Grade 2

A story of Units Module/Approximate number of instructional days.	Common Core Learning Standards Addressed in Grade 2 Modules Unless otherwise noted, each cluster is taught in its entirety.	Suggested Additional Resources
YEAR ROUND →	YEAR ROUND RESOURCES → Link: ***A Story of Units* Curriculum Map** **(found at the end of this document)**	**Virtual Manipulatives:** http://www.glencoe.com/sites/common_assets/mathematics/ebook_assets/vmf/VMF-Interface.html **Interactive Activities, Grid paper, Clocks, and MORE!** http://resources.oswego.org/games/

Module 1: Sums and Differences to 20
(10 days)
	Represent and solve problems involving addition and subtraction.
	Story problems focus primarily on result unknown and change unknown situations from CCLS Table 1 (in the glossary section of the CCLS).
	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.
	
	Add and subtract within 20.
	From this point forward, fluency practice with addition and subtraction to 20 is part of the students' ongoing experience.
	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.
	
	Use place value understanding and properties of operations to add and subtract.
	2.NBT.6, NBT.7, NBT.8, and NBT.9 are taught in Module 4.
	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.
		Contexts for Learning (Fosnot):
		• Games for Early Number Sense
		  ○ Leapfrog p. 15
		  ○ Finding Doubles p. 21
		  ○ Doubles More or Less p.22
		  ○ Bus Stops p.24
		  ○ Going to School p.25
		
		Teaching Student Centered Mathematics K-3 (John Van de Walle):
		• pp. 94 - 110
		
		Tools:
		• Rekenreks
		• Various Counters
		• Popsicle Sticks/Straws
		• Ten and Double Ten Frames
		• Dot and/or number cubes (dice)
		• Connecting Cubes
		• Place Value Strips (Hide Zero Cards)
		• 1 to 20 Number Paths
		Links:
		http://www.k-5mathteachingresources.com/2nd-grade-number-activities.html

		http://www.ronblond.com/MathGlossary/Division01/Rekenrek/REKENREK/ **Select 2.OA & 2.NBT illustrations** **http://www.illustrativemathematics.org/standards/k8** **Select choices for numbers to one hundred** **http://www.dreambox.com/teachertools** **Video connection:** • **Learn Zillion –for OA, view lesson sets** 1 & 2 **http://learnzillion.com/courses/39?collection_id=420** • **Sprint process in the classroom./use EVL log-in. http://evl.vcsd.k12.ny.us/SafeVideos/Video.aspx?id=kDAG405awRk**
Module 2: Addition and Subtraction of Length Units (12 days)	**Measure and estimate lengths in standard units.** **Focus on meters and centimeters in preparation for Module 3's place value.** 2.MD.1 Measure the length of an object by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes. 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.	**Contexts for Learning (Fosnot):** • **None** **Teaching Student Centered Mathematics K-3 (John Van de Walle):** • pp. 242 – 244 • pp. 245 -247 **Tools:** • inch and/or cm cubes/tiles • rulers/yardsticks/meter sticks/measuring tape **Links:** **Read pages 12 – 15** **http://commoncoretools.files.wordpress.com/2012/07/ccss_progression_gm_k5_2012_07_21.pdf**

		http://www.k-5mathteachingresources.com/2nd-grade-measurement-and-data.html **Select 2.MD illustrations** **http://www.illustrativemathematics.org/standards/k8** **Video connection:** • **Learn Zillion – for MD, view lesson sets 1, 2 & 3** **http://learnzillion.com/courses/39?collection_id=420#collection_419** • **Brainpopjr requires building's ID and Password.** **http://www.brainpopjr.com/math/measurement/inchesandfeet/**
Module 3: Place Value, Counting, and Comparison to 1000 **(25 days)**	**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). 2.NBT.2 Count within 1000; skip-count by 5s, 10s, and 100s. **(Use analog clock to provide a context for skip-counting by 5s.)** 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.	**Contexts for Learning (Fosnot):** • None **Teaching Student Centered Mathematics K-3 (John Van de Walle):** • Chapter 5: pp. 122 - 156 **Tools:** • Rekenreks • Bead Strings • Various Counters • Popsicle Sticks/Straws/Rubber Bands for bundling • Ten and Double Ten Frames • Connecting Cubes • Place Value Blocks/Mats • Place Value Strips (Hide Zero Cards) • Number Disks

		Links: **Read pages 8 – 10** **(Recommendation: also read Grade 1 information on pp. 6 -7.)** **http://commoncoretools.me/wp-content/uploads/2011/04/ccss_progression_nbt_2011_04_073_corrected2.pdf** **http://commoncoretools.files.wordpress.com/2011/05/ccss_progression_cc_oa_k5_2011_05_302.pdf** **http://www.k-5mathteachingresources.com/2nd-grade-number-activities.html** **Select 2.NBT illustrations** **http://www.illustrativemathematics.org/standards/k8** **Video connection:** • **Learn Zillion** **– for NBT, view lesson sets** 1 & 2 **http://learnzillion.com/courses/39?collection_id=420#collection_421** **http://www.engageny.org/resource/nti-november-2012-rigor-breakdown-shoe-box-place-value-chart** **http://www.engageny.org/resource/nti-november-2012-rigor-breakdown-counting-with-bundles** **http://www.engageny.org/resource/nti-november-2012-session-2-a-story-of-units-skip-counting-by-ones-tens-and-hundreds**

Module 4: Addition and Subtraction Within 200 with Word Problems to 100 (35 days)	**Represent and solve problems involving addition and subtraction.**
	Story problems will include unknowns in all positions from CCLS Table 1 (in the glossary section of the CCLS).
	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.
	
	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.
	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.
	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.
		Contexts for Learning (Fosnot):
		• *Unit Guide*: Ages and Timelines (Subtraction on the Open Number Line, 2.NBT.5/6/7/8/9)
		  ○ Big Book Reference: ***El Bisabuelo Gregorio***
		• *Unit Guide*: The T-Shirt Factory (Place Value Addition, and Subtraction, 2.NBT.5/6/7/8/9)
		  ○ Big Book Reference: ***Grandma Eudora's T-Shirt Factory***
		• Minilessons for Extending Addition and Subtraction
		  ○ 2.NBT.5/6/7/8/9 – entire book supports these standards
		Teaching Student Centered Mathematics K-3 (John Van de Walle):
		• pp. 163 – 168
		• pp. 184 – 185
		Tools:
		• Rekenreks
		• Bead Strings (100 beads)
		• Number Lines
		• Various Counters
		• Popsicle Sticks/Straws/Rubber Bands for bundling
		• Ten and Double Ten Frames
		• Connecting Cubes
		• Place Value Blocks/Mats
		• Place Value Strips (Hide Zero Cards)
		• Number Disks

		Links: **Read pages 8 – 10** **(Recommendation: also read Grade 1 information on pp. 6 -7.)** **http://commoncoretools.me/wp-content/uploads/2011/04/ccss_progression_nbt_2011_04_073_corrected2.pdf** **Read pages 18 – 21** **(Recommendation: also read Grade 1 information on pp. 12 - 17.)http://commoncoretools.files.wordpress.com/2011/05/ccss_progression_cc_oa_k5_2011_05_302.pdf** **http://www.k-5mathteachingresources.com/2nd-grade-number-activities.html** **Select 2.OA & 2.NBT illustrations** **http://www.illustrativemathematics.org/standards/k8** **Look for your grade level.** **Look at one grade below and one grade above as well.** **http://www.dreambox.com/teacher tools** **http://thinkingblocks.com/tb_addition/addition.html** **Video connection:** • **Learn Zillion** **– for NBT, view lesson sets 3 - 7** **http://learnzillion.com/courses/39?collection_id=420#collection_421** **– for OA, view lesson set 1** **http://learnzillion.com/courses/39?collection_id=420#collection_420**

		• **Third graders BUT discussion includes many strategies for computation that might inform your instruction: https://www.teachingchannel.org/videos/third-grade-mental-math**
Module 5: Addition and Subtraction Within 1000 with Word Problems to 100 (24 days)	**Use place value understanding and properties of operations to add and subtract.** 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. 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.	**Contexts for Learning (Fosnot):** • *Unit Guide*: Ages and Timelines (Subtraction on the Open Number Line, 2.NBT.5/6/7/8/9) ○ Big Book Reference: ***El Bisabuelo Gregorio*** • *Unit Guide*: The T-Shirt Factory (Place Value Addition, and Subtraction, 2.NBT.5/6/7/8/9) ○ Big Book Reference: ***Grandma Eudora's T-Shirt Factory*** • Minilessons for Extending Addition and Subtraction ○ 2.NBT.5/6/7/8/9 – entire book supports these standards **Tools:** • Rekenreks • Bead Strings (100 beads) • Number Lines • Various Counters • Popsicle Sticks/Straws/Rubber Bands for bundling • Ten and Double Ten Frames • Connecting Cubes • Place Value Blocks/Mats • Place Value Strips (Hide Zero Cards) • Number Disks

		Links: **http://www.k-5mathteachingresources.com/2nd-grade-number-activities.html** **Select 2.OA & 2.NBT illustrations** **http://www.illustrativemathematics.org/standards/k8** **Look for your grade level.** **Look at one grade below and one grade above as well.** **http://www.dreambox.com/teacher tools** **http://thinkingblocks.com/tb_addition/addition.html** **Video connection:** • **Learn Zillion –for NBT, view lesson sets 5, 6, & 7** **http://learnzillion.com/courses/39?collection_id=420#collection_421**
Module 6: Foundations of Multiplication and Division (24 days)	**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 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. **Reason with shapes and their attributes.** **2.G.2 is taught before G.1 and G.3 because the array model is so important to the foundation for multiplication.** 2.G.2 Partition a rectangle into rows and columns of same size squares and count to find the total number of them.	**Contexts for Learning (Fosnot):** • *Unit Guide*: Beads and Shoes, Making Twos (Extending Number Sense, 2.OA.3) ○ Big Book Reference: ***Grandma's Necklaces*** **Teaching Student Centered Mathematics K-3 (John Van de Walle):** • pp. 291 – 293 (Odd/Even) **Tools:** • Rekenreks • Connecting Cubes • Inch Tiles • Geo-Boards/Rubber Bands • Graph/Grid Paper/Dot Paper

		Links: **Read the last paragraph on page 10 through page 12 for 2.G.2 support.http://commoncoretools.files.wordpress.com/2012/06/ccss_progression_g_k6_2012_06_27.pdf** **Read page 23 and page 25.** **http://commoncoretools.files.wordpress.com/2011/05/ccss_progression_cc_oa_k5_2011_05_302.pdf** **http://www.k-5mathteachingresources.com/2nd-grade-number-activities.html** **http://www.k-5mathteachingresources.com/2nd-grade-geometry.html** **Select 2.OA illustrations** **http://www.illustrativemathematics.org/standards/k8** **Video connection:** • **Learn Zillion** **–for OA, view lesson set 3** **http://learnzillion.com/courses/39?collection_id=420#collection_420** **–for G, view lesson set 3** **http://learnzillion.com/courses/39?collection_id=420#collection_422**
Module 7: Problem Solving with Length, Money, and Data **(30 days)**	**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. 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.	**Contexts for Learning (Fosnot):** • *Unit Guide*: Trades, Jumps, and Stops (Early Algebra, 2.MD.8) ○ Big Book Reference: ***The Masloppy Family Goes to New York City***

	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. **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 problems. 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. **Work with time and money.** **Focus on money. Time is taught in Module 2, practiced as fluency during Modules 3, 4, 5, and 6, and related to fractions of a circle in Module 7.** 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? **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. 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.	**Teaching Student Centered Mathematics K-3 (John Van de Walle):** • pp. 223 – 233 • pp. 245 – 248 • pp. 150 – 154 (money) **Tools:** • inch and/or cm cubes/tiles • rulers/yardsticks/meter sticks/measuring tape • Diverse Measurement Units (such as: links, inch tiles, crayons, connecting cubes, Straws, etc.) • Bead Strings • Number Lines • Coin/Dollar Bills • Graph/Grid Paper **Links:** **Read pages 12 – 15.** **(Recommendation: also read Grade 1 information on 8 – 11)** **http://commoncoretools.files.wordpress.com/2012/07/ccss_progression_gm_k5_2012_07_21.pdf** **http://www.k-5mathteachingresources.com/2nd-grade-measurement-and-data.html** **Select 2.MD illustrations** **http://www.illustrativemathematics.org/standards/k8** **Tape models used here can be applied to length/money word problems.** **http://thinkingblocks.com/tb_addition/addition.html**

		Video connection: • **Learn Zillion – may load slowly View lesson sets 1, 2, 3, 5, 6 http://learnzillion.com/courses/39?collection_id=420#collection_419**
Module 8: Time, Shapes, and Fractions as Equal Parts of Shapes (20 days)	**Work with time.** 2.MD.7 Tell and write time from analog and digital clocks to the nearest five minutes, using a.m. and p.m. **Reason with shapes and their attributes.** **Time is revisited using an analog clock as part of work with 2.G.3. Clock faces provide an excellent application of partitioning the whole into halves, etc. and to the corresponding angle sizes.** 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. 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.	**Contexts for Learning (Fosnot):** • None **Teaching Student Centered Mathematics K-3 (John Van de Walle):** • pp. 195, 199, 207 – 208, 221 – 222 **Tools:** • Pattern Blocks • Tangrams • Geometric Solids • Geo-Boards/Rubber Bands • Sticks and clay or marshmallows, gum drops, etc. • **Unmarked** fraction circles or rectangles • Blank paper for folding • Graph/Grid/Dot paper **Links:** **Read pages 10 – 12 (Recommendation: also read Grade 1 information pp. 8 - 9.)** **http://commoncoretools.files.wordpress.com/2012/06/ccss_progression_g_k6_2012_06_27.pdf** **http://www.k-5mathteachingresources.com/2nd-grade-geometry.html** **http://www.k-5mathteachingresources.com/Geometry-Interactive-Whiteboard-Resources.html**

		Select 2.G Illustrations **http://www.illustrativemathematics.org/standards/k8** **Select shape option** **http://illuminations.nctm.org/ActivityDetail.aspx?ID=73** **Video connection:** • **Learn Zillion – may load slowly** **View lesson set 4** **http://learnzillion.com/courses/39?collection_id=420#collection_419** • **Learn Zillion – may load slowly** **View lesson set 1, 2, 4** **http://learnzillion.com/courses/39?collection_id=420#collection_422**

A Story of Units Curriculum Map (rev.7/31/13)

	Pre-Kindergarten	Kindergarten	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	
20 days	M1: Numbers to 5 (45 days)	M1: Numbers to 10 (43 days)	M1: Sums and Differences to 10 (45 days)	M1: Sums and Differences to 20 (10 days)	M1: Properties of Multiplication and Division and Solving Problems with Units of 2-5 and 10 (25 days)	M1: Place Value, Rounding, and Algorithms for Addition and Subtraction (25 days)	M1: Place Value and Decimal Fractions (20 days)	20 days
20 days				M2: Addition and Subtraction of Length Units (12 days)				
20 days				M3: Place Value, Counting, and Comparison of Numbers to 1000 (25 days)	M2: Place Value and Problem Solving with Units of Measure (25 days)	*M2: Unit Conversions (7 days)	M2: Multi-Digit Whole Number and Decimal Fraction Operations (35 days)	20 days
20 days	M2: Two-Dimensional and Three-Dimensional Shapes (15 days)	*M2: 2D and 3D Shapes (12 days)	M2: Introduction to Place Value Through Addition and Subtraction Within 20 (35 days)	M4: Addition and Subtraction Within 200 with Word Problems to 100 (35 days)	M3: Multiplication and Division with Units of 0, 1, 6-9, and Multiples of 10 (25 days)	M3: Multi-Digit Multiplication and Division (43 days)		20 days
20 days	M3: Counting to Answer Questions of How Many (50 days)	M3: Comparison of Length, Weight, Capacity, and Numbers to 10 (38 days)					M3: Addition and Subtraction of Fractions (22 days)	20 days
20 days			M3: Ordering and Comparing Length Measurements as Numbers (15 days)	M5: Addition and Subtraction Within 1000 with Word Problems to 100 (24 days)	M4: Multiplication and Area (20 days)	M4: Angle Measure and Plane Figures (20 days)	M4: Multiplication and Division of Fractions and Decimal Fractions (38 days)	20 days
20 days		M4: Number Pairs, Addition and Subtraction to 10 (47 days)	M4: Place Value, Comparison, Addition and Subtraction to 40 (35 days)	M6: Foundations of Multiplication and Division (24 days)	M5: Fractions as Numbers on the Number Line (35 days)	M5: Fraction Equivalence, Ordering, and Operations (45 days)		20 days
20 days	M4: Comparison of Length, Weight, and Capacity (35 days)		M5: Identifying, Composing, and Partitioning Shapes (15 days)	M7: Problem Solving with Length, Money, and Data (30 days)	M6: Collecting and Displaying Data (10 days)		M5: Addition and Multiplication with Volume and Area (25 days)	20 days
20 days	M5: Numerals to 5, Addition and Subtraction Stories, Counting to 20 (35 days)	M5: Numbers 10-20 and Counting to 100 (30 days)	M6: Place Value, Comparison, Addition and Subtraction to 100 (35 days)		M7: Geometry and Measurement Word Problems (40 days)	M6: Decimal Fractions (20 days)	M6: Problem Solving with the Coordinate Plane (40 days)	20 days
20 days		M6: Analyzing, Comparing, and Composing Shapes (10 days)		M8: Time, Shapes, and Fractions as Equal Parts of Shapes (20 days)		M7: Exploring Multiplication (20 days)		20 days

Approx. test date for grades 3-5

*Please refer to grade-level descriptions to identify partially labeled modules and the standards corresponding to all modules.

Key:	Geometry	Number	Number and Geometry, Measurement	Fractions