2017-2018	Grade 2 Go Math! Quarter 2 Planner	15-16 Days
	Chapter 4 2-Digit Addition	

BIG IDEA: Students use several processes in the beginning stages of building understanding of addition. Understanding and mastering the basic facts support student's success with 2-digit addition. For sums less than 10, students may apply counting processes. For sums greater than 10, students may use strategies such as *make a ten*. Realizing that strategies used for 1-digit addition are not efficient for 2-digit addition, students may invent their own strategies. Ten (10) is important as a benchmark number in mathematics, not only for counting but also for addition. Students' early development of learning to count by 10 brings rewards in two-digit addition. A compensation strategy can be used to add 2-digit numbers when one addend is near the net ten. For example, 48 + 17 can be added by adding 2 to the 48 and subtracting 2 from 17, resulting in 50 + 15. Such strategies are grounded in student's ability to make use of prior knowledge of counting by tens and recognizing that two-digit numbers with a zero in the ones place are easy to add.

The addition strategies called out in 2.NBT.5 to build conceptual understanding are the following: 1) Adding by Place Value 48 + 37 = 40 + 30= 70 and 8 + 7= 15, so, 70 + 15 = 85, 2) Incremental adding (breaking one number into tens and ones) 48 + 30 = 78 and 78 + 7 = 85, and 3) Compensation (making a friendly number) 48 + 2 = 50, 37 − 2= 35 and 50 + 35 = 85. The properties that students should use are: 1) the Commutative property of Addition (a + b = b + a); 2) the Associative Property of Addition ((a + b) + c = a + (b + c)); and 3) the Identity Property of Addition (a + 0 = a).

Adapted from Go Math: Teaching for Depth, pg. 169E

Professional Development Videos:
Different Ways to Show a Number
Use Mental Math to 2-Digit Numbers
Addition with Regrouping

Quarter 2 Fluency Resources:
Fluency Resources in Go Math
Building Fluency Through Word Problems
Building Fluency Through Number Talks

ESSENTIAL QUESTION: How do you use place value to add 2-digit numbers, and what are some different ways to add 2-digit numbers?

STANDARDS: 2.OA.1, 2.NBT.5, 2.NBT.6, 2.NBT.9

ELD STANDARDS:

ELD.PI.2.1-Exchanging information/ideas via oral communication and conversations.

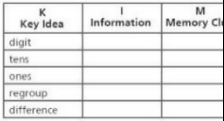ELD.PI.2.3-Offering opinions and negotiating with/persuading others.

ELD.PI.2.5-Listening actively and asking/answering questions about what was heard.
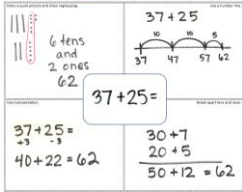
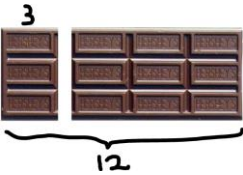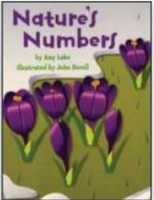ELD.PI.2.9- Expressing information and ideas in oral presentations.

ELD.PI.2.11- Supporting opinions or justifying arguments and evaluating others' opinions or arguments.
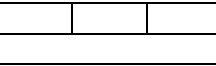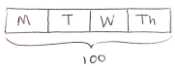
ELD.PI.2.12-Selecting and applying varied and precise vocabulary.

Lesson	Standards & Math Practices	Essential Questions	Math Content and Strategies	Models/Tools Go Math! Teacher Resources G2	Connections (ENGAGE prior knowledge)	Vocabulary	Academic Language Support	Journal
4.1 Break Apart Ones to Add	2.NBT.5 Companion Pg. 106 2.NBT.6 Companion Pg. 108 2.NBT.9 Companion Pg. 113 MP 1 MP 4 MP 6 MP 8	How does breaking apart a number make it easier to add?	Decomposing a number-breaking it apart- helps students use mental math to find sums for 2-digit addition problems. To break apart a number, students must understand that the place-value system is based on groupings of ten and that 10 ones may be thought of as 10 single things or as one group of 10. Students break apart numbers when they use the make a ten strategy with basic addition facts in Ch. 3. This lesson builds on that strategy by having students decompose, or break apart, ones to make a ten. For example, to add 27 + 8, students break apart the 8 ones as	Base-ten blocks Place Value Mat Open number line Number Line Template	There are 9 large bicycles at the store. There are 6 small bicycles at the store. How many bicycles are at the store? Look for a student who split up the 6 to make 1 + 5 in order to make 10 and have them share their reasoning with the class. Can you similarly break up the 9 to make 10?	Sum Place value decompose	**ELD Standards** ELD Standards ELA/ELD Framework ELPD Framework **Access Strategies** Organizing Learning for Student Access to Challenging Content	Solve 46 + 7. Explain how you found the sum.

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				3 ones and 5 ones and then combine the 3 ones with the 7, the digit in the ones place of 27, to make a ten. The addition problem then becomes 30 + 5, which is a simpler problem to solve mentally than 27 + 8. This strategy helps students build fluency with adding numbers and develop flexibility with decomposing numbers. This lesson builds coherence for 1.NBT.4 (2-digit plus one-digit).				Student Engagement Strategies Problem Solving Steps and Approaches	
4.2	Using the Compensation	2.NBT.5 Companion Pg. 106 2.NBT.6 Companion Pg. 108 2.NBT.9 Companion Pg. 113 MP 4 MP 5 MP 6	How can you make an addend a ten to help solve an addition problem?	In math, compensating means adjusting one number when you adjust or change another. In this lesson, when students break apart an addend to make another ten, they move part of one addend to the other addend. They are making one addend less and making the other addend greater. When the value of one addend is changed, students must compensate for the change by adjusting the value of the other addend. This adjustment does not change the total value of the addends.	Base-ten blocks Place Value Mat Open number line Number Line Template	Markers come in boxes of 10. Your teacher has 38 markers and the neighbor teacher has 29 markers. How can they share markers to make as many complete boxes as possible?	Addend decompose	**Equitable Talk** Accountable Talk Simply Stated Equitable Talk Conversation Prompts Accountable Talk Posters	How can you solve 38 + 24 by decomposing an addend? Draw a picture and explain.
4.3	Break Apart Addends as Tens and Ones	2.NBT.5 Companion Pg. 106 2.NBT.6 Companion Pg. 108 2.NBT.9 Companion Pg. 113 MP 1 MP 3 MP 6 MP 8	How do you break apart addends to add tens and then add ones?	Students with a deep conceptual understanding of numbers are able to express numbers in flexible ways. They are then able to use these representations to solve problems. This understanding is developed by providing students with multiple opportunities to explore numbers. By working with materials such as base-ten blocks, a hundred chart, and connecting cubes, students develop visual images of numbers. Students should be able to use these images to understand that 42 is the same as 4 tens and 2 ones which is the same as 40 + 2. Students use the expanded form to represent the addends for 2-digit addition problems. The *focus of this lesson is on applying place value concepts* and using numbers flexibly to solve addition problems.	Base-ten blocks Place Value Mat Open number line Number Line Template	Write on board: 26 + 7 = ___ Ask these questions: • How can you break apart 26 to make it easier to add? • What can you add to 6 to make 10? • How can you use a quick picture to break apart 7 to make 10? • How does breaking apart a number make it easier to add?	Tens Ones Place value decompose	Five Talk Moves Bookmark Effective Math Talks **Cooperative Learning** Cooperative Learning Role Cards Collaborative Learning Table Mats	Solve and explain how to break apart the addends by place value to find the sum of 25 + 16.
4.4	Model Regrouping for Addition	2.NBT.5 Companion Pg. 106 2.NBT.6 Companion Pg. 108 2.NBT.9 Companion Pg. 113 MP 1 MP 5 MP 6 MP 7	When do you regroup in addition?	Students will approach the task of adding two 2-digit numbers with differing degrees of number sense. Working with base-ten blocks on place-value mats emphasizes the visual and concrete aspects of the skill. • The blocks present a concrete demonstration of the important equivalent representation: 10 ones have the same value as 1 ten. An understanding of this fact is essential to regrouping. • The concrete and visual models in this lesson provide an important developmental step in understanding 2-digit addition for the standard algorithm.	Base-ten blocks Place Value Mat Open number line Number Line Template	Use base to blocks to represent the number 24 in three different ways. How can you easily change between the three different models without starting all over?	Regrouping Pictorial representation	Seating Chart Suggestions Math Word Wall	Add 43 + 28. Did you regroup? Explain why and how.
4.5	Model and Record 2-Digit Addition	2.NBT.5 Companion Pg. 106 2.NBT.6	How do you record 2-digit addition?	*Read the standard carefully--Do not solely focus on the standard algorithm aspect of these lessons. Use the problems from the lessons to continue modeling with*	Base-ten blocks Place Value Mat	There were 37 children at the park on Saturday and 25 children at the park on Sunday.	Regrouping Pictorial representation		Solve 27 + 36.

								Grab and Go Activites:	
		Companion Pg. 108 MP 1 MP 4 MP 6 MP 7		***blocks, use pictorial representations in order to build conceptual understanding. You may show students the algorithm, but it is not expected to be mastered until 4th grade.*** The focus for students in 2nd grade is to have a solid foundation of place value **and** the concept of addition and subtraction. The algorithm can count as another strategy as long as the student(s) can clearly explain the conceptual understanding of regrouping and place value when explaining their steps in solving it.	Open number line Number Line Template Multiple Strategies Template	How many children were at the park on those two days? Use multiple strategies.		Cool Blades	Explain why you recorded a 1 in the tens column.
4.6	2-Digit Addition	2.NBT.5 Companion Pg. 106 2.NBT.6 Companion Pg. 108 MP 3 MP 5 MP 6 MP 8	How do you record the steps when adding 2-digit numbers?	In this lesson, children will make connections between the use of strategies and conventions leading up to the standard algorithm. While helping students understand why the algorithm works, continue to accept and discuss multiple strategies for solving problems. For example, for the problem 28 + 25, children may respond with the following strategies: • Model with base ten blocks and quick pictures; • Use known combinations (I know that 25 + 25 = 50. So I added 50 + 3 to find 52); • Use compensation (28 + 25 = 28 + 2 + 23 = 30 + 23 = 53).	Base-ten blocks Place Value Mat Open number line Number Line Template Multiple Strategies Template	Tom has 17 yellow marbles. Tim has 34 yellow marbles. How many yellow marbles do they have together? Use multiple strategies.	Regrouping Pictorial representation	Pebble Beach Marbelous	Write the following problems on the board and have students find and discuss the error. 58 36 + 21 +27 79 513
4.7	Practice 2-Digit Addition	2.NBT.5 Companion Pg. 106 2.NBT.6 Companion Pg. 108 MP 2 MP 6 MP 7	How do you record the steps when adding 2-digit numbers?	There are some exercises in this lesson for which the sum is a 3 digit number. Some children may find this challenging along with problems that ask students to regroup twice. You may wish to suggest that students draw quick pictures for the addends using a three column place value chart to "prove" that they added correctly.	Base-ten blocks Place Value Mat Open number line Number Line Template Multiple Strategies Template	Alyssa grew 80 turnips. Sam grew 40 turnips. How many turnips did they grow? Use multiple strategies.	Regrouping Pictorial representation	All That Jazz Aqua Addition	Describe how you regroup when you find the sum of 64 + 43.
4.8	Rewrite 2-Digit Addition *AC option: This lesson may be omitted--it does not directly address 2.NBT.5	2.NBT.5 Companion Pg. 106 2.NBT.6 Companion Pg. 108 MP 1 MP 3 MP 6 MP 7	What are two different ways to write addition problems?	This lesson guides students through writing addition problems vertically in the standard algorithm format. Use place value understanding and a place value chart when discussing why certain numbers are lined up.	Base-ten blocks Place Value Mat Open number line Number Line Template Multiple Strategies Template	Have students write an addition sentence in which the sum will be greater than 100. Partners can trade their number sentences to verify each other's' work. Share strategies that students used to find the sum of 2-digit addends.	Regrouping Pictorial representation	School Store	Explain what can happen if you line up the digits incorrectly when you rewrite addition problems.

4.9	Problem Solving - Addition *AC Option: Combine with 4.10 and have students use the bar model **and** write a number sentence.	2.OA.1 Companion Pg. 59 MP 1 MP 2 MP 4	How can using a model help when solving addition problems?	Students may wonder why they are asked to use a diagram. Using a diagram is a way of organizing and representing information. It can help students understand what information they have and what information they still need. In this lesson, the bar model diagram shows one bar divided into two parts. One part is for each addend, and the complete bar represents the sum, or the whole. The parts are proportional to show how they relate to one another. Students determine which numbers are given in the problem. The diagram helps students identify the given information in order to find a way to solve the problem. With missing addends encourage students to recognize that these can be solved with an addition <u>and</u> subtraction sentence. This assists students with building understanding by relating addition and subtraction. For example: Kendra had 13 crayons. Her dad gave her some more crayons. Then she had 19 crayons. How many crayons did Kendra's dad give her? $13 + \_\_\_ = 19$ 	13	?
19	| $19 - 13 = \_\_\_\_$ After some modeling of how to use the template, students can be put into groups and given 2-3 word problems to solve. Encourage students to use the strategies from lessons 1-4 to solve these.	Part-Part-Total Template Steps to Word Problems Addressing Word Problems (examples of group activities to build understanding of word problems) PODs powerpoint	Cameron's candy bar has 12 pieces. He gives 3 pieces to his friend. How many pieces does Cameron have now? 3 12 Have students draw a picture of this problem. The picture here will help students visualize the bar model introduced in this lesson. Write related facts--an addition sentence and a subtraction sentence.	Addends Sum	**Grab and Go Games:** 2 Digit Shuffle Soccer Sums **Literacy Connection** (in Grab-N-Go kits): Nature's Numbers	Sean and Abby have 23 markers altogether. Abby has 14 markers. How many markers does Sean have?
4.10	Algebra-Write Equations to Represent Addition	2.OA.1 Companion Pg. 59 MP 1 MP 2 MP 4 MP 8	How do you write a number sentence to represent a problem?	This lesson focuses on translating addition word problems into number sentences. A number sentence shows a student's organization of information and his or her plan for solving a problem. It is important to note that there are several different types of problems in this lesson. Students need to read the problems carefully to determine what information they are being asked to find. Students must not get into the habit of simply adding the numbers in the problem together to find a sum. In some problems, the total is given and students need to find a missing addend (start unknown or change unknown). Students represent the unknown amount as a variable in the form of a box. Writing a number sentence is a way for students to represent a problem situation. This representation can then be used to solve for the unknown amount.	Part-Part-Total Template Steps to Word Problems Addressing Word Problems (examples of group activities to build understanding of word problems) PODs PowerPoint	Have students solve the following using a bar diagram: There are 30 students in the class. If 18 are boys, how many are girls? Then, have students write expressions for their answers. 	18	?
30		 $18 + \_\_ = 30$ $30 - 18 = \_\_$	Number sentence Addends Sum unknown	 Butterfly Farm	Solve using a bar model and number sentence. There are 36 children in Kathleen's class. 12 of the children are girls. How many children in her class are boys?
4.11	Algebra-Find Sums for 3 Addends	2.NBT.6 Companion Pg. 108	What are some ways to add 3 numbers?	This lesson extends what students learned in Chapter 3 about adding three 1-digit addends to adding three and four 2-digit addends. In these lessons, the problems are set	Base ten blocks Place Value Mat	Nick has 22 stickers. 7 stickers are red and 4 stickers are blue.	Tens Ones Place value		Describe how you would find the

	*AC Option: Combine with 4.12 and practice adding 3 and 4 addends.	MP 3 MP 4 MP 6 MP 8		up for the algorithm, however, it's suggested to focus on the strategies from Chapter 3 and Ch. 4 Lessons 1-4. Students can decide on their order to add the ones digits by look for facts that they know. They can also apply this strategy to the digits in the tens column. Have students talk about the strategies and methods they use to solve the problems in this lesson. Students should be able to explain how they solved the problems and why they chose to solve them that way.	Open number line Number Line Template 2.NBT.6 POD PowerPoint and resources	The rest are green. How many stickers are green? Students can use a bar model with 3 parts to help solve. Red | Blue | Green 22			sum of 24, 36, and 13.
4.12	Algebra-Find Sums for 4 Addends	2.NBT.6 Companion Pg. 108 MP 1 MP 3 MP 6 MP 8 M T W Th 100	What are some ways to add 4 numbers?	In this lesson students explore the ways to add four addends in column addition. Children may have trouble keeping track which digits they have already added. They may forget to add one of the digits or add the same digit more than once. Solicit ideas from children for keeping track of which digits they have added while they are working on each problem. Ideas may include circling digits as they are added, or making a check mark next to the digits as they are added. When children can take 'ownership' of a process, they may be more likely to use it. For strategies and PODs to address 2.NBT.6, please utilize this PowerPoint.	Base ten blocks Place Value Mat Open number line Number Line Template 2.NBT.6 POD PowerPoint and resources	Mia has 18 red marbles, 24 green marbles, and 19 blue marbles. How many marbles does she have in all? Ask students what strategies they used to solve the problem. Which addends did they choose to add first and why?	Tens Ones Place value		Sophie read her book each day for four days. She read 30 minutes on Monday, 20 minutes on Tuesday, and 20 minutes on Thursday. She read for 100 minutes in all. For how many minutes did she read on Wednesday? M T W Th 100

Assessments:

Chapter 4 Test

Chapter 4 Performance Task: Brick Towers

2017-2018	Grade 2 Go Math! Quarter 2 Planner Chapter 5 2-Digit Subtraction	15-16 Days

BIG IDEA: There are various strategies that second grade students understand when adding and subtracting within 100. The standard algorithm is neither an expectation nor a focus in second grade. Students use multiple strategies for addition and subtraction in Grades K-3. By the end of third grade students use a range of algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction to fluently add and subtract within 1000. Students are expected to fluently add and subtract multi-digit whole numbers using the standard algorithm by the end of Grade 4.

Students use several processes in the beginning stages of building understanding of addition and subtraction. Understanding and mastering the basic facts supports students' success with 2-digit addition and subtraction. For sums or differences less than 10, students may apply counting processes. For sums or differences greater than 10, students may use strategies such as *make a ten*. Realizing that strategies used for 1-digit addition/subtraction are not efficient for 2-digit addition/subtraction, students may invent their own strategies. Ten (10) is important as a benchmark number in mathematics, not only for counting but also for addition and subtraction. Students' early development of learning to count by 10 brings rewards in two-digit addition and subtraction. A compensation strategy can be used to add/subtract 2-digit numbers when one number is near the net ten. For example, 48 + 17 can be added by adding 2 to the 48 and subtracting 2 from 17, resulting in 50 + 15. Such strategies are grounded in student's ability to make use of prior knowledge of counting by tens and recognizing two-digit numbers with zero in the ones place are easy to add/subtract.

The addition strategies called out in 2.NBT.5 to build conceptual understanding are the following: 1) Adding by Place Value 48 + 37 = 40 + 30 = 70 and 8 + 7= 15, so, 70 + 15 = 85; 2) Incremental adding (breaking one number into tens and ones) 48 + 30 = 78 and 78 + 7 = 85; and 3) Compensation (making a friendly number) 48 + 2 = 50, 37 – 2= 35 and 50 + 35 = 85. The properties that students should know and use are: 1) Commutative property of Addition (a + b = b + a); 2) Associative Property of Addition ((a + b) + c = a + (b + c)); and 3) Identity Property of Addition (a + 0 = a).

The subtraction strategies called out in 2.NBT.5 to build conceptual understanding are the following: 1) Adding Up (from smaller number to larger number) 81-37 would be 37+3 =40, 40 + 40=80, 80 + 1=81, so 3 + 40 + 1 = 44 and 81 – 37 = 44; 2) Incremental Subtraction 81-10=71, 71-10=61, 61-10=51, 51-7=44; 3) Subtracting by place value 81-30=51, 51-7=44.

Adapted from The Common Core Math Companion (Gojak & Miles, 2015, pg. 106, 113).

Professional Development Videos: Different Ways to Show a Number and Subtraction with Regrouping

ESSENTIAL QUESTION: How do you use place value to subtract 2-digit numbers with and without regrouping?
STANDARDS: 2.OA.1, 2.NBT.5, 2.NBT.9

ELD STANDARDS:
ELD.PI.2.1-Exchanging information/ideas via oral communication and conversations.   ELD.PI.2.9- Expressing information and ideas in oral presentations.
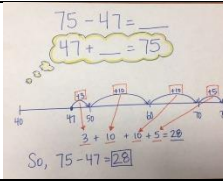ELD.PI.2.3-Offering opinions and negotiating with/persuading others.   ELD.PI.2.11- Supporting opinions or justifying arguments and evaluating others' opinions or arguments.
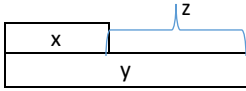ELD.PI.2.5-Listening actively and asking/answering questions about what was heard.   ELD.PI.2.12-Selecting and applying varied and precise vocabulary.

Lesson	Standards & Math Practices	Essential Question	Math Content and Strategies	Models/Tools Go Math! Teacher Resources G2	Connections (ENGAGE prior knowledge)	Vocabulary	Academic Language Support	Journal
5.1 Algebra - Break Apart Ones to Subtract *Same strategy as 4.1	2.NBT.5 Companion Pg.106 2.NBT.9 Companion Pg.113 MP 1 MP 5 MP 6	How does breaking apart a number make subtracting easier?	In this lesson, students learn to break apart numbers to subtract. A major goal for students is to develop fluency with numbers by manipulating them in various ways. Encourage students to share their strategies and explain their reasoning. Decomposing is a math strategy in which numbers are broken into parts. Giving students concrete experiences with manipulating numbers using base-ten blocks, connecting cubes, hundred charts, and number lines, builds visual images	Base Ten blocks Place Value Mat Open Number Line Laminate a sentence strip for students to make	Why is the breaking apart the number you are subtracting a helpful strategy to use? Would you use the break apart strategy to find the difference for 49- 5? Explain.	Difference Regroup Tens Ones Digits Decompose Compose	**ELD Standards** ELD Standards ELA/ELD Framework ELPD Framework **Access Strategies** Organizing Learning	Draw a number line and show how to find the difference for 24-6 using the break apart method.

#	Title	Standard	Essential Question	Teaching Notes	Manipulatives	Example Problems	Vocabulary	Resources	Assessment
		MP 8		for them to manipulate the numbers mentally to solve problems. A key component in teaching for understanding is the conversations that occur between the teacher and the students. Students feel more confident sharing their ideas when the following norms have been established: 1) There are many ways of finding an answer to a problem, 2) Everyone's ideas are important. You can learn by listening to other people's ideas, and 3) Incorrect answers and solutions are a valuable part of learning.	their own number lines.			for Student Access to Challenging Content Student Engagement Strategies Problem Solving Steps and Approaches **Equitable Talk**	
5.2	Algebra - Break Apart Numbers to Subtract *Same strategy as 4.3	2.NBT.5 Companion Pg.106 MP 1 MP 3 MP 5 MP 8	How does breaking apart a number make subtracting easier?	Decomposing is a math strategy in which numbers are broken into parts. Giving students concrete experiences with manipulating numbers using base-ten blocks, connecting cubes, hundred charts, and, in this lesson, number lines, builds visual images for them to manipulate the numbers mentally to solve problems.	Base Ten blocks Place Value Mat Open Number Line Laminate a sentence strip for students to make their own number lines.	68-37 Have students decompose these numbers and represent them with base ten blocks. Then subtract based on place value.	Difference Regroup Tens Ones Digits Decompose Compose	Accountable Talk Simply Stated Equitable Talk Conversation Prompts Accountable Talk Posters Five Talk Moves Bookmark	Draw a number line and show how to find the difference for 36 – 17 using the break apart method.
5.3	Model Regrouping for Subtraction *Same strategy as 4.4	2.NBT.9 Companion Pg.113 MP 2 MP 5 MP 6 MP 7	When do you regroup in subtraction?	Students will approach the task of subtracting two 2-digit numbers with differing degrees of number sense. Working with base-ten blocks on place-value mats emphasizes the visual and concrete aspects of the skill. The blocks present a concrete demonstration of the important equivalent representation: 10 ones have the same value as 1 ten. An understanding of this concept is essential to regrouping. The concrete and visual models in this lesson provide an important developmental step in the understanding of the abstract representation of 2-digit subtraction in the standard algorithm.	Regrouping Template This is the same Place Value Mat, but with an explanation of how to show regrouping.	43-26 Have students build the #43 with base ten blocks. Ask students how many tens and ones. Do we have enough ones to subtract 6? Where can we get more ones?	Difference Regroup Tens Ones Digits Decompose Compose	Effective Math Talks **Cooperative Learning** Cooperative Learning Role Cards Collaborative Learning Table Mats	Draw a quick picture for 37. Draw to show how you would subtract 19 from 37. Write to explain what you did to regroup.
5.4	Model and Record 2-digit Subtraction *Lessons 5.4-5.6 are the same as lessons 4.5-4.8.	2.NBT.5 Companion Pg.106 MP 1 MP 4 MP 6 MP 7	How do you record 2-digit subtraction?	Use the problems from the lessons to continue modeling with blocks, and use pictorial representations to build conceptual understanding. You may show students the algorithm, but it is not expected to be mastered until 4th grade. The focus for students in the 2nd grade is to have a solid foundation of place value **and** the concept of addition and subtraction. The algorithm can count as another strategy as long as the student(s) can clearly explain the concept of regrouping and use place value understanding to reason about the steps in their process.	Base Ten blocks Place Value Mat Open Number Line Laminate a sentence strip for students to make their own number lines.	Select problems from the Teacher Edition (19-32, 36-45, 26-53) and/or Student Edition and have students solve them with one of the strategies that they have been shown. Challenge students to see if they can create their own word problems using the given number sense.	Difference Regroup Tens Ones Digits Decompose Compose	Seating Chart Suggestions Math Word Wall **Literacy Connections** Comic Books for Sale Party Plans	Draw a quick picture to show the number 24. Then draw a quick picture to show 24 after you have regrouped 1 ten as 10 ones. Explain how both pictures show the same number, 24.
5.5	2-Digit Subtraction	2.NBT.5 Companion Pg.106	How do you record the steps	Do not focus on the standard algorithm aspect of these lessons. Use the problems from the lessons to continue	Base Ten blocks Place Value Mat	Select problems from the Teacher Edition and/or	Difference Regroup		Show two ways on how you can solve

		MP 2 MP 5 MP 6 MP 8	when subtracting 2-digit numbers?	modeling with blocks, and use pictorial representations to build conceptual understanding. Use the place value mats and base ten manipulatives to support student reasoning.	Open Number Line Laminate a sentence strip for students to make their own number lines.	Student Edition and have students solve them with one of the strategies that they have been shown. Challenge students to see if they can create their own word problems using the given number sense.	Tens Ones Digits Decompose Compose		to find the difference of 32-15.
5.6	Practice 2-Digit Subtraction	2.NBT.5 Companion Pg.106 MP 3 MP 7	How do you record the steps when subtracting 2-digit numbers?	Use the problems from the lessons to continue modeling with blocks, and use pictorial representations to build conceptual understanding.	Base Ten blocks Place Value Mat Open Number Line Laminate a sentence strip for students to make their own number lines.	Select problems from the Teacher Edition and/or Student Edition and have students solve them with one of the strategies that they have been shown. Challenge students to see if they can create their own word problems using the given number sense.	Difference Regroup Tens Ones Digits Decompose Compose		Explain how these two problems are different: 35-15= 43-26= Hint: One requires regrouping and the other doesn't.
5.7	Rewrite 2-digit Subtraction	2.NBT.5 Companion Pg.106 MP 1 MP 3 MP 6 MP 7	What are two different ways to write subtraction problems?	Students may ask why they start with the ones and not the tens when they are finding the difference in a vertical 2-digit subtraction problem. You may want to show children two 2-digit subtraction problems-a problem in which no regrouping is needed and a problem in which regrouping is needed. (No regrouping: 57-31; Regrouping Needed: 57-39) Discuss the difference can be found by starting with the tens or with the ones when no regrouping is needed. If regrouping is needed, then you should start with the ones, so that you can regroup 1 ten as 10 ones before you subtract the tens.	Base Ten blocks Place Value Mat Open Number Line Laminate a sentence strip for students to make their own number lines.	Why is it helpful to write the number vertically? When writing problems vertically, do we need to pay attention to place value? Which way is written correctly below: 78 78 - 4 - 4	Difference Regroup Tens Ones Digits Decompose Compose		Ana solved the following problem: 64 – 3 = 34 Do you agree or disagree with her answer?
5.8	Add to Find Differences	2.NBT.5 Companion Pg.106 MP 3 MP 5 MP 6 MP 8	How can you use addition to solve subtraction problems?	A number line can be used to solve subtraction problems. By using this tool, students can see how to add to find the difference between two numbers (or the missing addend). It is importance to guide the class through this multistep process when they begin. First, show how to start with the subtrahend and find how many ones need to be added to get to the next tens number. Then, find how many more tens (and maybe more ones) they need to add to get to the larger number (the minuend). Demonstrate how to keep track of the numbers and how they are used in the model by writing an addition sentence. Model on the number line and write the related addition or subtraction sentences.	Open Number Line Laminate a sentence strip for students to make their own number lines. Number Line Template with Examples	Solve: 43-18 Have students use a number line and add to find the difference. Challenge students to regroup the numbers to find different ways to find the difference. Example: 1 way: 18 + 2 = 20; 20 + 20 = 40; 40 + 3= 43. (2 + 20 + 3 =25, so 43-18=25) Another way: 18 + 10=28; 28 + 10= 38; 38+5=43. (10 + 10 + 5=25)	Difference Regroup Tens Ones Digits Decompose Compose		Explain how a number line can be used to find the difference for 34-28.

| 5.9 | Problem Solving - Subtraction

* Combine with 5.10 and have students write the corresponding number sentence after constructing the bar model. | 2.OA.1
Companion Pg. 59

MP 1
MP 2
MP 3
MP 4
MP 5 | How can drawing a diagram help when solving subtraction problems? | This lesson uses bar models as a tool for representing a problem situation. Similar to their use in addition, bar models can be used to represent a variety of subtraction situations. The unknown amount may be the start unknown, change unknown, or result unknown.
   Start Unknown: ? – 4 = 12
   Change Unknown: 16 - ? = 5
   Result Unknown: 23 – 14 = ?
Bar models also help to distinguish between types of subtraction, especially take-away subtraction and comparison subtraction. Bar models for comparison subtraction help students visualize why subtraction is appropriate in comparison situations.
For situations that are add to, take from, put together or take apart you would use the part-part-total template. For situations that compare (How many more? How many fewer?) you would use the comparison model.
Part-Part-Total:

      | x | y |

      z
X + Y = Z; Y + X = Z; Z – X = Y; Z – Y = X

Comparison Model:

    z
  x
  y

X + Z =Y; Y – X = Z | Part-Part-Total Template

Addressing Word Problems
(This link gives examples of group activities to help students build understanding of word problems)

Steps to Word Problems | When solving word problems, ask students the following:

What are you asked to find?
What is unknown?

What information do you need to use?

How can you use the bar model to help you write a number sentence about the problem?

Can I use addition and/or subtraction to solve?

Explain how this number sentence can be used to stand for this problem. | Difference
Regroup
Tens
Ones
Digits
Decompose
Compose | | Solve using a bar model:

Farmer Lee took 35 cows to the fair. He sold 14 cows. How many cows does he have left?

Explain how the bar model helped you solve this problem. |
| 5.10 | Algebra-Write Equations to Represent Subtraction | 2.OA.1
Companion Pg. 59

MP 1
MP 2
MP 6 | How do you write a number sentence to represent a problem? | Translating a word problem into a number sentence is a skill that students will use throughout their school years. Not only will they need to be able to do this in mathematics classes, but this will also be helpful when they are in testing situations. As they learn other operations, they will need to decide if they should add, subtract, multiply, or divide to solve problems.
To write a number sentence to represent a word problem, students need to understand the problem situation. To represent the situation correctly they must read and interpret the problem, rather than simply looking for numbers and for a | Part-Part-Total Template

Addressing Word Problems
(This link gives examples of group activities to help students build | When solving word problems, ask students the following:

What are you asked to find?
What is unknown?

What information do you need to use?

How can you use the bar model to help you write a | Difference
Regroup
Tens
Ones
Digits
Decompose
Compose | | There are 30 ants on a rock. Some ants moved to the dirt. Now there are 19 ants on the rock. How many ants moved to the dirt?

Describe different ways/strategies |

				few words that may be a "clue" for the operation. Looking for "clue" words does not support conceptual understanding of the answer to their word problem.	understanding of word problems) Steps to Word Problems	number sentence about the problem? Can I use addition and/or subtraction to solve? Explain how this number sentence can be used to stand for this problem.			that you can use to solve this story problem.
5.11	Solve Multistep Problems	2.OA.1 Companion Pg. 59 MP 1 MP 2 MP 4	How do you decide what steps to do to solve a problem?	Students may have difficulty determining the steps to do to solve a multistep problem. For many multistep problems, there is a piece of needed information that is not explicitly stated in the problem and must be found. However, enough information is given to determine that piece of needed information. Students must figure out what question to ask to find this needed information. A good understanding of the problem is necessary to solve a multistep problem. Students need to read the problem carefully, possibly rephrasing it in their own words, or acting it out with manipulatives or drawings. Encourage different representations that students may choose to use.	Part-Part-Total Template Addressing Word Problems (This link gives examples of group activities to help students build understanding of word problems) Steps to Word Problems	When solving 2-step word problems, ask students the following: What is the first step in solving this problem? What do you need to do next so that you can answer the question? Write the following on the board: Melissa has ___ animal cards. Then she buys ___ more animal cards. If she trades ___ animal cards for _____ Pokemon cards, how many animal cards will Melissa have now? Have partners work together to choose number to fill in the blanks of the story problem. Then have students solve the problem.	Difference Regroup Tens Ones Digits Decompose Compose		Solve: Travis had 47 stickers. He gave 21 stickers to Sara and 8 stickers to Jon. How many stickers does Travis have now? Describe the steps you used to solve this problem.

Assessments:
Chapter 5 Test
Chapter 5 Performance Task: The Farmers Market