

## **Grade Three – Suggested Math Instructional Resources**

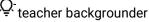


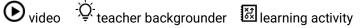
## **Number Sense**

(Fractions are a type of number that can represent quantities)

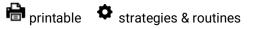
Curricular Content	Curricular Competencies (The student can)	Online Resources	Print Resources (all are available in the DLC or in schools)
Place value understanding to 1000	Represent and decompose numbers to 1000.  Count in various ways (by 2s, 3s, 4s, 5s, etc from different starting points up to 1000, ascending and descending).  Compare and order numbers to 1000 (put numbers in sequence, be able to tell what is 5 more/less, 10 more/less, 100 more/less than a number).	Counting Collections  Counting Collections  Steve Wyborney:  "Esti-Mysteries"  "Estimation Clipboard"  20 Days of Number Sense  Number Concepts Grades 3 - 5  Trade Number Sense Routines  Which One Doesn't Belong  Dot Card and Number Talks  Number Talk Images  Games:  Fill The Stairs	<ul> <li>Messy Maths (Robertson, 2016) Chapters 3 and 4</li> <li>Exploring Numbers (pp. 47-67)</li> <li>Number Functions and Fractions (pp. 69-83)</li> <li>Pocket Number Lines (pp. 59)</li> <li>Rope Line Hoops (pp. 65)</li> <li>Place Value in Intermediate (Fullerton, 2017)</li> <li>Putting Things in Order (pp. 85-89)</li> <li>Counting Sets to 1000 (pp. 111-115)</li> <li>Tell Me About it! 10 Blocks, Number Lines and Hundred Charts to 1000 (pp. 122-127)</li> <li>Sums &amp; Differences: Grades 2 &amp; 3 (Fullerton, 2014)</li> <li>Modeling Bigger Numbers Using Place Value (pp. 21-31)</li> <li>How Many? A Different Kind of Counting Book (Danielson, 2018)</li> </ul>







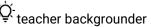


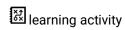






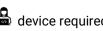
Curricular Content	Curricular Competencies (The student can)	Online Resources	Print Resources (all are available in the DLC or in schools)
		장 Pig Don't Break the Bank	Elementary and Middle School Mathematics (Van de Walle, 2022)  • pp. 217-225  • Chapter 9 (pp. 174-189)  All Hands on Deck (Felling, 2022)
Fraction concepts	Explain what a fraction is including concepts of equal shares/portions/part and that a fraction is a number that represents an amount.  Uses concrete materials (cubes, pattern blocks, etc.) to represent simple fractions such as 1/2, 1/10 and draw pictorial representations of fractions connected to a symbolic representation.	Fraction Talks Fraction Number Concepts	How Many? A Different Kind of Counting Book (Danielson, 2018)  Messy Maths (Robertson, 2016) Chapters 3 and 4  Chapter 4 - Number Functions and Fractions (pp. 69-83) Fractions in the Outdoor Space (p. 82) Simple Sharing and Scoring Games (p. 83)  Place Value in Intermediate (Fullerton, 2017) Thinking About Fractions: Cuisenaire Rods and Number Lines (pp. 151-156)  Elementary and Middle School Mathematics (Van de Walle, 2022) Chapter 13 (pp. 332-338)  Number Talks – Fractions, Decimals, and Percentages (Parrish, 2016) Chapter 4 (pp. 72-82)











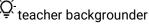


## **Computational Fluency**

(Development of computational fluency in addition, subtraction, multiplication, and division, of whole numbers requires flexible decomposing and composing.)

Curricular	Curricular Competencies	Online Resources	Print Resources
Content	(The student can)		(all are available in the DLC or in schools)
Fluency with addition and subtraction facts	Develop fact fluency with most addition and subtraction facts to 20 (with efficiency, accuracy and flexibility).	Facts fluency resources & strategies The difference between Number Talks and Number strings  "Splats through 20 and Multiple Splats" Cuisenaire Rods Lessons Flower Petal Puzzle  Bright Idea  Games: Sum What Face Off Lucky 13 How Many are Hiding  Fluency with addition and subtraction	Shuffling Into Math (Felling, 2022)     Subtraction Horse Race (pp. 48-51)     Salute (pp. 67-70)  Messy Maths (Robertson, 2016) Chapters 3 and 4     Exploring Numbers (pp. 47-67)     Number Functions and Fractions (pp. 69-83)     Subtraction (pp. 75-76)     The Game of Nim (pp. 76-77)  Elementary and Middle School Mathematics (Van de Walle, 2022)     Chapter 8 (pp. 146-156)     Chapter 9 (pp. 174-189)  Number Talks – Whole Number Computation (Parrish, 2014)     pp. 88-96  All Hands on Deck (Felling, 2022)     Starting on p. 18  Mastering the Facts: Addition (Fullerton, 2020)

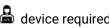








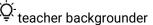


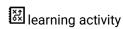




Curricular	Curricular Competencies	Online Resources	Print Resources
Content	(The student can)		(all are available in the DLC or in schools)
Addition and subtraction of two and three-digit numbers	Add and subtract numbers within 1000 using decomposing, compensating and regrouping strategies and using tools like the open number line for adding up to find the difference.  Information on decomposing by Janice Novakowski	Game:  Don't Break the Bank Take it to the Bank Computational Fluency  Lessons and Activities for Number Sense and Operations and Patterns and Geometry	<ul> <li>Shuffling Into Math (Felling, 2022)</li> <li>Addition Baseball (pp. 91-95)</li> <li>Subtraction Baseball (pp. 96-102)</li> <li>Regrouping Scramble (pp. 103-104)</li> <li>Sums &amp; Differences: Grades 2 &amp; 3 (Fullerton, 2014)</li> <li>Adding 100's, 10's and 1's to Bigger Number with No Bridging (pp. 89-97)</li> <li>Adding 100's, 10's and 1's to Bigger Number with Bridging (pp. 98-109)</li> <li>Subtracting 100's, 10's and 1's from Bigger Numbers with No Bridging (pp. 163-168)</li> <li>Subtracting 100's, 10's, and 1's from Bigger Numbers with Bridging (pp. 178-194)</li> <li>Place Value in Intermediate (Fullerton, 2017)</li> <li>Finding Sums and Differences: Whole Number Strategies (pp. 90-101)</li> <li>Finding Sums and Differences: Pay Day and Money Problems (pp. 128-136)</li> <li>Elementary and Middle School Mathematics (Van de Walle, 2022)</li> <li>Chapter 11 (pp. 230-266)</li> <li>Number Talks - Whole Number Computation (Parrish, 2014)</li> <li>Chapter 5 (pp. 157-229)</li> <li>All Hands on Deck (Felling, 2022)</li> <li>Starting on p. 105</li> </ul>

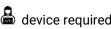








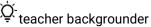


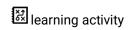




Curricular Content	Curricular Competencies (The student can)	Online Resources	Print Resources (all are available in the DLC or in schools)
Introduction to multiplication and division concepts	Demonstrate an understanding of the processes and representations of multiplication such as grouping, arrays and repeated addition using concrete and pictorial forms and symbols.  Demonstrate an understanding of the processes and representations of division such as sharing, grouping, repeated subtraction and thinking about multiplication using concrete and pictorial forms and symbols.	3 Act Tasks:  Cover the Floor Fruit-Nut Sharing is Caring  Games: Circles and Stars Face Off Pepperoni Pizza Close to 100  Math Cards Number concepts 100, multiplication and division concepts	<ul> <li>Multiplicative Thinking (Fullerton, 2015)</li> <li>What is Multiplication, Anyway? (pp. 18-21)</li> <li>Exploring "Groups of" (p. 22-24)</li> <li>Exploring "Groups of" and "Rows of" (pp. 25-28)</li> <li>Exploring "Groups of" Creating and Solving Word Problems (pp. 29-34)</li> <li>Messy Maths (Robertson, 2016) Chapters 3 and 4</li> <li>Multiplication (p. 77)</li> <li>Nature Multiplication (p. 78)</li> <li>Exploring Arrays (p. 78)</li> <li>Multiplication Scavenger Hunt (p. 78)</li> <li>Division (pp. 79-80)</li> <li>Elementary and Middle School Mathematics (Van de Walle, 2022)</li> <li>Chapter 12 (pp. 267-292)</li> </ul>
One-step equations with an unknown number	Use reasoning to verbally explain what they need to do to change 30 to 65 or 289 to 120. Record these changes using numbers and symbols such as $30 + n = 65$ or $289 - n = 120$ . Solve equations with the unknown number in different spots such as: $200 + 30 = n$ $450 + n = 700$ $n + 500 = 650$ using strategies such as rewriting the equation, using related operations, using an open number line.	Addition Scale Algebraic thinking	Place Value in Intermediate (Fullerton, 2017)  • Estimating Number to 100: Missing Parts and Open Sentences (pp. 45-49)  Elementary and Middle School Mathematics (Van de Walle, 2022)  • p. 319  Good Questions 2-4 (Fullerton, 2018)

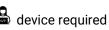














## **General Resources**

General Strategies and Routines	<ul> <li>Which One Doesn't Belong</li> <li>Dot Card and Number Talks</li> <li>Number Talk Images</li> <li>Coast Metro Math Project</li> </ul>	Esti-Mysteries  The Estimation Clipboard  Cube Conversations  Estimation  Math Applications	Week of Inspirational Math  Building Thinking Classrooms  Puzzles, Problems and Tasks  Supporting Numeracy in Early Years
Building Our Understanding	What is number sense?  Coast Metro Math Project  Concreteness Fading	Information on Counting  Spiraling the Curriculum  Progression of Multiplication  Progression of Division	Information on Place Value  Progression of Addition and Subtraction  Progression of Fractions  Building Math Fact Fluency
Classroom Assessment	- Ç Coast Metro Math Project	- Lisland Numeracy Assessment	- Assessing Curricular Competencies
Indigenous Connections	- Coast Metro Math Project	When Seagull Stole the Sun	-Ö-BC Numeracy Network
Planning	BC Numeracy Network  - Q  Math Year Plan For K-5	- Čritical Concepts Map	- 'Q'- 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.











