Math-U-See® Correlation with the Common Core State Standards for Mathematical Content for Kindergarten

Primer was written to give a sampling of introductory mathematical topics while developing early number sense. Some lessons are preliminary to concepts covered in Alpha and/or Beta. For example, practicing the writing of numerals is covered only in Primer; Alpha assumes that students know how to write their numbers.

Other Primer lessons are an introduction to topics covered in Alpha or Beta. The text in the instruction manual may even be identical for the two lessons. In general, however, when a lesson appears to be repeated in a later book, the Primer student worksheets offer problems using pictures of blocks while the corresponding lesson in Alpha or Beta will offer problems using numerals with the blocks used to check answers. This provides the Kindergarten teacher with a means of varying individual student worksheets according to ability, learning style, or interest.

KEY

Domain Name →

#	Standard	Location in Math-U-See Curriculum	Comments
K.CC. – Counting and Cardinality			
Cluster → Know number names and the count sequence. (MAJOR)			
1	Count to 100 by ones and by tens.	Counting to 100: Primer 14 (or Alpha 6)	Note that Math-U-See's method of counting begins with zero, not one.

Standard # and Text from Common Core State Standards →

↑ Where in the Math-U-See Curriculum this standard is met.   ↑ Additional Insights

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K.CC. – Counting and Cardinality			
	Know number names and the count sequence. (MAJOR)		
1	Count to 100 by ones and by tens.	Number Recognition and Counting from 0–9: Primer 1 Addition +1: Primer 13 Counting to 20: Primer 14 (or Alpha 2) Counting to 100: Primer 14 (or Alpha 6) Skip Counting by Tens: Primer 19, Alpha 6, Beta 8	Note that Math-U-See's method of counting begins with zero, not one.
2	Count forward beginning from a given number within the known sequence (instead of having to begin at 1).	Counting to 100: Primer 14 (or Alpha 6)	We suggest practicing this skill verbally.
3	Write numbers from 0 to 20. Represent a number of objects with a written numeral 0–20 (with 0 representing a count of no objects).	Writing Numerals: Primer 1–8 Counting to 20: Primer 14, Alpha 2 Addition +0: Alpha 4	Identifying zero as "no objects" occurs in the worksheets starting with Primer 1.

	Count to tell the number of objects. (MAJOR)		
4	Understand the relationship between numbers and quantities; connect counting to cardinality.	Number Recognition: Primer 1	The Math-U-See blocks help students realize that numbers represent real things. We also suggest in Primer 1 that you ask students to jump or clap a certain number of times.
4a	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.	Number Recognition: Primer 1	The blocks are key to conveying this concept.
4b	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.	Number Recognition: Primer 1	Arranging the blocks in a circle particularly emphasizes that you can start counting anywhere in an arrangement of objects and get the same number.
4c	Understand that each successive number name refers to a quantity that is one larger.	Number Recognition: Primer 1 Counting +1: Primer 13	Arranging the blocks from 1–10 helps visualize this relationship.
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.	Number Recognition: Primer 1	Throughout the student worksheets, the objects to be counted are arranged in various ways. The game for place value in Alpha 1 has students count out the required number of objects (e.g. unit blocks).

	Compare numbers. (MAJOR)		
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. (Include groups with up to ten objects.)	Number Recognition and Writing Numerals: Primer 5 Application and Enrichment 6G	
7	Compare two numbers between 1 and 10 presented as written numerals.	The student worksheets for Primer 6 and 9 include problems that exemplify this standard.	

K.OA. – Operations and Algebraic Thinking			
Understand addition as putting together and adding to, and understand subtraction as taking apart and taking from. (MAJOR)			
1	Represent addition and subtraction with objects, fingers, mental images, drawings (drawings need not show details but should show the mathematics in the problem.), sounds (e.g. claps), acting out situations, verbal explanations, expressions, or equations.	Addition: Primer 12–13, 15–20 (or Alpha 4–17) Subtraction: Primer 29–30 (or Alpha 18–30)	Using Math-U-See's "Build, Write, Say" method with the blocks naturally fulfills this standard. In addition, many worksheets include drawings, and the suggested games (e.g. "Act it Out" in Primer 11 or Alpha 3) include several of the ideas listed in the standard.

2	Solve addition and subtraction word problems, and add and subtract within 10, e.g. by using objects or drawings to represent the problem.	Written word problems begin in the Primer worksheets for Lesson 19 and in Alpha 4. Teaching Tip in Primer 13 on verbal word problems. Word Problem Tips and Strategies: Alpha 4	In Primer, Application and Enrichment 14G and 15G feature addition problems with both drawings and words.
3	Decompose numbers less than or equal to 10 into pairs in more than one way, e.g., by using objects or drawings, and record each decomposition by a drawing or equation (e.g., 5=2+3 and 5=4+1).	Teaching Tip in Primer 15 Teaching Tip in Alpha 10	In Primer 24 (or Alpha 15), the suggested games "Build a Wall" and "Fill in the Space" can be adapted to any number other than 10. The games "Race to 100" and "Race You Back" also emphasize the skill of decomposition.
4	For any number from 1 to 9, find the number that makes 10 when added to the given number, e.g., by using objects or drawings, and record the answer with a drawing or equation.	Addition Making 10: Primer 24 (or Alpha 15)	
5	Fluently add and subtract within 5.	Addition +0: Alpha 4 Addition +1: Primer 13 (or Alpha 5) Subtraction −1: Primer 30 (or Alpha 19) Addition +2: Primer 15 (or Alpha 7) Subtraction −2: Alpha 20	By the end of Alpha 20, students should have mastered this standard. In general, the Primer lessons fulfill this standard using pictures of the blocks while in Alpha students build, write, and say numerical problems. For additional math fact practice, Math-U-See provides an online worksheet generator and a drill webpage.

K.NBT. – Number and Operations in Base Ten

Work with numbers 11–19 to gain foundations for place value. (MAJOR)

1	Compose and decompose numbers from 11–19 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.	Primer Application and Enrichment 14G	This standard is consistently implied while using the blocks to master the concepts of place value (Primer 9 or Alpha 1) and counting to 20 (Primer 14 or Alpha 2). As students explore Decimal Street®, they learn how ones spill over to the tens house.

K.MD. – Measurement and Data

Describe and compare measurable attributes. (Additional)

1	Describe measurable attributes of objects, such as length or weight. Describe several measurable attributes of a single object.	Comparison of Amount: Primer 5 Application and Enrichment: Primer 6G	

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.	Comparison of Amount: Primer 5 (or Alpha 4)	Comparing the lengths of the integer blocks is a natural way to practice this skill verbally.

Classify objects and count the number of objects in each category. (Supporting)

3	Classify objects into given categories; count the numbers of objects in each category and sort the categories by count.	Classifying and Counting: Primer 6 Application and Enrichment: Primer 8G	Starting in Primer 8, the worksheets consistently ask students to count the number of particular shapes. We also suggest using attribute blocks.

K.G. – Geometry

Identify and describe shapes (squares, circles, triangles, rectangles, hexagons, cubes, cones, cylinders, and spheres). (Additional)

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.	Teaching Tip in Primer 8 Teaching Tip in Alpha 13	In the instructional materials, we make suggestions for objects that students can use to observe or draw circles.
2	Correctly name shapes regardless of their orientations or overall size.	Rectangles: Primer 4 including 4G (or Alpha 13) Circles: Primer 6 (or Alpha 11) Triangles: Primer 8 (or Alpha 11) Squares: Primer 16 (or Alpha 13)	Problems on the student worksheets vary the size and orientation of the shapes.
3	Identify shapes as two-dimensional (lying in a plane, "flat") or three-dimensional ("solid").	Teaching Tip in Primer 25 Teaching Tip in Alpha 13	

Analyze, compare, create, and compose shapes. (Additional)

4	Analyze and compare two- and three-dimensional shapes, in different sizes and orientations, using informal language to describe their similarities, differences, parts (e.g., having sides of equal length).	Teaching Tip in Primer 25 Teaching Tip in Alpha 13 Rectangles and Squares: Primer 16, Alpha 13	
5	Model shapes in the world by building shapes from components (e.g., sticks and clay balls) and drawing shapes.	Teaching Tip: Primer 25	
6	Compose simple shapes to form larger shapes. For example, "Can you join these two triangles with full sides touching to make a rectangle?"	Teaching Tip: Primer 16 Application and Enrichment: Primer 18G, 20G	Attribute blocks and/or tangrams are excellent tools to fulfill this standard. The Application and Enrichment pages noted provide the opportunity for students to find the number of shapes in a diagram of nested shapes.