

Grade 3: Primary Mathematics 2022 Video Correlation

Videos are a great way to support both students and educators with content. Check out the descriptions here to see what videos are available as part of the paying membership for [Jessica Kaminski's Teaching and Learning Library](#). Primary Mathematics 2022 videos will now be held in the new Teachable course format! Check your email as an existing member for information or [sign up here](#) as a new member!

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These videos are not aligned to the specific lesson in the book. Instead they are designed to be used as a preview of the task, remediation or as professional development for the educator. You can learn more about that in the 4C Math Mastery Model Course included in your yearly subscription. However, this year there are now specific videos for Primary Mathematics 2022. These are highlighted by PM Exclusive and match the problem in the textbook directly.

Chapters	Student Concept Videos	Educator Concept Videos
		• Concrete-Pictorial- Abstract • 3rd and 4th Grade Manipulatives • Bar Models

1- Numbers to 10,000	1A Place Value • COLLABORATE: Place Value of 4-Digit Numbers • COMPREHEND: PM Exclusive: Expanded Form of 4-Digit Numbers (THINK! pg. 10) 1B Compare and Order Numbers • COMMUNICATE: Comparing 4-Digit Numbers Using Base Ten Blocks 1C Number Patterns • COMMUNICATE: 4-Digit Number Patterns • COLLABORATE: Adding 1 More, 10 More, 100 More or 1000 More to 4-Digit Numbers • COMPREHEND: PM Exclusive: 4-Digit Number Patterns and Place Value (THINK! pg. 20) 1D Rounding Numbers • COMMUNICATE: Rounding and Place Value • COMPREHEND: PM Exclusive: Rounding Numbers to the Nearest Ten (THINK pg. 26) • COMPREHEND: PM Exclusive: Rounding Numbers to the Nearest Hundred (THINK! Pg. 26) Performance Task • PM Exclusive: Place Value Performance Task	This is a mastery based chapter. Students should review place value skills from Grade 2 and apply them to a new place value. By the end of this chapter, students should be able to: • read and write numbers to 10,000 by telling the place value of each digit. • compare and order numbers within 10,000. • round numbers to the nearest ten or hundred. • mentally add or subtract 1, 10, 100 or 1,000 to a given number. • locate numbers on a number line.
2- Addition and Subtraction within 10,000	2A Addition and Subtraction within 1,000 (1) • COMMUNICATE: Adding 3-Digit Numbers with Regrouping in the Ones 2A Addition and Subtraction within 1,000 (2) • COMMUNICATE: Subtracting with Regrouping in Tens and Ones • COLLABORATE: Understanding Sum and Difference 2B Addition and Subtraction within 10,000 (1) • COMMUNICATE: Addition within 10000 without Regrouping Using Base Ten Blocks • COMPREHEND: PM Exclusive: Adding 3 and 4-Digit Numbers without Renaming (THINK pg. 50) 2B Addition and Subtraction within 10,000 (2) • REVIEW: Renaming Numbers	• Developing Addition Algorithms • Developing Subtraction Algorithms This is a mastery chapter. Students should work carefully in this chapter to truly master addition and

	2B Addition and Subtraction within 10,000 (3) • COMMUNICATE: Subtract within 10,000 without Regrouping Using Base Ten Blocks • COMPREHEND: PM Exclusive: Subtract 4-Digit Numbers without Renaming (THINK pg. 58) 2B Addition and Subtraction within 10,000 (4) • COLLABORATE: Subtraction Across Zero Using Base Ten Blocks • COMPREHEND: PM Exclusive: Subtracting 4-Digit Numbers with Renaming (THINK pg. 62) 2C Other Addition and Subtraction Strategies (1) • COLLABORATE: Add 3-Digit Numbers Mentally Using a Number Line 2C Other Addition and Subtraction Strategies (2) • COLLABORATE: Add 2-Digit Numbers Mentally Using Compensation 2C Other Addition and Subtraction Strategies (3) • COLLABORATE: Subtract 3-Digit Numbers Mentally Using a Number Line 2C Other Addition and Subtraction Strategies (4) • COLLABORATE: Subtract 2-Digit Numbers Mentally Using Compensation 2D Word Problems • COLLABORATE: Compare Using Fewer: Difference Unknown: Challenge • COLLABORATE: Compare Using More: Bigger Unknown: Challenge • COLLABORATE: Compare Using Fewer: Smaller Unknown: Challenge • COLLABORATE: Compare Using More: Smaller Unknown: Challenge • COMPREHEND: PM Exclusive: Solving Multi-Step Addition and Subtraction Word Problems (THINK pg. 78) Chapter Practice • PM Exclusive: Missing Digits in 4-Digit Subtraction (Chapter Practice #10 pg. 86)	subtraction. By the end of this chapter, students should be able to: • add and subtract numbers within 1,000 fluently. • use estimation strategies to assess the reasonableness of an answer. • add and subtract within 10,000 using the standard algorithm. • add and subtract within 1,000 using a number line. • solve one and two-step word problems using bar models. • draw bar models to show operations.
3-	3A Multiplication (1)	• Number Bonds to Multiply

Multiplication and Division	• COMMUNICATE: Understanding Concepts of Multiplication • COMPREHEND: PM Exclusive: The Meaning of Multiplication (THINK pg. 92) 3A Multiplication (2) 3B Multiply by 2 (1) 3B Multiply by 2 (2) • COMPREHEND: PM Exclusive: Patterns When Multiplying by 2 (THINK pg. 104) 3C Multiply by 5 3D Multiply by 10 • COMPREHEND: PM Exclusive: Patterns when Multiplying by 10 (THINK pg. 114) 3E Multiply by 3 (1) 3E Multiply by 3 (2) 3F Multiply by 4 (1) • COMPREHEND: PM Exclusive: Commutative Property of Multiplication (THINK pg. 126) 3F Multiply by 4 (2) 3G Word Problems • COLLABORATE: Equal Groups: Unknown Product: Show It • COLLABORATE: Equal Groups: Unknown Product: Build It • COMPREHEND: PM Exclusive: Mult. Word Problems Grade 3 (THINK pg. 134) 3H Division (1) • COMMUNICATE: Understanding Concepts of Division 3H Division (2) • COMMUNICATE: Understanding Concepts of Division 3I Divide by 2 3J Divide by 5 • COMPREHEND: PM Exclusive: Division of 20 (THINK pg. 150) 3K Divide by 10 • COMPREHEND: PM Exclusive: Patterns When Dividing by 5 and 10 (THINK pg. 154) 3L Divide by 3 • COMPREHEND: PM Exclusive: Division Puzzles	• Multiplication Subitizing • Visual Multiplication Fact Fluency Strategies This chapter is a mastery-based chapter, BUT students have until the end of the year to fully master the math facts. Students will continue to use these facts in the next chapter and in the B book. By the end of this chapter, students will be able to: • multiply using equal groups, arrays and related facts. • multiply fluently by 2s, 5s and 10s. • use related facts to multiply by 3s and 4s. • find patterns in a table and explain why they work. • solve one-step multiplication word problems using bar models. • understand the two meanings of division. • divide by 2s, 5s, 10s, 3s and 4s using related multiplication fact. • solve one-step division word problems using bar models. • use bar models to represent operations.
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	(THINK pg. 158) 3M Divide by 4 • COMPREHEND: PM Exclusive: Dividing by 4 (THINK pg. 162) 3N Word Problems (1) • COLLABORATE: Equal Groups: Group Size Unknown: Build It 3N Word Problems (2) • COLLABORATE: Equal Groups: Number of Groups Unknown: Build It • COMPREHEND: PM Exclusive: Division Word Problems 3rd Grade (THINK pg. 170) Heuristics • PM Exclusive: Look for a Pattern 3rd Grade (pg. 179)	
4- Multiplication of 6, 7, 8 and 9	4A Multiply and Divide by 6 (1) • COMPREHEND: PM Exclusive: Patterns When Multiplying by 6 (THINK pg. 190) 4A Multiply and Divide by 6 (2) 4A Multiply and Divide by 6 (3) 4B Multiply and Divide by 7 (1) • COMPREHEND: PM Exclusive: Patterns When Multiplying by 7 (THINK pg. 204) 4B Multiply and Divide by 7 (2) • COMPREHEND: PM Exclusive: Multiplying and Dividing by 7 (THINK pg. 208) 4B Multiply and Divide by 7 (3) • COLLABORATE: Equal Groups: Group Size Unknown: Show It 4C Multiply and Divide by 8 (1) • COLLABORATE: Using Known Facts to Find New Facts (use first problem Lesson 8) • COMPREHEND: PM Exclusive: Patterns When Multiplying by 8 (THINK pg. 218) 4C Multiply and Divide by 8 (2) 4C Multiply and Divide by 8 (3) • COLLABORATE: Equal Groups: Number of Groups Unknown: Show It 4D Multiply and Divide by 9 (1)	• Number Bonds to Multiply • Multiplication Subitizing • Visual Multiplication Fact Fluency Strategies • Different Forms of Multiplication Algorithms This chapter is considered developing mastery. By the end of Grade 3, students should use a strategy to recall these facts quickly. Continue working on these facts all year long. By the end of the chapter, students will be able to: • multiply and divide by 6, 7, 8 and 9. • use drawings to solve word problems involving multiplication and division of 6, 7, 8, and 9.

• COLLABORATE: Using Known Facts to Find New Facts (use 2nd problem Lesson 11) 4D Multiply and Divide by 9 (2) • COMPREHEND: PM Exclusive: Dividing Zero by 9 (THINK pg. 234) 4D Multiply and Divide by 9 (3) 4E Multiply by Tens • COMPREHEND: PM Exclusive: Multiply by Tens (THINK pg. 241) • COMPREHEND: PM Exclusive: Multiplying by Multiples of Ten (THINK pg. 241) 4F Multiply a 2-Digit Number by a 1-Digit Number • COMMUNICATE: Multiply a 2-Digit Number by a 1-Digit Number without Regrouping • COLLABORATE: Area Models for 2-Digit by 1-Digit Multiplication 4G Word Problems (1) 4G Word Problems (2) • COLLABORATE: Equal Groups: Unknown Product: Challenge • COLLABORATE: Equal Groups: Group Size Unknown: Challenge • COLLABORATE: Equal Groups: Number of Groups Unknown: Challenge • COLLABORATE: Using All Four Operations to Solve Word Problems Grade 3 Chapter 4 Performance Task • PM Exclusive: pg. 357 Heuristics • PM Exclusive: Guess and Check (pg.265)	• multiply a 1-digit number by tens. • multiply a 1-digit number by a 2-digit number. • Solve 2-step and 2-part word problems using all four operations.
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5- Time	5A Hours and Minutes (1) • COMMUNICATE: Using the Clock to Tell Time 5A Hours and Minutes (2) • COLLABORATE: Converting Hours to Minutes • COLLABORATE: Converting Minutes to Hours 5B Word Problems (1) • COMMUNICATE: Finding Duration Using a Timeline • COMPREHEND: PM Exclusive: Calculating the Duration in Minutes (THINK pg. 280) 5B Word Problems (2) • COMMUNICATE: Finding End Time Using a Timeline • COMPREHEND: PM Exclusive: Discovering the Start Time (THINK pg. 284)	This is a mastery based chapter. Students should be able to read time well by the end of this chapter and be able to calculate duration. By the end of this chapter, students should be able to: • tell, read and write the time to the nearest minute. • find the duration. • solve word problems involving duration using a timeline. • solve word problems involving the start time or end time.
6- Area and Perimeter	6A Area (1) • COMMUNICATE: Understanding Area • COLLABORATE: Finding Area with Square Units • COLLABORATE: Finding Area with Half Squares • COMPREHEND: PM Exclusive: Comparing Area with Square Units (THINK pg. 10) 6A Area (2) 6A Area (3) • COMPREHEND: PM Exclusive: Area in Square Meters (THINK pg. 22) 6B Area of Squares and Rectangles • COMMUNICATE: Understanding Area • COMPREHEND: PM Exclusive: Using Formulas to Find Area (THINK! Pg. 28) 6C Perimeter (1) • COMMUNICATE: Finding Perimeter • COLLABORATE: Finding Perimeter Using Square Units	This is an introductory chapter to area and perimeter. It's an opportunity for students to practice their math facts in a new way. They will revisit and master in Grade 4. By the end of the chapter, students will be able to:

	6C Perimeter (2) • COMPREHEND: PM Exclusive: Finding Perimeter Using Formulas (THINK pg. 36) 6D Composite Figures • COMMUNICATE: Finding the Area of Composite Figures 6E Word Problems • COLLABORATE: How are Area and Perimeter Related? • COLLABORATE: Arrays and Area Models: Unknown Product: Show It Heuristics • PM Exclusive: Make a Supposition (pg.57)	• find the area of figures using square units. • compare the area of square units. • explore other forms of square units: square centimeters, square feet, square inches, square meters, and square yards. • find the area of rectangles and squares using side length. • find the perimeter of shapes. • find unknown side length of figures given the area. • solve real world problems involving area and perimeter. • find the area of composite figures.
7- Fractions	7A Unit Fractions • COMPREHEND: PM Exclusive: Dividing a Square Into Equal Parts (THINK pg. 70) 7B More Fractions • COMMUNICATE: What is a Fraction? • COLLABORATE: Fractions Make One Whole 7C Fractions Greater Than 1 • COMPREHEND: PM Exclusive: Fractions Greater Than 1 Whole (THINK pg. 82) 7D Compare and Order Fractions (1) • COLLABORATE: PM Exclusive: Compare Fractions with Like Denominators (pg. 84 #1) • COLLABORATE: PM Exclusive: Compare Fractions with Like Numerators (pg. 84 #2) • COMPREHEND: PM Exclusive: Comparing Unit Fractions (THINK pg. 86 #4) • COMPREHEND: PM Exclusive: Comparing Different Sized Wholes (THINK pg. 86 #5) 7D Compare and Order Fractions (2) • COLLABORATE: PM Exclusive: Compare and Order 3 Unit Fractions (pg. 89 #2) • COMPREHEND: PM Exclusive: Compare and Order Like Numerators (THINK pg. 90) 7E Equivalent Fractions • COMMUNICATE: What are Equivalent Fractions? 7F Fractions on a Number Line	This is an introduction to fully understand fractions and how they represent parts of a whole. Spend time using fraction materials to truly understand fractions. By the end of the chapter, students will be able to: • read, write and identify unit fractions and fractions as part of a whole. • read, write and identify fractions that are greater than 1 whole. • compare like and unit fractions and fractions with the same numerator. • identify, find and show equivalent fractions. • identify fractions of a set.

	• COMMUNICATE: Representing Fractions on a Number Line (Use first part of video) • COLLABORATE: Finding Equivalent Fractions on a Number Line • COMPREHEND: PM Exclusive: Equivalent Fractions on a Number Line (THINK pg. 100) 7G Fractions of a Set • COMMUNICATE: PM Exclusive: Describing Fraction of a Set (pg. 101) • COLLABORATE: Finding Fraction of a Set Using Models • COMPREHEND: PM Exclusive: Fraction of a Set (THINK pg. 106) Chapter Practice • PM Exclusive: Fraction of a Whole (#16)	
8- Mass and Liquid Volume	8A Measure Mass in Kilograms • COMMUNICATE: Measuring in Kilograms • COLLABORATE: Reading Kilogram Scales • COMPREHEND: PM Exclusive: Finding the Mass by Removing Items (THINK pg.124) 8B Measure Mass in Grams • COMMUNICATE: Measuring in Grams • COLLABORATE: Reading Gram Scales 8C Measure Volume in Liters • COMMUNICATE: Finding Capacity and Volume • COLLABORATE: Measuring in Liters 8D Word Problems Chapter Practice • PM Exclusive: Finding the Mass by Comparing Two Scales Heuristics • PM Exclusive: Act It Out (pg 147)	This is a measurement chapter that is expected to mastery for the understanding of units. However, measurement will be reviewed in Grade 4. By the end of this chapter, students will be able to: • measure and estimate the mass of objects to the nearest kilogram or gram. • measure and estimate liquid volumes to the nearest liter. • compare capacities. • solve word problems involving mass and liquid volume.

9- Data	9A Picture Graphs • COMMUNICATE: Using a Scale in a Picture Graph 9B Bar Graphs • COMMUNICATE: PM Exclusive: Reading Bar Graphs with Scales (pg. 160) 9C Line Plots • COMMUNICATE: Measure to the Nearest Quarter Inch • COMMUNICATE: Reading and Interpreting a Line Plot with Fractions • COMPREHEND: PM Exclusive: Reading a Line Plot (THINK pg. 174) Heuristics • PM Exclusive: Make a List (pg. 185)	This is a mastery-based chapter. Students should understand picture graphs and bar graphs. Measuring and using line plots will be new. By the end of the chapter, students will be able to: • read, interpret, and create picture graphs and bar graphs. • generate and measure data by making line plots. • interpret line plots.
10- Shapes	10A Angles and Shapes (1) • COMMUNICATE: What is an Angle? • COMPREHEND: PM Exclusive: Describing Triangle by their Angles (THINK pg. 194) 10A Angles and Shapes (2) • COMMUNICATE: Exploring Quadrilaterals	This is an introductory chapter to right angles and identifying angles. Students will consider other ways to name shapes. By the end of the chapter, students will be able to: • identify right angles and angles that are smaller or bigger than right angles. • identify right triangles.

		• categorize quadrilaterals.
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