



Second Grade Math Pacing Guide 2017-2018

First Nine Weeks		
Standard	Standard Description	Envision Topic
Operations and Algebraic Thinking (OA)		
Represent and solve problems involving addition and subtraction		
2.OA.1	Use addition and subtraction within 100 to solve one- and two-step word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.	T1, T2, T3, T4, T5
Add and subtract within 20		
2.OA.2	<u>Fluently</u> add and subtract within 20 using mental strategies. By end of Grade 2, know from memory all sums of two one-digit numbers.	T2, T3
Work with equal groups of objects to gain foundations for multiplication		
2.OA.3	Determine whether a group of objects (up to 20) has an odd or even number of members, e.g., by pairing objects or counting them by 2s; write an equation to represent an even number as a sum of two equal addends.	T5
2.OA.4	Use addition to find the total number of objects arranged in rectangular arrays with up to 5 rows and 5 columns; write an equation to express the total as a sum of equal addends.	T4, T5
Number and Operations in Base Ten (NBT)		
Understand place value		
2.NBT.1	Understand that the three digits of a three-digit number represent amounts of hundreds, tens, and ones; e.g., 706 equals 7 hundreds, 0 tens, and 6 ones. Understand the following as special cases: a. 100 can be thought of as a bundle of ten tens – called a “hundred.” b. The numbers 100, 200, 300, 400, 500, 600, 700, 800, 900 refer to one, two, three, four, five, six, seven, eight, or nine hundreds (and 0 tens and 0 ones).	T5
2.NBT.2	Count within 1000; skip-count by 5s, starting at any number ending in 5 or 0. Skip-count by 10s and 100s, starting at any number.	T5
2.NBT.3	Read and write numbers to 1000 using base-ten numerals, number names, and expanded form.	T5
2.NBT.4	Compare two three-digit numbers based on meanings of the hundreds, tens, and ones digits, using $>$, $=$, and $<$ symbols to record the results of the comparisons.	T5
Use place value understanding and properties of operations to add and subtract		
2.NBT.5	<u>Fluently</u> add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.	T1, T2, T3, T5
2.NBT.6	Add up to four two-digit numbers using strategies based on place value and properties of operations.	T5
2.NBT.9	Explain why addition and subtraction strategies work, using place value and the properties of operations.	T2, T3, T5

Envision Math Chapters (Topics) 1 – 5

Second Nine Weeks

Standard	Standard Description	Envision Topic
Operations and Algebraic Thinking (OA)		
Represent and solve problems involving addition and subtraction		
2.OA.1	Use addition and subtraction within 100 to solve one- and two-step word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.	T6, T7, T8, T9
Number and Operations in Base Ten (NBT)		
Understand place value		
2.NBT.1	Understand that the three digits of a three-digit number represent amounts of hundreds, tens, and ones; e.g., 706 equals 7 hundreds, 0 tens, and 6 ones. Understand the following as special cases: a. 100 can be thought of as a bundle of ten tens – called a “hundred.” b. The numbers 100, 200, 300, 400, 500, 600, 700, 800, 900 refer to one, two, three, four, five, six, seven, eight, or nine hundreds (and 0 tens and 0 ones).	T10
2.NBT.2	Count within 1000; skip-count by 5s, starting at any number ending in 5 or 0. Skip-count by 10s and 100s, starting at any number.	T6, T10
2.NBT.3	Read and write numbers to 1000 using base-ten numerals, number names, and expanded form.	T10
2.NBT.4	Compare two three-digit numbers based on meanings of the hundreds, tens, and ones digits, using >, =, and < symbols to record the results of the comparisons.	T10
Use place value understanding and properties of operations to add and subtract		
2.NBT.5	Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.	T6, T7, T8, T9
2.NBT.6	Add up to four two-digit numbers using strategies based on place value and properties of operations.	T8, T9
2.NBT.7	Add and subtract within 1000, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method. Understand that in adding or subtracting three-digit numbers, one adds or subtracts hundreds and hundreds, tens and tens, ones and ones; and sometimes it is necessary to compose or decompose tens or hundreds.	T7
2.NBT.8	Mentally add 10 or 100 to a given number 100-900, and mentally subtract 10 or 100 from a given number 100-900.	T6, T7, T10
2.NBT.9	Explain why addition and subtraction strategies work, using place value and the properties of operations.	T6, T7, T8, T9
Measurement and Data (MD)		
Relate addition and subtraction to length		
2.MD.6	Represent whole numbers as lengths from 0 on a number line diagram with equally spaced points corresponding to the numbers 0, 1, 2, ..., and represent whole-number sums and differences within 100 on a number line diagram.	T8, T9

Envision Math Chapters (Topics) 6 – 10

Third Nine Weeks		
Standard	Standard Description	Envision Topic
Number and Operations in Base Ten (NBT)		
Use place value understanding and properties of operations to add and subtract		
2.NBT.5	Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.	T14
2.NBT.7	Add and subtract within 1000, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method. Understand that in adding or subtracting three-digit numbers, one adds or subtracts hundreds and hundreds, tens and tens, ones and ones; and sometimes it is necessary to compose or decompose tens or hundreds.	T11
2.NBT.8	Mentally add 10 or 100 to a given number 100-900, and mentally subtract 10 or 100 from a given number 100-900.	T11
2.NBT.9	Explain why addition and subtraction strategies work, using place value and the properties of operations.	T11, T14
Geometry (G)		
Reason with shapes and their attributes		
2.G.1	Recognize and draw shapes having specified attributes, such as a given number of angles or a given number of equal faces. Identify triangles, quadrilaterals, pentagons, hexagons, and cubes.	T12
2.G.2	Partition a rectangle into rows and columns of same-size squares and count to find the total number of them.	T12
2.G.3	Partition circles and rectangles into two, three, or four equal shares, describe the shares using the words halves, thirds, half of, a third of, etc., and describe the whole as two halves, three thirds, four fourths. Recognize that equal shares of identical wholes need not have the same shape.	T12
Measurement and Data (MD)		
Work with time with respect to a clock and a calendar, and work with money		
2.MD.8a	Solve word problems involving dollar bills, quarters, dimes, nickels, and pennies, using \$ and cents symbols appropriately. Example: If you have 2 dimes and 3 pennies, how many cents do you have?	T13, T14
2.MD.8b	Fluently use a calendar to answer simple real world problems such as “How many weeks are in a year?” or “James gets a \$5 allowance every 2 months, how much money will he have at the end of each year?”	Integrated

Envision Math Chapter (Topics) 11 – 14

Fourth Nine Weeks		
Standard	Standard Description	Envision Topic
Measurement and Data (MD)		
Measure and estimate lengths in standard units		
2.MD.1	Measure the length of an object by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes.	T15
2.MD.2	Measure the length of an object twice using length units of different lengths for the two measurements; describe how the two measurements relate to the size of the unit chosen.	T15
2.MD.3	Estimate lengths using units of inches, feet, centimeters, and meters.	T15
2.MD.4	Measure to determine how much longer one object is than another, expressing the length difference in terms of a standard length unit.	T15
Relate addition and subtraction to length		
2.MD.5	Use addition and subtraction within 100 to solve word problems involving lengths that are given in the same units, e.g., by using drawings (such as drawings of rulers) and equations with a symbol for the unknown number to represent the problem.	T15
Work with time with respect to a clock and a calendar, and work with money		
2.MD.7	Tell and write time from analog and digital clocks to the nearest five minutes, using a.m. and p.m.	T16
Represent and interpret data		
2.MD.9	Generate measurement data by measuring lengths of several objects to the nearest whole unit, or by making repeated measurements of the same object. Show the measurements by making a line plot, where the horizontal scale is marked off in whole number units.	T16
2.MD.10	Draw a picture graph and a bar graph (with single-unit scale) to represent a data set with up to four categories. Solve simple put-together, take-apart, and compare problems using information presented in a bar graph.	T16

Envision Math Chapters (Topics) 15 – 16

envision Math Common Core Edition					Ready Mathematics 2016
Topic	Topic Name	Lesson	Lesson Title	Alignment	Recommended Lesson Sequencing
Topic 1	Understanding Addition and Subtraction	1-1	Writing Addition Number Sentences	2.OA.1	Lesson 1: <i>Understand Mental Math Strategies (Fact Families)</i> (2.OA.8.2) Lesson 2: Solve One-Step Word Problems (2.OA.A.1) Math in Action: Use Equal Groups and Add (2.OA.A.1, 2.OA.B.2, 2.OA.C.3, 2.OA.C.4, 2.NBT.A.2, 2.NBT.8.5)
		1-2	Stories About Joining	2.OA.1	
		1-3	Writing Subtraction Number Sentences	2.OA.1	
		1-4	Stories About Separating	2.OA.1	
		1-5	Stories About Comparing	2.OA.1	
		1-6	Connecting Addition and Subtraction	2.OA.1	
		1-7	Problem Solving: Use Objects	2.OA.1	
Topic 2	Addition Strategies	2-1	Adding 0, 1, 2	2.OA.1	Lesson 2: Solve One-Step Word Problems (2.OA.A.1) Lesson 3: <i>Understand Mental Math Strategies (Make a Ten)</i> (2.OA.B.2) Math in Action: Use Equal Groups and Add (2.OA.A.1, 2.OA.B.2, 2.OA.C.3, 2.OA.C.4, 2.NBT.A.2, 2.NBT.B.5)
		2-2	Doubles	2.OA.1	
		2-3	Near Doubles	2.OA.1	
		2-4	Adding in Any Order	2.OA.1	
		2-5	Adding Three Numbers	2.OA.1	
		2-6	Making 10 to Add	2.OA.2	
		2-7	Problem Solving: Draw a Picture & Write a Number Sentence	2.OA.1	
Topic 3	Subtraction Strategies	3-1	Subtracting 0, 1, 2	2.OA.1	Lesson 2: Solve One-Step Word Problems (2.OA.A.1) Lesson 3: <i>Understand Mental Math Strategies (Make a Ten)</i> (2.OA.B.2) Math in Action: Use Equal Groups and Add (2.OA.A.1, 2.OA.B.2, 2.OA.C.3, 2.OA.C.4, 2.NBT.A.2, 2.NBT.B.5)
		3-2	Thinking Addition to Subtract Doubles	2.OA.1	
		3-3	Thinking Addition to 10 to Subtract	2.OA.1	
		3-4	Thinking Addition to 18 to Subtract	2.OA.1	
		3-5	Making 10 to Subtract	2.OA.1	
		3-6	Problem Solving: Two-Question Problems	2.OA.2	
Topic 4	Working with Equal Groups	4-1	Repeated Addition	2.OA.4	Lesson 5: Add Using Arrays (2.NBT.A.2, 2.OA.C.4) Math in Action: Use Equal Groups and Add (2.OA.A.1, 2.OA.B.2, 2.OA.C.3, 2.OA.C.4, 2.NBT.A.2, 2.NBT.B.5)
		4-2	Building Arrays	2.OA.4	
		4-3	Practicing Repeated Addition	2.OA.4	
		4-4	Problem Solving: Draw a Picture & Write a Number Sentence	2.OA.1	
Topic 5	Place Value to 100	5-1	Models for Tens and Ones	2.NBT.1.a	Lesson 4: <i>Understand Even and Odd Numbers</i> (2.NBT.A.2, 2.OA.C.3) Math in Action: Add, Subtract, and Compare Numbers (2.NBT.A.2, 2.NBT.A.3, 2.NBT.A.4, 2.NBT.B.5, 2.NBT.B.6, 2.NBT.B.7)
		5-2	Reading and Writing Numbers	2.NBT.3	
		5-3	Using Symbols to Compare Numbers	2.NBT.4	
		5-4	Counting to 100	2.NBT.2	
		5-5	More or 10 less	2.NBT.5	
		5-6	Even and Odd Numbers	2.OA.3	
		5-7	Problem Solving: Use Data from a Chart	2.NBT.5	

Topic 8	Adding Two-Digit Numbers	8-1	Regrouping 10 Ones from 1 Ten	2.NBT.5	Lesson 7: Add Two-Digit Numbers (2.NBT.A.2, 2.NBT.B.5, 2.NBT.B.8) Lesson 9: Solve One-Step Word Problems With Two-Digit Numbers (2.NBT.B.5, 2.OA.A.1) Lesson 15: Add Several Two-Digit Numbers (2.NBT.B.6) Lesson 21: Add and Subtract Lengths (2.MD.B.6, 2.OA.A.1) Math in Action: Add, Subtract, and Compare Numbers (2.NBT.A.1, 2.NBT.A.3, 2.NBT.A.4, 2.NBT.B.5, 2.NBT.B.6, 2.NBT.B.7)
		8-2	Models to Add Two- and One-Digit Numbers	2.NBT.5	
		8-3	Adding Two- and One-Digit Numbers	2.NBT.5	
		8-4	Models to Add Two-Digit Numbers	2.NBT.5	
		8-5	Adding Two-Digit Numbers	2.NBT.5	
		8-6	Adding on a Number Line	2.MD.6	
		8-7	Adding More than Two Numbers	2.NBT.6	
		8-8	Ways to Add	2.NBT.5	
		8-9	Problem Solving: Draw a Picture & Write a Number Sentence	2.NBT.5	
Topic 9	Subtracting Two-Digit Numbers	9-1	Regrouping 1 Ten for 10 Ones	2.NBT.5	Lesson 6: Solve Two-Step Word Problems (2.OA.A.1) Lesson 8: Subtract Two-Digit Numbers (2.NBT.A.2, 2.NBT.B.5, 2.NBT.B.8) Lesson 21: Add and Subtract Lengths (2.MD.B.6, 2.OA.A.1) Math in Action: Use Equal Groups and Add (2.OA.A.1, 2.OA.B.2, 2.OA.C.3, 2.OA.C.4, 2.NBT.A.2, 2.NBT.B.5) Math in Action: Add, Subtract, and Compare Numbers (2.NBT.A.1, 2.NBT.A.3, 2.NBT.A.4, 2.NBT.B.5, 2.NBT.B.6, 2.NBT.B.7)
		9-2	Models to Subtract Two- and One-Digit Numbers	2.NBT.5	
		9-3	Subtracting Two- and One-Digit Numbers	2.NBT.5	
		9-4	Models to Subtract Two-Digit Numbers	2.NBT.5	
		9-5	Subtracting Two-Digit Numbers	2.NBT.5	
		9-6	Subtracting on a Number Line	2.MD.6	
		9-7	Using Addition to Check Subtraction	2.NBT.5	
		9-8	Ways to Subtract	2.NBT.5	
		9-9	Problem Solving: Two-Question Problems	2.NBT.5	
Topic 10	Place Value to 1,000	10-1	Building 1,000	2.NBT.1.b	Lesson 10: Understand Three-Digit Numbers (2.NBT.A.1a, 2.NBT.A.1b, 2.NBT.A.2) Lesson 11: Read and Write Three-Digit Numbers (2.NBT.A.3) Lesson 12: Compare Three-Digit Numbers (2.NBT.A.4) Math in Action: Add, Subtract, and Compare Numbers (2.NBT.A.1, 2.NBT.A.3, 2.NBT.A.4, 2.NBT.B.5, 2.NBT.B.6, 2.NBT.B.7)
		10-2	Counting Hundreds, Tens, and Ones	2.NBT.1	
		10-3	Reading and Writing Numbers to 1,000	2.NBT.3	
		10-4	Changing Numbers by Hundreds and Tens	2.NBT.8	
		10-5	Patterns with Numbers on Hundreds Charts	2.NBT.2	
		10-6	Skip Counting by 5, 10, 100 to 1,000	2.NBT.2	
		10-7	Comparing Numbers	2.NBT.4	
		10-8	Ordering Numbers	2.NBT.4	
		10-9	Problem Solving: Look for a Pattern	2.NBT.2	
Topic 11	Three-Digit Addition and Subtraction	11-1	Exploring Adding Three-Digit Numbers	2.NBT.7	Lesson 13: Add Three-Digit Numbers (2.NBT.B.7, 2.NBT.B.9) Lesson 14: Subtract Three-Digit Numbers (2.NBT.B.7, 2.NBT.B.9) Math in Action: Add, Subtract, and Compare Numbers (2.NBT.A.2, 2.NBT.A.3, 2.NBT.A.4, 2.NBT.B.5, 2.NBT.B.6, 2.NBT.B.7)
		11-2	Mental Math	2.NBT.7	
		11-3	Models for Adding with Three-Digit Numbers	2.NBT.9	
		11-4	Adding Three-Digit Numbers	2.NBT.7	
		11-5	Exploring Subtracting Three-Digit Numbers	2.NBT.7	
		11-6	Mental Math: Ways to Find Missing Parts	2.NBT.7	
		11-7	Models for Subtracting with Three-Digit Numbers	2.NBT.9	
		11-8	Subtracting Three-Digit Numbers	2.NBT.7	
		11-9	Problem Solving: Use Logical Reasoning	2.NBT.7	
Topic 12	Geometry	12-1	Flat Surfaces, Vertices, and Edges	2.G.1	Lesson 26: Recognize and Draw Shapes (2.G.A.1)

					<i>Lesson 27: Understand Tiling in Rectangles (2.G.A.2)</i> <i>Lesson 28: Understand Halves, Thirds, and Fourths in Shapes (2.G.A.3)</i> Math in Action: Recognize and Use Shapes (2.G.A.1, 2.G.A.2, 2.G.A.3)
--	--	--	--	--	---

		12-2	Relating Plane Shapes to Solid Figures	2.G.1	
		12-3	Polygons and Angles	2.G.1	
		12-4	Making New Shapes	2.G.1	
		12-5	Cutting Shapes Apart	2.G.1	
		12-6	Dividing Rectangles into Equal Shares	2.G.2	
		12-7	Wholes and Equal Parts	2.G.3	
		12-8	Problem Solving: Use Reasoning	2.G.1	
Topic 13	Counting Money	13-1	Coins	2.MD.8	Lesson 25: Solve Word Problems Involving Money (2.MD.A.2) Math in Action: Use Measurement (2.MD.A.1, 2.MD.A.4, 2.MD.B.5, 2.MD.C.8)
		13-2	Counting Collections of Coins	2.MD.8	
		13-3	Ways to Show the Same Amount	2.MD.8	
		13-4	One Dollar	2.MD.8	
		13-5	Problem Solving: Make an Organized List	2.MD.8	
Topic 15	Measuring Length	15-1	Exploring Length	2.MD.1	Lesson 16: Understand Length and Measurement Tools (2.MD.A.1) Lesson 17: Measure Length (2.MD.A.1) Lesson 18: Understand Measurement With Different Units (2.MD.A.2) Lesson 19: Understand Estimating Length (2.MD.A.3) Lesson 20: Compare Lengths (2.MD.A.4) Lesson 21: Add and Subtract Lengths (2.MD.B.6, 2.OA.A.1) Math in Action: Use Measurement (2.MD.A.1, 2.MD.A.4, 2.MD.B.5, 2.MD.C.8)
		15-2	Inches	2.MD.1	
		15-3	Centimeters	2.MD.1	
		15-4	Inches, Feet, and Yards	2.MD.3	
		15-5	Centimeters and Meters	2.MD.3	
		15-6	Measuring Length	2.MD.2	
		15-7	Adding and Subtracting in Measurement	2.MD.5	
		15-8	Comparing Lengths	2.MD.4	
		15-9	Problem Solving: Use Objects	2.MD.3	
Topic 16	Time, Graphs, and Data	16-1	Telling Time to Five Minutes	2.MD.7	Lesson 22: Reading and Making Line Plots (2.MD.B.6, 2.MD.D.9) Lesson 23: Draw and Use Bar Graphs and Picture Graphs (2.MD.D.10) Lesson 24: Tell and Write Time (2.MD.A.2) Math in Action: Use Measurement (2.MD.A.1, 2.MD.A.4, 2.MD.B.5, 2.MD.C.8)
		16-2	Telling Time Before and After the Hour	2.MD.7	
		16-3	Organizing Data	2.MD.10	
		16-4	Graphing Lengths	2.MD.9	
		16-5	Pictographs	2.MD.10	
		16-6	Problem Solving: Use a Graph	2.MD.10	