Grade 2 Mathematics Curriculum Guide

Grade Level/Course Title: Grade 2	**Trimester 1**	**Academic Year:** 2017-2018

Grade Level Mathematics Focus:
In Grade 2, instructional time should focus on four critical areas: (1) extending understanding of base-ten notation; (2) building fluency with addition and subtraction; (3) using standard units of measure; and (4) describing and analyzing shapes.

Essential Questions:

1. How can students extend their understanding of the base-ten system, including ideas of counting in fives, tens, and multiples of hundreds, tens, and ones, as well as number relationships involving these units, including comparing?
2. How can students understand multi-digit numbers (up to 1000) written in base-ten notation, recognizing that the digits in each place represent amounts of thousands, hundreds, tens, or ones (e.g., 853 is 8 hundreds + 5 tens + 3 ones)?

Suggestions: Release groups for recess, P.E., or lunch according to the days date to help with odd/even number understanding. All word problems should utilize the 3 Read strategies and have a visual representation of the problem.. Use the addition and subtraction strategies when teaching**.** Choral facts of what makes 5, 10 and 20 and counting by 2's, 5's, and 10's. Integrate math language all day to show its importance. Use Base 10 blocks regularly.

Time Frame	Standard	Standard Description	Content	Resources
(Aug.-Sept.) **Chapter 1:** **Apply Addition and Subtraction Concepts** **(Approx. 19 days)**	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.	• Using open number lines and bar models with single digit numbers • Decomposition by place value • Decomposition of whole numbers by addition • Using decomposition to add and subtract whole numbers • Using open number lines to represent multi-digit addition and subtraction • Using bar models to add and subtract multi-digit numbers • Inverse relationship between addition and subtraction • Commutative and associative properties of addition	**Chapter 1 – Apply Addition and Subtraction Concepts (13 Lessons)** 1-1: Addition Properties 1-2: Count On to Add 1-3: Doubles and Near Doubles 1-4: Make a 10 1-5: Add Three Numbers 1-6: Problem-Solving Strategy: Write a Number Sentence 1-7: Count Back to Subtract 1-8: Subtract All and Subtract Zero 1-9: Use Doubles to Subtract 1-10: Relate Addition and Subtraction 1-11: Missing Addends 1-12: Fact Families 1-13: Two-Step Word Problems 3 Read Word Problem Strategy Adding and Subtracting Within 100 [L] Represent Unknowns Using Multiple Methods [L] Adding By Finding Tens [L] Even and Odd: A Conceptual Understanding [L] Adding/Subtraction Daily Practices Building toward fluency [IMT] Hitting The Target Number [IMT] Addition/Subtraction Strategies K-7 Addition/Subtraction Game PIG (GMR)
	2.OA.2	Fluently add and subtract within 20 using mental strategies. By end of Grade 2, know from memory all sums of two one-digit numbers.		
	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 express an even number as a sum of two equal addends.		
	2.OA.4	Use addition to find the total number of objects arranged in rectangular arrays with up to 5 rows and up to 5 columns; write an equation to express the total as a sum of equal addends.		

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Essential Questions: See page 1

Suggestions: Put a number in your warm up asking for all the ways to look at it. 24 = 2T 4ones, 1T 14 ones, 24 ones. Use the mental math strategies from Addition and Subtraction Strategies K-7(see pg. 1 hyperlink). Have them build an equation, draw the equation and then write a problem for the equation. Use My Math games and songs online and the games under Resources. Have students turn to a partner and explain a problem, define a math term, decide what operation is necessary in a word problem, etc. Use manipulatives often. Mark appropriate previewed external sources with sticky notes in your T.E.

Time Frame	Standard	Standard Description	Content	Resources
(Sept.-Oct.) **Chapter 2:** **Number Patterns** **(Approx. 12 days)**	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.	• Using open number lines and bar models with single digit numbers • Decomposition by place value • Decomposition of whole numbers by addition • Using decomposition to add and subtract whole numbers • Using open number lines to represent multi-digit addition and subtraction • Using bar models to add and subtract multi-digit numbers • Inverse relationship between addition and subtraction • Commutative and associative properties of addition	**Chapter 2 – Number Patterns (7 Lessons)** 2-1: Skip Count on a Hundred Chart 2-2: Skip Count by 2s, 5s, and 10s 2-3: Problem-Solving Strategy: Find a Pattern 2-4: Repeated Addition 2-5: Repeated Addition with Arrays 2-6: Even and Odd 2-7: Sums of Equal Numbers Adding and Subtracting — Inverse Operations [L] Fact Families [L] Buttons odd and even [IMT] Counting Dots in Arrays [IMT] Red and Blue Tiles [IMT] Five Steps to Zero (GMR) Addition/Subtraction Strategies K-7 Addition/Subtraction Game PIG (GMR)
	2.OA.2	Fluently add and subtract within 20 using mental strategies. By end of Grade 2, know from memory all sums of two one-digit numbers.		
	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 express an even number as a sum of two equal addends.		
	2.OA.4	Use addition to find the total number of objects arranged in rectangular arrays with up to 5 rows and up to 5 columns; write an equation to express the total as a sum of equal addends.		

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Essential Questions: See page 1
Suggestions:

Time Frame	Standard	Standard Description	Content	Resources
(Sept.-Oct.) **Chapter 3:** **Add Two-Digit Numbers** **(Approx. 12 days)**	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.	• Using open number lines and bar models with single digit numbers • Decomposition by place value • Decomposition of whole numbers by addition • Using decomposition to add and subtract whole numbers • Using open number lines to represent multi-digit addition and subtraction • Using bar models to add and subtract multi-digit numbers • Inverse relationship between addition and subtraction • Commutative and associative properties of addition	**Chapter 3 – Add Two-Digit Numbers (7 Lessons)** 3-1: Take Apart Tens to Add 3-2: Regroup Ones as Tens 3-3: Add to a Two-Digit Number 3-4: Add Two-Digit Numbers 3-5: Rewrite Two-Digit Addition 3-6: Add Three and Four Two-Digit Numbers 3-7: Problem-Solving Strategy: Make a Model A Pencil and a Sticker [IMT] **Suggested things to do in the weeks before the test** Extended Response Tests in Assessment Masters Book or use problems from Chapter tests SBAC Assessment Book (provides insight on students constructing their responses and practice in justifying their answers.). Use questions from the tests as warm ups, chapter practice, exit tickets after a new lesson, or as problems in a quiz you make **My Math! Common Assessment 1** .
	2.OA.2	Fluently add and subtract within 20 using mental strategies. By end of Grade 2, know from memory all sums of two one-digit numbers.		
	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 express an even number as a sum of two equal addends.		
	2.OA.4	Use addition to find the total number of objects arranged in rectangular arrays with up to 5 rows and up to 5 columns; write an equation to express the total as a sum of equal addends.		

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Essential Questions:
1. How can students extend their understanding of the base-ten system, including ideas of counting in fives, tens, and multiples of hundreds, tens, and ones, as well as number relationships involving these units, including comparing?
2. How can students understand multi-digit numbers (up to 1000) written in base-ten notation, recognizing that the digits in each place represent amounts of thousands, hundreds, tens, or ones (e.g., 853 is 8 hundreds + 5 tens + 3 ones)?

Time Frame	Standard	Standard Description	Content	Resources
(Oct.-Nov.) **Chapter 4:** **Subtract Two-Digit Numbers** **(Approx. 14 days)**	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.	• Using open number lines and bar models with single digit numbers • Decomposition by place value • Decomposition of whole numbers by addition • Using decomposition to add and subtract whole numbers • Using open number lines to represent multi-digit addition and subtraction • Using bar models to add and subtract multi-digit numbers • Inverse relationship between addition and subtraction • Commutative and associative properties of addition	**Chapter 4 – Subtract Two-Digit Numbers (9 Lessons)** 4-1: Two-Digit Fact Families 4-2: Take Apart Tens to Subtract 4-3: Regroup a Ten as Ones 4-4: Subtract From a Two-Digit Number 4-5: Subtract Two-Digit Numbers 4-6: Rewrite Two-Digit Subtraction 4-7: Check Subtraction 4-8: Problem-Solving Strategy: Write a Number Sentence 4-9: Two-Step Word Problems Five Steps to Zero (GMR) **Suggested things to do in the weeks before the test** Extended Response Tests in Assessment Masters Book or use problems from Chapter tests SBAC Assessment Book (provides insight on students constructing their responses and practice in justifying their answers.). Use questions from the tests as warm ups, chapter practice, exit tickets after a new lesson, or as problems in a quiz you make
	2.OA.2	Fluently add and subtract within 20 using mental strategies. By end of Grade 2, know from memory all sums of two one-digit numbers.		
	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 express an even number as a sum of two equal addends.		
	2.OA.4	Use addition to find the total number of objects arranged in rectangular arrays with up to 5 rows and up to 5 columns; write an equation to express the total as a sum of equal addends.		

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Grade Level/Course Title: Grade 2	**Trimester 2**	**Academic Year:** 2017-2018

Grade Level Mathematics Focus:
In Grade 2, instructional time should focus on four critical areas: (1) extending understanding of base-ten notation; (2) building fluency with addition and subtraction; (3) using standard units of measure; and (4) describing and analyzing shapes.

Essential Questions:
1. How can students use their understanding of addition to develop fluency with addition and subtraction within 100?
2. How can students learn to solve problems within 1000 by applying their understanding of models for addition and subtraction, and develop, discuss, and use efficient, accurate, and generalizable methods to compute sums and differences of whole numbers in base-ten notation, using their understanding of place value and the properties of operations?
3. How can students select and accurately apply methods that are appropriate for the context and the numbers involved to mentally calculate sums and differences for numbers with only tens or only hundreds?

Time Frame	Standard	Standard Description	Content	Resources
(Nov.) **Chapter 5:** **Place Value to 1,000** **(Approx.** **12 days)**	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).	• Decomposition by place value and within place values • Open number lines • Bar models • Inverse relationship between addition and subtraction with multi-digit numbers • Commutative and associative properties of addition	**Chapter 5 – Place Value to 1,000 (7 Lessons)** 5-1: Hundreds 5-2: Hundreds, Tens, and Ones 5-3: Place Value to 1,000 5-4: Problem-Solving Strategy: Use Logical Reasoning 5-5: Read and Write Numbers to 1,000 5-6: Count by 5s, 10s, and 100s 5-7: Compare Numbers to 1,000 Largest Number Game [IMT] Looking at Numbers Every Which Way [IMT] Digits 2-5-7 [IMT] Number Line Comparisons [IMT]
	2.NBT.2	Count within 1000; skip-count by **2s**, 5s, 10s, and 100s. **CA**		
	2.NBT.3	Read and write numbers to 1000 using base-ten numerals, number names, and expanded form.		
	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 comparisons.		

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Essential Questions: See page 5
Suggestions: Use the games Pig and Five Steps To Zero for practice. Online instructions provided under the Instructional tab, Math Dept., General Resources.

Time Frame	Standard	Standard Description	Content	Resources
(Nov.-Dec.) **Chapter 6:** **Add Three-Digit Numbers** **(Approx. 13 days)**	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.	• Decomposition by place value and within place values • Open number lines • Bar models • Inverse relationship between addition and subtraction with multi-digit numbers • Commutative and associative properties of addition	**Chapter 6 – Add Three-Digit Numbers (8 Lessons)** 6-1: Make a Hundred to Add 6-2: Add Hundreds 6-3: Mentally Add 10 or 100 6-4: Regroup Ones to Add 6-5: Regroup Tens to Add 6-6: Add Three-Digit Numbers 6-7: Rewrite Three-Digit Numbers 6-8: Problem-Solving Strategy: Guess, Check, and Revise Adding Whole Numbers — Multiple Algorithms [L] Adding and Subtracting Whole Numbers — Multiple Representations [CP] Subtracting Whole Numbers — Multiple Methods [L] Subtracting Multiple Ways, With or Without Regrouping [L] Comparing Numbers [L] Subtraction — Comparison Model [L] Multi-Step Word Problems [L] Adding By Finding Tens [L] Sums to 10, 100, and 1,000 [L] Toll Bridge Puzzle [IMT] Peyton and Presley Discuss Addition [IMT] **My Math! Common Assessment 2**
	2.NBT.6	Add up to four two-digit numbers using strategies based on place value and properties of operations.		
	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. 7.1 Use estimation strategies to make reasonable estimates in problem solving. CA		
	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.		
	2.NBT.9	Explain why addition and subtraction strategies work, using place value and the properties of operations.		

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Essential Questions:
1. How can students use their understanding of addition to develop fluency with addition and subtraction within 100?
2. How can students learn to solve problems within 1000 by applying their understanding of models for addition and subtraction, and develop, discuss, and use efficient, accurate, and generalizable methods to compute sums and differences of whole numbers in base-ten notation, using their understanding of place value and the properties of operations?
3. How can students select and accurately apply methods that are appropriate for the context and the numbers involved to mentally calculate sums and differences for numbers with only tens or only hundreds?

Time Frame	Standard	Standard Description	Content	Resources
(Nov.-Dec.) **Chapter 7:** **Subtract Three-Digit Numbers** **(Approx. 14 days)**	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.	• Decomposition by place value and within place values • Open number lines • Bar models • Inverse relationship between addition and subtraction with multi-digit numbers • Commutative and associative properties of addition	**Chapter 7 – Subtract Three-Digit Numbers (9 Lessons)** 7-1: Take Apart Hundreds to Subtract 7-2: Subtract Hundreds 7-3: Mentally Subtract 10 or 100 7-4: Regroup Tens 7-5: Regroup Hundreds 7-6: Subtract Three-Digit Numbers 7-7: Rewrite Three-Digit Subtraction 7-8: Problem-Solving Strategy: Write a Number Sentence 7-9: Subtract Across Zeros Adding Whole Numbers — Multiple Algorithms [L] Adding and Subtracting Whole Numbers — Multiple Representations [CP] Subtracting Whole Numbers — Multiple Methods [L] Subtracting Multiple Ways, With or Without Regrouping [L] Comparing Numbers [L] Subtraction — Comparison Model [L] Multi-Step Word Problems [L] **Suggested things to do in the weeks before the test** Extended Response Tests in Assessment Masters Book or use problems from Chapter tests SBAC Assessment Book (provides insight on students constructing their responses and practice in justifying their answers.). Use questions from the tests as warm ups, chapter practice, exit tickets after a new lesson, or as problems in a quiz you make
	2.NBT.6	Add up to four two-digit numbers using strategies based on place value and properties of operations.		
	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. 7.1 Use estimation strategies to make reasonable estimates in problem solving. CA		
	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.		
	2.NBT.9	Explain why addition and subtraction strategies work, using place value and the properties of operations.		

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Essential Questions:
1. How can students learn to solve problems within 1000 by applying their understanding of models for addition and subtraction, and develop, discuss, and use efficient, accurate, and generalizable methods to compute sums and differences of whole numbers in base-ten notation, using their understanding of place value and the properties of operations?
2. How can students recognize the need for standard units of measure (centimeter and inch) and use rulers and other measurement tools with the understanding that linear measure involves an iteration of units?
3. How can students recognize that the smaller the unit, the more iterations they need to cover a given length?

Time Frame	Standard	Standard Description	Content	Resources
(Jan.) **Chapter 8:** **Money** **(Approx. 9 days)**	2.MD.7	Tell and write time from analog and digital clocks to the nearest five minutes, using a.m. and p.m. Know relationships of time (e.g., minutes in an hour, days in a month, weeks in a year). CA	• Decomposition by place value and within place value as a strategy to add or subtract • Representing addition and subtraction in multiple ways, e.g., bar models and open number lines • Concept of iterating a unit for measurement • Solving word problems based on data in a graph	**Chapter 8 – Money (5 Lessons)** 8-1: Pennies, Nickels, and Dimes 8-2: Quarters 8-3: Count Coins 8-4: Problem-Solving Strategy: Act It Out 8-5: Dollars Line Plots Using Measurement [L] Graphing in the Primary Grades [L] Pet Shop [IMT] Three Reads for Word Problems (GMR)
	2.MD.8	Solve word problems involving dollar bills, quarters, dimes, nickels, and pennies, using $ and ¢ symbols appropriately. *Example: If you have 2 dimes and 3 pennies, how many cents do you have?*		
	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.		
	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.		

Grade 2 Mathematics Curriculum Guide

Grade Level/Course Title: Grade 2	**Trimester 3**	**Academic Year:** 2017-2018

Grade Level Mathematics Focus:
In Grade 2, instructional time should focus on four critical areas: (1) extending understanding of base-ten notation; (2) building fluency with addition and subtraction; (3) using standard units of measure; and (4) describing and analyzing shapes.

Essential Questions:
1. How can students learn to solve problems within 1000 by applying their understanding of models for addition and subtraction, and develop, discuss, and use efficient, accurate, and generalizable methods to compute sums and differences of whole numbers in base-ten notation, using their understanding of place value and the properties of operations?
2. How can students recognize the need for standard units of measure (centimeter and inch) and use rulers and other measurement tools with the understanding that linear measure involves an iteration of units?
3. How can students recognize that the smaller the unit, the more iterations they need to cover a given length?

Time Frame	Standard	Standard Description	Content	Resources
(Feb.) **Chapter 9:** **Data Analysis** **(Approx.** **13 days)**	2.MD.7	Tell and write time from analog and digital clocks to the nearest five minutes, using a.m. and p.m. Know relationships of time (e.g., minutes in an hour, days in a month, weeks in a year). CA	• Decomposition by place value and within place value as a strategy to add or subtract • Representing addition and subtraction in multiple ways, e.g., bar models and open number lines • Concept of iterating a unit for measurement • Solving word problems based on data in a graph	**Chapter 9 – Data Analysis (8 Lessons)** 9-1: Take a Survey 9-2: Make Picture Graphs 9-3: Analyze Picture Graphs 9-4: Make Bar Graphs 9-5: Analyze Bar Graphs 9-6: Problem-Solving Strategy: Make a Table 9-7: Make Line Plots 9-8: Analyze Line Plots Line Plots Using Measurement [L] Graphing in the Primary Grades [L] **My Math! Common Assessment 3**
	2.MD.8	Solve word problems involving dollar bills, quarters, dimes, nickels, and pennies, using $ and ¢ symbols appropriately. *Example: If you have 2 dimes and 3 pennies, how many cents do you have?*		
	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.		
	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.		

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Essential Questions:
1. How can students learn to solve problems within 1000 by applying their understanding of models for addition and subtraction, and develop, discuss, and use efficient, accurate, and generalizable methods to compute sums and differences of whole numbers in base-ten notation, using their understanding of place value and the properties of operations?
2. How can students recognize the need for standard units of measure (centimeter and inch) and use rulers and other measurement tools with the understanding that linear measure involves an iteration of units?
3. How can students recognize that the smaller the unit, the more iterations they need to cover a given length?

Time Frame	Standard	Standard Description	Content	Resources
(Feb.-March) **Chapter 10:** **Time** **(Approx.** **11 days)**	2.MD.7	Tell and write time from analog and digital clocks to the nearest five minutes, using a.m. and p.m. Know relationships of time (e.g., minutes in an hour, days in a month, weeks in a year). CA	• Decomposition by place value and within place value as a strategy to add or subtract • Representing addition and subtraction in multiple ways, e.g., bar models and open number lines • Concept of iterating a unit for measurement • Solving word problems based on data in a graph	**<u>Chapter 10 – Time (6 Lessons)</u>** 10-1: Time to the Hour 10-2: Time to the Half Hour 10-3: Problem-Solving Strategy: Find a Pattern 10-4: Time to the Quarter Hour 10-5: Time to Five Minute Intervals 10-6: A.M. and P.M. Line Plots Using Measurement [L] Graphing in the Primary Grades [L] **<u>Suggested things to do in the weeks before the test</u>** Extended Response Tests in Assessment Masters Book or use problems from Chapter tests SBAC Assessment Book (provides insight on students constructing their responses and practice in justifying their answers.). Use questions from the tests as warm ups, chapter practice, exit tickets after a new lesson, or as problems in a quiz you make
	2.MD.8	Solve word problems involving dollar bills, quarters, dimes, nickels, and pennies, using $ and ¢ symbols appropriately. *Example: If you have 2 dimes and 3 pennies, how many cents do you have?*		
	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.		
	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.		

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Essential Questions:
1. How can students recognize the need for standard units of measure (centimeter and inch) and use rulers and other measurement tools with the understanding that linear measure involves an iteration of units?
2. How can students recognize that the smaller the unit, the more iterations they need to cover a given length?

Time Frame	Standard	Standard Description	Content	Resources
(April-May) **Chapter 11:** **Customary and Metric Lengths** **(Approx. 18 days)**	2.MD.1	Measure the length of an object by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes.	• Concept of iteration for measurement • Understanding the need for standard units • Length • Relate addition and subtraction to length	**Chapter 11 – Customary and Metric Lengths (9 Lessons)** 11-1: Inches 11-2: Feet and Yards 11-3: Select and Use Customary Tools 11-4: Compare Customary Lengths 11-5: Relate Inches, Feet, and Yards 11-6: Problem-Solving Strategy: Use Logical Reasoning 11-7: Centimeters and Meters 11-8: Select and Use Metric Tools 11-9: Compare Metric Lengths 11-10 Relate Centimeters and Meters 11-11: Measure on a Number Line 11-12: Measurement Data Appropriate and Correct Measurement [L] Measurement in the Primary Grades [L] Plotting Numbers on a Number Line [L] Measurement – Introduction to Standard Units[L] Frog and Toad on the number line [IMT] Hand Span Measures [IMT]
	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.		
	2.MD.3	Estimate lengths using units of inches, feet, centimeters, and meters.		
	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.		
	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.		
	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.		

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Essential Questions:
1. How can students describe and analyze shapes by examining their sides and angles?
2. How can students investigate, describe, and reason about decomposing and combining shapes to make other shapes?
3. How can students, through building, drawing, and analyzing two- and three-dimensional shapes, develop a foundation for understanding area, volume, congruence, similarity, and symmetry in later grades?

Time Frame	Standard	Standard Description	Content	Resources
(May-June) **Chapter 12:** **Geometric Shapes and Equal Shares** **(Approx. 13 days)**	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.	• Attributes of geometric shapes • Decomposing and re-composing shapes • Foundations of area, volume, congruence, similarity, and symmetry • Equal share (fractional) representations of two dimensional shapes • Understanding equal shares (equivalent fractions) need not be represented by the same shape, e.g., one-half of the same whole can be represented with different shapes	**Chapter 12 – Geometric Shapes and Equal Shares (8 Lessons)** 12-1: Two-Dimensional Shapes 12-2: Sides and Angles 12-3: Problem-Solving: Draw a Diagram 12-4: Three-Dimensional Shapes 12-5: Faces, Edges, and Vertices 12-6: Relate Shapes and Solids 12-7: Halves, Thirds, and Fourths 12-8: Area Decomposing/Recomposing Geometric Shapes [L] Partitioning Shapes [L] Representing Half of a Rectangle [IMT] **My Math! Common Assessment 4**
	2.G.2	Partition a rectangle into rows and columns of same-size squares and count to find the total number of them.		
	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.		