

Common Core Standard	Materials / References
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Reason with shapes and their attributes	
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2.G.1	Recognize and draw shapes having specified attributes, such as a given number of angles or a given number of equal faces (sizes are compared directly or visually, not compared by measuring). Identify triangles, quadrilaterals, pentagons, hexagons, and cubes.	Manipulatives/Materials: pattern blocks (shapes) (triangles, quadrilaterals, pentagons, hexagons, cubes); CGI strategies; HC lessons: 18.1, 18.2, 18.3, 19.3; Vocabulary: attribute(s) (properties), angles, faces, rectangle, square, triangle, circle, quadrilaterals, pentagons, hexagons, cubes, number of angles, number of equal faces
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Represent and solve problems involving addition and subtraction	
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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.	
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	<p>(A). Add to: Result Unknown Ex. Two bunnies sat on the grass. Three more bunnies hopped there. How many bunnies are on the grass now? $2 + 3 = ?$</p>	<p>Manipulatives/Materials: 100s chart, number line, counters, flashcards, calculator, paper, pencil; CGI strategies; HC lessons: 3.4, 7.1, 7.5, 8.7, 9.5, 10.7, 11.7, 24.5, 27.2, 30.6; Vocabulary: Add to: Result Unknown, label, number sentence, addition, equation, adding to, putting together, compare, symbol, represent, unknowns; Other Resources: Common Core glossary table 1</p>
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	<p>(B). Add to: Change Unknown Ex. Two bunnies were sitting on the grass. Some more bunnies hopped there. Then there were five bunnies. How many bunnies hopped over to the first two? $2 + ? = 5$</p>	<p>Manipulatives/Materials: 100s chart, number line, counters, flashcards, calculator, paper, pencil; CGI strategies; HC lessons: 3.4, 7.1, 7.5, 8.7, 9.5, 10.7, 11.7, 24.5, 27.2, 30.6; Vocabulary: Add to: Change Unknown, label, number sentence, addition, equation, adding to, putting together, compare, symbol, represent, unknowns; Other Resources: Common Core glossary table 1</p>
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Represent and solve problems involving addition and subtraction	
<p>(C). Add to: Start Unknown Ex. Some bunnies were sitting on the grass. Three more bunnies hopped there. Then there were five bunnies. How many bunnies were on the grass before? $? + 3 = 5$</p>	<p>Manipulatives/Materials: 100s chart, number line, counters, flashcards, calculator, paper, pencil; CGI strategies; HC lessons: 3.4, 7.1, 7.5, 8.7, 9.5, 10.7, 11.7, 24.5, 27.2, 30.6; Vocabulary: Add to: Start Unknown, label, number sentence, addition, equation, adding to, putting together, compare, symbol, represent, unknowns; Other Resources: Common Core glossary table 1</p>
<p>(D). Take from: Result Unknown Ex. Five apples were on the table. I ate two apples. How many apples are on the table now? $5 - 2 = ?$</p>	<p>Manipulatives/Materials: 100s chart, number line, counters, flashcards, calculator, paper, pencil; CGI strategies; HC lessons: 3.4, 7.1, 7.5, 8.7, 9.5, 10.7, 11.7, 24.5, 27.2, 30.6; Vocabulary: Take From: Result Unknown, label, number sentence, subtraction, equation, taking from, taking apart, compare, symbol, represent, unknowns; Other Resources: Common Core glossary table 1</p>
<p>(E). Take from: Change Unknown Ex. Five apples were on the table. I ate some apples. Then there were three apples. How many apples did I eat? $5 - ? = 3$</p>	<p>Manipulatives/Materials: 100s chart, number line, counters, flashcards, calculator, paper, pencil; CGI strategies; HC lessons: 3.4, 7.1, 7.5, 8.7, 9.5, 10.7, 11.7, 24.5, 27.2, 30.6; Vocabulary: Take From: Change Unknown, label, number sentence, subtraction, equation, taking from, taking apart, compare, symbol, represent, unknowns; Other Resources: Common Core glossary table 1</p>
<p>(F). Take from: Start Unknown Ex. Some apples were on the table. I ate two apples. Then there were three apples. How many apples were on the table before? $? - 2 = 3$</p>	<p>Manipulatives/Materials: 100s chart, number line, counters, flashcards, calculator, paper, pencil; CGI strategies; HC lessons: 3.4, 7.1, 7.5, 8.7, 9.5, 10.7, 11.7, 24.5, 27.2, 30.6; Vocabulary: Take From: Start Unknown, label, number sentence, subtraction, equation, taking from, taking apart, compare, symbol, represent, unknowns; Other Resources: Common Core glossary table 1</p>

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Common Core Math Curriculum Map

TEXARKANA SCHOOL DISTRICT - GRADE 2 MATH

2011 - 2012

Module 1 - Math	Start: 8/17/2011	Teaching Days: 25	Test: 9/22/2011	Remediation Days: 1	End: 9/23/2011
Common Core Standard					Materials / References
Add and subtract within 20					
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.					
(A). Addition			Manipulatives/Materials: connecting cubes (two colors), ten frames, dominoes, fact triangles, flash cards, tens/ones work mats; CGI strategies; HC lessons: 5.2, 6.2, 7.1, 9.1; Vocabulary: addends, fact family, addition, strategy		
(B). Subtraction			Manipulatives/Materials: connecting cubes (two colors), ten frames, dominoes, fact triangles, flash cards, tens/ones work mats; CGI strategies; HC lessons: 5.2, 6.2, 7.1, 9.1; Vocabulary: addends, fact family, subtraction, strategy		
9 testable standards					End of Module 1

ALIGNMENT NOTES

2.MD.10
Engage students at the beginning of the year with creating graphs without adding/subtracting. Not tested until Module 3.
Review
After shapes and data, spend about a week reviewing 2-digit place value.
Addition Unit
2.OA.1 is with one-step word problems until Module 6. 2.OA.2, 2.NBT.5, and 2.MD.6 are all taught within 2.OA.1, not necessarily in that sequence as independent skills.
2.MD.6
Teach with addition, but not assessed until Module 2.
2.OA.2 - Add and subtract within 20 - Fluently add and subtract within 20 using mental strategies.
By end of Grade 2, know from memory all sums of two one-digit numbers. Students should work on addition and subtraction math facts throughout the year.

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Represent and solve problems involving addition and subtraction
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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.
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<p>(G). Put Together/Take Apart: Total Unknown Ex. Three red apples and two green apples are on the table. How many apples are on the table? $3 + 2 = ?$</p>	<p>Manipulatives/Materials: 100s chart, number line, counters, flashcards, calculator, paper, pencil; CGI strategies; HC lessons: 3.4, 7.1, 7.5, 8.7, 9.5, 10.7, 11.7, 24.5, 27.2, 30.6; Vocabulary: Put Together/Take Apart: Total Unknown, label, number sentence, addition, subtraction, equation, adding to, taking from, putting together, taking apart, compare, symbol, represent, unknowns; Other Resources: Common Core glossary table 1</p>
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<p>(H). Put Together/Take Apart: Addend Unknown Ex. Five apples are on the table. Three are red, and the rest are green. How many apples are green? $3 + ? = 5$, $5 - 3 = ?$</p>	<p>Manipulatives/Materials: 100s chart, number line, counters, flashcards, calculator, paper, pencil; CGI strategies; HC lessons: 3.4, 7.1, 7.5, 8.7, 9.5, 10.7, 11.7, 24.5, 27.2, 30.6; Vocabulary: Put Together/Take Apart: Addend Unknown, label, number sentence, addition, subtraction, equation, adding to, taking from, putting together, taking apart, compare, symbol, represent, unknowns; Other Resources: Common Core glossary table 1</p>
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<p>(I). Put Together/Take Apart: Both Addends Unknown Ex. Grandma has 5 flowers. How many can she put in her red vase and how many in her blue vase? $5 = 0 + 5$, $5 = 5 + 0$; $5 = 1 + 4$, $5 = 4 + 1$; $5 = 3 + 2$, $5 = 2 + 3$</p>	<p>Manipulatives/Materials: 100s chart, number line, counters, flashcards, calculator, paper, pencil; CGI strategies; HC lessons: 3.4, 7.1, 7.5, 8.7, 9.5, 10.7, 11.7, 24.5, 27.2, 30.6; Vocabulary: Put Together/Take Apart: Both Addends Unknown, label, number sentence, addition, subtraction, equation, adding to, taking from, putting together, taking apart, compare, symbol, represent, unknowns; Other Resources: Common Core glossary table 1</p>
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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.

(A). Addition	Manipulatives/Materials: counters and other manipulatives; CGI strategies; HC lessons: 6.6, AR-6; Vocabulary: addition, subtraction, place value, strategy, properties of operations, commutative property, associative property, turn around facts; Other Resources: HC Mega Math "Numberopolis:", "Carnival Stories"
(B). Subtraction	Manipulatives/Materials: counters and other manipulatives; CGI strategies; HC lessons: 6.6, AR-6; Vocabulary: addition, subtraction, place value, strategy, properties of operations, commutative property, associative property, turn around facts; Other Resources: HC Mega Math "Numberopolis:", "Carnival Stories"
(C). Relationship between addition and subtraction	Manipulatives/Materials: counters and other manipulatives; CGI strategies; HC lessons: 6.6, AR-6; Vocabulary: addition, subtraction, place value, strategy, properties of operations, commutative property, associative property, turn around facts; Other Resources: HC Mega Math "Numberopolis:", "Carnival Stories"

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.	Manipulatives/Materials: ruler, yardstick, tape measure, objects to measure; CGI strategies; HC lessons: 1st grade AR-12, 2nd grade 23.5; Vocabulary: attributes/properties, measurement, length, ruler, yardstick, tape measure, inch, feet, yard, customary units
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Common Core Standard	Materials / References
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Measure and estimate lengths in standard units	
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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.	Manipulatives/Materials: ruler, yardstick, tape measure, objects to measure; CGI strategies; HC lessons: 22.4, 23.4; Vocabulary: measurement, length, ruler, yardstick, tape measure, inch, feet, yard
2.MD.3	Estimate lengths using units of inches, feet, centimeters, and meters.	Manipulatives/Materials: ruler, yardstick, tape measure, objects to measure; CGI strategies; HC lessons: 3rd grade 17.1, 17.3; Vocabulary: estimate, inches, feet centimeters, 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.	Manipulatives/Materials: ruler, yardstick, tape measure, objects to measure; CGI strategies; HC lessons: 22.4, 23.4; Vocabulary: ruler, yardstick, tape measure, standard length unit, inch, feet, centimeter, meter

Relate addition and subtraction to length	
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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.	Manipulatives/Materials: ; CGI strategies; HC lessons: N/A; Vocabulary: addition, subtraction, length, equation, symbol, unknown, represent
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 line diagram.	Manipulatives/Materials: number line; CGI strategies; HC lessons: N/A; Vocabulary: whole number, number line diagram, length, corresponding, sums, differences, addends

Represent and interpret data	
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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.	Manipulatives/Materials: graph paper (chart size and/or student size); CGI strategies; HC lessons: N/A; Vocabulary: line plot, horizontal, scale, compare
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13 testable standards	End of Module 2
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ALIGNMENT NOTES
Subtraction

2.OA.2, 2.NBT.5, and 2.MD.6 are all taught within 2.OA.1, not necessarily in that sequence as independent skills.

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2.MD.6

This skill is taught as a strategy within 2.OA.1, not within the Measurement Unit.

Represent and solve problems involving addition and subtraction
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<p>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.</p>	
<p>(J). Compare: Difference Unknown Ex. ("How many more?" version): Lucy has two apples. Julie has five apples. How many more apples does Julie have than Lucy? Ex. ("How many fewer?" version): Lucy has two apples. Julie has five apples. How many fewer apples does Lucy have than Julie? $2 + ? = 5$, $5 - 2 = ?$</p>	<p>Manipulatives/Materials: 100s chart, number line, counters, flashcards, calculator, paper, pencil; CGI strategies; HC lessons: 3.4, 7.1, 7.5, 8.7, 9.5, 10.7, 11.7, 24.5, 27.2, 30.6; Vocabulary: Compare: Difference Unknown, label, number sentence, addition, subtraction, equation, adding to, taking from, putting together, taking apart, compare, symbol, represent, unknowns; Other Resources: Common Core glossary table 1</p>
<p>(K). Compare: Bigger Unknown Ex. (Version with "more"): Julie has three more apples than Lucy. Lucy has two apples. How many apples does Julie have? Ex. (Version with "fewer"): Lucy has 3 fewer apples than Julie. Lucy has two apples. How many apples does Julie have? $2 + 3 = ?$, $3 + 2 = ?$</p>	<p>Manipulatives/Materials: 100s chart, number line, counters, flashcards, calculator, paper, pencil; CGI strategies; HC lessons: 3.4, 7.1, 7.5, 8.7, 9.5, 10.7, 11.7, 24.5, 27.2, 30.6; Vocabulary: Compare: Bigger Unknown, label, number sentence, addition, subtraction, equation, adding to, taking from, putting together, taking apart, compare, symbol, represent, unknowns; Other Resources: Common Core glossary table 1</p>
<p>(L). Compare: Smaller Unknown Ex. (Version with "more"): Julie has three more apples than Lucy. Julie has five apples. How many more apples does Lucy have? Ex. (Version with "fewer"): Lucy has 3 fewer apples than Julie. Julie has five apples. How many apples does Lucy have? $5 - 3 = ?$, $? + 3 = 5$</p>	<p>Manipulatives/Materials: 100s chart, number line, counters, flashcards, calculator, paper, pencil; CGI strategies; HC lessons: 3.4, 7.1, 7.5, 8.7, 9.5, 10.7, 11.7, 24.5, 27.2, 30.6; Vocabulary: Compare: Smaller Unknown, label, number sentence, addition, subtraction, equation, adding to, taking from, putting together, taking apart, compare, symbol, represent, unknowns; Other Resources: Common Core glossary table 1</p>

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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.**

(A). Addition	Manipulatives/Materials: counters and other manipulatives; CGI strategies; HC lessons: 6.6, AR-6; Vocabulary: addition, subtraction, place value, strategy, properties of operations, commutative property, associative property, turn around facts; Other Resources: HC Mega Math "Numberopolis:", "Carnival Stories"
(B). Subtraction	Manipulatives/Materials: counters and other manipulatives; CGI strategies; HC lessons: 6.6, AR-6; Vocabulary: addition, subtraction, place value, strategy, properties of operations, commutative property, associative property, turn around facts; Other Resources: HC Mega Math "Numberopolis:", "Carnival Stories"
(C). Relationship between addition and subtraction	Manipulatives/Materials: counters and other manipulatives; CGI strategies; HC lessons: 6.6, AR-6; Vocabulary: addition, subtraction, place value, strategy, properties of operations, commutative property, associative property, turn around facts; Other Resources: HC Mega Math "Numberopolis:", "Carnival Stories"

Represent and interpret data

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.	Manipulatives/Materials: graph paper (chart size and/or student size), ; CGI strategies; HC lessons: 4.4, 16.1, 3rd grade lessons 15.2, 15.5, 16.1, 16.3; Vocabulary: compare, picture graph, bar graph, horizontal, vertical, organize, display, survey, data, line plot, key; Other Resources: HC Mega Math "White Water Rafting"
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Common Core Math Curriculum Map

TEXARKANA SCHOOL DISTRICT - GRADE 2 MATH

2011 - 2012

Module 3 - Math	Start: 11/3/2011	Teaching Days: 25	Test: 12/15/2011	Remediation Days: 1	End: 12/16/2011
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Common Core Standard	Materials / References
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Work with time and money

2.MD.7	Tell and write time from analog and digital clocks to the nearest five minutes, using a.m. and p.m.	Manipulatives/Materials: ; CGI strategies; HC lessons: 14.5; Vocabulary: analog, digital, clock, time, hour, minute, hour hand, minute hand, am, pm
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8 testable standards	End of Module 3
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ALIGNMENT NOTES

2.MD.10
Use graphing to present compare problems in context. Teach this within 2.OA.1.

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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.	Manipulatives/Materials: base ten blocks, connecting cubes, place value mats, place value chart; CGI strategies; HC lessons: 1.3, 27.1, 27.4, 29.2, 29.3, 29.5, 29.6, AR-1, 3rd grade lesson 3.2; Vocabulary: base ten blocks (flat, rod, units), compare, represent, place value, expanded notation, models, base ten
	a. Also understand the following as a special case: 100 can be thought of as a bundle of ten tens -- called a "hundred."	Manipulatives/Materials: base ten blocks, connecting cubes, place value mats, place value chart; CGI strategies; HC lessons: 1.3, 27.1, 27.4, 29.2, 29.3, 29.5, 29.6, AR-1, 3rd grade lesson 3.2; Vocabulary: base ten blocks (flat, rod, units), compare, represent, place value, expanded notation, models, base ten
	b. Also understand the following as a special case: 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).	Manipulatives/Materials: base ten blocks, connecting cubes, place value mats, place value chart; CGI strategies; HC lessons: 1.3, 27.1, 27.4, 29.2, 29.3, 29.5, 29.6, AR-1, 3rd grade lesson 3.2; Vocabulary: base ten blocks (flat, rod, units), compare, represent, place value, expanded notation, models, base ten
2.NBT.2 *	Count within 1000; skip-count by 5s, 10s, and 100s.	
	(A). Counting	Manipulatives/Materials: 100s chart; CGI strategies; HC lessons: Kindergarten lessons 7.6, 7.7, 3rd grade lesson 3.3; Vocabulary: skip count, extend, pattern, forward, backward
	(B). Skip-counting	Manipulatives/Materials: 100s chart; CGI strategies; HC lessons: Kindergarten lessons 7.6, 7.7, 3rd grade lesson 3.3; Vocabulary: skip count, extend, pattern, forward, backward

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Common Core Standard	Materials / References
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Understand place value	
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2.NBT.3	Read and write numbers to 1000 using base-ten numerals, number names, and expanded form.	Manipulatives/Materials: base ten blocks (flat, rod, unit), place value chart, bundles of ten; CGI strategies; HC lessons: 1.2, 4.1, 7.3, 9.3, 3rd grade lesson 3.2; Vocabulary: tally marks, base ten blocks, compare, represent, place value, expanded form, number names, base ten numerals
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.	Manipulatives/Materials: two-color counters; CGI strategies; HC lessons: AR-5; Vocabulary: greater than ($>$), less than ($<$), equal to ($=$), three-digit number, hundreds, tens, ones, digit, symbol, comparison

Use place value understanding and properties of operations to add and subtract	
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2.NBT.6	Add up to four two-digit numbers using strategies based on place value and properties of operations.	Manipulatives/Materials: base ten blocks, tens/ones work mats, number grid; CGI strategies; HC lessons: AR-7, 7.5, 8.2, 9.1, 10.1, 10.2; Vocabulary: two-digit number, place value, hundreds, tens, ones, properties of operations, commutative property, associative property, compatible numbers, compensatory numbers, strategy, compose, decompose
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.	
	(A). Addition	Manipulatives/Materials: base ten blocks, tens/ones work mats, number grid; CGI strategies; HC lessons: AR-7, 7.5, 8.2, 9.1, 10.1, 10.2; Vocabulary: two-digit number, place value, hundreds, tens, ones, properties of operations, commutative property, associative property, compatible numbers, compensatory numbers, strategy, compose, decompose, models, drawings

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Use place value understanding and properties of operations to add and subtract		
(B). Subtraction		Manipulatives/Materials: base ten blocks, tens/ones work mats, number grid; CGI strategies; HC lessons: AR-7, 7.5, 8.2, 9.1, 10.1, 10.2; Vocabulary: two-digit number, place value, hundreds, tens, ones, properties of operations, commutative property, associative property, compatible numbers, compensatory numbers, strategy, compose, decompose, models, drawings
(C). Relationship between addition and subtraction		Manipulatives/Materials: base ten blocks, tens/ones work mats, number grid; CGI strategies; HC lessons: AR-7, 7.5, 8.2, 9.1, 10.1, 10.2; Vocabulary: two-digit number, place value, hundreds, tens, ones, properties of operations, commutative property, associative property, compatible numbers, compensatory numbers, strategy, compose, decompose, models, drawings
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.	Manipulatives/Materials: N/A; CGI strategies; HC lessons: 3rd grade lessons AR-1, AR-2; Vocabulary: more, less
2.NBT.9	Explain why addition and subtraction strategies work, using place value and the properties of operations (explanations may be supported by drawings or objects).	Manipulatives/Materials: N/A; CGI strategies; HC lessons: 3rd grade lessons 1.1, 1.2, 1.4, 1.5, 4.1, 4.2, 5.1, 5.2, 5.3, 5.4, 5.6; Vocabulary: strategy, place value, properties of operations
12 testable standards		End of Module 4

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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 (sizes are compared directly or visually, not compared by measuring). Identify triangles, quadrilaterals, pentagons, hexagons, and cubes.	Manipulatives/Materials: pattern blocks (shapes) (triangles, quadrilaterals, pentagons, hexagons, cubes); CGI strategies; HC lessons: 18.1, 18.2, 18.3, 19.3; Vocabulary: attribute(s) (properties), angles, faces, rectangle, square, triangle, circle, quadrilaterals, pentagons, hexagons, cubes, number of angles, number of equal faces
2.G.2	Partition a rectangle into rows and columns of same-size squares and count to find the total number of them.	Manipulatives/Materials: color tiles, grid paper; CGI strategies; HC lessons: 25.2; Vocabulary: area, grid, array, rows, columns, partition
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.	
	(A). Partitioning	Manipulatives/Materials: crayons, two-color counters, fraction bars, fraction circles; CGI strategies; HC lessons: 26.1, 26.2, 26.3, 26.4, 26.5, 1st grade lessons: 21.1, 21.2, 21.3, 21.4, 21.5; Vocabulary: equal shares, fractions, partition, circle, rectangle, halves, fourths, thirds, half of, a third of, a fourth of, two halves, three thirds, four fourths, whole; Other Resources: HC Mega Math "Ship Shapes"
	(B). Equal shares not same shape	Manipulatives/Materials: crayons, two-color counters, fraction bars, fraction circles; CGI strategies; HC lessons: 26.1, 26.2, 26.3, 26.4, 26.5, 1st grade lessons: 21.1, 21.2, 21.3, 21.4, 21.5; Vocabulary: equal shares, fractions, partition, circle, rectangle, halves, fourths, thirds, half of, a third of, a fourth of, two halves, three thirds, four fourths, whole; Other Resources: HC Mega Math "Ship Shapes"

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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.	
	(A). Even and Odd	Manipulatives/Materials: number line, 100s chart, counting objects (cubes, teddy bears, etc); CGI strategies; HC lesson: 2.3; Vocabulary: odd, even, digit, sum, addend
	(B). Write an equation	Manipulatives/Materials: number line, 100s chart, counting objects (cubes, teddy bears, etc); CGI strategies; HC lesson: 2.3; Vocabulary: odd, even, digit, addend, difference, equation
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.	Manipulatives/Materials: number line, 100s chart, counting objects (cubes, teddy bears, etc); CGI strategies; HC lesson: 2.3; Vocabulary: odd, even, digit, sum, addend, difference, rectangular array

Work with time and money

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?	Manipulatives/Materials: coins (penny, nickel, dime, quarter), dollar bills, 100s chart, calculators; CGI strategies; HC lessons: 12.1, 12.2, 12.3, 12.4, 13.2, 13.3, 13.4, 13.5, 23.6, 27.5, 29.7; Vocabulary: coin(s), dollar bill, money, penny, nickel, dime, quarter, dollar sign (\$), cent sign (¢), value, decimal (.)
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Use place value understanding and properties of operations to add and subtract

2.NBT.6	Add up to four two-digit numbers using strategies based on place value and properties of operations.	Manipulatives/Materials: base ten blocks, tens/ones work mats, number grid; CGI strategies; HC lessons: AR-7, 7.5, 8.2, 9.1, 10.1, 10.2; Vocabulary: two-digit number, place value, hundreds, tens, ones, properties of operations, commutative property, associative property, compatible numbers, compensatory numbers, strategy, compose, decompose
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ALIGNMENT NOTES

2.NBT.6

In this module, 2.NBT.6 is used with money to add up to four amounts of money to find the total cost.

Represent and solve problems involving addition and subtraction
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2.OA.1 *	<p>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.</p>	
	<p>(A). Add to: Result Unknown Ex. Two bunnies sat on the grass. Three more bunnies hopped there. How many bunnies are on the grass now? $2 + 3 = ?$</p>	<p>Manipulatives/Materials: 100s chart, number line, counters, flashcards, calculator, paper, pencil; CGI strategies; HC lessons: 3.4, 7.1, 7.5, 8.7, 9.5, 10.7, 11.7, 24.5, 27.2, 30.6; Vocabulary: Add to: Result Unknown, label, number sentence, addition, equation, adding to, putting together, compare, symbol, represent, unknowns; Other Resources: Common Core glossary table 1</p>
	<p>(B). Add to: Change Unknown Ex. Two bunnies were sitting on the grass. Some more bunnies hopped there. Then there were five bunnies. How many bunnies hopped over to the first two? $2 + ? = 5$</p>	<p>Manipulatives/Materials: 100s chart, number line, counters, flashcards, calculator, paper, pencil; CGI strategies; HC lessons: 3.4, 7.1, 7.5, 8.7, 9.5, 10.7, 11.7, 24.5, 27.2, 30.6; Vocabulary: Adding to: Change Unknown, label, number sentence, addition, equation, adding to, putting together, compare, symbol, represent, unknowns; Other Resources: Common Core glossary table 1</p>
	<p>(C). Add to: Start Unknown Ex. Some bunnies were sitting on the grass. Three more bunnies hopped there. Then there were five bunnies. How many bunnies were on the grass before? $? + 3 = 5$</p>	<p>Manipulatives/Materials: 100s chart, number line, counters, flashcards, calculator, paper, pencil; CGI strategies; HC lessons: 3.4, 7.1, 7.5, 8.7, 9.5, 10.7, 11.7, 24.5, 27.2, 30.6; Vocabulary: Add to: Start Unknown, label, number sentence, addition, equation, adding to, putting together, compare, symbol, represent, unknowns; Other Resources: Common Core glossary table 1</p>

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Represent and solve problems involving addition and subtraction	
<p>(D). Take from: Result Unknown Ex. Five apples were on the table. I ate two apples. How many apples are on the table now? $5 - 2 = ?$</p>	<p>Manipulatives/Materials: 100s chart, number line, counters, flashcards, calculator, paper, pencil; CGI strategies; HC lessons: 3.4, 7.1, 7.5, 8.7, 9.5, 10.7, 11.7, 24.5, 27.2, 30.6; Vocabulary: Take From: Result Unknown, label, number sentence, subtraction, equation, taking from, taking apart, compare, symbol, represent, unknowns; Other Resources: Common Core glossary table 1</p>
<p>(E). Take from: Change Unknown Ex. Five apples were on the table. I ate some apples. Then there were three apples. How many apples did I eat? $5 - ? = 3$</p>	<p>Manipulatives/Materials: 100s chart, number line, counters, flashcards, calculator, paper, pencil; CGI strategies; HC lessons: 3.4, 7.1, 7.5, 8.7, 9.5, 10.7, 11.7, 24.5, 27.2, 30.6; Vocabulary: Take From: Change Unknown, label, number sentence, subtraction, equation, taking from, taking apart, compare, symbol, represent, unknowns; Other Resources: Common Core glossary table 1</p>
<p>(F). Take from: Start Unknown Ex. Some apples were on the table. I ate two apples. Then there were three apples. How many apples were on the table before? $? - 2 = 3$</p>	<p>Manipulatives/Materials: 100s chart, number line, counters, flashcards, calculator, paper, pencil; CGI strategies; HC lessons: 3.4, 7.1, 7.5, 8.7, 9.5, 10.7, 11.7, 24.5, 27.2, 30.6; Vocabulary: Take From: Start Unknown, label, number sentence, subtraction, equation, taking from, taking apart, compare, symbol, represent, unknowns; Other Resources: Common Core glossary table 1</p>
<p>(G). Put Together/Take Apart: Total Unknown Ex. Three red apples and two green apples are on the table. How many apples are on the table? $3 + 2 = ?$</p>	<p>Manipulatives/Materials: 100s chart, number line, counters, flashcards, calculator, paper, pencil; CGI strategies; HC lessons: 3.4, 7.1, 7.5, 8.7, 9.5, 10.7, 11.7, 24.5, 27.2, 30.6; Vocabulary: Put Together/Take Apart: Total Unknown, label, number sentence, addition, subtraction, equation, adding to, taking from, putting together, taking apart, compare, symbol, represent, unknowns; Other Resources: Common Core glossary table 1</p>

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Represent and solve problems involving addition and subtraction	
<p>(H). Put Together/Take Apart: Addend Unknown Ex. Five apples are on the table. Three are red, and the rest are green. How many apples are green? $3 + ? = 5$, $5 - 3 = ?$</p>	<p>Manipulatives/Materials: 100s chart, number line, counters, flashcards, calculator, paper, pencil; CGI strategies; HC lessons: 3.4, 7.1, 7.5, 8.7, 9.5, 10.7, 11.7, 24.5, 27.2, 30.6; Vocabulary: Put Together/Take Apart: Addend Unknown, label, number sentence, addition, subtraction, equation, adding to, taking from, putting together, taking apart, compare, symbol, represent, unknowns; Other Resources: Common Core glossary table 1</p>
<p>(I). Put Together/Take Apart: Both Addends Unknown Ex. Grandma has 5 flowers. How many can she put in her red vase and how many in her blue vase? $5 = 0 + 5$, $5 = 5 + 0$; $5 = 1 + 4$, $5 = 4 + 1$; $5 = 3 + 2$, $5 = 2 + 3$</p>	<p>Manipulatives/Materials: 100s chart, number line, counters, flashcards, calculator, paper, pencil; CGI strategies; HC lessons: 3.4, 7.1, 7.5, 8.7, 9.5, 10.7, 11.7, 24.5, 27.2, 30.6; Vocabulary: Put Together/Take Apart: Both Addends Unknown, label, number sentence, addition, subtraction, equation, adding to, taking from, putting together, taking apart, compare, symbol, represent, unknowns; Other Resources: Common Core glossary table 1</p>
<p>(J). Compare: Difference Unknown Ex. ("How many more?" version): Lucy has two apples. Julie has five apples. How many more apples does Julie have than Lucy? Ex. ("How many fewer?" version): Lucy has two apples. Julie has five apples. How many fewer apples does Lucy have than Julie? $2 + ? = 5$, $5 - 2 = ?$</p>	<p>Manipulatives/Materials: 100s chart, number line, counters, flashcards, calculator, paper, pencil; CGI strategies; HC lessons: 3.4, 7.1, 7.5, 8.7, 9.5, 10.7, 11.7, 24.5, 27.2, 30.6; Vocabulary: Compare: Difference Unknown, label, number sentence, addition, subtraction, equation, adding to, taking from, putting together, taking apart, compare, symbol, represent, unknowns; Other Resources: Common Core glossary table 1</p>

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Represent and solve problems involving addition and subtraction

(K). Compare: Bigger Unknown Ex. (Version with "more"): Julie has three more apples than Lucy. Lucy has two apples. How many apples does Julie have? Ex. (Version with "fewer"): Lucy has 3 fewer apples than Julie. Lucy has two apples. How many apples does Julie have? $2 + 3 = ?$, $3 + 2 = ?$	Manipulatives/Materials: 100s chart, number line, counters, flashcards, calculator, paper, pencil; CGI strategies; HC lessons: 3.4, 7.1, 7.5, 8.7, 9.5, 10.7, 11.7, 24.5, 27.2, 30.6; Vocabulary: Compare: Bigger Unknown, label, number sentence, addition, subtraction, equation, adding to, taking from, putting together, taking apart, compare, symbol, represent, unknowns; Other Resources: Common Core glossary table 1
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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.	Manipulatives/Materials: base ten blocks, connecting cubes, place value mats, place value chart; CGI strategies; HC lessons: 1.3, 27.1, 27.4, 29.2, 29.3, 29.5, 29.6, AR-1, 3rd grade lesson 3.2; Vocabulary: base ten blocks (flat, rod, units), compare, represent, place value, expanded notation, models, base ten
2.NBT.3 Read and write numbers to 1000 using base-ten numerals, number names, and expanded form.	Manipulatives/Materials: base ten blocks (flat, rod, unit), place value chart, bundles of ten; CGI strategies; HC lessons: 1.2, 4.1, 7.3, 9.3, 3rd grade lesson 3.2; Vocabulary: tally marks, base ten blocks, compare, represent, place value, expanded form, number names, base ten numerals

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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.

(A). Addition	Manipulatives/Materials: base ten blocks, tens/ones work mats, number grid; CGI strategies; HC lessons: AR-7, 7.5, 8.2, 9.1, 10.1, 10.2; Vocabulary: two-digit number, place value, hundreds, tens, ones, properties of operations, commutative property, associative property, compatible numbers, compensatory numbers, strategy, compose, decompose, models, drawings
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(B). Subtraction	Manipulatives/Materials: base ten blocks, tens/ones work mats, number grid; CGI strategies; HC lessons: AR-7, 7.5, 8.2, 9.1, 10.1, 10.2; Vocabulary: two-digit number, place value, hundreds, tens, ones, properties of operations, commutative property, associative property, compatible numbers, compensatory numbers, strategy, compose, decompose, models, drawings
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(C). Relationship between addition and subtraction	Manipulatives/Materials: base ten blocks, tens/ones work mats, number grid; CGI strategies; HC lessons: AR-7, 7.5, 8.2, 9.1, 10.1, 10.2; Vocabulary: two-digit number, place value, hundreds, tens, ones, properties of operations, commutative property, associative property, compatible numbers, compensatory numbers, strategy, compose, decompose, models, drawings
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ALIGNMENT NOTES

2-Step Problems

In this module, 1.OA.1(A)-(J) is with 2-step word problems.

2.NBT

This is a review/solidification of three-digit place value and operations.