2015 – 2016

Kindergarten MATHEMATICS Curriculum Map

Volusia County Schools

Mathematics Florida Standards

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Critical Areas for Mathematics in Kindergarten

In Kindergarten, instructional time should focus on two critical areas: (1) representing, relating and operating on whole numbers, initially with sets of objects; (2) describing shapes and space. More learning time in kindergarten should be devoted to number than to other topics.

1. Students use numbers, including written numerals, to represent quantities and to solve quantitative problems, such as counting objects in a set; counting out a given number of objects; comparing sets or numerals; and modeling simple joining and separating situations with sets of objects, or eventually with equations such as 5 + 2 = 7 and 7 – 2 = 5. (Kindergarten students should see addition and subtraction equations, and student writing of equations in kindergarten is encouraged, but it is not required.) Students choose, combine, and apply effective strategies for answering quantitative questions, including quickly recognizing the cardinalities of small sets of objects, counting and producing sets of given sizes, counting the number of objects in combined sets, or counting the number of objects that remain in a set after some are taken away.

2. Students describe their physical world using geometric ideas (e.g., shape, orientation, spatial relations), measurable attributes (e.g., length or weight) and vocabulary. They identify, name, and describe basic two-dimensional shapes, such as squares, triangles, circles, rectangles, and hexagons, presented in a variety of ways (e.g., with different sizes and orientations), as well as three-dimensional shapes such as cubes, cones, cylinders, and spheres. They use basic shapes and spatial reasoning to model objects in their environment and to construct more complex shapes.

Grade K Overview

Domain: Counting and Cardinality
- Cluster 1: Know number names and count sequence.
- Cluster 2: Count to tell the number of objects.
- Cluster 3: Compare numbers.

Domain: Operations and Algebraic Thinking
- Cluster 1: Understand addition as putting together and adding to, and understand subtraction as taking apart and taking from.

Domain: Number and Operations in Base Ten
- Cluster 1: Work with numbers 11-19 to gain foundations for place value.

Domain: Measurement and Data
- Cluster 1: Describe and compare measureable attributes.
- Cluster 2: Classify objects and count the number of objects in a category.

Domain: Geometry
- Cluster 1: Identify and describe shapes.
- Cluster 2: Analyze, compare, create, and compose shapes.

Standards for Mathematical Practice

Students will:

1. **Make sense of problems and persevere in solving them. (SMP.1)**
   Solving a mathematical problem involves making sense of what is known and applying a thoughtful and logical process which sometimes requires perseverance, flexibility, and a bit of ingenuity.
2. **Reason abstractly and quantitatively. (SMP.2)**
   The concrete and the abstract can complement each other in the development of mathematical understanding: representing a concrete situation with symbols can make the solution process more efficient, while reverting to a concrete context can help make sense of abstract symbols.
3. **Construct viable arguments and critique the reasoning of others. (SMP.3)**
   A well-crafted argument/critique requires a thoughtful and logical progression of mathematically sound statements and supporting evidence.
4. **Model with mathematics. (SMP.4)**
   Many everyday problems can be solved by modeling the situation with mathematics.
5. **Use appropriate tools strategically. (SMP.5)**
   Strategic choice and use of tools can increase reliability and precision of results, enhance arguments, and deepen mathematical understanding.
6. **Attend to precision. (SMP.6)**
   Attending to precise detail increases reliability of mathematical results and minimizes miscommunication of mathematical explanations.
7. **Look for and make use of structure. (SMP.7)**
   Recognizing a structure or pattern can be the key to solving a problem or making sense of a mathematical idea.
8. **Look for and express regularity in repeated reasoning. (SMP.8)**
   Recognizing repetition or regularity in the course of solving a problem (or series of similar problems) can lead to results more quickly and efficiently.

Common Addition and Subtraction Situations

	Result Unknown	Change Unknown	Start Unknown
Add to	Two bunnies sat on the grass. Three more bunnies hopped there. How many bunnies are on the grass now? 2 + 3 = ?	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	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
Take from	Five apples were on the table. I ate two apples. How many apples are on the table now? 5 – 2 = ?	Five apples were on the table. I ate some apples. Then there were three apples. How many apples did I eat? 5 - ? = 3	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

	Total Unknown	Addend Unknown	Both Addends Unknown[1]
Put Together/ Take Apart[2]	Three red apples and two green apples are on the table. How many apples are on the table? 3 + 2 = ?	Five apples are on the table. Three are red and the rest are green. How many apples are green? 3 + ? = 5, 5 – 3 = ?	Grandma has five 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 = 2 + 3, 5 = 3 + 2

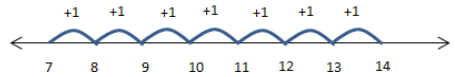
	Difference Unknown	Bigger Unknown	Smaller Unknown
Compare [3]	("How many more?" version): Lucy has two apples. Julie has five apples. How many more apples does Julie have than Lucy? ("How many fewer?" version): Lucy has two apples. Julie has five apples. How may fewer apples does Lucy have than Julie? 2 + ? = 5, 5 – 2 = ?	(Version with "more"): Julie has 3 more apples than Lucy. Lucy has two apples. How many apples does Julie have? (Version with "fewer"): Lucy has three fewer apples than Julie. Lucy has two apples. How many apples does Julie have? 2 + 3 = ?, 3 + 2 = ?	(Version with "more"): Julie has three more apples than Lucy. Julie has five apples. How many apples does Lucy have? (Version with "fewer"): Lucy has three fewer apples than Julie. Julie has five apples. How many apples does Lucy have? 5 – 3 = ?, ? + 3 = 5

[1] These take apart situations can be used to show all the decompositions of a given number. The associated equations, which have the total on the left of the equal sign, help children understand that the = sign does not always mean makes or results in, but always does mean is the same number as.
[2] Either addend can be unknown, so there are three variations of these problem situations. Both Addends Unknown is a productive extension of this basic situation, especially for small numbers less than or equal to 10. [3] For the Bigger Unknown or Smaller Unknown situations, one version directs the correct operation (the version using more for the bigger unknown and using less for the smaller unknown). The other versions are more difficult.

Addition Strategies		
Name	Clarification	Student Work Sample
Counting All	• student counts every number • students are not yet able to add on from either addend, they must mentally build every number	8 + 9 1,2,3,4,5,6,7,8,9,10,11,12,13, 14,15,16,17
Counting On	• transitional strategy • student starts with 1 number and counts on from this point	8 + 9 8…9,10,11,12,13,14,15,16,17
Doubles/Near Doubles	• student recalls sums for many doubles	8 + 9 8 + (8 + 1) (8 + 8) + 1 16 + 1= 17
Making Tens	• student uses fluency with ten to add quickly	8 + 9 (7 +1) + 9 7 + (1 + 9) 7 + 10 = 17
Making Friendly Numbers/ Landmark Numbers	• friendly numbers are numbers that are easy to use in mental computation • student adjusts one or all addends by adding or subtracting to make friendly numbers • student then adjusts the answer to compensate	23 + 48 23 + (48 + 2) 23 + 50= 73 73 – 2 = 71
Compensation	• student manipulates the numbers to make them easier to add • student removes a specific amount from one addend and gives that exact amount to the other addend	8 + 6 8-1=7 6+1=7 7+7=14
Breaking Each Number into its Place Value	• strategy used as soon as students understand place value • student breaks each addend into its place value (expanded notation) and like place value amounts are combined • student works left to right to maintain the magnitude of the numbers	24 + 38 (20 + 4) + (30 + 8) 20 + 30 = 50 4 + 8 = 12 50 + 12 = 62
Adding Up in Chunks	• follows place value strategy • student keeps one addend whole and adds the second addend in easy-to-use chunks • more efficient than place value strategy because student is only breaking apart one addend	45 + 28 45 + (20 + 8) 45 + 20 = 65 65 + 8 = 73

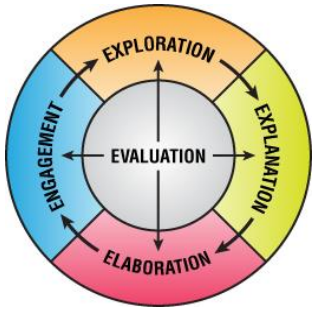
Children do not have to be taught a particular strategy. Strategies for computation come naturally to young children. With opportunity and encouragement, children invent strategies for themselves.

Subtraction Strategies

Name	Clarification	Student Work Sample
Adding Up	• student adds up from the number being subtracted (subtrahend) to the whole (minuend) • the larger the jumps, the more efficient the strategy • student uses knowledge of basic facts, doubles, making ten, and counting on	14 – 7 7… 8,9,10,11,12,13,14 (+1 each jump)  7 + 3= 10 10 + 4= 14 3 + 4= 7
Counting Back/Removal	• strategy used by students who primarily view subtraction as <u>taking away</u> • student starts with the whole and removes the subtrahend in parts • student needs the ability to decompose numbers in easy-to-remove parts	65 – 32 65 – (10 + 10 + 10 + 2) 65, 55, 45, 35, 33 65 – (30 + 2) 65 – 30 = 35 35 – 2 = 33
Place Value	• student breaks each number into its place value (expanded notation) • student groups like place values and subtracts	999 – 345 (900 + 90 + 9) – (300 + 40 + 5) 900 – 300 = 600 90 – 40 = 50 9 – 5 = 4 600 + 50 + 4 = 654
Keeping a Constant Difference	• student understands that adding or subtracting the same amount from both numbers maintains the distance between the numbers • student manipulates the numbers to create friendlier numbers	123 – 59 123 + 1 = 124 59 + 1 = 60 124 – 60 = 64
Adjusting to Create an Easier Number	• strategy requires students to adjust only one of the numbers in a subtraction problem • student chooses a number to adjust, subtracts, then adjusts the final answer to compensate • students must understand part/whole relationships to reason through this strategy	123 – 59 59 + 1 = 60 123 – 60 = 63 I added 1 to make an easier number. 63 + 1 = 64 I have to add 1 to my final answer because I took away 1 too many.

Children do not have to be taught a particular strategy. Strategies for computation come naturally to young children. With opportunity and encouragement, children invent strategies for themselves.

5E Learning Cycle: An Instructional Model

ENGAGEMENT	EXPLORATION	EXPLANATION	ELABORATION	EVALUATION
The engagement phase of the model is intended to capture students' interest and focus their thinking on the concept, process, or skill that is to be learned. During this engagement phase, the teacher is on center stage.	The exploration phase of the model is intended to provide students with a common set of experiences from which to make sense of the concept, process or skill that is to be learned. During the exploration phase, the students come to center stage.	The explanation phase of the model is intended to grow students' understanding of the concept, process, or skill and its associated academic language. During the explanation phase, the teacher and students share center stage.	The elaboration phase of the model is intended to construct a deeper understanding of the concept, process, or skill through the exploration of related ideas. During the elaboration phase, the teacher and students share center stage.	The evaluation phase of the model is intended to be used during all phases of the learning cycle driving the decision-making process and informing next steps. During the evaluation phase, the teacher and students share center stage.
What does the teacher do? • **create** interest/curiosity • **raise** questions • **elicit** responses that uncover student thinking/prior knowledge (preview/process) • **remind** students of previously taught concepts that will play a role in new learning • **familiarize** students with the unit	**What does the teacher do?** • **provide** necessary materials/tools • **pose** a hands-on/minds-on problem for students to explore • **provide** time for students to "puzzle" through the problem • **encourage** students to work together • **observe** students while working • **ask** probing questions to redirect student thinking as needed	**What does the teacher do?** • **ask** for justification/clarification of newly acquired understanding • **use** a variety of instructional strategies • **use** common student experiences to: ○ develop academic language ○ explain the concept • **use** a variety of instructional strategies to grow understanding • **use** a variety of assessment strategies to gage understanding	**What does the teacher do?** • **provide** new information that extends what has been learned • **provide** related ideas to explore • **pose** opportunities (examples and non-examples) to apply the concept in unique situations • **remind** students of alternate ways to solve problems • **encourage** students to persevere in solving problems	**What does the teacher do?** • **observe** students during all phases of the learning cycle • **assess** students' knowledge and skills • **look** for evidence that students are challenging their own thinking • **present** opportunities for students to assess their learning • **ask** open-ended questions: ○ What do you think? ○ What evidence do you have? ○ How would you explain it?
What does the student do? • **show** interest in the topic • **reflect and respond** to questions • **ask** self-reflection questions: ○ What do I already know? ○ What do I want to know? ○ How will I know I have learned the concept, process, or skill? • **make** connections to past learning experiences	**What does the student do?** • **manipulate** materials/tools to explore a problem • **work** with peers to make sense of the problem • **articulate** understanding of the problem to peers • **discuss** procedures for finding a solution to the problem • **listen** to the viewpoint of others	**What does the student do?** • **record** procedures taken towards the solution to the problem • **explain** the solution to a problem • **communicate** understanding of a concept orally and in writing • **critique** the solution of others • **comprehend** academic language and explanations of the concept provided by the teacher • **assess** own understanding through the practice of self-reflection	**What does the student do?** • **generate** interest in new learning • **explore** related concepts • **apply** thinking from previous learning and experiences • **interact** with peers to broaden one's thinking • **explain** using information and experiences accumulated so far	**What does the student do?** • **participate** actively in all phases of the learning cycle • **demonstrate** an understanding of the concept • **solve** problems • **evaluate** own progress • **answer** open-ended questions with precision • **ask** questions
Evaluation of Engagement The role of evaluation during the engagement phase is to gain access to students' thinking during the pre-assessment event/activity. Conceptions and misconceptions currently held by students are uncovered during this phase. These outcomes determine the concept, process, or skill to be explored in the next phase of the learning cycle.	**Evaluation of Exploration** The role of evaluation during the exploration phase is to gather an understanding of how students are progressing towards making sense of a problem and finding a solution. Strategies and procedures used by students during this phase are highlighted during explicit instruction in the next phase. The concept, process, or skill is formally explained in the next phase of the learning cycle.	**Evaluation of Explanation** The role of evaluation during the explanation phase is to determine the students' degree of fluency (accuracy and efficiency) when solving problems. Conceptual understanding, skill refinement, and vocabulary acquisition during this phase are enhanced through new explorations. The concept, process, or skill is elaborated in the next phase of the learning cycle.	**Evaluation of Elaboration** The role of evaluation during the elaboration phase is to determine the degree of learning that occurs following a differentiated approach to meeting the needs of all learners. Application of new knowledge in unique problem solving situations during this phase constructs a deeper and broader understanding. The concept, process, or skill has been and will be evaluated as part of all phases of the learning cycle.	

Elementary Instructional Math Block

Time	Components	Description
5 minutes	Opening: Hook/Warm-up **(engage/explore)**	Teachers will **engage** students to create interest for the whole group mini lesson or to review previous learning targets by posing a hands-on minds-on problem for students to **explore**.
15 minutes	Whole Group: Mini Lesson & Guided Practice **(explore/explain/evaluate)**	During this time, the learning target will be introduced through explicit instruction by the teacher or through exploration/discovery by the students. Teachers model their thinking and teach or reinforce vocabulary in context. Teacher leads students to participate in guided practice of the new learning target. Students will **explore** using manipulatives and having conversations about their new learning. Students and teachers **explain** and justify what they are doing. Teachers are using probing questions to redirect student thinking during guided practice. Teachers provide explicit instruction to scaffold the learning if the majority of the students are struggling. Formative techniques are used to **evaluate** which students will need interventions and which students will need enrichment.
35-45 minutes	Small Group: Guided Practice & Collaborative/ Independent Practice **(explain/evaluate/ explore/ elaborate)**	The teacher will work with identified, homogeneous groups to provide intervention or enrichment. The students will **explain** their thinking through the use of a variety of instructional strategies. The teacher will **evaluate** student understanding and address misconceptions that still exist. Students will work in groups using cooperative structures or engaging in mathematical tasks. These activities are related to the mini lesson, previously taught learning targets, or upcoming standards. Students will continue to **explore** the learning targets by communicating with peers. All students will **elaborate** to construct a deeper understanding while engaging in collaborative and independent practices. Students will **evaluate** their own understanding through the practice of self-reflection.
5 minutes	Closure: Summarize **(explain/evaluate)**	The teacher will revisit the learning target and any student discoveries. Students will **explain** and **evaluate** their understanding of the learning target through a variety of techniques. The teacher will **evaluate** students' depth of understanding to drive future instruction.
Formative techniques occur throughout each piece of the framework.		

Standards for Mathematical Practice **Students will:** **(to be embedded throughout instruction as appropriate)**							
Make sense of problems and persevere in solving them. SMP.1	Reason abstractly and quantitatively. SMP.2	Construct viable arguments and critique the reasoning of others. SMP.3	Model with mathematics. SMP.4	Use appropriate tools strategically. SMP.5	Attend to precision. SMP.6	Look for and make use of structure. SMP.7	Look for and express regularity in repeated reasoning. SMP.8

MAFS Domain: Counting and Cardinality		**Pacing: Weeks 1 – 9 August 24 – October 22**
Learning Targets	**Standards**	**Vocabulary**
Count to 100 by ones and by tens.	**MAFS.K.CC.1.1**	count count on digit eight five four group nine number numeral one sequence seven six ten three two
Students will: • **count** orally to 5 by ones. • **count** orally to 10 by ones.		
Count forward beginning from a given number within the known sequence instead of having to begin at 1.	**MAFS.K.CC.1.2**	
Students will: • **count** forward orally up to 5 from a given number in the correct sequence (i.e., instead of having to begin at 1). • **count** forward orally up to 10 from a given number in the correct sequence (i.e., instead of having to begin at 1). • **understand** that numbers follow the same order no matter where you start to count.		

Understand the relationship between numbers and quantities; connect counting to cardinality. a. When counting objects, say the number names in the standard order, pairing each object with one and only one number name and each number name with one and only one object. b. Understand that the last number name said tells the number of objects counted. The number of objects is the same regardless of their arrangement or the order in which they were counted. c. Understand that each successive number name refers to a quantity that is one larger.	**MAFS.K.CC.2.4**	after before count digit how many number pairing set

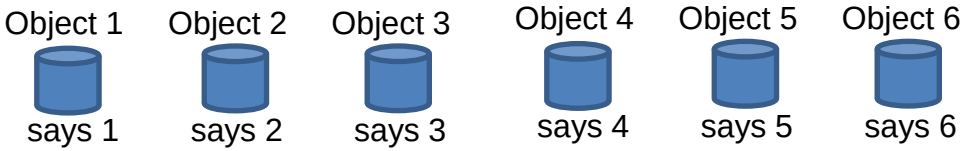
Students will:

- **say** number names in standard order (e.g., one, two, three, four, five …).
- **count** objects by pairing them with one and only one number name (one-to-one correspondence).
- **keep** track of objects that have and have not been counted.

HINT: This is the foundation of counting.

E.g.,

The student touches (and may move to organize) the first object and says one, touches the second object and says two, touches the third object and says three…



- **count** objects in a group (i.e., up to 5, up to 10) correctly, regardless of arrangement and order.
- **say** "how many" are in a group after counting all the objects.
- **rearrange** the objects after counting and tell "how many" in the group without recounting.
- **understand** that the last number name said represents the number of objects counted (cardinality).

HINT: The student should answer the same without counting again and be able to explain that it is the same because none have been added or taken away.

- **say** "how many" are in the group when one more object is added without recounting the whole group.
- **understand** that "one more" is the next counting number, with and without objects.

Count to answer "how many" question about as many as 20 things arranged in a line, a rectangular array, or a circle, or as many as 10 things in a scattered configuration; given a number from 1-20, count out that many objects.	**MAFS.K.CC.2.5**	count number
Students will: • **count or identify** objects up to 5, up to 10, in a variety of arrangements (e.g., line, rectangular array, circle, scattered). • **show** the correct number of objects when given a number 1-5, 0-10. **HINT:** At first students will touch each item they count. Later, they will be able to just look and count.		
Read and write numerals from 0 to 20. Represent a number of objects with a written numeral 0-20 (with 0 representing a count of no objects).	**MAFS.K.CC.1.3**	count counting on digit/ number/numeral eight five four group nine one sequence seven six ten three two zero
Students will: • **read and write** numerals 1-5, then 0-10. • **represent** a group of objects with a written numeral 1- 5, then 0-10. • **write** the numerals in order from 0 to 10, beginning at any number. **HINT:** Reversals of numerals of anticipated. While reversals should be pointed out to students and correct formation modeled in instruction, the emphasis of the standard is on the use of numerals to represent the quantities rather than the correct handwriting formation of the actual numeral itself.		

Identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group (e.g., by using matching and counting strategies).	**MAFS.K.CC.3.6**	compare count digit equal equal to fewer greater greater than groups less less than more more than number quantities same set

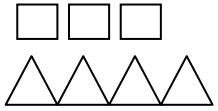
Students will:

- **identify** which group has more by matching or counting the number of objects in both groups.
- **identify** which group has less or fewer by matching or counting the number of objects in both groups.
- **identify** when groups are equal (i.e., same as) by matching and counting.

HINT: Students should understand greater means more; less means not as many. Equal means there is the same amount in each group and if you match the groups there will be none left over.

E.g.,

This standard requires mastery of up to ten objects. Students can use matching strategies (Student 1), counting strategies (Student 2) or equal shares (Student 3) to determine whether one group is greater than, less than, or equal to the number of objects in another group.

Student 1	Student 2	Student 3
I lined up one square and one triangle. Since there is one extra triangle, there are more triangles than squares. 	I counted the squares and I got 3. Then I counted the triangles and got 4. Since 4 is bigger than 3, there are more triangles than squares.	I put them in a pile. I then took away objects. Every time I took a square, I also took a triangle. When I had taken almost all of the shapes away, there was still a triangle left. That means there are more triangles than squares.

Compare two numbers between 1 and 10 presented as written numerals.	**MAFS.K.CC.3.7**	compare count digit equal/equal to fewer greater greater than groups less/less than more/more than number quantities same set

Students will:

- **use** numerals and pictures of objects to compare up to 10.
- **compare** two numerals between 1 and 5, then 1 and 10 and say which numeral has a greater value.

Unit 1 Suggested Instructional Resources

MAFS	enVisionMATH	AIMS	Lakeshore	MFAS	Internet
CC.1.1 (0-10)	**SE/RMC/POD/A&R:** 3-1, 3-3, 3-5, 3-8 5-1, 5-3, 5-6, 5-8, 5-11 **Math Start Readers:** "Every Buddy Counts"	Count With Me Scrambled Eggs	Teacher Guide, p. 2 Giant Magnetic Write and Wipe Number Line Count & Write Math Mats Magnetic Numbers		**www.k-5mathteachingresources.com** CC.1 **www.cpalms.org** Let's Count to 5 Spiders Have 8 Legs **https://gradekcommoncoremath.wikispaces.hcpss.org/Kindergarten** CC.1 Lessons CC.1 Formatives
CC.1.2 (0-10)	**SE/RMC/POD/A&R:** 7-1, 7-2 **Math Start Readers:** "Jack the Builder"	Number Story Theater Too	Teacher Guide, p. 3 Magnetic Numbers Giant Magnetic Write and Wipe Number Line	Apples In a Bag Count On Counting On Count The Dots Game	**www.k-5mathteachingresources.com** CC.2 **www.cpalms.org** Mouse Count- Counting on to 10 Counting on With Splash Counting to Ten With Ten Black Dots **https://gradekcommoncoremath.wikispaces.hcpss.org/Kindergarten** CC.2 Lessons CC.2 Formatives
CC.2.4 (0-10)	**SE/RMC/POD/A&R:** 4-4, 6-4, 6-5, 6-6, 6-7	You Can Count on Us Counting Crows Fish Tales	Teacher Guide, pp. 5-6 Reproducibles p. 7 Count & Write Math Mats Early Math Activity Jars Magnetic Ten Frame Answer Board Jumbo Magnetic Ten Frame	Books and Bookmarks How Many Dots Are There Is It Still Seven Which Set has One More	**www.k-5mathteachingresources.com** CC.4 **www.cpalms.org** And The Number Is Counting to Ten With Ten Black Dots Educational Games: Mingle & Count **https://gradekcommoncoremath.wikispaces.hcpss.org/Kindergarten** CC.4 Lessons CC.4 Formatives

enVisionMATH: SE = Student Edition; RMC= Ready-Made Centers; POD= Problem of the Day; A&R = Assessment and Reteaching Workbook

Unit 1 Suggested Instructional Resources

MAFS	enVisionMATH	AIMS	Lakeshore	MFAS	Internet
CC.2.5 (0-10)		Counting Crows Fish Tales	Teacher Guide, p. 7 Count & Write Math Mats Early Math Activity Jars Magnetic Ten Frame Answer Board Jumbo Magnetic Ten Frame Magnetic Numbers		**www.k-5mathteachingresources.com** CC.5 **www.cpalms.org** And The Number Is Building Numbers to Five **https://gradekcommoncoremath.wikispaces.hcpss.org/Kindergarten** CC.5 Lessons CC.5 Formatives
CC.1.3 (0-10)	**SE/RMC/POD/A&R:** 3-2, 3-7, 3-9 5-5, 5-10, 5-13	Bears Wear Buttons	Teacher Guide, pp. 4-5 Reproducibles pp. 5-6 Count & Write Math Mats Giant Magnetic Number Line	How Do I write The Number	**www.k-5mathteachingresources.com** CC.3 **www.cpalms.org** Building Numbers to Five Building Sets of Ten Show me 1, 2, 3, 4, 5 Virtual Manipulative: Five Frame Image/Photograph: Clipart ETC: Counting Teaching Idea: My First Number Book Teaching Idea: How Many Seeds Teaching Idea: 1-10 Book **https://gradekcommoncoremath.wikispaces.hcpss.org/Kindergarten** CC.3 Lessons CC.3 Formatives

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Unit 1 Suggested Instructional Resources

MAFS	enVisionMATH	AIMS	Lakeshore	MFAS	Internet
CC.3.6	**SE/RMC/POD/A&R:** 6-3 **Math Start Readers:** "Just Enough Carrots"	Fish Tales Comparing Catches	Teacher Guide, p. 8 Magnetic Ten Frame Answer Board Jumbo Magnetic Ten Frame Discovery Can: Counting & Comparing	Greater Than/Less Than/ Equal to Which Side Has More Who Has More Dots	**www.k-5mathteachingresources.com** CC.6 **www.cpalms.org** Comparing Sets **https://gradekcommoncoremath.wikispaces.hcpss.org/Kindergarten** CC.6 Lessons CC.6 Formatives
CC.3.7	**SE/RMC/POD/A&R:** 6-1, 6-2	Comparing Catches	Teacher Guide, pp. 10-11 Reproducibles p. 12 Discovery Can: Counting & Comparing Giant Magnetic Write and Wipe Number Line Magnetic Numbers	Comparing Numbers Comparing Number Cards Game Which Is Greater Who Wins	**www.k-5mathteachingresources.com** CC.7 **www.cpalms.org** Let's Count to Five Counting A World of Numbers **https://gradekcommoncoremath.wikispaces.hcpss.org/Kindergarten** CC. 7 Lessons CC.7 Formatives

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Unit 1 Suggestions for Assessing Numbers 0 to 10

MAFS.K.CC.1.1	**Count to 100 by ones and by tens.** **(Note: For this unit you are only counting to 10)** The student counts correctly from 1 – 10, with 100% accuracy, while the teacher observes.
MAFS.K.CC.1.2	**Count forward from a given numeral within the known sequence (instead of having to begin at 1).** **(Note: Students should understand that numbers follow the same order no matter where you start to count. Numbers are used to describe things at this stage.)** The teacher will say a numeral from 1 – 7. The student will state the next three numerals in the correct sequence. (Example 5: 6, 7, 8)
MAFS.K.CC.1.3	**Read and write numerals from 0 to 20. Represent a number of objects with a written numeral 0-20 (with 0 representing a count of no objects).** **(Note: For this unit students are only writing to 10)** The student will write the numerals 1-10 without looking at a model. Inversions and reversals are acceptable at this point in the year.
MAFS.K.CC.2.4a	**Understand the relationship between numbers and quantities; connect counting to cardinality.** **a. When counting objects, say the number names in the standard order, pairing each object with one and only one number name and each number name with one and only one object.** Student will orally count assorted groups of objects, from 1 – 10, using one-to-one correspondence.
MAFS.K.CC.2.4b	**Understand the relationship between numbers and quantities; connect counting to cardinality.** **b. Understand that the last number name said tells the number of objects counted. The number of objects is the same regardless of their arrangement or the order in which they were counted.** The teacher will provide a set of objects in a straight line. The student counts the objects and tells "how many." The set is rearranged to a rectangular array, circle or scattered array and the student is asked "how many?" They should not have to recount the objects. **(Note: A student who counts them may not have the deep understanding of cardinality.)**
MAFS.K.CC.2.4c	**Understand the relationship between numbers and quantities; connect counting to cardinality.** **c. Understand that each successive numeral refers to a quantity that is one larger.** **(Note: The student should clearly understand "one more" is the next counting number.)** Put out sets of 1 – 9 items and ask "How many?" add one more and ask, "How many?" Student should say the next number without counting.

MAFS.K.CC.2.5	**Count to answer "how many?" questions about as many as 20 things arranged in a line, a rectangular array, or a circle, or as many as 10 things in a scattered configuration; given a number from 1–20, count out that many objects.** **(Note: For this unit students are only counting to 10)** The teacher will provide sets of objects (1-10). The student will quickly recognize the quantities and tell "how many." "Students choose, combine, and apply effective strategies for answering quantitative questions, including quickly recognizing the cardinalities of small sets of objects…" http://www.corestandards.org/Math/Content/K/introduction **AND** The teacher will say a number 1 – 10. The student will count out that number of objects and state the quantity.
MAFS.K.CC.3.6	**Identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group, e.g., by using matching and counting strategies.** The teacher provides two sets of objects. The teacher asks the student to say if the first group is greater than, less than or equal to the second group. The student explains how they knew a quantity was greater than, less than or equal to.
MAFS.K.CC.3.7	**Compare two numbers between 1 and 10 presented as written numerals.** **(Note: For this unit students are only comparing numbers to10)** The teacher secretly places between 1 and 10 marbles in a paper bag, and then shows the bag to the class. After shaking it enough times for students to hear the marbles inside, students guess how many marbles are in the bag. The students write their answers on index cards. The contents of the bag are revealed and counted out. The teacher writes the number representing the total on the board. The students line up on one or the other side of the teacher depending if they were greater than, less than or equal to the target number. http://www.illustrativemathematics.org/standards/k8

Standards for Mathematical Practice

Students will: **(to be embedded throughout instruction as appropriate)**

Make sense of problems and persevere in solving them.	Reason abstractly and quantitatively.	Construct viable arguments and critique the reasoning of others.	Model with mathematics.	Use appropriate tools strategically.	Attend to precision.	Look for and make use of structure.	Look for and express regularity in repeated reasoning.
SMP.1	SMP.2	SMP.3	SMP.4	SMP.5	SMP.6	SMP.7	SMP.8

MAFS Domains: Counting and Cardinality and Operations and Algebraic Thinking

Pacing: Weeks 10 – 21 October 26 – January 29

Learning Targets	Standards	Vocabulary
Count to 100 by ones and by tens.	**MAFS.K.CC.1.1**	count count on digit eighteen eleven fifteen fifty forty fourteen group nineteen number numeral sequence seventeen sixteen thirteen thirty twelve twenty
Students will: • **count** orally to 20 by ones. • **count** orally to 50 by ones. • **count** orally to 100 by tens starting with 10 (e.g., 10, 20, 30, 40, 50,…). • **use** tools such as hundreds charts, number lines, and calendar activities to reinforce the repeated pattern that occurs when counting to 100 by tens. **HINT:** Counting by tens is a rote process, not the counting of objects		
Count forward beginning from a given number within the known sequence instead of having to begin at 1.	**MAFS.K.CC.1.2**	
Students will: • **count** forward orally up to 20 from a given number in the correct sequence (i.e., instead of having to begin at 1). **HINT:** Students should understand that numbers follow the same order (sequence) no matter where you start to count.		

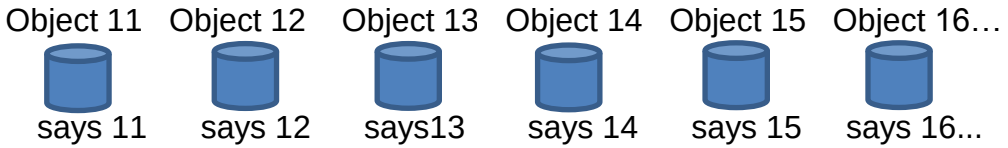
Understand the relationship between numbers and quantities; connect counting to cardinality. a. When counting objects, say the number names in the standard order, pairing each object with one and only one number name and each number name with one and only one object. b. Understand that the last number name said tells the number of objects counted. The number of objects is the same regardless of their arrangement or the order in which they were counted. c. Understand that each successive number name refers to a quantity that is one larger.	**MAFS.K.CC.2.4**	after before count digit how many number pairing set

Students will:

- **say** number names in standard order (e.g., one, two, three, four, five, …).
- **count** objects by pairing them with one and only one number name (one-to-one correspondence).
- **keep** track of objects that have and have not been counted.

  HINT: This is the foundation of counting.

  E.g., The student touches (and may move to organize) the first object and says one, touches the second object and says two, touches the third object and says three…



- **count** objects in a group (up to 20) correctly, regardless of arrangement and order.
- **say** "how many" are in a group after counting all the objects.
- **rearrange** the objects after counting and tell "how many" in the group without recounting.
- **understand** that the last number name said represents the number of objects counted (cardinality).

  HINT: The student should answer the same without counting again and be able to explain that it is the same because none have been added or taken away.

- **say** "how many" are in the group when one more object is added without recounting the whole group.
- **understand** that "one more" is the next counting number, with and without objects.

Count to answer "how many" question about as many as 20 things arranged in a line, a rectangular array, or a circle, or as many as 10 things in a scattered configuration; given a number from 1-20, count out that many objects.	**MAFS.K.CC.2.5**	count number
Students will: • **count or identify** objects up to 20 in a variety of arrangements (e.g., line, rectangular array, circle, scattered). • **show** the correct number of objects when given a number 0-20. **HINT:** At first students will touch each item they count. Later, they will be able to just look and count.		
Read and write numerals from 0 to 20. Represent a number of objects with a written numeral 0-20 (with 0 representing a count of no objects).	**MAFS.K.CC.1.3**	count count on digit/number/numeral eight eighteen eleven fifteen five four fourteen group nine nineteen one sequence seven seventeen six sixteen ten thirteen three twelve two
Students will: • **read and write** numerals 0-20. • **represent** a group of objects with a written numeral 0-20. • **write** the numerals in order from 0 to 20, beginning at any number. **HINT:** Reversals of numerals of anticipated. While reversals should be pointed out to students and correct formation modeled in instruction, the emphasis of the standard is on the use of numerals to represent the quantities rather than the correct handwriting formation of the actual numeral itself.		

Represent addition and subtraction with objects, fingers, mental images, drawings, sounds (*e.g.,* claps), acting out situations, verbal explanations, expressions, or equations.	**MAFS.K.OA.1.1**	add (+) addition addend combining counting on counting back difference digit equal (=) equation (5 = 3 + 2) in all joining make 10 minus (-) one fewer one more plus (+) put together sets solve subtract (-) subtracting from subtraction (-) symbol taking apart taking from ten frame total

Students will:

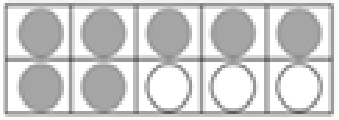
- **show** addition to ten using objects, acting out situations, expressions, and equations.
- **explain** addition as putting together, adding to, combining, and joining.
- **identify** the mathematical symbols used to show addition.
- **demonstrate** the understanding of how objects can be joined (addition).
- **show** subtraction using objects, acting out situations, expressions, and equations.
- **explain** subtraction as taking apart and taking from.
- **identify** the mathematical symbols used to show subtraction.
- **demonstrate** the understanding of how objects can be taken from a group (subtraction).

HINT: Make sure students have MANY opportunities to concretely represent and solve addition and subtraction problems before introducing the plus (+), minus (-) and equal (=) sign.

For any number from 1 to 9, find the number that makes 10 when added to the given number using objects or drawings, and record the answer with a drawing or equation.	**MAFS.K.OA.1.4**

Students will:

- **determine** the number to add to a given number 1-9 to make 10.
- **show** the answer with objects, drawings or an equation.
- **understand and apply** addition through ten.



HINT: Students should be able to represent all the combinations that make 10 and record them by drawing pictures or writing equations (e.g., 1 + 9 = 10,
2 + 8 = 10, 3 + 7 = 10, 4 + 6 = 10, 5 + 5 = 10, 6 + 4 = 10, 7 + 3 = 10, 8 + 2 = 10, 9 + 1 = 10).

Fluently add and subtract within 5.	**MAFS.K.OA.1.5**

Students will:

- **compose** numbers within 5.
- **decompose** numbers within 5.
- **add** numbers within 5.
- **subtract** numbers within 5.

HINT: Fluency is knowing how a number can be composed and decomposed and using that information to be flexible and efficient.

add (+)
addition
addend
combining
compose
count on
counting back
decompose
difference
digit
equal (=)
equation (5 = 3 + 2)
five frame
in all
joining
make 10
minus (-)
one fewer
one more
plus (+)
put together
sets
solve
subtract (-)
subtracting from
subtraction (-)
symbol
taking apart
taking from
ten frame
total

Unit 2 Suggested Instructional Resources

MAFS	enVisionMATH	AIMS	Lakeshore	MFAS	Internet
CC.1.1 (0-50)		A Jump Start on Numbers Scrambled Eggs	Teacher Guide, p. 2 Reproducibles p. 2 Giant Magnetic Write and Wipe Number Line Count & Write Math Mats Magnetic Numbers		**www.k-5mathteachingresources.com** CC.1 **www.cpalms.org** Building Sets 11 and 12 Building Sets 13 and 14 Building Sets of 15 and 16 Building Sets of 17 and 18 Building Sets of 19 and 20 **https://gradekcommoncoremath.wikispaces.hcpss.org/Kindergarten** CC.1 Lessons CC.1 Formatives
CC.1.2 (0-20)	**SE / RMC / POD / A&R:** 10-8	Number Story Theater Too	Teacher Guide, pp. 3-4 Reproducibles p. 4 Magnetic Numbers Giant Magnetic Write and Wipe Number Line	Counting Strategies Count The Dots Game	**www.k-5mathteachingresources.com** CC.2 **www.cpalms.org** Let's Go On A Counting Walk Counting on with SPLASH Let's Count to 20: Buildings Sets of 11 and 12 Let's Count to 20: Building Sets of 13 and 14 **https://gradekcommoncoremath.wikispaces.hcpss.org/Kindergarten** CC.2 Lessons CC.2 Formatives

enVisionMATH: SE = Student Edition; RMC= Ready-Made Centers; POD= Problem of the Day; A&R = Assessment and Reteaching Workbook

Unit 2 Suggested Instructional Resources

MAFS	enVisionMATH	AIMS	Lakeshore	MFAS	Internet
CC.2.4 (0-20)		You Can Count on Us Counting Crows Fish Tales	Teacher Guide, pp.5-6 Count & Write Math Mats Early Math Activity Jars Magnetic Ten Frame Answer Board Jumbo Magnetic Ten Frame Discovery Can: Counting & Comparing	Conservation of Cardinality How Many Dots Are There Is It Still Seven How Many Cubes	**www.k-5mathteachingresources.com** CC.4 **www.cpalms.org** Let's Go On A Counting Walk Let's Count to 20 **https://gradekcommoncoremath.wikispaces.hcpss.org/Kindergarten** CC.4 Lessons CC.4 Formatives
CC.2.5 (0-20)		Counting Crows Fish Tales	Teacher Guide, p. 7 Reproducibles p. 10 Count & Write Math Mats Early Math Activity Jars Magnetic Ten Frame Answer Board Jumbo Magnetic Ten Frame Magnetic Numbers	How Many Cubes Are There How Many Cubes Does Brianna Need How Many Cubes	**www.k-5mathteachingresources.com** CC.5 **www.cpalms.org** Vegetables…in Cupcakes? Let's Count the Steps Hopping Hippo Needs Help **https://gradekcommoncoremath.wikispaces.hcpss.org/Kindergarten** CC.5 Lessons CC.5 Formatives
CC.1.3 (0-20)	**SE / A&R:** 10-1, 10-2, 10-3, 10-4, 10-5 **RMC / POD:** 10-1, 10-3, 10-4, 10-5	Bears Wear Buttons	Teacher Guide, pp. 4-5 Reproducibles pp. 5-6 Count & Write Math Mats Giant Magnetic Number Line	Field Trip To the Fire station Matching Ten Frames To Numerals Model And Write Numbers You Can Do It Sam Fall Math Story	**www.k-5mathteachingresources.com** **CC.3** **www.cpalms.org** Let's Count to 20 Rubber Ducky, Where Are You? **https://gradekcommoncoremath.wikispaces.hcpss.org/Kindergarten** CC.3 Lessons CC.3 Formatives

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Unit 2 Suggested Instructional Resources

MAFS	enVisionMATH	AIMS	Lakeshore	MFAS	Internet
OA.1.1	**SE/RMC/POD/A&R:** 3-4, 3-6, 5-2, 5-4, 5-7, 5-9, 5-12, 9-2,	Hopping Into Addition Counting Crows Fish Tales Number Story Theater Too Computation Model Boards	Teacher Guide pp.12-13 Reproducibles pp. 8, 9 Giant Magnetic Ten Frame Early Math Activity Jars Magnetic Ten Frame Answer Board Discovery Can: Addition & Subtraction	Carly's Sleepover Modeling Addition and Subtraction Writing an Equation Writing Center More Fun With Numbers	**www.k-5mathteachingresources.com** OA.1 **www.cpalms.org** Lady Bug Addition Lost Buttons Join Them Together/Take Them Away Bunny Addition Hopping Backwards on a Number Line Making Tens With Caterpillars **https://gradekcommoncoremath.wikispaces.hcpss.org/Kindergarten** OA.1 Lessons OA.1 Formatives
OA.1.4		My Friend Ten Balancing Bears Sweet Sums	Teacher Guide pp.16-17 Reproducibles pp. 8, 14 Giant Magnetic Ten Frame Magnetic Ten Frame Answer Board Jumbo Magnetic Number line Magnetic Numbers Discovery Can: Addition & Subtraction	Bags Of Apples Draw Rectangles To Make Ten Making Ten Memory	**www.k-5mathteachingresources.com** OA.4 **www.cpalms.org** Try For Five Using a Number Balance to Represent Decompositions Filling Crayon Boxes Monster Math **https://gradekcommoncoremath.wikispaces.hcpss.org/Kindergarten** OA.4 Lessons OA.4 Formatives

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Unit 2 Suggested Instructional Resources

MAFS	enVisionMATH	AIMS	Lakeshore	MFAS	Internet
OA.1.5		Hopping Into Addition Bears Wear Buttons	Teacher Guide pp.14-15 Reproducibles pp. 8, 16 Giant Magnetic Ten Frame Magnetic Ten Frame Answer Board Jumbo Magnetic Number line Discovery Can: Addition & Subtraction	Fluency Within Five Fluency Within Five Addition Only Fluency Within Five – Plus One Minus One Fluency Within Five Subtraction Only	**www.k-5mathteachingresources.com** OA.5 **www.cpalms.org** Finding Fact Families Finding Fact Families-dominoes Sum Search Counting Fingers Quiz, Quiz, Trade Add t or Take It Away! **https://gradekcommoncoremath.wikispaces.hcpss.org/Kindergarten** OA.5 Lessons OA.5 Formatives

enVisionMATH: SE = Student Edition; RMC= Ready-Made Centers; POD= Problem of the Day; A&R = Assessment and Reteaching Workbook

Unit 2 Suggestions for Assessing Numbers 0 to 20 and Introducing Addition and Subtraction

MAFS.K.CC.1.1	**Count to 100 by ones and by tens.** **(Note: For this unit you are only counting to 20)** The student counts correctly from 1 – 20, with 100% accuracy, while the teacher observes.
MAFS.K.CC.1.2	**Count forward from a given numeral within the known sequence (instead of having to begin at 1).** **(Note: Students should understand that numbers follow the same order no matter where you start to count. Numbers are used to describe things at this stage.)** The teacher states a numeral from 1-17. The student says the next three numerals in the correct sequence. (e.g., "15 – 16, 17, 18")
MAFS.K.CC.1.3	**Read and write numerals from 0 to 20. Represent a number of objects with a written numeral 0-20 (with 0 representing a count of no objects)** The student will write the numerals 1-20 without looking at a model. Inversions and reversals are acceptable at this point in the year.
MAFS.K.CC.2.4a	**Understand the relationship between numbers and quantities; connect counting to cardinality.** **a. When counting objects, say the number names in the standard order, pairing each object with <u>one and only one</u> number name and each number name with <u>one and only one</u> object.** Student will orally count assorted groups of objects, from 1 – 20, using one-to-one correspondence.
MAFS.K.CC.2.4b	**Understand the relationship between numbers and quantities; connect counting to cardinality.** **b. Understand that the last number name said tells the number of objects counted. The number of objects is the same regardless of their arrangement or the order in which they were counted.** The teacher will provide a set of objects in a straight line. The student counts the objects and tells "how many." The set is rearranged to a rectangular array, circle or scattered array and the student is asked "how many?" They should not have to recount the objects. **(Note: A student who counts them may not have a deep understanding of cardinality.)**
MAFS.K.CC.2.4c	**Understand the relationship between numbers and quantities; connect counting to cardinality.** **c. Understand that each successive numeral refers to a quantity that is one larger.** **(Note: The student should clearly understand <u>"one more"</u> is the next counting number.)** Put out sets of 1 – 20 items and ask "How many?" add one more and ask, "How many?" Student should say the next number **<u>without</u>** counting.

MAFS.K.CC.2.5 **Count to answer "how many?" questions about as many as 20 things arranged in a line, a rectangular array, or a circle, or as many as 10 things in a scattered configuration; given a number from 1–20, count out that many objects.**

The teacher will provide sets of objects (1-20). The student will quickly recognize the quantities and tell "how many."
"Students choose, combine, and apply effective strategies for answering quantitative questions, including quickly recognizing the cardinalities of small sets of objects…" http://www.corestandards.org/Math/Content/K/introduction

AND

The teacher will say a number 1 – 20. The student will count out that number of objects and state the quantity.

MAFS.K.OA.1.1 **Represent addition and subtraction with objects, fingers, mental images, drawings, sounds (e.g., claps), acting out situations, verbal explanations, expressions, or equations.**

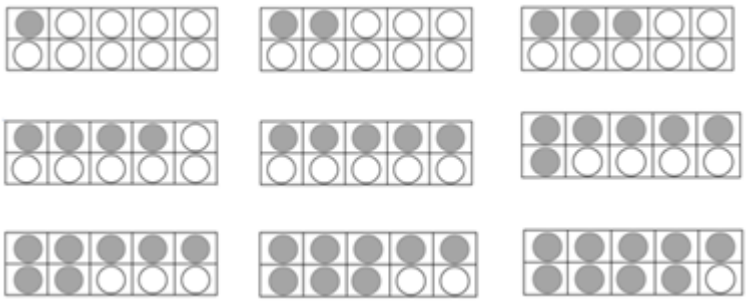
Addition	Subtraction
Students should understand addition as putting together and adding to.	Students should understand subtraction as taking apart and taking from.

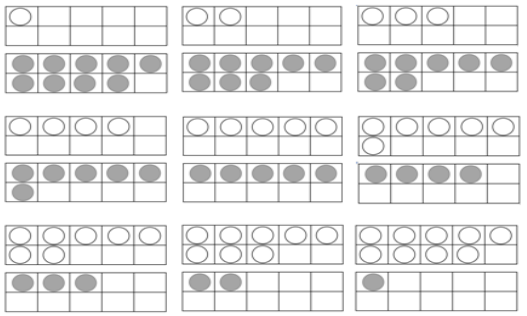
Drawings need not show details, but should show the mathematics in the problem. (This applies wherever drawings are mentioned in the Standards.)

The teacher will show an addition or subtraction problem. The student will use any of the representations listed (objects, fingers, mental images, drawings, sounds (e.g., claps), acting out situations, verbal explanations, expressions, or equations) to solve the problem.
(Note: Kindergarten students should see addition and subtraction equations, and student writing of equations in kindergarten is encouraged, but it is not required.)

MAFS.K.OA.1.4 **For any number from 1 to 9, find the number that makes 10 when added to a given number e.g., by using objects or drawings; record the answer with a drawing or an equation.**

Teacher will give students a number. Students will use objects or drawings to find the number to make 10 when added to the given number. E.g., Teacher says 4, students use counters and ten frame to come up with 6 more make 10). They may say or write the equation 4 + 6 = 10.
Kindergarten students should see addition and subtraction equations, and student writing of equations in kindergarten is encouraged, but it is *not required*.





MAFS.K.OA.1.5 Fluently add and subtract within 5.

Teacher shows students four or five of the combinations, one at a time, that make 5 (i.e., 1 + 1, 1 + 2, 1 + 3, 1 + 4, 2 + 1, 2 + 2, 2 + 3, 3 + 1, 3 + 2, 4 + 1, 5 – 1, 5 – 2, 5 – 3, 5 – 4, 4 – 1, 4 – 2, 4 – 3 , 3 – 1, 3 – 2, 2 – 1). These combinations should be on a whiteboard or index cards. Students should solve the problems quickly and efficiently. The student can respond orally or in writing.

Standards for Mathematical Practice **Students will:** **(to be embedded throughout instruction as appropriate)**							
Make sense of problems and persevere in solving them. SMP.1	Reason abstractly and quantitatively. SMP.2	Construct viable arguments and critique the reasoning of others. SMP.3	Model with mathematics. SMP.4	Use appropriate tools strategically. SMP.5	Attend to precision. SMP.6	Look for and make use of structure. SMP.7	Look for and express regularity in repeated reasoning. SMP.8

MAFS Domains: Counting and Cardinality Operations and Algebraic Thinking Number and Operations in Base Ten	**Pacing: Weeks 22 – 31 February 1 – April 15**	
Learning Targets	**Standards**	**Vocabulary**
Count to 100 by ones and by tens.	**MAFS.K.CC.1.1**	count count on digit eighty fifty ninety number numeral one hundred sequence seventy sixty
Students will: • **count** orally to 100 by tens starting with 10 (i.e., 10, 20, 30, 40, 50,…). • **count** orally to 100 by ones fluently.		
Count forward beginning from a given number within the known sequence (instead of having to begin at 1).	**MAFS.K.CC.1.2**	
Students will: • **count** forward orally up to 50 from a given number in the correct sequence (i.e., instead of having to begin at 1). • **use** tools such as hundreds charts, number lines, and calendar activities to reinforce the repeated pattern that occurs when counting to 100. • **count** orally on from a number other than 1 up to 100 (i.e., 23 on to 24, 25, 26, 27, 28, 29, … or 78 on to 79, 80, 81, 82,…). **HINT:** Students should understand that numbers follow the same order no matter where you start to count.		

Solve addition and subtraction word problems, and add and subtract within 10, e.g., by using objects or drawings to represent the problem. **(Students are not required to independently read the word problems.)**	**MAFS.K.OA.1.2**	add/adding to addition addend combining count on count back difference digit equal (=) equation (5=3+2) five frame in all joining make 10 minus (-) one fewer one more plus (+) put together sets solve subtract (-) subtracting from subtraction (-) symbol take away taking apart taking from ten frame total
Students will: • **add/subtract** numbers within 10. • **understand and apply** addition and subtraction through 10. • **solve** addition and subtraction word problems using objects and drawings. **HINT:** Refer to page 4 in the *Kindergarten Mathematics Curriculum Map* for clarification of Common Addition and Subtraction Situations. It is expected that students will become proficient with **all** situations.		

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Use addition and subtraction within 10 to solve word problems involving both addends unknown, e.g., by using objects, drawings, and equations with symbols for the unknown numbers to represent the problem. **(Students are not required to independently read the word problems.)**	**MAFS.K.OA.1.a**

Students will:

- **add/subtract** numbers within 10.
- **understand and apply** addition and subtraction through 10
- **solve** addition and subtraction word problems within 10, using objects, drawings, and equations.
- **use** symbols for an unknown in a problem.

HINT: Refer to page 4 in the *Kindergarten Mathematics Curriculum Map* for clarification of Common Addition and Subtraction Situations. It is expected that students will become proficient with **all** situations.

E.g.,

Take From **Change Unknown**	**Add to** **Start Unknown**	**Put Together /** **Take Apart** **Addend Unknown**
7 apples were on the table. I ate some apples. Then there were 5 apples. How many apples did I eat? 7 - △ = 5	Some dogs were sitting on the grass. Five more dogs came. Then there were seven dogs. How many dogs were on the grass before? ○ + 5 = 7	Five apples are on the table. Three are red and the rest are green. How many applies are green? 3 + □ = 5 5 – 3 = □

add/adding to
addition
addend
combining
count on
count back
difference
digit
equal (=)
equation (5=3+2)
five frame
in all
joining
make 10
minus (-)
one fewer
one more
plus (+)
put together
sets
solve
subtract (-)
subtracting from
subtraction (-)
symbol
take away
taking apart
taking from
ten frame
total

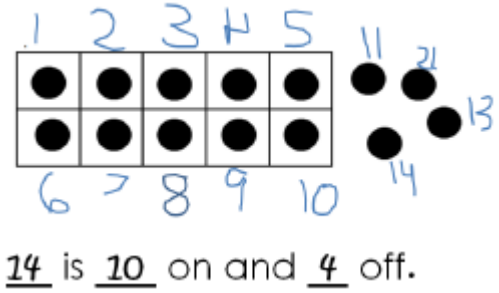
Compose and decompose numbers from 11-19 into ten ones and some further ones by using objects or drawings, and record each composition or decomposition by a drawing or equation (e.g., 18 = 10 + 8); understand that these numbers are composed of ten ones and one, two, three, four, five, six, seven, eight, or nine ones.	**MAFS.K.NBT.1.1**	compose decompose equation ones put together regroup take apart tens

Students will:

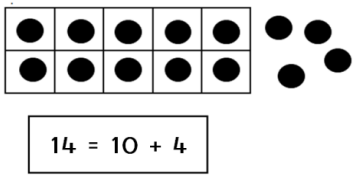
- **regroup** (rearrange) a set of 11-19 objects into a group of ten objects with leftovers.
- **compose** (put together) numbers 11-19 using a ten and some ones; show work with a drawing or an equation.
- **decompose** (take apart) numbers 11-19 using a ten and some ones; show work with a drawing or an equation.

  HINT: Compose means to put smaller numbers together to make a larger number. Decompose means to take a larger number apart into smaller numbers.
  "Teen" means one "ten" plus some ones.

- **build** toward the idea of ten ones as a "ten" as a foundation for first grade.
- **understand** that teen numbers are composed of 10 ones and one, two, three, four, five, six, seven, eight, or nine ones.



ALL	On	Off
14	10	4



Fluently add and subtract with in 5.	**MAFS.K.OA.1.5**	add (+) addition addend combining count on count back difference digit equal (=) equation (5 = 3 + 2) in all joining make 10 minus (-) one fewer one more plus (+) put together sets solve subtract (-) subtracting from subtraction (-) symbol taking apart taking from ten frame total
Students will: • **compose** numbers within 5. • **decompose** numbers within 5. • **add** numbers within 5. • **subtract** numbers within 5. **HINT:** Fluency is knowing how a number can be composed and decomposed and using that information to be flexible and efficient.		

Unit 3 Suggested Instructional Resources

MAFS	enVisionMATH	AIMS	Lakeshore	MFAS	Internet
CC.1.1 (0-100)	**SE/RMC/POD/A&R:** 10-11A, 10-11B	A Jump Start on Numbers Scrambled Eggs	Teacher Guide, p. 2 Reproducibles pp. 2, 3 Giant Magnetic Write and Wipe Number Line Magnetic Numbers	Count The Candy Corn Bundles Of Ten Count By Ones What Day Of School Is It	**www.k-5mathteachingresources.com** CC.1 **www.cpalms.org** Counting biy 10's with Zero the Hero and Little Count Let Bullwinkle and His Friends Help you Count to 100 Curious George 100 Day **https://gradekcommoncoremath.wikispaces.hcpss.org/Kindergarten** CC.1 Lessons CC.1 Formatives
CC.1.2 (0-100)		Number Story Theater Too	Teacher Guide, p. 3 Reproducibles pp. 2 Magnetic Numbers Giant Magnetic Write and Wipe Number Line	Count On	**www.k-5mathteachingresources.com** CC.2 **www.cpalms.org** Pineville Playground **https://gradekcommoncoremath.wikispaces.hcpss.org/Kindergarten** CC.2 Lessons CC.2 Formatives

enVisionMATH: SE = Student Edition; RMC= Ready-Made Centers; POD= Problem of the Day; A&R = Assessment and Reteaching Workbook

Unit 3 Suggested Instructional Resources

MAFS	enVisionMATH	AIMS	Lakeshore	MFAS	Internet
OA.1.2	**SE/RMC/POD/A&R:** 8-1, 8-2, 8-3, 8-6, 9-1, 9-3, 9-6, 9-7 **Math Start Readers:** "Animals On Board"	Computation Model Boards	Teacher Guide pp.14-15 Reproducibles pp. 8, 13, 16 Giant Magnetic Ten Frame Magnetic Ten Frame Answer Board Jumbo Magnetic Number line Magnetic Numbers Discovery Can: Addition & Subtraction Early Math Activity Jars	Bowl Of Apples Word Problem More Fun With Numbers	**www.k-5mathteachingresources.com** OA.2 **www.cpalms.org** Quacking Addition-Sums to 10 Finding Fact Families Finding Fact Families-dominoes Supermarket Sweep: Day 2 Counting Back and Counting On How Many Goldfish? Recording Two Ways **https://gradekcommoncoremath.wikispaces.hcpss.org/Kindergarten** OA.2 Lessons OA.2 Formatives
OA.1.a	**SE/RMC/POD/A&R:** 8-4, 8-5, 9-4, 9-5	Computation Model Boards	Teacher Guide pp. 14-15 Reproducibles pp. 8, 13, 16 Giant Magnetic Ten Frame Magnetic Ten Frame Answer Board Jumbo Magnetic Number line Magnetic Numbers Discovery Can: Addition & Subtraction Early Math Activity Jars	Cat and Dogs Word Problems Lizards On a Rock Two Tables	**www.cpalms.org** Hidden Cubes Roll and Find the Missing Ten What's Growing in Your Garden..working with word problems Splash! Jumping in and out of the Pond Add Up The Parts

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Unit 3 Suggested Instructional Resources

MAFS	enVisionMATH	AIMS	Lakeshore	MFAS	Internet
NBT.1.1	**SE / RMC / POD / A&R:** 10-3A, 10-4A, 10-6, 10-6A, 10-7A, 10-7B, 10-7C	Ten-Gallon Hat	Teacher Guide pp.17-18 Reproducibles pp. 9, 16, 17 Giant Magnetic Ten Frame Magnetic Ten Frame Answer Board Jumbo Magnetic Number line	Composing 13 Decomposing 15 Make Tens and Ones Ten Ones and Some Other Ones	**www.k-5mathteachingresources.com** NBT.1 **www.cpalms.org** Ten and Some More (Exploring Numbers 11-20) Fireflies-Numbers 11-19 Decompose That Teen Number! **https://gradekcommoncoremath.wikispaces.hcpss.org/Kindergarten** NBT.1 Lessons NBT.1 Formatives
OA.1.5		Sweet Sums	Teacher Guide pp.14-15 Reproducibles pp. 8, 16 Giant Magnetic Ten Frame Magnetic Ten Frame Answer Board Jumbo Magnetic Number line Discovery Can: Addition & Subtraction	Fluency Within Five Fluency Within Five Addition Only Fluency Within Five – Plus One Minus One Fluency Within Five Subtraction Only	**www.k-5mathteachingresources.com** OA.5 **www.cpalms.org** Finding Fact Families Finding Fact Families-dominoes Sum Search Counting Fingers Quiz, Quiz, Trade Add t or Take It Away! **https://gradekcommoncoremath.wikispaces.hcpss.org/Kindergarten** OA.5 Lessons OA.5 Formatives

enVisionMATH: SE = Student Edition; RMC= Ready-Made Centers; POD= Problem of the Day; A&R = Assessment and Reteaching Workbook

Unit 3 Suggestions for Assessing Addition and Subtraction and Numerals 0 to 100

MAFS.K.CC.1.1 **Count to 100 by ones and by tens.**

The student counts correctly from 1 – 100, with 100% accuracy, while the teacher observes.

AND

Starting at 10 the student counts to 100 by 10s.

MAFS.K.CC.1.2 **Count forward from a given numeral within the known sequence (instead of having to begin at 1).**

(Note: Students should understand that numbers follow the same order no matter where you start to count. Numbers are used to describe things at this stage.)

Have students count forward beginning from a given number, instead of starting at 1 (e.g., 23 – 24, 25, 26, 27, 28… and 78 – 79, 80, 81, 82…). Stop them after 4 or 5 more numbers are added. This should probably be done at least twice (see the examples).
Note: Students should understand that numbers follow the same order no matter where you start to count.

MAFS.K.OA.1.2 **Solve addition and subtraction word problems, and add and subtract within 10, e.g., by using objects or drawings to represent the problem. (Students are not required to independently read the word problems.)**

Teacher will tell the student an addition or subtraction word problem. The student will solve the problem using drawings, objects, fingers, or numbers.

Add to: Change Unknown	Take from: Result Unknown
Three cars were parked in the street. Some more cars came. Then there were five cars. How many cars came and parked next to the first three? 2 + ? = 5	Five cats were lying on the bed. Two of them went outside to hunt for lizards. How many cats were still on the bed? 5 – 2 = ?

MAFS.K.OA.1.a **Use addition and subtraction within 10 to solve word problems involving both addends unknown, e.g., by using objects, drawings, and equations with symbols for the unknown numbers to represent the problem. (Students are not required to independently read the word problems.)**

Teacher will tell the students an addition or subtraction word problem.

Add to: Start Unknown	Take from: Change Unknown
Some cats were sitting outside on the grass. Three more cats came and sat on the grass. Then there were five cats. How many cats were on the grass before? ? + 3 = 5	Five children were in the pool. Some children decided to get out of the pool. Then there were three children. How many children got out of the pool? 5 – ? = 3

MAFS.K.NBT.1.1 **Compose and decompose numbers from 11 to 19 into ten ones and some further ones, e.g., by using objects or drawings, and record each composition or decomposition by a drawing or equation (e.g., 18 = 10 + 8); understand that these numbers are composed of ten ones and one, two, three, four, five, six, seven, eight, or nine ones.**
(Note: Build toward the idea of ten ones as a 10 unit as a foundation for first grade.)

Have students draw or count out objects for a given number 11-19. Ask them to make a group of ten. Ask how many are left over. Ask them to express the two groups (e.g., 13 is 10 and 3 more -or- 13 is 1 group of 10 and 3 more - or -10 and 3 more makes 13) either by drawing a pictorial representation or, if the student chooses, writing an equation.
(Note: Kindergarten students should see addition and subtraction equations, and student writing of equations in kindergarten is encouraged, but it is not required.)

MAFS.OA.1.5 **Fluently add and subtract within 5.**

Teacher shows students four or five of the combinations, one at a time, that make 5 (i.e., 1 + 1, 1 + 2, 1 + 3, 1 + 4, 2 + 1, 2 + 2, 2 + 3, 3 + 1, 3 + 2, 4 + 1, 5 – 1, 5 – 2, 5 – 3, 5 – 4, 4 – 1, 4 – 2, 4 – 3 , 3 – 1, 3 – 2, 2 – 1). These combinations should be on a whiteboard or index cards. Students should solve the problems quickly and efficiently. The student can respond orally or in writing.

Standards for Mathematical Practice **Students will:** **(to be embedded throughout instruction as appropriate)**							
Make sense of problems and persevere in solving them. SMP.1	Reason abstractly and quantitatively. SMP.2	Construct viable arguments and critique the reasoning of others. SMP.3	Model with mathematics. SMP.4	Use appropriate tools strategically. SMP.5	Attend to precision. SMP.6	Look for and make use of structure. SMP.7	Look for and express regularity in repeated reasoning. SMP.8

MAFS Domains: Measurement and Data
Geometry
Operations and Algebraic Thinking

PACING: Weeks 32 – 39
April 18 – June 7

Learning Targets	Standards	Vocabulary
Classify objects into given categories; count the numbers of objects in each category and sort the categories by count.	**MAFS.K.MD.2.3**	amount category classify count group set size sort

Students will:

- **identify** similarities and differences between objects (e.g., size, color).
- **classify** (sort) objects into categories/groups.
- **explain** how the objects were sorted.
- **count** the number of objects in given sets.
- **determine** the number of objects in each category/group.
- **label** each set with a category.
- **compare** the categories by number or count
  (e.g., Which category has the most? Which category has the least? Are there categories that have the same amount of objects?).

Describe measurable attributes of objects, such as length or weight. Describe several measurable attributes of a single object.	**MAFS.K.MD.1.1**	attributes balance compare count heavier heaviest height length length units less lighter lightest longer longest measure more scale shorter shortest sort taller tallest weight

Students will:

- **describe** measurable attributes of objects.
- **describe** measurable attributes of a given object.
- **explain** how objects can be measured (length, height, weight).

Directly compare two objects with a measureable attribute in common to see which object has "more" or "less of" the attribute and describe the difference. For example, directly compare the height of two children and describe one child as taller/shorter.	**MAFS.K.MD.1.2**

Students will:

- **identify** which object is longer (or shorter or taller).
- **compare** side by side objects by length.

  E.g., A student may line up two blocks and say, "The gray block is longer than the white one."

  HINT: Do not find the actual length of each object.

- **identify** which object is heavier (or lighter).
- **compare** objects by weight by lifting one in one hand and the other in the other hand or using a balance scale.

  E.g., A student may put a block on one side of the scale and a book on the other side, and say, "The book is a lot heavier than the block."

  HINT: Do not find the actual weight of the objects.

Express the length of an object as a whole number of length units, by laying multiple copies of a shorter object (the length units) end to end; understand that the length measurement of an object is the number of same-size length units that span it with no gaps or overlaps. *Limits to contexts where the object being measured is spanned by a whole number of length units with no gaps or overlaps.*	**MAFS.K.MD.1.a**

Students will:

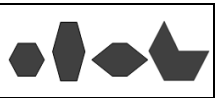
- **use** objects (e.g. paper clips, string, pencil) to express and understand length.
- **use** objects to measure items found in the environment.
- **determine** how to use a shorter object to measure the length of a longer object and explain why it is important to avoid gaps and overlaps.
- **represent** the length of the longer object with a whole number.

  HINT: Use nonstandard units of measurement to measure items. All non-standard units must be the same size (e.g., use small paper clips OR large paper clips; do not mix them).

Correctly name shapes regardless of their orientations or overall size.	MAFS.K.G.1.2

Students will:

- **name** shapes correctly (square, triangle, rectangle, circle, hexagon).
- **explore** many shapes in many different sizes and orientations.

Triangles		Hexagons	

- **name** shapes correctly when their size and orientation is unusual or different.

E.g., Students should be able to recognize that a square turned onto its vertex/corner (■ → ◆) is still a square.

HINT: Students should use concrete models and drawings to represent their understanding of 2-dimensional shapes.

Identify shapes as two-dimensional (lying in a plane, "flat") or three-dimensional ("solid").	MAFS.K.G.1.3

Students will:

- **name** two and three dimensional shapes.
- **identify** two-dimensional shapes-flat (i.e., squares, circles, triangles, rectangles, and hexagons).
- **identify** three-dimensional -solid (cubes, cones, cylinders, and spheres)
- **classify** (sort) shapes/objects into two categories: *2*-dimensional and 3-dimensional.
- **explain** how shapes are classified / sorted.

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 of, behind,* and *next to*.	MAFS.K.G.1.1

Students will:

- **name** shapes in the environment (e.g., flat- two dimensional and solid-three dimensional).
- **describe** the position and location of objects (e.g., above, below, on, beside, in front of, behind, and next to, left, right, near, far, inside, outside, top, middle, bottom).
- **act out** position and location.
- **explain** position and location to a partner.
- **explore** shapes found in the environment (e.g., square, triangle, circle, rectangle).
- **explore** shapes found in the environment (e.g., cube, cone, cylinder, sphere).

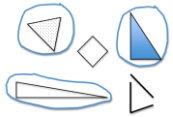
2- dimensional
3- dimensional
above
behind
below
beside
bottom
circle
classify
cone
cube
cylinder
describe
different
flat
group
hexagon
in front of
inside
left
location
middle
next to
outside
position
rectangle
right
same
shape
solid
sort
square
top
triangle
vertex
vertices

Analyze and compare two- and three-dimensional shapes, in different sizes and orientations, using informal language to describe similarities, differences, parts (e.g., number of sides and vertices/"corners") and other attributes (e.g., having sides of equal length).	**MAFS.K.G.2.4**

Students will:

- **describe** a shape by naming things like the number of sides, number of vertices (i.e., corners), and other special qualities.
- **describe** a three-dimensional shape by naming the two-dimensional shapes that make up the flat surfaces.
- **compare** two-dimensional shapes and describe their similarities and differences.
- **compare** three-dimensional shapes and describe their similarities and differences.

E.g., Circle the triangles in this collection of shapes. →



Model shapes in the world by building shapes from components (e.g., sticks and clay balls) and drawing shapes.	**MAFS.K.G.2.5**

Students will:

- **draw** shapes found in the environment.
- **create** a picture or model of something found in the environment using 2-dimensional shapes.

E.g.,

- **build** 2-dimensional and 3-dimensional models of an object from materials from the environment.
- **identify** the names of the shapes used in the picture or model.

Compose simple shapes to form larger shapes (e.g., *"Can you join these two triangles with full sides touching to make a rectangle?"*).	**MAFS.K.G.2.6**

Students will:

- **put** shapes together to make new larger shapes.
- **use** simple 2-dimensional shapes to form larger 2-dimensional shapes (e.g., "Can you join these 2 ◣ ◣ to make a rectangle?").
- **name** the new shape resulting from composing two simple shapes.

2-dimensional
3-dimensional
category
circle
compose
cone
corner
cube
curves
cylinder
describe
flat
hexagon
rectangle
same
shape
side
size
solid
sort
sphere
straight
square
triangle
vertex
vertices

Fluently add and subtract with in 5.	**MAFS.K.OA.1.5**	add (+) addition addend combining count on count back difference digit equal (=) equation (5 = 3 + 2) in all joining make 10 minus (-) one fewer one more plus (+) put together sets solve subtract (-) subtracting from subtraction (-) symbol taking apart taking from ten frame total
Students will: • **compose** numbers within 5. • **decompose** numbers within 5. • **add** numbers within 5. • **subtract** within 5. **HINT:** Fluency is knowing how a number can be composed and decomposed and using that information to be flexible and efficient.		

Unit 4 Suggested Instructional Resources

MAFS	enVisionMATH	AIMS	Lakeshore	MFAS	Internet
MD.2.3	**SE/RMC/POD/A&R:** 1-1,1-2, 1-3, 1-4, 1-5	Button Down	Teacher Guide p. 21 Discovery Can: Measurement & Data Early Math Activity Jars	Shape Sort Sort Objects Sort The Tiles Sorting Animals Sorting Buttons Sorting Color Tiles	**www.k-5mathteachingresources.com** MD.3 **www.cpalms.org** Properties Everywhere How Many Buttons? Shell Sort Sorting it All Out Caps For Sale, Anyone? Every Group Counts **https://gradekcommoncoremath.wikispaces.hcpss.org/Kindergarten** MD.3 Lessons MD.3 Formatives
MD.1.1	**SE/RMC/POD/A&R:** 14-1, 14-1A, 14-2	Bears of All Sizes	Discovery Can: Measurement & Data	Attributes of a Car Describing Lengths of Pencils Measurable Attributes of a Paper Clip Measurable Attributes of an Elephant	www.k-5mathteachingresources.com MD.1 **www.cpalms.org** Magnificent Measure: The Weight of Things Tight Rope **https://gradekcommoncoremath.wikispaces.hcpss.org/Kindergarten** MD.1 Lessons MD.1 Formatives
MD.1.2	**SE/RMC/POD/A&R:** 14-3, 14-5, 14-6, 14-8, 14-10	Bears of All Sizes Weight Lifters Rows of Bows	Teacher Guide p. 21 Discovery Can: Measurement & Data	Compare Lengths OF Cubes Compare Two Bags Comparing Lengths Longer Than Taller or Shorter	**www.k-5mathteachingresources.com** MD.2 **www.cpalms.org** Weighted Eggs The Long and Short of Candy **https://gradekcommoncoremath.wikispaces.hcpss.org/Kindergarten** MD.2 Lessons MD.2 Formatives

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Unit 4 Suggested Instructional Resources

MAFS	enVisionMATH	AIMS	Lakeshore	MFAS	Internet
MD.1.a		Turkey and Dressing	Teacher Guide pp.19-20 Reproducibles p. 15 Discovery Can: Measurement & Data Hands on Math Center	Measure With Color Tiles Measure With Paper Clips Measuring the Width and Height of a Book Using Paper Clips to Measure Using Tiles to Measure	**www.k-5mathteachingresources.com** 1.MD.2 **www.cpalms.org** Measuring End to End is a Win Win Measuring Madness Estimate and Measure-Sticky Math! **https://gradekcommoncoremath.wikispaces.hcpss.org/Kindergarten** 1.MD.2 Lessons 1.MD.2 Formatives
G.1.2	**SE/A&R:** 11-1, 11-2, 11-3, 11-4, 11-6, 11-9 **RMC:** 11-1, 11-2, 11-6, 11-9 **POD:** 11-4,11-6	Rough Enough Shapes Kindergarten 2-D Shapes Sneak A Peek At Shapes	Teacher Guide pp. 22-23 Reproducibles pp.18-20 Discovery Can: Shapes 3D Geometric Shape Tub	Find That Shape Identify The Shape Is it still a Triangle Small and Large Spheres Name The Shape	**www.k-5mathteachingresources.com** G.2 **www.cpalms.org** Building Triangles **https://gradekcommoncoremath.wikispaces.hcpss.org/Kindergarten** G.2 Lessons G.2 Formatives
G.1.3	**SE/RMC/POD** 12-1 **A&R:** 12-1, 12-2	Kindergarten 2-D Shapes	Teacher Guide pp. 22-23 Reproducibles pp.18-20 Discovery Can: Shapes 3D Geometric Shape Tub	Comparing A Cylinder To A Circle Is It A Plane Or A Solid Spheres and Circles Squares And Cubes	**www.k-5mathteachingresources.com** G.3 **www.cpalms.org** Eating Shapes **https://gradekcommoncoremath.wikispaces.hcpss.org/Kindergarten** G.3 Lessons G.3 Formatives

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Unit 4 Suggested Instructional Resources

MAFS	enVisionMATH	AIMS	Lakeshore	MFAS	Internet
G 1.1		Going On A Shape Hunt Kindergarten 2-D Shapes	Teacher Guide p. 22-23 Reproducibles pp.18-20 Discovery Can: Shapes 3D Geometric Shape Tub	Changing Position Locations Of Shapes Shapes In A Classroom What Shape Where is The Sphere Name That Shape	**www.k-5mathteachingresources.com** G.1 **www.cpalms.org** Where's the Shape? Where Am I? Hide and Seek Those Shapes Shape Hunt 3D Shape Video **https://gradekcommoncoremath.wikispaces.hcpss.org/Kindergarten** G.1 Lessons G.1 Formatives
G.2.4	**SE/RMC/POD/A&R:** 12-3, 12-5	Shape Shifters Kindergarten 2-D Shapes 3D Explorations Solid Shape Relay	Teacher Guide pp. 23-24 Reproducibles pp.19-20 Discovery Can: Shapes 3D Geometric Shape Tub	Compare Hexagons Compare Rectangles and Triangles How Are These Shapes Alike	**www.k-5mathteachingresources.com** G.4 **www.cpalms.org** Hide and Seek Those Shapes **https://gradekcommoncoremath.wikispaces.hcpss.org/Kindergarten** G.4 Lessons G.4 Formatives
G.2.5	**SE/RMC/POD/A&R:** 12-4	Making Models Kindergarten 2-D Shapes	Teacher Guide p. 24 Discovery Can: Shapes 3D Geometric Shape Tub	Draw a Triangle Hexagonal Tiles Model the Shapes Modeling the Shape of the Door	**www.k-5mathteachingresources.com** G.5 **www.cpalms.org** Three Dimensional PlayDoh Shape Creator **https://gradekcommoncoremath.wikispaces.hcpss.org/Kindergarten** G.5 Lessons G.5 Formatives

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Unit 4 Suggested Instructional Resources

MAFS	enVisionMATH	AIMS	Lakeshore	MFAS	Internet
G.2.6	**SE/POD/A&R:** **RMC:** 11-7, 11-8 11-8	Shape to Shape Kindergarten 2-D Shapes	Teacher Guide p. 24 Discovery Can: Shapes 3D Geometric Shape Tub	Can You Make a Rectangle Compose a Hexagon Compose a Rectangle Compose a Square	**www.k-5mathteachingresources.com** G.6 **www.cpalms.org** ShapeBot Patch Tool Shape Tool **https://gradekcommoncoremath.wikispaces.hcpss.org/Kindergarten** G.6 Lessons G.6 Formatives
OA.1.5		Sweet Sums	Teacher Guide pp.14-15 Reproducibles pp. 8, 16 Giant Magnetic Ten Frame Magnetic Ten Frame Answer Board Jumbo Magnetic Number line Discovery Can: Addition & Subtraction	Fluency Within Five Fluency Within Five Addition Only Fluency Within Five – Plus One Minus One Fluency Within Five Subtraction Only	**www.k-5mathteachingresources.com** OA.5. **www.cpalms.org** Finding Fact Families Finding Fact Families-dominoes Sum Search Counting Fingers Quiz, Quiz, Trade Add t or Take It Away! **https://gradekcommoncoremath.wikispaces.hcpss.org/Kindergarten** OA.5 Lessons OA.5 Formatives

enVisionMATH: SE = Student Edition; RMC= Ready-Made Centers; POD= Problem of the Day; A&R = Assessment and Reteaching Workbook

Unit 4 Suggestions for Assessing Measurement and Data and Geometry

MAFS.K.MD.2.3	**Classify objects into given categories; count the numbers of objects in each category and sort the categories by count.** **(Note: It is not appropriate to ask students to come up with category headings, they should be given)** Teacher will provide any assortment of manipulatives and instruct each child to sort by color, shape, kind and size using sorting mats. For E.g., The teacher gives the student a bag of attribute links. 1. The student sorts them by color. 2. The student sorts them by size. 3. The student sorts them by shape.
MAFS.K.MD.1.1	**Describe measurable attributes of objects, such as length or weight. Describe several measurable attributes of a single object.** Teacher will provide an object such as a paperclip, pencil, textbook, shoe, etc. Student will describe the object using measurable attributes. (e.g., This shoe is short and light. This pencil is long and light. This book is small and heavy.)
MAFS.K.MD.1.2	**Directly compare two objects with a measurable attribute in common, to see which object has "more of"/"less of" the attribute, and describe the difference. For example, directly compare the heights of two children and describe one child as taller/shorter (Note: This is side-by-side comparison.)** Teacher will provide two objects of different lengths/heights. Student will organize the objects by their length/height and will describe the order using measurement concepts. (This pencil is taller than that crayon.) **AND** Teacher will provide two objects of different weights. Using a balance scale the student will compare two objects using measurement concepts. (This book is heavier than this eraser.) Note: Do not find the actual weight of each object; make comparisons based on the balance outcome. **AND** Teacher will provide <u>two</u> objects that are distinctly different temperatures. Student will describe the objects based on their temperature. (This bottle of water is colder than this snap cube.)
MAFS.K.MD.1a	**Express the length of an object as a whole number of length units, by laying multiple copies of a shorter object (the length unit) end to end; understand that the length measurement of an object is the number of same-size length units that span it with no gaps or overlaps.** *Limit to contexts where the object being measured is spanned by a whole number of length units with no gaps or overlaps.* Teacher will provide different objects (found in the environment) to measure with items such as, paper clips, snap cubes. Count the number of units as a whole number.

MAFS.K.G.1.2 **Correctly name shapes regardless of their orientations or overall size.**

Teacher will provide a variety of shapes (**square, circle, triangle, rectangle, hexagon, cube, cone, cylinder, sphere**). Student will correctly name that shape. Note: **Students should be able to recognize that a square turned onto its vertex**  **is still a square and not a rhombus; a rhombus does not have 4 right angles.)**

MAFS.K.G.1.3 **Identify shapes as 2-dimensional (lying in a plane "flat") or 3-dimensional ("solid").**

Teacher will present a collection of 2- and 3-dimensional shapes (**square, circle, triangle, rectangle, hexagon, cube, cone, cylinder, and sphere**). The student identifies which shapes are 2-dimensional and which are 3-dimensional.

MAFS.K.G.1.1 **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 of, behind,* and *next to*.**

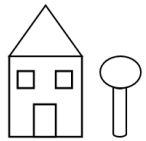
The teacher will set up situations using shapes and classroom objects (e.g., a square *below* a chair, a circle *behind* a book, etc.). The student will describe the position of the shape as it relates to the classroom object.

MAFS.K.G.2.4 **Analyze and compare 2- and 3-dimensional shapes in different sizes and orientations, using informal language, to describe their similarities, differences, parts (number of sides and vertices) and other attributes. (e.g., having sides of equal length)**

Show students 2 shapes.
Ask: How are these shapes the same?
How are these shapes different?
How many sides do they each have?
How many vertices (corners) do they each have?
(etc…)
Illustrative Mathematics E.g., http://www.illustrativemathematics.org/standards/k8 (K, Geometry (show all), 4, see illustrations)

MAFS.K.G.2.5 **Model shapes in the world by building shapes from components (e.g., sticks and clay balls) and drawing shapes.**

Have students use 2-dimensional shapes (square, circle, triangle, rectangle and hexagon) to draw a picture of something such as a house, furniture, plant, etc.



AND

Give students toothpicks, chenille stems, string, yarn, marshmallows, straws, clay, etc. to create 3-dimensional shapes (cube, cone, cylinder, and sphere).

MAFS.K.G.2.6 **Compose simple shapes to form larger shapes.** ***For example, "Can you join these two triangles with full sides touching to make a rectangle?"***

Ask students to use simple 2-dimensional shapes to form larger 2-dimensional shapes and name the new shape.

(i.e.  square)

(i.e. 2  rectangle)

MAFS.K.OA.1.5 **Fluently add and subtract within 5.**

Teacher shows students four or five of the combinations, one at a time, that make 5 (i.e., 1 + 1, 1 + 2, 1 + 3, 1 + 4, 2 + 1, 2 + 2, 2 + 3, 3 + 1, 3 + 2, 4 + 1, 5 – 1, 5 – 2, 5 – 3, 5 – 4, 4 – 1, 4 – 2, 4 – 3 , 3 – 1, 3 – 2, 2 – 1). These combinations should be on a whiteboard or index cards. Students should solve the problems quickly and efficiently. The student can respond orally or in writing.

Formative Assessment Strategies
Mathematics K-5

<table>
<tr><th>Name</th><th>Description</th><th>Additional Information</th></tr>
<tr><td>A & D Statements</td><td>A & D Statements analyze a set of “fact or fiction” statements. First, students may choose to agree or disagree with a statement or identify whether they need more information. Students are asked to describe their thinking about why they agree, disagree, or are unsure. In the second part, students describe what they can do to investigate the statement by testing their ideas, researching what is already known, or using other means of inquiry.</td><td>
<table>
<tr><th>Statement</th><th>How can I find out?</th></tr>
<tr><td>9/16 is larger than 5/8.

__agree __disagree
__not sure __it depends on

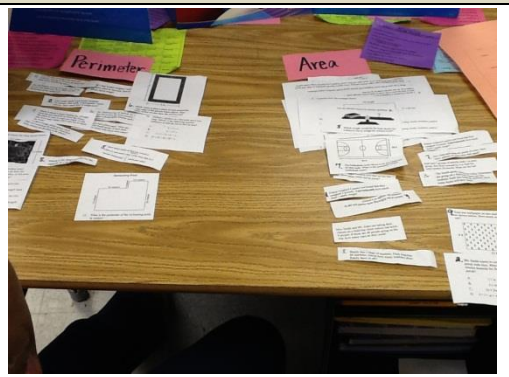
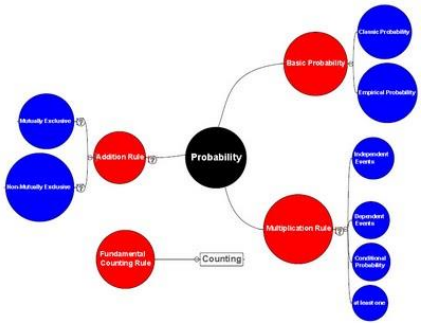
My thoughts:</td><td></td></tr>
</table>

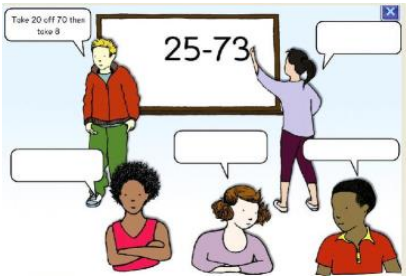
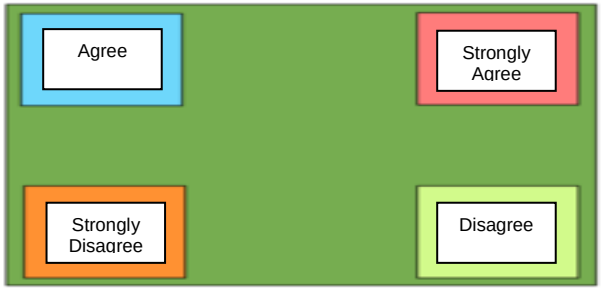
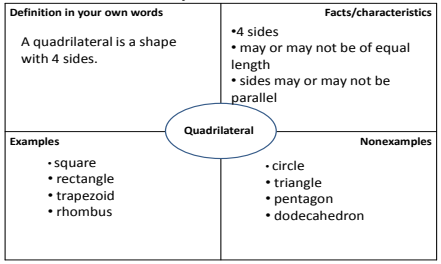
http://www.mathsolutions.com/documents/How_to_Get_Students_Talking.pdf
</td></tr>
<tr><td>Agreement Circles</td><td>Agreement Circles provide a kinesthetic way to activate thinking and engage students in mathematical argumentation. Students stand in a circle as the teacher reads a statement. They face their peers still standing and match themselves up in small groups of opposing beliefs. Students discuss and defend their positions. After some students defend their answers, the teacher can ask if others have been swayed. If so, stand up. If not, what are your thoughts? Why did you disagree? After hearing those who disagree, does anyone who has agreed want to change their minds? This should be used when students have had some exposure to the content.</td><td>There 20 cups in a gallon. Agree or disagree?
2/3 equivalent to 4/6. Agree or disagree?
A square is a rectangle. Agree or disagree?

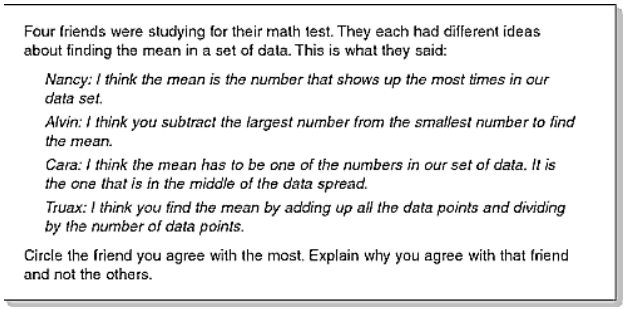
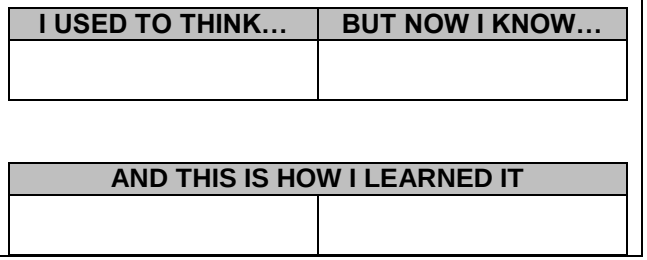
Additional Questioning:
Has anyone been swayed into new thinking?
What is your new thinking?
Why do you disagree with what you have heard?
Does anyone want to change their mind?
What convinced you to change your mind?
Use when students have had sufficient exposure to content.

http://formativeassessment.barrow.wikispaces.net/Agreement+Circles</td></tr>
<tr><td>Annotated Student Drawings</td><td>Annotated Student Drawings are student-made, labeled illustrations that visually represent and describe students’ thinking about mathematical concepts. Younger students may verbally describe and name parts of their drawings while the teacher annotates it for them.</td><td>Represent 747 by drawing rods and cubes.
Represent 3x2=2x3 by drawing arrays.
Describe the meaning of 5.60.
 

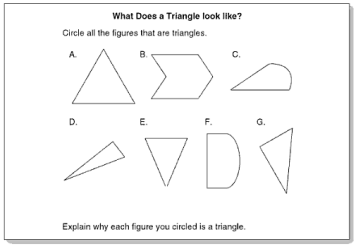
http://formativeassessment.barrow.wikispaces.net/Annotated+Student+Drawings</td></tr>
</table>

Formative Assessment Strategies/Mathematics K-5 (continued)		
Name	**Description**	**Additional Information**
Card Sorts	*Card Sorts* is a sorting activity in which students group a set of cards with pictures or words according to certain characteristics or category. Students sort the cards based on their preexisting ideas about the concepts, objects, or processes on the cards. As students sort the cards, they discuss their reasons for placing each card into a designated group. This activity promotes discussion and active thinking.	 http://teachingmathrocks.blogspot.com/2012/09/vocabulary-card-sort.html
Commit and Toss	*Commit and Toss* is a technique used to anonymously and quickly assess student understanding on a topic. Students are given a question. They are asked to answer it and explain their thinking. They write this on a piece of paper. The paper is crumpled into a ball. Once the teacher gives the signal, they toss, pass, or place the ball in a basket. Students take turns reading their "caught" response. Once all ideas have been made public and discussed, engage students in a class discussion to decide which ideas they believe are the most plausible and to provide justification for the thinking.	*Stephanie eats 5 apple slices during lunch. When she gets home from school she eats more. Which statement(s) below indicates the number of apple slices Stephanie may have eaten during the day?* a. She eats 5 apple slices. b. She eats 5 apple slices at least. c. She eats more than 5 apple slices. d. She eats no more than 5 apple slices. e. I cannot tell how many apple slices were eaten. **Explain your thinking. Describe the reason for the answer(s) you selected.**
Concept Card Mapping	*Concept Card Mapping* is a variation on concept mapping. Students are given cards with the concepts written on them. They move the cards around and arrange them as a connected web of knowledge. This strategy visually displays relationships between concepts.	

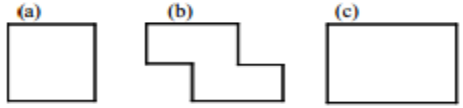
Formative Assessment Strategies/Mathematics K-5 (continued)		
Name	**Description**	**Additional Information**
Concept Cartoons	*Concept Cartoons* are cartoon drawings that visually depict children or adults sharing their ideas about common everyday mathematics. Students decide which character in the cartoon they agree with most and why. This formative is designed to engage and motivate students to uncover their own ideas and encourage mathematical argumentation. Concept Cartoons are most often used at the beginning of a new concept or skill. These are designed to probe students' thinking about everyday situations they encounter that involve the use of math. Not all cartoons have one "right answer." Students should be given ample time for ideas to simmer and stew to increase cognitive engagement.	 • www.pixton.com (comic strip maker)
Four corners	*Four Corners* is a kinesthetic strategy. The four corners of the classroom are labeled: Strongly Agree, Agree, Disagree and Strongly Disagree. Initially, the teacher presents a math-focused statement to students and asks them to go to the corner that best aligns with their thinking. Students then pair up to defend their thinking with evidence. The teacher circulates and records student comments. Next, the teacher facilitates a whole group discussion. Students defend their thinking and listen to others' thinking before returning to their desks to record their new understanding.	**A decimal is a fraction.**  http://debbiedespirt.suite101.com/four-corners-activities-a170020 http://wvde.state.wv.us/teach21/FourCorners.html
Frayer Model	*Frayer Model* graphically organizes prior knowledge about a concept into an operational definition, characteristics, examples, and non-examples. It provides students with the opportunity to clarify a concept or mathematical term and communicate their understanding. For formative assessment purposes, they can be used to determine students' prior knowledge about a concept or mathematical term before planning the lesson. Barriers that can hinder learning may be uncovered with this assessment. This will then in turn help guide the teacher for beneficial instruction.	Frayer Model 

Formative Assessment Strategies/Mathematics K-5 (continued)		
Name	**Description**	**Additional Information**
Friendly Talk Probes	*Friendly Talk Probes* is a strategy that involves a selected response section followed by justification. The probe is set in a real-life scenario in which friends talk about a math-related concept or phenomenon. Students are asked to pick the person they most agree with and explain why. This can be used to engage students at any point during a unit. It can be used to access prior knowledge before the unit begins, or assess learning throughout and at the close of a unit.	 http://www.sagepub.com/upm-data/37758_chap_1_tobey.pdf
Human Scatterplots	*Human Scatterplot* is a quick, visual way for teacher and students to get an immediate classroom snapshot of students' thinking and the level of confidence students have in their ideas. Teachers develop a selective response question with up to four answer choices. Label one side of the room with the answer choices. Label the adjacent wall with a range of low confidence to high confidence. Students read the question and position themselves in the room according to their answer choice and degree of confidence in their answer.	
I Used to Think… But Now I Know…	*I Used to Think…But Now I Know* is a self-assessment and reflection exercise that helps students recognize if and how their thinking has changed at the end of a sequence of instruction. An additional column can be added to include…*And This Is How I Learned It* to help students reflect on what part of their learning experiences helped them change or further develop their ideas.	

Formative Assessment Strategies/Mathematics K-5 (continued)

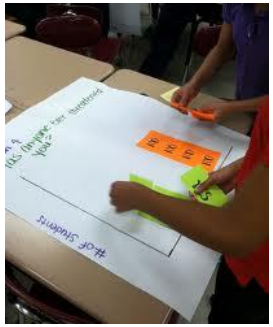
<table>
<tr><th>Name</th><th>Description</th><th>Additional Information</th></tr>
<tr><td>Justified List</td><td>Justified List begins with a statement about an object, process, concept or skill. Examples and non-examples for the statement are listed. Students check off the items on the list that are examples of the statement and provide a justification explaining the rule or reasons for their selections. This can be done individually or in small group. Small groups can share their lists with the whole class for discussion and feedback. Pictures or manipulatives can be used for English-language learners.</td><td>
Example 1
<table>
<tr><td>Put an X next to the examples that represent 734.</td></tr>
<tr><td>___700+30+4 ___7 tens 3 hundreds 4 ones
___730 tens 4 ones ___7 hundreds 3 tens 4ones
___734 ones ___seven hundred thirty-four
___seventy-four ___ 400+70+3</td></tr>
<tr><td>Explain your thinking. What “rule” or reasoning did you use to decide which objects digit is another way to state that number.</td></tr>
</table>
Example 2


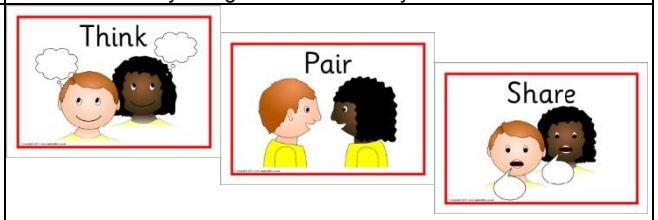
</td></tr>
<tr><td>K-W-L Variations</td><td>K-W-L is a general technique in which students describe what they Know about a topic, what they Want to know about a topic, and what they have Learned about the topic. It provides an opportunity for students to become engaged with a topic, particularly when asked what they want to know. K-W-L provides a self-assessment and reflection at the end, when students are asked to think about what they have learned. The three phrases of K-W-L help students see the connections between what they already know, what they would like to find out, and what they learned as a result.</td><td>
<table>
<tr><th>K-This what I already KNOW</th><th>W-This is what I WANT to find out</th><th>L-This is what I LEARNED</th></tr>
<tr><td></td><td></td><td></td></tr>
</table>
</td></tr>
<tr><td>Learning Goals Inventory (LGI)</td><td>Learning Goals Inventory (LGI) is a set of questions that relate to an identified learning goal in a unit of instruction. Students are asked to “inventory” the learning goal by accessing prior knowledge. This requires them to think about what they already know in relation to the learning goal statement as well as when and how they may have learned about it. The LGI can be given back to students at the end of the instructional unit as a self-assessment and reflection of their learning.</td><td>
<table>
<tr><th>What do you think the learning goal is about?</th></tr>
<tr><td>List any concepts or ideas you are familiar with related to this learning goal.</td></tr>
<tr><td>List any terminology you know of that relates to this goal.</td></tr>
<tr><td>List any experiences you have had that may have helped you learn about the ideas in this learning goal.</td></tr>
</table>
</td></tr>
</table>

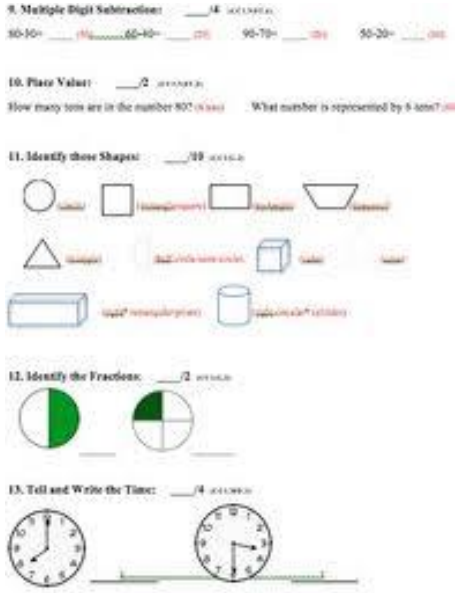
<table>
<tr><th colspan="3">Formative Assessment Strategies/Mathematics K-5 (continued)</th></tr>
<tr><th>Name</th><th>Description</th><th>Additional Information</th></tr>
<tr><td>Look Back</td><td>Look Back is a recount of what students learned over a given instructional period of time. It provides students with an opportunity to look back and summarize their learning. Asking the students “how they learned it” helps them think about their own learning. The information can be used to differentiate instruction for individual learners, based on their descriptions of what helped them learn.</td><td><table><tr><th>What I Learned</th><th>How I Learned it</th></tr><tr><td></td><td></td></tr></table></td></tr>
<tr><td>Muddiest Point</td><td>Muddiest Point is a quick-monitoring technique in which students are asked to take a few minutes to jot down what the most difficult or confusing part of a lesson was for them. The information gathered is then to be used for instructional feedback to address student difficulties.</td><td>Scenario: Students have been learning about the attributes of three-dimensional shapes.
Teacher states, “I want you to think about the muddiest point for you so far when it comes to three-dimensional shapes. Jot it down on this notecard. I will use the information you give to me to think about ways to help you better understand three-dimensional shapes in tomorrow’s lesson.”</td></tr>
<tr><td>Odd One Out</td><td>Odd One Out combines similar items/terminology and challenges students to choose which item/term in the group does not belong. Students are asked to justify their reasoning for selecting the item that does not fit with the others. Odd One Out provides an opportunity for students to access scientific knowledge while analyzing relationships between items in a group.</td><td>Show students three figures and ask:
Which is the odd one out?
Explain your thinking.
 
Ask students to choose a different odd one out and explain their thinking.</td></tr>
<tr><td>Partner Speaks</td><td>Partner Speaks provides students with an opportunity to talk through an idea or question with another student before sharing with a larger group. When ideas are shared with the larger group, pairs speak from the perspective of their partner’s ideas. This encourages careful listening and consideration of another’s ideas.</td><td>Today we are going to explore different ways to add three-digit numbers together.

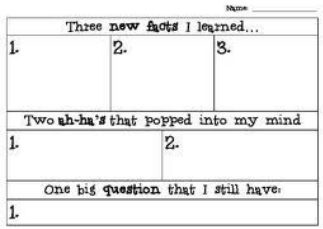
What different kinds of strategies can you use to add 395+525?

Turn to your partner and take turns discussing your strategies. Listen carefully and be prepared to share your partner’s ideas.</td></tr>
</table>

Formative Assessment Strategies/Mathematics K-5 (continued)		
Name	**Description**	**Additional Information**
A Picture Tells a Thousand Words	*A Picture Tells a Thousand Words,* students are digitally photographed during a mathematical investigation using manipulatives or other materials. They are given the photograph and asked to describe what they were doing and learning in the photo. Students write their description under the photograph. The images can be used to spark student discussions, explore new directions in inquiry, and probe their thinking as it relates to the moment the photograph was snapped. By asking students to annotate a photo that shows the engaged in a mathematics activity or investigation helps them activate their thinking about the mathematics, connect important concepts and procedures to the experience shown in the picture and reflect on their learning. Teachers can better understand what students are gaining from the learning experience and adjust as needed.	
Question Generating	*Question Generating* is a technique that switches roles from the teacher as the question generator to the student as the question generator. The ability to formulate good questions about a topic can indicate the extent to which a student understands ideas that underlie the topic. This technique can be used any time during instruction. Students can exchange or answer their own questions, revealing further information about the students' ideas related to the topic.	Question Generating Stems: • Why does___? • Why do you think___? • Does anyone have a different way to explain___? • How can you prove___? • What would happen if___? • Is___always true? • How can we find out if___?
Sticky Bars	*Sticky Bars* is a technique that helps students recognize the range of ideas that students have about a topic. Students are presented with a short answer or multiple-choice question. The answer is anonymously recorded on a Post-it note and given to the teacher. The notes are arranged on the wall or whiteboard as a bar graph representing the different student responses. Students then discuss the data and what they think the class needs to do in order to come to a common understanding.	

Formative Assessment Strategies/Mathematics K-5 (continued)		
Name	**Description**	**Additional Information**
Thinking Log	*Thinking Logs* is a strategy that informs the teacher of the learning successes and challenges of individual students. Students choose the thinking stem that would best describe their thinking at that moment. Provide a few minutes for students to write down their thoughts using the stem. The information can be used to provide interventions for individuals or groups of students as well as match students with peers who may be able to provide learning support.	• I was successful in… • I got stuck… • I figured out… • I got confused when…so I… • I think I need to redo… • I need to rethink… • I first thought…but now I realize… • I will understand this better if I… • The hardest part of this was… • I figured it out because… • I really feel good about the way…
Think-Pair-Share	*Think-Pair-Share* is a technique that combines thinking with communication. The teacher poses a question and gives individual students time to think about the question. Students then pair up with a partner to discuss their ideas. After pairs discuss, students share their ideas in a small-group or whole-class discussion. (Kagan) NOTE: Varying student pairs ensures diverse peer interactions.	
Three-Minute Pause	*Three-Minute Pause* provides a break during a block of instruction in order to provide time for students to summarize, clarify, and reflect on their understanding through discussion with a partner or small group. When three minutes are up, students stop talking and direct their attention once again to the teacher, video, lesson, or reading they are engaged in, and the lesson resumes. Anything left unresolved is recorded after the time runs out and saved for the final three-minute pause at the end.	
Traffic Light Cards/Cups/Dots	*Traffic Light Cards/Cups/Dots* is a monitoring strategy that can be used at any time during instruction to help teachers gauge student understanding. The colors indicate whether students have full, partial, or minimal understanding. Students are given three different-colored cards, cups, or dots to display as a form of self-assessment revealing their level of understanding about the concept or skill they are learning.	

Formative Assessment Strategies/Mathematics K-5 (continued)		
Name	**Description**	**Additional Information**
Two-Minute Paper	*Two-Minute Paper* is a quick way to collect feedback from students about their learning at the end of an activity, field trip, lecture, video, or other type of learning experience. Teacher writes two questions on the board or on a chart to which students respond in two minutes. Responses are analyzed and results are shared with students the following day.	• What was the most important thing you learned today? • What did you learn today that you didn't know before? • What important question remains unanswered for you? • What would help you learn better tomorrow?
Two Stars and a Wish	*Two Stars and a Wish* is a way to balance positive and corrective feedback. The first sentence describes two positive commendations for the student's work. The second sentence provides one recommendation for revision. This strategy could be used teacher-to-student or student-to-student.	
Two-Thirds Testing	*Two-Thirds Testing* provides an opportunity for students to take an ungraded "practice test" two thirds of the way through a unit. It helps to identify areas of difficulty or misunderstanding through an instructional unit so that interventions and support can be provided to help them learn and be prepared for a final summative assessment. Working on the test through discussions with a partner or in a small group further develops and solidifies conceptual understanding.	

Formative Assessment Strategies/Mathematics K-5 (continued)		
Name	**Description**	**Additional Information**
What Are You Doing and Why?	*What Are You Doing and Why?* is a short, simple monitoring strategy to determine if students understand the purpose of the activity or how it will help them learn. At any point in an activity the teacher gets the students' attention and asks "What are you doing and why are you doing it?" Responses can be shared with the class, discussed between partners, or recorded in writing as a *One-Minute Paper* to be passed in to the teacher. The data are analyzed by the teacher to determine if the class understands the purpose of the activity they are involved in.	**Scenario:** Students are decomposing a fraction into the sum of two or more of its parts. $\frac{3}{8} = \frac{1}{8} + \frac{1}{8} + \frac{1}{8}$ $\frac{3}{8} = \frac{2}{8} + \frac{1}{8}$ $\frac{3}{8} = \frac{3}{8} + \frac{0}{8}$ Teacher stops students in their tracks and asks, *"What are you do and why are you doing it?"*
Whiteboarding	*Whiteboarding* is a technique used in small groups to encourage students to pool their individual thinking and come to a group consensus on an idea that is shared with the teacher and the whole class. Students work collaboratively around the whiteboard during class discussion to communicate their ideas to their peers and the teacher.	http://www.educationworld.com/a_lesson/02/lp251-01.shtml 
3-2-1	*3-2-1* is a technique that provides a structured way for students to reflect upon their learning. Students respond in writing to three reflective prompts. This technique allows students to identify and share their successes, challenges, and questions for future learning. Teachers have the flexibility to select reflective prompts that will provide them with the most relevant information for data-driven decision making.	**Sample 1** • **3 – Three** key ideas I will remember • **2 – Two** things I am still struggling with • **1 – One** thing that will help me tomorrow **Sample 2** 

enVisionMATH Intervention/Remediation Resource Guide

Resource	Location	Description
Intervention Lessons (Student and Teacher pages)	**Diagnosis and Intervention System –** a separate kit of materials	Use for pre-requisite skills or remediation. For grades K-2, the lessons consist of a teacher-directed activity followed by problems. In grades 3-5, the student will first answer a series of questions that guide him or her to the correct answer of a given problem, followed by additional, but similar problems.
Meeting Individual Needs	**Teacher's Edition –** planning section of each Topic	Provides topic-specific considerations and activities for differentiated instruction of ELL, ESE, Below-Level and Advanced students.
Differentiated Instruction	**Teacher's Edition –** Close/Assess and Differentiate step of each lesson	Provides lesson-specific activities for differentiated instruction for Intervention, On-Level and Advanced levels.
Error Intervention	**Teacher's Edition –** Guided Practice step of each lesson	Provides on-the-spot suggestions for corrective instruction.
ELL Companion Lesson	**Florida Interactive Lesson Support for English Language Learners**	Includes short hands-on lessons designed to provide support for teachers and their ELL students, useful for struggling students as well

GLOSSARY OF TERMS

Pacing: the recommended timeline determined by teacher committee for initial delivery of instruction in preparation for State Assessments

Domain: the broadest organizational structure used to group content and concepts within the curriculum map

Cluster: a sub-structure of related standards; standards from different clusters may sometimes be closely related because mathematics is a connected subject

Standard: a definition of what students should understand and be able to do

Learning Targets/Skills: the content knowledge, processes, and behaviors students should exhibit for mastery of the standards

Hints: additional information that serves to further clarify the expectations of the learning targets/skills to assist with instructional decision-making processes

Vocabulary: the content vocabulary and other key terms and phrases that support mastery of the learning targets and skills; for teacher and student use alike

Standards for Mathematical Practice: processes and proficiencies that teachers should seek to purposefully develop in students

Resource Alignment: a listing of available, high quality and appropriate materials, strategies, lessons, textbooks, videos and other media sources that are aligned with the learning targets and skills; recommendations are not intended to limit lesson development

Common Addition and Subtraction Situations: a comprehensive display of possible addition and subtraction problem solving situations that involve an unknown number in varied locations within an equation

Formative Assessment Strategies: a collection of assessment strategies/techniques to help teachers discover student thinking, determine student understanding, and design learning opportunities that will deepen student mastery of standards

Intervention/Remediation Guide: a description of resources available within the adopted mathematics textbook resource (enVisionMATH) that provides differentiated support for struggling learners—ESE, ELL, and General Education students alike