	Grade: 1					
	Suggested Timeline: 9 weeks					
Addition and Subtraction of Numbers to 10 and Fluency		Students work to build fluence with addition and subtraction facts - a major gateway to later grades. The next major stepping stone in understanding place value is learning to group "10 ones" as a single unit: 1 ten.				
I Can Statements / Essential Questions / Objectives	**Content / Concepts**	**Skills / Competencies**	**Vocabulary**	**Assessments**	**Focus Standards**	**Standards for Math Practice**
Use addition and subtraction within 10 to model and solve word problems using objects, drawings, and equations	Addition and Subtraction	Use addition and subtraction within 20 to solve word problems by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.	Addend, Counting on, Compose / Decompose, Making ten, sum, ones, tens, Less than, Greater than, Equal to, Addition, Subtraction		Represent and solve problems involving addition and subtraction within 20.	# 1, 2, 3, 6, 7
Solve word problems with unknowns in different positions		Add and subtract within 20. Use strategies such as counting on; making ten; decomposing a number leading to a ten; using the relationship between addition and subtraction; and creating equivalent but easier or known sums.				
Add and subtract within 20, demonstrating fluency for addition and subtraction within 10.		Solve word problems that call for addition of three whole numbers whose sum is less than or equal to 20.				

Important Standards Addressed in This Unit	Misconceptions	Proper Conceptions
none	Many children misunderstand the meaning of the equal sign, The equal sign means - is the same as, but most primary students believe the equal sign tells you that the - answer is coming up to the right of the equal sign. This misconception is over-generalized by only seeing examples of number sentences with an operation to the left of the equal sign and the answer on the right.	First graders need to see equations written multiple ways, for example 5 + 7 = 12 and 12 = 5 + 7

	Many students think that it is valid to assume that a key word or phrase in a problem suggests the same operation will be used every time. For example, they might assume that the word LEFT always means that subtraction must be used to find a solution.	Providing problems in which key words like this are used to represent different operations is essential. For example, the use of the word LEFT in this problem does not indicate subtraction as a solution method: Joes took the 8 stickers he no longer wanted and gave them to Anna. Now Jose has 11 stickers LEFT. How many did Jose have to begin with? Students need to analyze word problems and avoid using key words to solve them.

Subject/Course: Math	Grade: 1					
	Suggested Timeline: 6 weeks					
Unit Title: Place Value, Comparison, Addition and Subtraction of Numbers to 20	Students practice grouping into tens and ones by adding and subtracting numbers to 20. Work begins slowly by modeling "adding and subtracting across a ten" in word problems, with equations, and as part of fluency. Learning to "complete a unit" empowers students in later grades to understand "renaming" in the addition algorithm, to add 298 and 35 mentally (i.e. 298 + 2 + 33) and to add measurements like 4 m, 80 cm, and 50 cm.					
I Can Statements / Essential Questions / Objectives	**Content / Concepts**	**Skills / Competencies**	**Vocabulary**	**Assessments**	**Focus Standards**	**Standards for Math Practice**
Use addition and subtraction within 20 to solve word problems.	Numerical sequence	Count to 120, starting at any number less than 120.	Addend, Counting on, Compose / Decompose, Making ten, sum, tens, ones, less than, greater than, equal to, addition, subtraction, compare, place value		Extend the counting sequence to read and write numerals to represent objects.	#1,3,5,6
Use the concept of tems and ones to represent and compare two-digit numbers.	Place value	Read and write numerals up to 120 and represent a number of objects with a written numeral.			Use place value concepts to represent amounts of tems and ones and to compare two digit numbers.	
Count by ones and tens beginning with numbers other than 1.	Addition and Subtraction	Compare two two-digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols >, =, and <.			Represent and solve problems involving addition and subtraction within 20.	

Solve word problems that call for the addition of three whole numbers whose sum is less than or equal to 20.	Properties of Operations	Add within 100, including adding a two-digit number and a one-digit number, and adding a two-digit number and a multiple of 10 using concrete models or drawings. Relate the strategy to a written method and explain the reasoning used.			Understand and apply properties of operations and the relationship between addition and subtraction.	
		Subtract multiples of 10 in the range 10-90, using concrete models or drawings. Relate the strategy to a written method and explain the reasoning used.				
		Add and subtract within 20. Use strategies such as counting on; making ten; decomposing a number leading to a ten; using the relationship between addition and subtraction; and creating equivalent but easier or known sums.				
		Solve word problems that call for addition of three whole numbers whose sum is less than or equal to 20.				
		Apply properties of operations as strategies to add and subtract (commutative property of addition; associative property of addition).				

		Understand subtraction as an unknown-addend problem. For example, subtract 10 – 8 by finding the number that makes 10 when added to 8.				

Important Standards Addressed in This Unit	Misconceptions	Proper Conceptions
none	Many children misunderstand the meaning of the equal sign. The equal sign means —is the same as, but most primary students believe the equal sign tells you that the —answer is coming up to the right of the equal sign. This misconception is over-generalized by only seeing examples of number sentences with an operation to the left of the equal sign and the answer on the right.	First graders need to see equations written multiple ways, for example 5 + 7 = 12 and 12 = 5 + 7.

	A second misconception that many students have is that it is valid to assume that a key word or phrase in a problem suggests the same operation will be used every time. For example, they might assume that the word left always means that subtraction must be used to find a solution.	Providing problems in which key words like this are used to represent different operations is essential. For example, the use of the word left in this problem does not indicate subtraction as a solution method: Seth took the 8 stickers he no longer wanted and gave them to Anna. Now Seth has 11 stickers left. How many stickers did Seth have to begin with? Students need to analyze word problems and avoid using key words to solve them.
	A common misconception is that the commutative property applies to subtraction.	After students have discovered and applied the commutative property for addition, ask them to investigate whether this property works for subtraction. Have students share and discuss their reasoning and guide them to conclude that the commutative property does not apply to subtraction.

	First graders might have informally encountered negative numbers in their lives, so they think they can take away more than the number of items in a given set, resulting in a negative number below zero.	Provide many problems situations where students take away all objects from a set, e.g. 19 - 19 = 0 and focus on the meaning of 0 objects and 0 as a number. Ask students to discuss whether they can take away more objects than what they have.
	Students ignore the need for regrouping when subtracting with numbers 0 to 20 and think that they should always subtract a smaller number from a larger number. For example, students solve 15 – 7 by subtracting 5 from 7 and 0 (0 tens) from 1 to get 12 as the incorrect answer.	Students need to relate their understanding of place-value concepts and grouping in tens and ones to their steps for subtraction. They need to show these relationships for each step using mathematical drawings, ten-frames or base-ten blocks so they can understand an efficient strategy for multi-digit subtraction.

	Often when students learn to use an aid (Pac Man, bird, alligator, etc.) for knowing which comparison sign (<, >, =) to use, the students don't associate the real meaning and name with the sign.	The use of the learning aids must be accompanied by the connection to the names: < Less Than, > Greater Than, and = Equal To. More importantly, students need to begin to develop the understanding of what it means for one number to be greater than another. In Grade 1, it means that this number has more tens, or the same number of tens, but with more ones, making it greater. Additionally, the symbols are shortcuts for writing down this relationship. Finally, students need to begin to understand that both inequality symbols (<, >) can create true statements about any two numbers where one is greater/smaller than the other, (15 < 28 and 28 >15).

Subject/Course: Math	Grade: 1					
	Suggested Timeline: 4 weeks					
Unit Title: Ordering and Expressing Length Measurements as Numbers and Telling Time	This unit focuses on measuring lengths indirectly and by iterating length units, giving students time and opportunities to practice and internalize "making a 10" during daily fluency activities. The clock is introduced and students will tell time to the nearest hour and half hour. Introducing measurement in the first half of the year also allows for an increased variety of word problems that can be given throughout the year.					
I Can Statements / Essential Questions / Objectives	**Content / Concepts**	**Skills / Competencies**	**Vocabulary**	**Assessments**	**Focus Standards**	**Standards for Math Practice**
Measure length with nonstandard units	Measurement	Add and subtract within 20. Use strategies such as counting on; making ten; decomposing a number leading to a ten; using the relationship between addition and subtraction; and creating equivalent but easier or known sums.	Less than, Greater than, length, hour, half hour, compare, analog, Compose / decompose, Making ten		Order lengths and measure them both indirectly and by repeating length units	#1,3,5,6
Measure the length of an object by comparing it to another object.	Represent and Interpret Data	Order three objects by length; compare the lengths of two objects indirectly by using a third object.			Tell and write time to the nearest half hour using both analog and digital clocks	
Order objects according to their length		Use standard and non-standard units of measure to express the length of an objects a whole number of length units.				
Tell time to the nearest hour and half hour using analog and digital clocks		Tell and write time in hours and half hours using analog and digital clocks.				

Use the "make a ten" strategy to increase fluency						

Important Standards Addressed in This Unit	Misconceptions	Proper Conceptions
none	Some students may view the measurement process as a procedural counting task. Students need numerous experiences measuring lengths with student-made tapes or rulers with numbers in the center of the spaces. They may have gaps or overlaps with the units they are using to measure. They may not understand that the units used to measure must be the same size.	In order for students to be able to compare objects, students need to understand that length is measured from one end point to another end point. They determine which of two objects is longer, by physically aligning the objects. Typical language of length includes taller, shorter, longer, and higher. When students use bigger or smaller as a comparison, they should explain what they mean by the word. Some objects may have more than one measurement of length, so students identify the length they are measuring. Both the length and the width of an object are measurements of length.
	Students have difficulty distinguishing the hour and minute hand on the clock.	Students need many opportunities to work with a clock, manipulating the hands and telling the time.

Subject/Course: Math	Grade: 1					
	Suggested Timeline: 7 weeks					
Unit Title: Place Value, Comparison, Addition and Subtraction of Numbers to 40.	Module 4 returns to understanding place value. Addition and subtraction to 40 rests on firmly establishing a "ten" as a unit that can be counted. In earlier modules, students loosely grouped 10 objects to make a ten. They now transition to conceptualizing that ten as a single unit (using 10 linker cubes stuck together, for example). Students begin to see a problem like 23 + 6 as an opportunity to push the "2 tens" in 23 over to the side and concentrate on the familiar addition problem 3 + 6.					

I Can Statements / Essential Questions / Objectives	Content / Concepts	Skills / Competencies	Vocabulary	Assessments	Focus Standards	Standards for Math Practice
Decompose numbers into tens and ones	Place Value	Compare two two-digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols >, =, and <.	Addend, Counting on, Compose / Decompose, Making ten, sum, tens, ones, Less than, Greater than, Equal to, Addition, Subtraction, Compare, Place value, Data		Use place value concepts to represent amounts of tens and ones and to compare two digit numbers.	#1,2,3,5,6,7
Represent and solve addition and subtraction problems to 40 using concrete objects, drawings, and equations		Add within 100, including adding a two-digit number and a one-digit number, and adding a two-digit number and a multiple of 10 using concrete models or drawings. Relate the strategy to a written method and explain the reasoning used.			Represent and solve problems involving addition and subtraction within 20.	

Gather and represent data in tables / charts	Addition and Subtraction	Subtract multiples of 10 in the range 10-90, using concrete models or drawings. Relate the strategy to a written method and explain the reasoning used.			Represent and interpret data using tables/charts	
use data in tables / charts to solve problems	Represent and Interpret Data	Use addition and subtraction within 20 to solve word problems by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.				
Represesnt and solve different types of addition and subtraction word problems						
		Solve word problems that call for addition of three whole numbers whose sum is less than or equal to 20.				
		Add and subtract within 20. Use strategies such as counting on; making ten; decomposing a number leading to a ten; using the relationship between addition and subtraction; and creating equivalent but easier or known sums.				

		Organize, represent, and interpret data with up to three categories. Ask and answer questions about the data.				

Important Standards Addressed in This Unit	Misconceptions	Proper Conceptions
none	Many children misunderstand the meaning of the equal sign. The equal sign means is the same as but most primary students believe the equal sign tells you that the answer is coming upll to the right of the equal sign. This misconception is over-generalized by only seeing examples of number sentences with an operation to the left of the equal sign and the answer on the right.	First graders need to see equations written multiple ways, for example 5 + 7 = 12 & 12 = 5 + 7.

	A second misconception that many students have is that it is valid to assume that a key word or phrase in a problem suggests the same operation will be used every time. For example, they might assume that the word left always means that subtraction must be used to find a solution.	Providing problems in which key words like this are used to represent different operations is essential. For example, the use of the word left in this problem does not indicate subtraction as a solution method: Jose took the 8 stickers he no longer wanted and gave them to Anna. Now Jose has 11 stickers left. How many stickers did Jose have to begin with? Students need to analyze word problems and avoid using key words to solve them.
	Students ignore the need for regrouping when subtracting with numbers 0 to 20 and think that they should always subtract a smaller number from a larger number. For example, students solve 15 – 7 by subtracting 5 from 7 and 0 (0 tens) from 1 to get 12 as the incorrect answer.	Students need to relate their understanding of place-value concepts and grouping in tens and ones to their steps for subtraction. They need to show these relationships for each step using mathematical drawings, ten-frames or base-ten blocks so they can understand an efficient strategy for multi-digit subtraction.

Subject/Course: Math	Grade: 1					
	Suggested Timeline: 3 weeks					
Unit Title: Identify, Compose, and Partition Shapes	In Module 5, students think about attributes of shapes and practice composing and decomposing geometric shapes. They also practice fluency with addition and subtraction within 40 (from Module 4). Thus, this module provides important "internalization time" for students between two intense number-based modules. The module placement also gives more spatially-oriented students the opportunity to build their confidence before they return to arithmetic.					

I Can Statements / Essential Questions / Objectives	Content / Concepts	Skills / Competencies	Vocabulary	Assessments	Focus Standards	Standards for Math Practice
Identify two- and three- dimensional shapes	Two and Three Dimensional	Compose two and three-dimensional shapes and distinguish between attributes.	Compose/decompose, trapezoids		Compose and distinguish between two- and three-dimensional shapes based on their attributes.	#1,2,3,4,5,6
Compose geometric shapes from two or more smaller shapes	Fractions	Build and draw shapes to possess attributes.	Half circles, quarter-circles, Rectangle		Use the understanding of fractions to partition shapes into halves and quarters.	
Decompose geometrict shapes into halves and quarters		Partition circles and rectangles into two and four equal shares. Understand that decomposing into more equal shares creates smaller shares.	Square, circle, triangle, cube			
Identify attributes of geometric shapes			Rectangular prism, cone, cylinder Halves, fourths, quarters			
Increase fluency with addition and subtraction						

Important Standards Addressed in This Unit	Misconceptions	Proper Conceptions
Represent and solve problems involving addition and subtraction within 20.	Students may think that a square that has been rotated so that the sides form 45-degree angles with the vertical diagonal is no longer a square but a diamond.	They need to have experiences with shapes in different orientations. For example, in building-shapes, ask students to orient the smaller shapes in different ways.
	Some students may think that the size of the equal shares is directly related to the number of equal shares. For example, they think that fourths are larger than halves because there are four fourths in one whole and only two halves in one whole.	Students need to focus on the change in the size of the fractional parts as recommended in the folding shapes strategy. (Focus on Concrete and Representational activities).

Module 6	Grade: 1 Suggested Timeline: 7 weeks					
Unit Title: Place Value, Comparison, Addition and Subtraction of Numbers to 100	Although Module 6 focuses on "adding and subtracting within 100," the learning goal differs from Module 4, which focuses on addition and subtraction "within 40". Here, the new level of complexity is to introduce the addition and subtraction algorithms, building off the place value understanding and mental math strategies that were introduced in earlier modules. Students explore the algorithms by using simple examples and the familiar units of 10 made out of linker cubes.					
I Can Statements / Essential Questions / Objectives	**Content / Concepts**	**Skills / Competencies**	**Vocabulary**	**Assessments**	**Focus Standards**	**Standards for Math Practice**
Represent and solve addition and subtraction problems within 100, including different types of word problems	Place Value	Compare two two-digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols >, =, and <.	Addend, Counting on, Compose / Decompose, Making ten, sum, tens, ones, Less than, Greater than, Equal to, Addition, Subtractions, Compare, Place Value		Use place value concepts to represent amounts of tens and ones and to compare two digit numbers.	#1,2,3,4,5,6
Use place value concepts and properties of operations to find sums and differences within 100	Addition and Subtraction	Add within 100, including adding a two-digit number and a one-digit number, and adding a two-digit number and a multiple of 10 using concrete models or drawings. Relate the strategy to a written method and explain the reasoning used.			Use place value concepts and properties of operations to add and subtract within 100.	
Increase fluency within 20	Properties of Operations	Subtract multiples of 10 in the range 10-90, using concrete models or drawings. Relate the strategy to a written method and explain the reasoning used.			Represent and solve problems involving addition and subtraction within 20.	

		Apply properties of operations as strategies to add and subtract (commutative property of addition; associative property of addition).			Understand and apply properties of operations and the relationship between addition and subtraction.	
		Understand subtraction as an unknown-addend problem. For example, subtract 10 – 8 by finding the number that makes 10 when added to 8.				

Important Standards Addressed in This Unit	Misconceptions	Proper Conceptions
none	A common misconception is that the commutative property applies to subtraction.	After students have discovered and applied the commutative property for addition, ask them to investigate whether this property works for subtraction. Have students share and discuss their reasoning and guide them to conclude that the commutative property does not apply to subtraction.
	First graders might have informally encountered negative numbers in their lives, so they think they can take away more than the number of items in a given set, resulting in a negative number below zero.	Provide many problems situations where students take away all objects from a set, e.g. 19 - 19 = 0 and focus on the meaning of 0 objects and 0 as a number. Ask students to discuss whether they can take away more objects than what they have.