro to Class</p> <p> Fraction Talks-Fraction Compare</p> <p> Fraction Wars Cards</p> <p> Converting Between Fractions and Decimals Open Middle®</p>	<p><i>Proportional Reasoning</i> (Fullerton, 2019)</p> <ul style="list-style-type: none"> • Fractions and Decimals Making Connections Between Models (pp. 187-189) • Comparing and Ordering Fractions in All Forms, (pp. 136-137) • Fractions, Decimals and Percent Comparing and Ordering Intro, (pp. 195-196) • Three in a line (p. 196, 197, 200) • Pick a Card, Any Card!" (p.198)



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Curricular Content	Curricular Competencies (The student can...)	Online Resources	Print Resources (all are available in the DLC or in schools)
			<p><i>Number Talks – Fractions, Decimals, and Percentages</i> (Parrish, 2016)</p> <ul style="list-style-type: none"> p. 69 pp. 82-88 pp. 99-111
Whole number percents and percentage discounts	<p>Demonstrate understanding of what a percent represents.</p> <p>Solve percentage discount problems utilizing multiple strategies.</p>	<p> Math Antics - What Are Percentages?</p> <p> Create Your Own Discounts and Percentages</p> <p> Percent of a Quantity 1 Open Middle®</p>	<p><i>Multiplicative Thinking</i> (Fullerton, 2015)</p> <ul style="list-style-type: none"> From Fractions to Decimals to Percent (pp. 145-147) Multiplying Numbers Less Than One (pp. 148-161) <p><i>Number Talks – Fractions, Decimals, and Percentages</i> (Parrish, 2016)</p> <ul style="list-style-type: none"> pp. 120-124 <p><i>Elementary and Middle School Mathematics</i> (Van de Walle, 2022)</p> <ul style="list-style-type: none"> pp. 422-428 <p><i>Radical Math</i> (Felling, 2021)</p> <ul style="list-style-type: none"> pp. 126-129
Introduction to ratios	<p>Compare and record the quantities of a set of two different images or objects using part-to-part ratios.</p>	<p> Math Antics - Ratios And Rates</p> <p> Introduction to Ratios</p> <p> Click Battle - Ratio activity by Desmos</p> <p> Ratios 1 Open Middle®</p>	<p><i>Proportional Reasoning</i> (Fullerton, 2019)</p> <ul style="list-style-type: none"> Part-to-Part Ratios (pp. 168-172) Comparing Ratios and Rate Problem-Solving (pp. 173-175) Unit Ratios and Rate (pp. 176 - 181) <p><i>Elementary and Middle School Mathematics</i> (Van de Walle, 2022)</p> <ul style="list-style-type: none"> Chapter 17 (pp. 429 - 443)



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Curricular Content	Curricular Competencies (The student can...)	Online Resources	Print Resources (all are available in the DLC or in schools)
Prime and composite numbers	Identify and explain why a number is prime with numbers to 100. Identify and explain why a number is composite with numbers to 100.	 Math Antics - Prime Factorization  Composite Numbers Open Middle®  Prime Numbers Open Middle®	<i>Multiplicative Thinking</i> (Fullerton, 2015) <ul style="list-style-type: none"> • Prime and Composite Numbers (pp. 65-71)
Greatest common factor/Least common multiple	Factor a composite number to 100 into prime factors Compare two numbers (within 100) and identify the greatest common factors and the least common multiple.	 Least Common Multiples vs. Greatest Common Factors (LCM vs. GCF)  Smallest Possible LCM Open Middle®  Largest Possible GCF Open Middle®  Largest Possible GCF #2 Open Middle®	<i>Multiplicative Thinking</i> (Fullerton, 2015) <ul style="list-style-type: none"> • Lowest Common Multiples pp. 61-63 • Prime Factorization and Common Factors, pp. 68-71, • Prime Factor (p. 71)



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Computational Fluency

(Computational [fluency](#) and flexibility with numbers extend to operations with whole numbers and decimals.)

Curricular Content	Curricular Competencies (The student can...)	Online Resources	Print Resources (all are available in the DLC or in schools)
Fluency with multiplication and division facts	Demonstrate fact fluency with most multiplication facts and related division facts Apply multiplication facts when multiplying larger numbers and decimal numbers.	 Learn Math through sport: 'Shuttle runs' > Division & multiplication PE game  My Favorite Fact Fluency Resources  Multiplication/Division - Same but different math  Math Flips – Berkeley Everett	<i>Number Talks – Whole Number Computation</i> (Parrish, 2014), <ul style="list-style-type: none"> • Multiplication and Division Strategies (pp. 231-261) • Multiplication and Division Number Talks (pp. 262-299) <i>Mastering the Multiplication Facts</i> (Fullerton, 2020) <i>All Hands on Deck</i> (Felling, 2022) <ul style="list-style-type: none"> • Multiplication Flip Out Challenger (pp. 126-127) • Multiplication Tic-Tac-Toe”(pp. 48-50) <i>Elementary and Middle School Mathematics</i> (Van de Walle, 2022) <ul style="list-style-type: none"> • pp. 190-201
Multiplication and division of decimal numbers	Multiply and divide decimal numbers using related strategies used for whole numbers such as decomposing and compensating.	 Decimal Multiplication & Division  Multiplying Decimals Elementary Open Middle  Multiplying Decimals Open Middle@	<i>Elementary and Middle School Mathematics</i> (Van de Walle, 2022) <ul style="list-style-type: none"> • pp. 417-427 <i>Number Talks – Fractions, Decimals, and Percentages</i> (Parrish, 2016) <ul style="list-style-type: none"> • pp. 368-398 <i>Good Questions: 5-8</i> (Fullerton, 2018)



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Curricular Content	Curricular Competencies (The student can...)	Online Resources	Print Resources (all are available in the DLC or in schools)
Order of operations (introduction to brackets)	Solve equations including multiple operations and brackets/parentheses.	 Math Antics - Order Of Operations  Twin Puzzles • Activity Builder by Desmos  Order of Operations I Open Middle®	<i>All Hands on Deck</i> (Felling, 2022) <ul style="list-style-type: none"> Operation Mixer (p. 158)
One-step equations with whole-number coefficients and solutions	Use reasoning to explain their process for solving one-step equations . Solve one-step equations with whole number coefficients such as $3x=12$ or $x+5=11$.	 Algebra Basics: What Is Algebra? - Math Antics (first part of video only)  Algebra Basics: Solving Basic Equations  Solving One-Step Equations Using a Pan-Balance  Pan Balance – Shapes	<i>Algebraic Thinking</i> (Fullerton, 2020) <ul style="list-style-type: none"> pp. 77 - 115



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




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General Resources

General Strategies and Routines	 Which One Doesn't Belong  Dot Card and Number Talks  Number Talk Images  Coast Metro Math Project  Interactive Simulations	 Esti-Mysteries  The Estimation Clipboard  Cube Conversations  Week of Inspirational Math	 Building Thinking Classrooms  Estimation  Math Applications  Puzzles, Problems and Tasks
Building our Understanding	 Coast Metro Math Project  Concreteness Fading	 Surrey Video Series  Progression of Multiplication  Progression of Division	 Spiraling the Curriculum  Progression of Fractions  Building Math Fact Fluency
Classroom Assessment	 Coast Metro Math Project	 Island Numeracy Assessment	 Assessing Curricular Competencies
Indigenous Connections	 Coast Metro Math Project	 When Seagull Stole the Sun	 BC Numeracy Network
Planning	 BC Numeracy Network	 Critical Concepts Map	 Planning - Year, Week, Day

This document intentionally focusses on number sense and computational fluency as these are foundational skills that can be spiraled throughout the rest of the content standards while being grounded in the curricular competencies.