Subject/Course: Math	**Grade: Kindergarten**	
	Suggested Timeline: 6 weeks	
Unit Title: Classify and Count Numbers to 10	Kindergarten starts out realistically with solidifying the meaning of numbers to 10 with a focus on relationships to 5. Here, students investigate growth and shrinking patterns to 10 of "1 more" and "1 less," using models.	
I Can Statements / Essential Questions / Objectives	**Content / Concepts**	**Skills / Competencies**
Count orally by ones beginning from a given number (instead of always beginning at 1)	Numerical Sequence	Rote count to 100.
Write numbers from 10 to 10	Object Quantity	Count forward beginning from a given number within the known sequence (instead of having to begin at 1).
Count to tell the number of objects	Number Comparison	Name numerals.
Say the number names in the standard order, pairing each object with one and only one object		Represent a number of objects with a written numeral 0-20.
Understand that the last number said tells the number of objects counted		Use one-to-one correspondence when counting to 20.
Understand that each successive number name refers to a quantity that is one larger		State the total number of objects counted, demonstrating that the last number named tells the number of objects counted.
Compare amounts to 10		Understand that each successive number name refers to a quantity that is one larger.
		Identify whether the number of objects in one group is great than, less than, or equal to the number of objects in another group, e.g. by using matching and counting strategies.

Vocabulary	Assessments	Focus Standards	Standards for Math Practice	Important Standards Addressed in This Unit	Misconceptions
Digit, Total, Quantity, Greater Than, Less Than, Equal		Know number names and write and recite the count sequence.	#1, 3, 5, 6	Apply the concept of magnitude to compare numbers and quantities.	Some students might not see 0 as a number.
		Apply one-to-one correspondence to count the number of objects.			As students are learning to count, they often make one or more of the following errors: Amount of counting experiences (more experience leads to fewer errors), size of set (children become accruate on small sets first), arrangements of objects (objects in rows make it easier to keep track of what has been counted and what has not).

Proper Conceptions
Ask students to write 0 and say ZERO to represent the number of items left when all items have been taken away. Avoid using the word NONE to represent this situation. Find instances for which the response would be zero in real-world settings to provide experiences with the concept of zero.
As long as children understand that correct counting requires one point and one word for each object and are trying to do that, parents and teachers do not need to correct errors all the time. As with many physical activities, counting will improve with practice and does not need to be perfect every time. It is much more important for all children to get frequent counting practice and watch and help one another, with occasional help and corrections from the teacher.

Subject/Course: Math	Grade: Kindergarten		
	Suggested Timeline: 3 weeks		
Unit Title: Identify and Describe Shapes	Students learn to identify and describe squares, circles, triangles, rectangles, hexagons, cubes, cones, cylinders and spheres. They also practice their fluency with numbers to 10.		
I Can Statements / Essential Questions / Objectives	**Content / Concepts**	**Skills / Competencies**	**Vocabulary**
Edientify shapes in the environment.	Numerical Sequence	Count forward geginning from a given number within the known sequence (instead of having to begin at 1).	total, Quantity, Greater Than, Less Than, Equal, Triangle, Square, Circle, Rectangle,Cube, Cone, Cylinder, Sphere, Length, Sides, Corners
Use positional words to describe position of shape.	Object Quantity	Name numerals 0-20.	
Identify and compare attributes of shapes.	Two and Three Dimensional Shapes	Represent a number of objects with a written numeral 0-20.	
Sort by two attributes and count the shapes in each category.		State the total number of objects counted, demonstrating understanding that the last number named tells the number of objexts counted.	
		Identify shapes as two dimensional or three dimensional.	
		Name shapes regardless of their orientations or overall size.	
		Use simple shapes to compose larger shapes.	

		Describe objexts in the environment using names of shapes and describe the relative positions of these objexts using terms such as above, below, beside, in front, behind, and next to.	
		Analyze and compare two and three dimensional shapes, in different sizes and orientations, using informal language to describe their similarities, differences, parts and other attributes.	
		Model shapes in the world by building shapes from components and drawing shapes.	

Assessments	Focus Standards	Standards for Math Practice	Important Standards Addressed in This Unit	Misconceptions	Proper Conceptions
	Know number names and write and recite the count sequence.	#1, 3, 5, 6	Use place value to compose and decompose numbers within 19.	Due to varied development of fine motor and visual development, a reversal of numerals is anticipated for a majority of the students.	While reversals should be pointed out to students, the emphasis is on the use of numerals to represent quantities rather than the correct handwriting formation of the actual numeral itself.
	Apply one-to-one correspondence to count the number of objexts.			Some students might think that the count word used to tag an item is permanently connected to that item. So when the item is used again for counting and should be tagged with a different count word, the student uses the original count word.	Students need many opportunities to count various objexts. They also need to see counting of shapes modeled.
				Students many times use incorrect terminology when describing shapes. For example students may say a cube is a square or that a sphere is a circle. The use of the two dimensional shape that appears to be part of a three dimensional shape to name the three dimensional shape is a common misconception.	Work with students to help them understand that the two dimensional shape is a part of the objext but it has a different name.

				Kindergarten students have difficulty with the terms two dimensional and three dimensional.	Manipulatives used for shape identification actually have three dimensions. However, kindergarteners need to think of thes shapes as two dimensional or :flat" and typical three dimensional shapes as "solid." Students will identify two dimensional shapes that form surfaces on three dimensional objexts. Students need to focus on noticing two and three dimensions, not on the words two dimensional and three dimensional.

Subject/Course: Math	Grade: Kindergarten					
	Suggested Timeline: 7 weeks					
Unit Title: Comparison with Length, Weight, and Numbers to 10	Students begin to experiment with measurement, particularly with units and comparison of units. Students use different units to measure length, weight, and capacity, and explore the measurable attributes of an object. Comparison begins with developing the meaning of the word "than" in the context of "taller than," "shorter than," heavier than," longer than," etc. The terms "more' and "less" are abstract later in kindergarten because of their context: "7 is 2 more than 5" is more abstract than "Jim is taller than John." 1 more, 2 more, 3 more lead into the addition fact fluencies (+1, +2, +3). Comparing numbers leads to a study of the numbers that make up a number (e.g."3 is less than 7" and later, "3 and 4 make 7." This, in turn, leads naturally to discussions of adding, subtracting, and solving word problems in the next module.					

I Can Statements / Essential Questions / Objectives	Content / Concepts	Skills / Competencies	Vocabulary	Assessments	Focus Standards	Standards for Math Practice
Measure using length, weight and capacity.	Measurable Attributes	Describe measurable attributes of objects, such as length, weight, area or capacity.	Length, Weight		Describe and compare attributes of length, area, weight, and capacity of everyday objexts.	#1, 5, 6
Use vocabulary such as shorter than, one more, one less when describing quantities.		Compare two objects with a measurable attribute in cimmon and describe the difference.			classify objects and count the number of objects in each category.	
Compare quantities.						
Compare objexts using a measurable attribute.						

Important Standards Addressed in This Unit	Misconceptions	Proper Conceptions
Apply the concept of magnitude to compare numbers and quantities.	Many students have difficulty understanding that the length does not change when an object is moved away from the object they are comparing it to. Students often initially hold undifferentiated views of measurable attributes, saying that one object is "bigger" than another whether it is longer, or greater in area or volume, and so forth. For example, two students might both claim that their block building is "the biggest."	With multiple opportunities, students learn that they have to line up the items they are comparing and measuring. Conversations about how they compare help students learn to discriminate and name these measurable attributes. As they discuss these situations and compare objects using different attributes, they learn to distinguish, label and describe several measureable attributes of a single object.

Subject/Course: Math	Grade: Kindergarten					
	Suggested Timeline: 6 weeks					
Unit Title: Number Pairs, Addition and Subtraction of Numbers to 10	Students use objects, fingers, mental images, drawings, acting out situations, verbal explanations, expressions, or equations to represent addition and subtraction situations. They will understand addition as putting together and adding to and subtraction as taking apart and taking from.					

I Can Statements / Essential Questions / Objectives	Content / Concepts	Skills / Competencies	Vocabulary	Assessments	Focus Standards	Standards for Math Practice
Demonstrate putting together and taking apart situations with objects, fingers or drawings.	Addition	Solve addition and subtraction word problems, and add and subtract within 10, by using objects or drawings to represent the problem.	Equal, Addition, Subtraction, Total, Less Than		Extend concepts of putting together and taking apart to add and subtract within 10.	#1,2,3,5
Add and subtract within 10 using objects, fingers, drawings, verbal explanations or equations.		Represent addition and subtraction with objects, fingers, mental images, and drawings, sounds, acting out situations, verbal explanations, expressions or equations.				
		Decompose numbers less than or equal to 10 into pairs in more than one way, by using objects or drawings, and record each decomposition by a drawing or equation.				

		Find the number that makes 10, for any number from 1 to 9, when added to teh given number, by using objects or drawings, and record the answer with a drawing or equation.				

Important Standards Addressed in This Unit	Misconceptions	Proper Conceptions
No standards are currently aligned.	Students may over-generalize teh vocabulary in word problems and think that certain words indicate solution strategies that must be used to find an answer. They might think that the word "more" always means to add and the words "take away" or left always means to subtract.	When students use the words "take away" to refer to subtraction and its symbol, teachers need to repeat students' ideas using the words "minus" or "subtract."
	Note on vocabulary: the term "total" should be used instead of "sum." Sum sounds the same as Some, but has the opposite meaning.	If students progress from working with manipulative to writing numerical expressions and equations, and they skip using pictorial thinking - students will then be more likely to use finger counting for work with addition and subtraction.
	Counting forward builds to the concept of addition while counting back leads to the concept of subtraction. However, counting is an inefficient strategy.	Teachers need to provide instructional experiences so that students progress from teh concrete level, to the pictorial level, to the abstract level.

		Students need to develop the ability to quickly and accurately understand the relationships between numbers. They need to make sense of numbers as they find and make strategies for joining and separating quantities.

Subject/Course: Math	Grade: Kindergarten					
	Suggested Timeline: 7 weeks					
Unit Title: Numbers 10-20, Counting to 100 by 1 and 10.	When students have a firm grasp of numbers 1-20 they progress to this module. This module explores numbers 10-20, which are parsed as "10 together with a number from 1-10." For example, "12 is more than 10." In numbers 6-10, the role of 5 loses significance as those numbers are shown in dfferent configurations other than "5 and a number." In contrast, the number 10 is special; it is the anchor that will eventually become the "ten" unit in the place value system.					
I Can Statements / Essential Questions / Objectives	**Content / Concepts**	**Skills / Competencies**	**Vocabulary**	**Assessments**	**Focus Standards**	**Standards for Math Practice**
Compose and decompose numbers.	Numerical Sequence	Count forward beginning from a given number within the known sequence (instead of having to begin at 1).	Place value, DIgit, Total, Tens, Ones		Know number names and write and recite the count sequence.	#1, 2, 4, 7, 8
Develop understanding of ten, both as a benchmark and as 10 ones = 1 ten.	Place Value	Name numerals 0-20.			Use place value to compose and decompose numbers within 10.	
Rename a teen number as ten and some more, e.g. 15 is ten and 5 more.		Represent a number of objects with a written numeral 0-20.				
Count orally to 100 by ones and tens.		Compose and decompose numbers up to 19 into ten and ones by using objects or drawings, and record each composition or decomposition by a drawing or equation.				

Important Standards Addressed in This Unit	Misconceptions	Proper Conceptions
Know number names and write and recite the count sequence.	Some students might not see zero as a number. Ask students to write 0 and say zeroto represent the number of items left when all items have been taken away. Avoid using the word NONE to represent this situation. Find instances for which the response would be zero in real-world settings to provide experiences with the concept of zero.	As long as children understand that correct counting requires one point and one word for each object and are trying to do that, parents and teachers do not need to correct errors all the time. As with many physical activities, counting will improve with practice and does not need to be perfect each time. It is much more important for all children to get frequent counting practice and watch and help one another, with occasional help and corrections from the teacher.
Apply one-to-one correspondence to count the number of objects.	The idea that ten ones can also be one ten is difficult for young children and this concept takes time to develop.	Teachers need to provide many opportunities for children to work with this concept.

Apply the concept of magnitude to compare numbers and quantities.	Due to varied development of fine motor and visual development, reversal of numerals is anticipated.	While reversals should be pointed out to students and correct formation modele in instruction, the emphasis of this standard is on the use of numerals to represent quantities rather than the correct handwriting formation of the actual numeral itself.

Subject/Course: Math	Grade: Kindergarten					
	Suggested Timeline: 6 weeks					
Unit Title: Analyze, Compare, Create and Compose Shapes	This is an exploration of shapes. Students discover that shapes can be composed of smaller shapes. They begin to describe similarities and differences among shapes.					

I Can Statements / Essential Questions / Objectives	Content / Concepts	Skills / Competencies	Vocabulary	Assessments	Focus Standards	Standards for Math Practice
Compare two shapes, giving similarities and differences.	Two and Three Dimensional Shapes	Identify shapes as two-dimensional or three-dimensional.	Corners, Sides, Sphere, Cylinder, Cone, Cube, Rectangle, Circle, Square, Triangle		Analyze, compare, create and compose two- and three-dimensional shapes.	#1, 3, 4, 7
Sort shapes based on appearance.		Name shapes regardless of their orientation or overall size.				
Make a larger shape out of two or more smaller shapes.		Use simple shapes to compose larger shapes.				
Model shapes using paper, clay, gumdrops, etc.		Describe objects in the environment using names of shapes and describe the relative positions of these objects using terms such as above, below, beside, in front, behind, and next to.				

		Analyze and compare two- and three- dimensional shapes, in different sizes and orientations, using informal language to describe their similarities, differences, parts and other attributes.				
		Model shapes in the world by building shapes from components and drawing shapes.				

Important Standards Addressed in This Unit	Misconceptions	Proper Conceptions
Identify and describe two- and three- dimensional shapes.	Some students believe that orientation is tied to shape. Students confuse the name of a two-dimensional shape with a related three-dimensional shape or the shape of its face. For example, students might call a cube a square because the student sees the face of the cube.	Students need to have many experiences with shapes in different orientations. For example, ask students to form larger triangles with the two triangles in different orientations.
	Students also confuse the name of a two-dimensional shape with a related three-dimensional shape or the shape of its face. For example, students might calla cube a square because the student sees the face of the cube.	It is important when students are exploring 2-dimensional shapes (flat) that the shapes they are working with are on paper or other FLAT material.