












# Grade Three – Suggested Math Instructional Resources



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here.





## 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	<p>Represent and <b>decompose</b> numbers to 1000.</p> <p>Count in various ways (by 2s, 3s, 4s, 5s, etc from different starting points up to 1000, ascending and descending).</p> <p>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).</p>	<p> <a href="#">Counting Collections</a></p> <p> <a href="#">Counting Collections</a></p> <p>Steve Wyborney:</p> <p> <a href="#">"Esti-Mysteries"</a></p> <p> <a href="#">"Estimation Clipboard"</a></p> <p> <a href="#">20 Days of Number Sense</a></p> <p> <a href="#">Number Concepts Grades 3 - 5</a></p> <p> <a href="#">3rd Grade Number Sense Routines</a></p> <p> <a href="#">Which One Doesn't Belong</a></p> <p> <a href="#">Dot Card and Number Talks</a></p> <p> <a href="#">Number Talk Images</a></p> <p>Games:</p> <p> <a href="#">Fill The Stairs</a></p>	<p><i>Messy Maths</i> (Robertson, 2016) Chapters 3 and 4</p> <ul style="list-style-type: none"> <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> </ul> <p><i>Place Value in Intermediate</i> (Fullerton, 2017)</p> <ul style="list-style-type: none"> <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> </ul> <p><i>Sums &amp; Differences: Grades 2 &amp; 3</i> (Fullerton, 2014)</p> <ul style="list-style-type: none"> <li>• Modeling Bigger Numbers Using Place Value (pp. 21-31)</li> </ul> <p><i>How Many? A Different Kind of Counting Book</i> (Danielson, 2018)</p>














 video
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  learning activity
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  strategies & routines
  device required

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Curricular Content	Curricular Competencies (The student can...)	Online Resources	Print Resources (all are available in the DLC or in schools)
		 <a href="#">Pig</a>  <a href="#">Don't Break the Bank</a>	<p><i>Elementary and Middle School Mathematics</i> (Van de Walle, 2022)</p> <ul style="list-style-type: none"> <li>• pp. 217-225</li> <li>• Chapter 9 (pp. 174-189)</li> </ul> <p><i>All Hands on Deck</i> (Felling, 2022)</p>
<p>Fraction concepts</p>	<p>Explain what a fraction is including concepts of equal shares/portions/part and that a fraction is a number that represents an amount.</p> <p>Uses concrete materials (cubes, pattern blocks, etc.) to <b>represent</b> simple fractions such as <math>\frac{1}{2}</math>, <math>\frac{1}{10}</math> and draw pictorial representations of fractions connected to a symbolic representation.</p>	 <a href="#">Fraction Talks</a>   <a href="#">Fraction Number Concepts</a>	<p><i>How Many? A Different Kind of Counting Book</i> (Danielson, 2018)</p> <p><i>Messy Maths</i> (Robertson, 2016) Chapters 3 and 4</p> <ul style="list-style-type: none"> <li>• Chapter 4 - Number Functions and Fractions (pp. 69-83)</li> <li>• Fractions in the Outdoor Space (p. 82)</li> <li>• Simple Sharing and Scoring Games (p. 83)</li> </ul> <p><i>Place Value in Intermediate</i> (Fullerton, 2017)</p> <ul style="list-style-type: none"> <li>• Thinking About Fractions: Cuisenaire Rods and Number Lines (pp. 151-156)</li> </ul> <p><i>Elementary and Middle School Mathematics</i> (Van de Walle, 2022)</p> <ul style="list-style-type: none"> <li>• Chapter 13 (pp. 332-338)</li> </ul> <p><i>Number Talks – Fractions, Decimals, and Percentages</i> (Parrish, 2016)</p> <ul style="list-style-type: none"> <li>• Chapter 4 (pp. 72-82)</li> </ul>








## Computational Fluency









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

Curricular Content	Curricular Competencies (The student can...)	Online Resources	Print Resources (all are available in the DLC or in schools)
Fluency with addition and subtraction facts	Develop <b>fact fluency</b> with most addition and subtraction facts to 20 (with efficiency, accuracy and flexibility).	<p>  <a href="#">Facts fluency resources &amp; strategies</a>   <a href="#">The difference between Number Talks and Number strings</a> </p> <p>  <a href="#">"Splats through 20 and Multiple Splats"</a>   <a href="#">Cuisenaire Rods Lessons</a>   <a href="#">Flower Petal Puzzle</a> </p> <p>  <a href="#">Bright Idea</a> </p> <p>Games:</p> <p>  <a href="#">Sum What</a>   <a href="#">Face Off</a>   <a href="#">Lucky 13</a>   <a href="#">How Many are Hiding</a> </p> <p>  <a href="#">Fluency with addition and subtraction</a> </p>	<p><i>Shuffling Into Math</i> (Felling, 2022)</p> <ul style="list-style-type: none"> <li>Subtraction Horse Race (pp. 48-51)</li> <li>Salute (pp. 67-70)</li> </ul> <p><i>Messy Maths</i> (Robertson, 2016) Chapters 3 and 4</p> <ul style="list-style-type: none"> <li>Exploring Numbers (pp. 47-67)</li> <li>Number Functions and Fractions (pp. 69-83)</li> <li>Subtraction (pp. 75-76)</li> <li>The Game of Nim (pp. 76-77)</li> </ul> <p><i>Elementary and Middle School Mathematics</i> (Van de Walle, 2022)</p> <ul style="list-style-type: none"> <li>Chapter 8 (pp. 146-156)</li> <li>Chapter 9 (pp. 174-189)</li> </ul> <p><i>Number Talks – Whole Number Computation</i> (Parrish, 2014)</p> <ul style="list-style-type: none"> <li>pp. 88-96</li> </ul> <p><i>All Hands on Deck</i> (Felling, 2022)</p> <ul style="list-style-type: none"> <li>Starting on p. 18</li> </ul> <p><i>Mastering the Facts: Addition</i> (Fullerton, 2020)</p>
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.	<p>  <a href="#">The Water Boy</a> </p> <p>Game:</p> <p>  <a href="#">Don't Break the Bank</a> </p>	<p><i>Shuffling Into Math</i> (Felling, 2022)</p> <ul style="list-style-type: none"> <li>Addition Baseball (pp. 91-95)</li> <li>Subtraction Baseball (pp. 96-102)</li> <li>Regrouping Scramble (pp. 103-104)</li> </ul>







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


























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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> <a href="#">Information on decomposing</a> by Janice Novakowski</p>	<p> <a href="#">Take it to the Bank</a></p> <p> <a href="#">Target 999</a></p> <p> <a href="#">Computational Fluency</a></p>	<p><i>Sums &amp; Differences: Grades 2 &amp; 3</i> (Fullerton, 2014)</p> <ul style="list-style-type: none"> <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> </ul> <p><i>Place Value in Intermediate</i> (Fullerton, 2017)</p> <ul style="list-style-type: none"> <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> </ul> <p><i>Elementary and Middle School Mathematics</i> (Van de Walle, 2022)</p> <ul style="list-style-type: none"> <li>• Chapter 11 (pp. 230-266)</li> </ul> <p><i>Number Talks – Whole Number Computation</i> (Parrish, 2014)</p> <ul style="list-style-type: none"> <li>• Chapter 5 (pp. 157-229)</li> </ul> <p><i>All Hands on Deck</i> (Felling, 2022)</p> <ul style="list-style-type: none"> <li>• Starting on p. 105</li> </ul>
Introduction to multiplication and division concepts	<p>Demonstrate an understanding of the processes and <a href="#">representations of multiplication</a> such as grouping, arrays and repeated addition using concrete and pictorial forms and symbols.</p> <p>Demonstrate an understanding of the</p>	<p>3 Act Tasks:</p> <p> <a href="#">Cover the Floor</a></p> <p> <a href="#">Fruit-Nut</a></p> <p> <a href="#">Sharing is Caring</a></p>	<p><i>Multiplicative Thinking</i> (Fullerton, 2015)</p> <ul style="list-style-type: none"> <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> </ul>

Curricular Content	Curricular Competencies (The student can...)	Online Resources	Print Resources (all are available in the DLC or in schools)
	<p>processes and <a href="#">representations of division</a> such as sharing, grouping, repeated subtraction and thinking about multiplication using concrete and pictorial forms and symbols.</p>	<p>Games:</p> <ul style="list-style-type: none"> <li> <a href="#">Circles and Stars</a></li> <li> <a href="#">Face Off</a></li> <li> <a href="#">Pepperoni Pizza</a></li> <li> <a href="#">Close to 100</a></li> <li> <a href="#">Math Cards</a></li> <li> <a href="#">Number concepts 100, multiplication and division concepts</a></li> </ul>	<ul style="list-style-type: none"> <li>• Exploring “Groups of” Creating and Solving Word Problems (pp. 29-34)</li> </ul> <p><i>Messy Maths</i> (Robertson, 2016) Chapters 3 and 4</p> <ul style="list-style-type: none"> <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> </ul> <p><i>Elementary and Middle School Mathematics</i> (Van de Walle, 2022)</p> <ul style="list-style-type: none"> <li>• Chapter 12 (pp. 267-292)</li> </ul>
<p>One-step equations with an unknown number</p>	<p>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 <math>30 + n = 65</math> or <math>289 - n = 120</math>.</p> <p>Solve equations with the unknown number in different spots such as:  <math>200 + 30 = n</math>     <math>450 + n = 700</math>     <math>n + 500 = 650</math>            using strategies such as rewriting the equation, using related operations, using an open number line.</p>	<ul style="list-style-type: none"> <li> <a href="#">Addition Scale</a></li> <li> <a href="#">Algebraic thinking</a></li> </ul>	<p><i>Place Value in Intermediate</i> (Fullerton, 2017)</p> <ul style="list-style-type: none"> <li>• Estimating Number to 100: Missing Parts and Open Sentences (pp. 45-49)</li> </ul> <p><i>Elementary and Middle School Mathematics</i> (Van de Walle, 2022)</p> <ul style="list-style-type: none"> <li>• p. 319</li> </ul> <p><i>Good Questions 2-4</i> (Fullerton, 2018)</p>

### General Resources

<p>General Strategies and Routines</p>	<ul style="list-style-type: none"> <li> <a href="#">Which One Doesn't Belong</a></li> <li> <a href="#">Dot Card and Number Talks</a></li> </ul>	<ul style="list-style-type: none"> <li> <a href="#">Esti-Mysteries</a></li> <li> <a href="#">The Estimation Clipboard</a></li> </ul>	<ul style="list-style-type: none"> <li> <a href="#">Week of Inspirational Math</a></li> <li> <a href="#">Building Thinking Classrooms</a></li> </ul>
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	 <a href="#">Number Talk Images</a>  <a href="#">Coast Metro Math Project</a>	 <a href="#">Cube Conversations</a>  <a href="#">Estimation</a>  <a href="#">Math Applications</a>	 <a href="#">Puzzles, Problems and Tasks</a>  <a href="#">Supporting Numeracy in Early Years</a>
Building Our Understanding	 <a href="#">What is number sense?</a>  <a href="#">Coast Metro Math Project</a>  <a href="#">Concreteness Fading</a>	 <a href="#">Information on Counting</a>  <a href="#">Spiraling the Curriculum</a>  <a href="#">Progression of Multiplication</a>  <a href="#">Progression of Division</a>	 <a href="#">Information on Place Value</a>  <a href="#">Progression of Addition and Subtraction</a>  <a href="#">Progression of Fractions</a>  <a href="#">Building Math Fact Fluency</a>
Classroom Assessment	 <a href="#">Coast Metro Math Project</a>	 <a href="#">Island Numeracy Assessment</a>	 <a href="#">Assessing Curricular Competencies</a>
Indigenous Connections	 <a href="#">Coast Metro Math Project</a>	 <a href="#">When Seagull Stole the Sun</a>	 <a href="#">BC Numeracy Network</a>
Planning	 <a href="#">BC Numeracy Network</a>  <a href="#">Math Year Plan For K-5</a>  <a href="#">BCED K-4 Math progressions</a>	 <a href="#">Critical Concepts Map</a>  <a href="#">Coast Metro Math Year at a Glance</a>  <a href="#">BCED Gr.3 Math progressions</a>	 <a href="#">Planning - Year, Week, Day</a>  <a href="#">Coast Metro Math Practice Questions</a>

**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.**