COMMON CORE ESSENTIAL ELEMENTS
FOR MATHEMATICS

FIRST-GRADE

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First Grade Mathematics Standards: Operations and Algebraic Thinking	
CCSS Grade-Level Clusters	**Common Core Essential Elements**
Represent and solve problems involving addition and subtraction.	
1.OA.1. Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.	**EE1.OA.1.a.** Use language to describe putting together and taking apart, aspects of addition and subtraction. **EE1.OA.1.b.** Recognize two groups that have the same or equal quantity.
1.OA.2. Solve word problems that call for addition of three whole numbers whose sum is less than or equal to 20, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.	**EE1.OA.2.** Use "putting together" to solve problems with two sets.
Understand and apply properties of operations and the relationship between addition and subtraction.	
1.OA.3. Apply properties of operations as strategies to add and subtract.[3] *Examples: If 8+3 = 11 is known, then 3+8 = 11 is also known. (Commutative property of addition.) To add 2+ 6+4, the second two numbers can be added to make a 10, so 2+6+4 = 2+10 = 12. (Associative property of addition.)*	**EE1.OA.3.** N/A
1.OA.4. Understand subtraction as an unknown-addend problem. *For example, subtract 10 – 8 by finding the number that makes 10 when added to 8. Add and subtract within 20.*	**EE1.OA.4.** N/A (See EENBT.1.4 and EENBT.1.6)
Add and subtract within 20.	
1.OA.5. Relate counting to addition and subtraction (e.g., by counting on 2 to add 2).	**EE1.OA.5.a.** Use manipulatives or visual representations to indicate the number that results when adding one more.
	EE1.OA.5.b. Apply knowledge of "one less" to subtract one from the numbers.
1.OA.6. Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making ten (e.g., 8+6 = 8+2+4 = 10+4 = 14); decomposing a number leading to a ten (e.g., 13–4 = 13–3–1 = 10–1 = 9); using the relationship between addition and subtraction (e.g., knowing that 8+4 = 12, one knows 12–8= 4); and creating equivalent but easier or known sums (e.g., adding 6+7 by creating the known equivalent 6+6+1 = 12+1 = 13).	**EE1.OA.6**. N/A

[3] Students need not use formal terms for these properties.

First Grade Mathematics Standards: Operations and Algebraic Thinking	
Work with addition and subtraction equations.	
1.OA.7. Understand the meaning of the equal sign, and determine if equations involving addition and subtraction are true or false. For example, which of the following equations are true and which are false? 6 = 6, 7 = 8 – 1, 5+2 = 2+5, 4 + 1 = 5+2.	**EE1.OA.7.** N/A (See EE1.OA.1.b)
1.OA.8. Determine the unknown whole number in an addition or subtraction equation relating three whole numbers. *For example, determine the unknown number that makes the equation true in each of the equations 8+? = 11,* 5 = _ *– 3, 6+6 =* _.	**EE1.OA.8.** N/A

First Grade Mathematics Standards: Number and Operations in Base Ten	
CCSS Grade-Level Clusters	**Common Core Essential Elements**
Extend the counting sequence.	
1.NBT.1. Count to 120, starting at any number less than 120. In this range, read and write numerals and represent a number of objects with a written numeral.	**EE1.NBT.1.a.** Count by ones.
	EE1.NBT.1.b. Count as many as 10 objects and represent the quantity with the corresponding numeral.
Understand place value.	
1.NBT.2. Understand that the two digits of a two-digit number represent amounts of tens and ones. Understand the following as special cases: ▪ 10 can be thought of as a bundle of ten ones — called a "ten." ▪ The numbers from 11 to 19 are composed of a ten and one, two, three, four, five, six, seven, eight, or nine ones. ▪ The numbers 10, 20, 30, 40, 50, 60, 70, 80, 90 refer to one, two, three, four, five, six, seven, eight, or nine tens (and 0 ones).	**EE1.NBT.2.** Create sets of 10.
1.NBT.3. Compare two two-digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols >, =, and <.	**EE1.NBT.3.** Compare two groups of 10 or fewer items when the quantity of items in each group is similar.
Use place value understanding and properties of operations to add and subtract.	
1.NBT.4. Add within 100, including adding a two-digit number and a one-digit number, and adding a two-digit number and a multiple of 10, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used. Understand that in adding two-digit numbers, one adds tens and tens, ones and ones; and sometimes it is necessary to compose a ten.	**EE1.NBT.4.** Compose numbers less than or equal to five in more than one way.
1.NBT.5. Given a two-digit number, mentally find 10 more or 10 less than the number, without having to count; explain the reasoning used.	**EE1.NBT.5.** N/A (See EE1.OA.5.a and EE1.OA.5.b)

First Grade Mathematics Standards: Number and Operations in Base Ten	
1.NBT.6. Subtract multiples of 10 in the range 10-90 from multiples of 10 in the range 10-90 (positive or zero differences), using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used.	**EE1.NBT.6.** Decompose numbers less than or equal to five in more than one way.

First Grade Mathematics Standards: Measurement and Data	
CCSS Grade-Level Clusters	**Common Core Essential Elements**
Measure lengths indirectly and by iterating length units.	
1.MD.1. Order three objects by length; compare the lengths of two objects indirectly by using a third object. **1.MD.2.** 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.*	**EE1.MD.1-2.** Use appropriate vocabulary to describe the length of an object using the language of longer/shorter, taller/shorter.
Tell and write time.	
1.MD.3. Tell and write time in hours and half-hours using analog and digital clocks.	**EE1.MD.3.a.** Demonstrate an understanding of the terms "tomorrow, yesterday, and today."
	EE1.MD.3.b. Name a day of the week for tomorrow and yesterday.
	EE1.MD.3.c. Identify activities that come next, before, and after.
	EE1.MD.3.d. Demonstrate an understanding that telling time is the same every day.
Represent and interpret data.	
1.MD.4. Organize, represent, and interpret data with up to three categories; ask and answer questions about the total number of data points, how many in each category, and how many more or less are in one category than in another.	**EE1.MD.4.** Given a count of the total number of data points in two categories, determine whether there are more or less in each category.

First Grade Mathematics Standards: Geometry	
CCSS Grade-Level Clusters	**Common Core Essential Elements**
Reason with shapes and their attributes.	
1.G.1. Distinguish between defining attributes (e.g., triangles are closed and three-sided) versus non-defining attributes (e.g., color, orientation, overall size); build and draw shapes to possess defining attributes. **1.G.2.** Compose two-dimensional shapes (rectangles, squares, trapezoids, triangles, half-circles, and quarter-circles) or three-dimensional shapes (cubes, right rectangular prisms, right circular cones, and right circular cylinders) to create a composite shape, and compose new shapes from the composite shape.[4]	**EE1.G.1.** Identify common two-dimensional shapes: square, circle, triangle, and rectangle.
1.G.3. Partition circles and rectangles into two and four equal shares, describe the shares using the words *halves*, *fourths*, and *quarters*, and use the phrases *half of*, *fourth of*, and *quarter of*. Describe the whole as *two of*, or *four of* the shares. Understand for these examples that decomposing into more equal shares creates smaller shares.	**EE1.G.3.** Put together two pieces to make a shape that relates to the whole (i.e., two semicircles to make a circle, two squares to make a rectangle).

[4] Students do not need to learn formal names such as "right rectangular prism."