Grade Seven – Suggested Math Instructional Resources

Access Digital copy here.

Number Sense

(Decimals, fractions, and percents are used to represent and describe parts and wholes of <u>numbers</u>.)

Curricular Content	Curricular Competencies (The student can…)	Online Resources	Print Resources (all are available in the DLC or in schools)
Fraction, decimal and percentage concepts and relationships	Compare and order fractions (greater than 1) and decimal numbers. Represent and compare fractions, decimals and percentages in different forms, including equivalent forms. Explain the relationship between fractions, decimals and percentages.	👤 [Comparing Balloon Pop](#) ▶ [Math Antics - Decimal Place Value](#)	*Mastering the Multiplication Facts* (Fullerton, 2020) • Skills Check - From Fractions to Decimals to Percent (pp. 145-146) • Game: Sneaky Snakes - Fractions, Decimals, and Percents (p. 147) • Assessment (p. 147) *Elementary and Middle School Mathematics* (Van de Walle, 2022) • pp. 361-366 • pp. 400-412 *Proportional Reasoning* (Fullerton, 2019) • pp. 187 - 201

▶ video   💡 teacher backgrounder   🔢 learning activity   🖶 printable   ⚙ strategies & routines   👤 device required

Computational Fluency

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

Curricular Content	Curricular Competencies (The student can…)	Online Resources	Print Resources (all are available in the DLC or in schools)
Extending fluency with multiplication and division facts	Recall of multiplication facts and related division facts and application of these facts when multiplying and dividing greater numbers.	👤 [Canoe Penguins (Multiplayer Game)](#) ▶ [My Favorite Fact Fluency Resources](#) ▶ [Learn Math through sport: 'Shuttle runs' › Division & multiplication PE game](#) ▦ [Multiplication/Division — SAME BUT DIFFERENT MATH](#) ▦ [Math Flips – Berkeley Everett](#)	*Mastering the Multiplication Facts* (Fullerton, 2020) • What is Multiplication Anyway? - Diagnostic Assessment to Set the Stage (pp. 18-19) • Multiplying Bigger Numbers - Decomposition and Multiplying by 5, (pp. 118-119) • Game: Three in a Line-Multiply by 5-Big Factors (p. 120) • Using the Distributive Property (pp. 121-123) • Area Models and the Distributive Property -1 (pp. 124-127) • Game: Roll the Bigger Product! (p. 127) *All Hands on Deck* (Felling, 2022) • Multiplication Flip Out Challenger (pp. 126-127) *Number Talks – Fractions, Decimals, and Percentages* (Parrish, 2016) • Chapter 5 (pp. 114-132) *Elementary and Middle School Mathematics (Van de Walle, 2022)* • pp. 190-201

▶ video ☀ teacher backgrounder ▦ learning activity 🖶 printable ⚙ strategies & routines 👤 device required

Curricular Content	Curricular Competencies (The student can…)	Online Resources	Print Resources (all are available in the DLC or in schools)
Operations with decimal numbers	Fluency with all operations using decimal numbers, applying strategies such as decomposing, compensating and regrouping and demonstrating understanding of place value and of decimal and fraction relationships.	⏵ **Math Antics - Decimal Arithmetic**	*All Hands on Deck* (Felling, 2022) • Dicey Decimals (pp. 90-91) • Rock 'N Roll (p.92, 95&97) • Do Your Decimals (pp.129-130) *Elementary and Middle School Mathematics (Van de Walle, 2022)* • Chapter 16 (pp. 399-428) *Number Talks – Fractions, Decimals, and Percentages* (Parrish, 2016) • Chapter 10 (pp. 316-398) *Multiplicative Thinking* (Fullerton, 2015) • pp. 134 - 139
Order of operations (use of brackets)	Solve equations including multiple operations and brackets/parentheses.	⏵ **Math Antics - Order Of Operations** 👤 **Who wants to be a Hundredaire Game** 👤 **Martian Hoverboards (Multiplayer Game)**	*All Hands on Deck* (Felling, 2022) • Operation Mixer (p. 158) *Radical Math* (Felling, 2021) • pp. 41 – 53

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Curricular Content	Curricular Competencies (The student can…)	Online Resources	Print Resources (all are available in the DLC or in schools)
Operations with integers	Represent integers concretely, pictorially and symbolically using two-sided counters and number lines. Compare and order integers along a number line. Solve contextual problems involving integers such as thinking about temperature differences. Add, subtract, multiply and divide small integer numbers using both the two-sided counters and number line approaches.	▶ [Opposites and Zero Pairs](#) ▶ [How To Add Integers Using Zero Pairs](#) 🎮 [Math Lines Integers Game](#) 🎮 [Orbit Integers (Multiplayer Game)](#)	*Number Talks: Whole Number Computation* (Parrish, 2014) • pp. 217-222 *All Hands on Deck (*Felling, 2022*)* • Get Back to Zero (p. 103&104) *Elementary and Middle School Mathematics (Van de Walle, 2022)* • pg. 601-611 *Algebraic Thinking* (Fullerton, 2020) • pp. 116 – 128 *Radical Math* (Felling, 2021) • p. 25, 26, 37, 38
Two-step equations with whole-number coefficients, constants, and solution	Use reasoning to explain their process for solving two-step equations. Solve two-step equations with whole number coefficients and constants such as 3x + 4 = 19.	▶ [Algebra Basics: What Is Algebra?](#) ▶ [Algebra Basics: Solving 2-Step Equations](#) ▶ [Algebra Basics: Solving Basic Equations](#)	*Multiplicative Thinking* (Fullerton, 2015) • pp. 87-104 *Algebraic Thinking* (Fullerton, 2020) • pp. 25-115

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General Resources

General Strategies and Routines	⚙ Which One Doesn't Belong	⚙ Esti-Mysteries	▦ Week of Inspirational Math
	⚙ Dot Card and Number Talks	⚙ The Estimation Clipboard	⚙ Building Thinking Classrooms
	⚙ Number Talk Images	⚙ Cube Conversations	⚙ Estimation
	☀ Coast Metro Math Project		⚙ Math Applications
	▦ Interactive Simulations		▦ Puzzles, Problems and Tasks
Building our Understanding	☀ Coast Metro Math Project	▶ Surrey Video Series	☀ Spiraling the Curriculum
	☀ Concreteness Fading	☀ Progression of Multiplication	☀ Progression of Fractions
		☀ Progression of Division	
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.

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