

COMMON CORE ELEMENTS AND ACHIEVEMENT DESCRIPTORS FOR KINDERGARTEN
Kindergarten Mathematics Standards

CCSS Grade-Level Clusters	Common Core EE	Instructional Achievement Level Descriptor
Counting and Cardinality		
<p>K.CC.1 Count to 100 by ones and by tens.</p>	<p>EEK.CC.1. Starting with one, count to 10 by ones.</p>	<p>Level IV AA Students will: EEK.CC.1. Starting with any number greater than one, count to 10 by ones. <i>Ex.</i> Count numbers to 10 starting with one and any number great than one and less than 10. <i>Ex.</i> Count sequentially to 10 starting with one, independent of objects or pictures. <i>Ex.</i> Count with or without one-to-one correspondence numbers beyond 10.</p> <p>Level III AA Students will: EEK.CC.1. Starting with one, count to 10 by ones. <i>Ex.</i> Count number to 10. <i>Ex.</i> Sequentially sing numbers to 10 starting with one.</p> <p>Level II AA Students will: EEK.CC.1. Starting with one, count by ones to five. <i>Ex.</i> Count own fingers to five. <i>Ex.</i> Count without one-to-one correspondence to five. <i>Ex.</i> Sing along to counting song.</p> <p>Level I AA Students will: EEK.CC.1. Count from one to two.</p>
<p>K.CC.2 Count forward beginning from a given number within the known sequence (instead of having to begin at 1).</p>	<p>EEK.CC.2. Count forward from a given number in a known sequence.</p>	<p>Level IV AA Students will: EEK.CC.2. Count forward beginning from a given number between 1 and 30.</p> <p>Level III AA Students will: EEK.CC.2. Count forward beginning from a given number between 1 and 20.</p> <p>Level II AA Students will: EEK.CC.2. Identify next number when given a starting number between 1 and 10.</p> <p>Level I AA Students will: EEK.CC.2. Identify next number when given a starting number between 1 and 5.</p>
<p>K.CC.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).</p>	<p>EEK.CC.3. Represent a number of objects with a written numeral 1-10.</p>	<p>Level IV AA Students will: EEK.CC.3. Represent a number of objects with a numerical symbol 5-20. <i>Ex.</i> The student correctly represents the number of objects by writing or indicating the appropriate numeral.</p>

		<p>Level III AA Students will: EEK.CC.3. Represent a number of objects with a numerical symbol 0-10.</p> <p>Level II AA Students will: EEK.CC.3 Match a given number to quantity of objects up to ten.</p> <p>Level I AA Students will: EEK.CC.3 Match a given number to quantity of objects up to five.</p>
<p>K.CC.4 Understand the relationship between numbers and quantities; connect counting to cardinality.</p>	<p>EEK.CC.4. Demonstrate one-to-one correspondence pairing each object with one and only one number.</p>	<p>Level IV AA Students will: EEK.CC.4 Demonstrates one-to-one correspondence with 10 objects. <i>Ex.</i> When counting objects, say the number names in standard order and pair each object with one and only one number name. <i>Ex.</i> Uses one-to-one correspondence when counting up to 10 common objects in the classroom (crayons, blocks, buttons).</p> <p>Level III AA Students will: EEK.CC.4 Demonstrates one-to-one correspondence up to 5 objects.</p> <p>Level II AA Students will: EEK.CC.4 Demonstrates one-to-one correspondence up to 3 objects.</p> <p>Level I AA Students will: EEK.CC.4 The student will count one object.</p>
<p>K.CC5. 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.</p>	<p>EEK.CC.5 Count out up to three objects from a larger set to tell how many.</p>	<p>Level IV AA Students will EEK.CC.5. Counts five objects out of a group of more than five objects. Counts a given set of five objects, and when asked, “how many”, says five without recounting. <i>Ex.</i> Given a box of crayons, select five crayons as requested by teacher.</p> <p>Level III AA Students will: EEK.CC.5. Count out up to three objects from a larger set, to tell how many. <i>Ex.</i> Given an array of objects, count out three of the objects, counting each object only once and tell how many.</p> <p>Level II AA Students will: EEK.CC.5 Counts either one or two objects out of a group of five objects. <i>Ex.</i> Count out two counting bears from a group of five.</p> <p>Level I AA Students will: EEK.CC.5 Identify one object out of a group of objects. <i>Ex.</i> Go to the prize box and pick one object.</p>

<p>K.CC.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.¹</p>	<p>EEK.CC.6 Compare numbers of objects to determine more or less</p>	<p>Level IV AA Students will: EEK.CC.6. Identify whether the number of objects in one group is more or less than or equal to the number of objects in another group. <i>Ex.</i> Given two groups of blocks, one group has eight blocks and other has five, identify which group has less blocks.</p> <p>Level III AA Students will: EEK.CC.6. Identify whether the number of objects in one group is more or less (when the quantities are clearly different) in another group.</p> <p>Level II AA Students will: EEK.CC.6 Given two groups of clearly different quantities of objects, identify which group has more.</p> <p>Level I AA Students will: EEK.CC.6 Given a group of one and a group of ten objects, identify which group has more.</p>
<p>K.CC.7. Compare two numbers between 1 and 10 presented as written numerals.</p>	<p>EEK.CC.6 Compare numbers 1-10 to determine more, less or equal</p>	<p>Level IV AA Students will: EEK.CC.6. Compare sets of two numbers (1-10) to determine more, less or equal.</p> <p>Level III AA Students will: EEK.CC.6. Compare two numbers (1-10) to determine more, less or equal.</p> <p>Level II AA Students will: EEK.CC.6 Given two numbers (1-10) the student determines which number is more or less.</p> <p>Level I AA Students will: EEK.CC.6 Given two numbers, identify which number is more.</p>
<p>Operations and Algebraic Thinking</p>		
<p>K.OA.1. Represent addition and subtraction with objects, fingers, mental images, drawings², sounds (e.g., claps), acting out situations, verbal explanations, expressions, or equations.</p>	<p>EEK.OA.1. Represent addition as “putting together” or subtraction as “taking from” in everyday activities.</p>	<p>Level IV AA Students will: EEK.OA.1. Represent addition as “putting together” and subtraction as “taking from” with quantities to 10.</p> <p>Level III AA Students will: EEK.OA.1. Represent addition as “putting together” and subtraction as “taking from” with quantities to 5.</p> <p>Level II AA Students will: EEK.OA.1. Follow directions to “put together” by adding one and “take from” by taking one.</p> <p>Level I AA Students will: EEK.OA.1. Follow directions to “put together” by adding one or “take from” by taking one.</p>

<p>K.OA.2 Solve addition and subtraction word problems, and add and subtract within 10, e.g., by using objects or drawings to represent the problem.</p>	<p>EEK.OA.2 Using word problems, represent addition as “putting together” or subtraction as “taking from” in everyday activities.</p>	<p>Level IV AA Students will: EEK.OA.1. Using word problems, Represent addition as “putting together” and subtraction as “taking from” with quantities to 10. <i>Ex.</i> Uses objects or drawings to represent the problems</p> <p>Level III AA Students will: EEK.OA.1. Using word problems, Represent addition as “putting together” and subtraction as “taking from” with quantities to 5.</p> <p>Level II AA Students will: EEK.OA.1. Using word problems, follow directions to “put together” by adding one and “take from” by taking one.</p> <p>Level I AA Students will: EEK.OA.1. Follow directions to “put together” by adding one or “take from” by taking one</p>
<p>K.OA.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 $5 = 4 + 1$).</p>	<p>EEK.OA.3 Using sums for less than 5, Identify sets of addends for the same sum.</p>	<p>Level IV AA Students will: EEK.OA.3 Using sums for less than 5, identify two sets of addends for the same sum.</p> <p>Level III AA Students will: EEK.OA.3 Using sums for less than 5, identify one set of addends.</p> <p>Level II AA Students will: EEK.OA.3 Identify one addends (of two addends), for a sum less than 5.</p> <p>Level I AA Students will: EEK.OA.3 Match addends for a sum less than 3.</p>
<p>K.OA.4 N/A Covered in K.OA.1</p>	<p>EEK.OA.4 N/A</p>	
<p>K.OA.5 N/A Covered in K.OA.1</p>	<p>EEK.OA.5 N/A</p>	
<p>Number and Operation Base Ten</p>		
<p>K.NBT.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.</p>	<p>EEK.NBT.1. Using numbers from 11-19, identify tens place value and the ones place value.</p>	<p>Level IV AA Students will: EEK.NBT.1. Using numbers from 11-19, identify tens place value and the ones place value, in more than one number.</p> <p>Level III AA Students will: EEK.NBT.1. Using numbers from 11-19, identify tens place value and the ones place value in one number.</p> <p>Level II AA Students will: EEK.NBT.1. Using numbers from 11-19, identify tens place value or the ones place value.</p> <p>Level I AA Students will: EEK.NBT.1. Using numbers from 11-19, match tens place value or the ones place value.</p>

Measurement and Data		
<p>K.MD.1 Describe measurable attributes of objects, such as length or weight. Describe several measurable attributes of a single object.</p> <p>K.MD.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. <i>For example, directly compare the heights of two children and describe one child as taller/shorter.</i></p> <p>K.MD.3 Classify objects into given categories; count the numbers of objects in each category and sort the categories by count.3</p>	<p>EEK.MD.1-3. Classify objects according to attributes (big/small, heavy/light).</p>	<p>Level IV AA Students will: EEK.MD.1-3. Order objects according to attributes (big/smaller/smallest, heavy/lighter/lightest).</p> <p>Level III AA Students will: EEK.MD.1-3. Classify objects according to attributes (big/small, heavy/light).</p> <p>Level II AA Students will: EEK.MD.1-3. Using a model or a template, sort objects by one attribute (big/small or heavy/light).</p> <p>Level I AA Students will: EEK.MD.1-3. Match objects by attribute big and small.</p>
Geometry		
<p>K.G.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.</p>	<p>EEK.G.1. Identify shapes and describe positions.</p>	<p>Level IV AA Students will: EEK.G.1. Describe objects in the environment using names of shapes and the relative position of objects using terms in, on, out, under, and off.</p> <p>Level III AA Students will: EEK.G.1. Describe objects in the environment using names of shapes and identifying the relative position of objects using terms in, on, out, under, and off.</p> <p>Level II AA Students will: EEK.G.1. Will imitate a teacher model of two shapes and their relative position.</p> <p>Level I AA Students will: EEK.G.1. Match/copy a teacher model of two shapes and their relative position.</p>

<p>K.G.2. Correctly name shapes regardless of their orientations or overall size.</p> <p>K.G.3. Identify shapes as two-dimensional (lying in a plane, “flat”) or three- dimensional (“solid”).</p> <p>K.G.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., number of sides and vertices/“corners”) and other attributes (e.g., having sides of equal length).</p>	<p>EEK.G.2-4. Correctly name shapes regardless of their orientations or overall size.</p>	<p>Level IV AA Students will: EEK.G.2-4. Correctly name shapes regardless of their dimensions, orientations or overall size.</p> <p>Level III AA Students will: EEK.G.2-4. Correctly sort two-dimensional shapes regardless of their orientations or overall size.</p> <p>Level II AA Students will: EEK.G.2-4. Correctly match shapes regardless of their dimensions, orientations or overall size.</p> <p>Level I AA Students will: EEK.G.2-4. Match a shape regardless of its dimensions, orientations or overall size.</p>
<p>K.G.5. Model shapes in the world by building shapes from components (e.g., sticks and clay balls) and drawing shapes.</p>	<p>EEK.G.5. Model shapes in the world by building shapes from components (e.g., sticks and clay balls) and drawing shapes.</p>	<p>Level IV AA Students will: EEK.G.5. Model 4 shapes in the world by building shapes from components (e.g., sticks and clay balls) and drawing shapes.</p> <p>Level III AA Students will: EEK.G.5. Model 4 shapes in the world by building shapes from components (e.g., sticks and clay balls) or drawing shapes.</p> <p>Level II AA Students will: EEK.G.5. Model a shape in the world by building shapes from components (e.g., sticks and clay balls) or drawing shapes.</p> <p>Level I AA Students will: EEK.G.5 Match a shape in the world by building shapes from components (e.g., sticks and clay balls).</p>
<p>K.G.6. Compose simple shapes to form larger shapes. For example, “Can you join these two triangles with full sides touching to make a rectangle?”</p>	<p>EEK.G.6. Compose simple shapes to form larger shapes. For example, “Can you join these two triangles with full sides touching to make a rectangle?”</p>	<p>Level IV AA Students will: EEK.G.6. Using 2, 3, and 4 equally shaped parts, combine these simple shapes to form larger shapes.</p> <p>Level III AA Students will: EEK.G.6. Using 2 and 4 equally shaped parts, combine these simple shapes to form larger shapes.</p> <p>Level II AA Students will: EEK.G.6. Match a model of 2 or 4 equally shaped parts to form a larger shape.</p> <p>Level I AA Students will: EEK.G.6 Match a model of 2 equally shaped parts to form a larger shape.</p>

COMMON CORE ELEMENTS AND ACHIEVEMENT DESCRIPTORS FOR FIRST GRADE
First Grade Mathematics Standards

CCSS Grade-Level Clusters	Common Core EE	Instructional Achievement Level Descriptor
Operations and Algebraic Thinking		
<p>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.²</p>	<p>EE1.OA.1. When solving problems with sums up to 10, students will determine the math functions of putting together and taking apart.</p>	<p>Level IV AA Students will: EE1.OA.1. When solving word problems with sums up to 20, students will determine the math functions of putting together and taking apart.</p> <p>Level III AA Students will: EE1.OA.1. When solving problems within 10, students will determine the math functions of putting together and taking apart. <i>Ex.</i> After the teacher shows six blocks and removes two, label the action as “take away” or informal language with the same meaning.</p> <p>Level II AA Students will: EE1.OA.1. Put together or take away. <i>Ex.</i> Take away one crayon from the box.</p> <p>Level I AA Students will: EE1.OA.1. Follow directions to put together.</p>
<p>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.</p>	<p>EE1.OA.2. Use “putting together” to solve problems with two sets.</p>	<p>Level IV AA Students will: EE1.OA.2. Use “putting together” to solve problems using three sets.</p> <p>Level III AA Students will: EE1.OA.2. Use “putting together” to solve problems with two sets.</p> <p>Level II AA Students will: EE1.OA.2. Use “putting together” to solve a problem with one set and adding one more.</p> <p>Level I AA Students will: EE1.OA.2. Indicate two equal sets.</p>
<p>1.OA.3 Apply properties of operations as strategies to add and subtract. <i>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</i></p>	<p>EE1.OA.3. Add more to a group to show both groups have the same or equal quantity.</p>	<p>Level IV AA Students will: EE1.OA.3. Create two groups that have the same or equal quantity. <i>Ex.</i> Fill two book bags with five books each.</p> <p>Level III AA Students will: EE1.OA.3. Add more to a group to show both groups have the same or equal quantity.</p>

<p><i>numbers can be added to make a ten, so $2 + 6 + 4 = 2 + 10 = 12$. (Associative property of addition.)</i></p>		<p>Level II AA Students will: EE1.OA.3. Recognize two groups that have the same or equal quantity. <i>Ex. When presented with two groups of items, indicate if they have the same quantity. "Are they equal?"</i></p> <p>Level I AA Students will: EE1.OA.3. Match two groups of equal objects. <i>Ex. Given two blocks and shown a model of two blocks together, duplicate the model.</i></p>
<p>1.OA.4. N/A Covered in EE1.OA.5.b</p>	<p>EE1.OA.4.</p>	
<p>1.OA.5. Relate counting to addition and subtraction (e.g., by counting on 2 to add 2).</p>	<p>EE1.OA.5.a. Use manipulatives or visual representations to indicate the number that results when adding one more.</p>	<p>Level IV AA Students will: EE1.OA.5.a. Indicate the numeral that results when adding more to the known addend of sums up to 20.</p> <p>Level III AA Students will: EE1.OA.5. 5.a. Use manipulatives or visual representations to indicate the numeral that results when adding more to the known addend of sums up to 20.</p> <p>Level II AA Students will: EE1.OA.5.a. With manipulatives or visual representation, indicate the number that results when adding one more to any number up to 20.</p> <p>Level I AA Students will: EE1.OA.5. Indicate the number that results when adding one more to any number up to 5.</p>
	<p>EE1.OA.5.a. Use manipulatives or visual representations to indicate the number that results when subtracting one less.</p>	<p>Level IV AA Students will: EE1.OA.5.a. Indicate the numeral that results when subtracting any number within 20.</p> <p>Level III AA Students will: EE1.OA.5. 5.a. Use manipulatives or visual representations, indicate the numeral that results when subtracting any number within 20.</p> <p>Level II AA Students will: EE1.OA.5.a. With manipulatives or visual representation, indicate the numeral that results when subtracting one from any number up to 20.</p> <p>Level I AA Students will: EE1.OA.5. Indicate the numeral that results when subtracting one from any number up to 5.</p>
<p>1.OA.6. N/A. Covered in EE1.OA.5.a-b</p>	<p>EE1.OA.6</p>	
<p>1.OA.7. Covered in E1.OA.3.</p>	<p>EE1.OA.7.</p>	

Number and Operations Base Ten		
<p>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.</p>	<p>EE1.NBT.1.a. Count by ones.</p>	<p>Level IV AA Students will: EE1.NBT.1.a. Count by ones from 1 - 30. <i>Ex.</i> Recite the count sequence 1 – 30. <i>Ex.</i> Sing numbers to 30.</p> <p>Level III AA Students will: EE1NBT.1.a. Count by ones 1-20. <i>Ex.</i> Recite the count sequence 1 – 20. <i>Ex.</i> Sing numbers to 20.</p> <p>Level II AA Students will: EE1.NBT.1.a. Count by ones 1- 10. <i>Ex.</i> Participate in a classroom chant 1 -10. <i>Ex.</i> Recite numbers 1-10. <i>Ex.</i> Sing numbers 1-10.</p> <p>Level I AA Students will: EE1.NBT.1.a. Count by ones to 1-2. <i>Ex.</i> Sing numbers up to two with teacher. <i>Ex.</i> Count along using a voice output communicative device that will count in order (1-2) upon each activation</p>
	<p>EE1.NBT.1.b. Count as many as 10 objects and represent the quantity with the corresponding numeral.</p>	<p>Level IV AA Students will: EE1.NBT.1.b. Count up to 20 objects and represent the quantity with a numeral.</p> <p>Level III AA Students will: EE1.NBT.1.b. Count as many as 10 objects and represent the quantity with the corresponding numeral. <i>Ex.</i> Teacher will show the student numeral nine and ask them to give them that many blocks. <i>Ex.</i> When shown the number five, count five crayons.</p> <p>Level II AA Students will: EE1.NBT.1.b. Count as many as five objects and/or represent the quantity with the appropriate numeral. <i>Ex.</i> Tap objects while counting.</p> <p>Level I AA Students will: EE1.NBT.1.b. Count up to two objects.</p>
<p>1.NBT.2. Understand that the two digits of a two-digit number represent amounts of tens and</p>	<p>EE1.NBT.2. Create sets of 10.</p>	<p>Level IV AA Students will: EE1.NBT.2. Create multiple sets of ten with an odd number of objects (remainders).</p>

<p>ones. Understand the following as special cases:</p> <p>a. 10 can be thought of as a bundle of ten ones — called a “ten.”</p> <p>b. The numbers from 11 to 19 are composed of a ten and one, two, three, four, five, six, seven, eight, or nine ones.</p> <p>c. 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)</p>		<p>Level III AA Students will: EE1.NBT.2. Create sets of 10.</p> <p>Level II AA Students will: EE1.NBT.2. Create one set of 10. <i>Ex.</i> Instructor creates one set of 10 using a jig, model, or template for the student to match another set of 10.</p> <p>Level I AA Students will: EE1.NBT.2. Match a given set of 10 to another set of 10.</p>
<p>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 $<$.</p>	<p>EE1NBT.3. Compare two groups of items (10 or fewer) when the quantity of items in each group is similar.</p>	<p>Level IV AA Students will: EE1.NBT.3. Choose the set of items that are more than 10 and less than 10 when the sets differ by 3 or fewer. <i>Ex.</i> Given two stacks of blocks, which has more than 10, which has less than 10?</p> <p>Level III AA Students will: EE1.NBT.3. Compare two groups of 10 or fewer items when the quantity of items in each group is similar.</p> <p>Level II AA Students will: EE1.NBT.3. Choose the matching set of items (4-8 items). <i>Ex.</i> Given three pencil boxes, identify which two pencil boxes contain the same number of items.</p> <p>Level I AA Students will: 1.EE1.NBT.3. Choose the matching set of items (1-3 items).</p>
<p>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.</p>	<p>EE1NBT.4. Create sets of ten.</p>	<p>Level IV AA Students will: EE1.NBT.4. Create sets of ten. <i>Ex.</i> Given a bowl of pennies, and make sets of 10 with different numbers of pennies. <i>Ex.</i> Given lanyards or string and two colors of beads, create bracelets with varying combinations of 10 colored beads. (One bracelet with 10 blue beads, one bracelet with five blue beads, five red beads, etc.).</p> <p>Level III AA Students will: EE1.NBT.4. Create sets of ten.</p> <p>Level II AA Students will: EE1.NBT.4. Match sets of ten to teacher models.</p> <p>Level I AA Students will: EE1.1NBT.4. Match a set of five to a teacher model.</p>

1.NBT.5. N/A	EE1NBT.5.	
<p>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.</p>	<p>EE1.NBT.6. Decompose numbers less than or equal to 10 in one way.</p>	<p>Level IV AA Students will: EE1.NBT.6. Decompose numbers less than or equal to 10 in more than one way. <i>Ex.</i> Given 10 or fewer bean bags and two baskets, toss bean bags into baskets, creating different sets each time using a dry erase board to track quantities. <i>Ex.</i> Given 10 or fewer counting blocks, arrange them into two different group combinations.</p> <p>Level III AA Students will: EE1.NBT.6. Decompose numbers less than or equal to ten in one way.</p> <p>Level II AA Students will: EE1.NBT.6. Decompose numbers less than or equal to ten using a teacher model.</p> <p>Level I AA Students will: EE1.NBT.6. Decompose numbers less than or equal to 5 using a teacher model.</p>
Measurement and Data		
<p>1.MD.1. Order three objects by length; compare the lengths of two objects indirectly by using a third object.</p> <p>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. <i>Limit to contexts where the object being measured is spanned by a whole number of length units with no gaps or overlaps.</i></p>	<p>EE1.MD.1-2 Use appropriate vocabulary to describe the length of an object using the language of longer/shorter, taller/shorter.</p>	<p>Level IV AA Students will: EE1.MD.1-2. Measure and compare two similar objects aligned at the same starting point, and describe which is longer/shorter, taller/shorter. <i>Ex.</i> Indicate who is taller and who is shorter when two students stand side-by-side. <i>Ex.</i> Measure the height of their desks and the height of the teacher’s desk with interlocking cubes and then lay them down horizontally side-by-side on a table to compare.</p> <p>Level III AA Students will: EE1.MD.1-2. Use appropriate vocabulary to describe the length of an object using the language of longer/shorter, taller/shorter. <i>Ex.</i> Given two pieces of string placed side-by-side, use “longer” and “shorter” to describe their relative lengths (e.g., “Look at these two objects and tell me about their length.”).</p> <p>Level II AA Students will: EEK.MD.1-2. Select from two everyday objects based on the stated attribute (long/short, tall/short). <i>Ex.</i> Using a model, select the one that is shorter from two options (e.g., using two sets of pictures the teacher says “Here are two boys. This one is shorter.” “Here are two dogs. Show me the shorter one.”).</p> <p>Level I AA Students will: EE1.MD.1-2. When presented with a manipulatives, demonstrates long and short. <i>Ex.</i> When presented with a model, use clay to make a “long snake and a short snake” and compare them. <i>Ex.</i> First sit and then stand to explore short and tall (e.g., Stand up; Now you are tall. Sit down; Now you are short.)</p>

<p>1.MD.3. Tell and write time in hours and half-hours using analog and digital clocks.</p>	<p>EE1.MD.3.a. Demonstrate an understanding of the terms “tomorrow, yesterday, and today.”</p>	<p>Level IV AA Students will: EE1.MD.3.a. Use the words “today, tomorrow, and yesterday” with a calendar to refer to personal activities and events. <i>Ex.</i> Using lunch menu, answer questions such as, “What did you have for lunch yesterday?”, “What did you eat today?”, and “What will you have tomorrow?” <i>Ex.</i> If today is Monday, what day is tomorrow?</p> <p>Level III AA Students will: EE1.MD.3.a. Demonstrate understanding of the terms “tomorrow, yesterday, and today.” <i>Ex.</i> Given a classroom calendar, find a picture of an activity that fits with “What happens tomorrow?” <i>Ex.</i> Given a calendar, find “Today” and place a sticker on it. <i>Ex.</i> Use a calendar to determine the day before and the day after today. <i>Ex.</i> If today is Tuesday, what is tomorrow?</p> <p>Level II AA Students will: EE1.MD.3.a. Indicate understanding of the term today. <i>Ex.</i> When asked, identify today. <i>Ex.</i> When shown two picture cards of daily activities, select the event that happens today. <i>Ex.</i> During calendar activity, answer the question, “Show me today on the calendar. What is the weather like today?”</p> <p>Level I AA Students will: EE1.MD.3.a. Identify an activity that will take place “today.” <i>Ex.</i> Look at visual schedule and using picture symbol, indicate the music symbol to represent the current activity.</p>
	<p>EE1.MD.3.b. Demonstrate an understanding that telling time is the same every day.</p>	<p>Level IV AA Students will: EE1.MD.3.b. Demonstrate an understanding of telling time with a clock or watch related to real-life context. <i>Ex.</i> Match noon on an analog clock to lunch. <i>Ex.</i> Match the current time on a clock with the appropriate activity from a picture schedule.</p> <p>Level III AA Students will: EE1.MD.3.b. Demonstrate an understanding that time is the same every day. <i>Ex.</i> Teacher announces “time to go home” and asks, “Does this happen every morning or every afternoon?”</p> <p>Level II AA Students will: EE1.MD.3.b. Demonstrate an understanding of the use of a clock (time). <i>Ex.</i> Indicate the use of a clock when asked what tool is needed to tell time.</p> <p>Level I AA Students will: EE1.MD.3.b. Recognize representations of different parts of the day; morning, noon, and night. <i>Ex.</i> Point to a picture of a bed when prompted. <i>Ex.</i> Point to a picture of a sunrise when prompted. <i>Ex.</i> Point to a clock when prompted. <i>Ex.</i> Points to food pictures to indicate meal times.</p>

<p>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.</p>	<p>EE1.MD.4. Interpret data in two categories to determine whether there are more or less in each category.</p>	<p>Level IV AA Students will: EE1.MD.4. Collect and count data into at least two categories to determine whether there are more or less in one category than in another. <i>Ex.</i> Collect data about class choices and categorize the count to determine which is the favorite (e.g., hot lunch choices, milk choices, any activity where you are counting and tallying in two or more choices).</p> <p>Level III AA Students will: 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.</p> <p>Level II AA Students will: EE1.MD.4. Put objects and choices into categories. <i>Ex.</i> Tape a paper doll to attendance chart to represent oneself (e.g., Each girl has a paper doll representing “girl” and each boy has one representing “boy.” After students tape their dolls to the attendance chart, the teacher counts the number of boys and the number of girls on the chart.).</p> <p>Level I AA Students will: EE1.MD.4. Participate in data collection by voting or otherwise choosing. <i>Ex.</i> Indicate pencil or crayon when asked, “Do you like pencils or crayons better?”</p>
Geometry		
<p>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.</p> <p>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.</p>	<p>1.G.1-2. Identify common two-dimensional shapes: square, circle, triangle, and rectangle.</p>	<p>Level IV AA Students will: EE1.G.1-2. Identify attributes of common two-dimensional shapes: square, circle, triangle, and rectangle. <i>Ex.</i> Given shapes of different sizes, and orientations, sort by shape attribute.</p> <p>Level III AA Students will: EE1.G.1-2. Identify common two-dimensional shapes: square, circle, triangle, and rectangle. <i>Ex.</i> Given an array of shapes, identify the shape when asked.</p> <p>Level II AA Students will: EE1.G.1-2. Match shape to shape <i>Ex.</i> Match a two-dimensional shape to a two-dimensional shape in their environment.</p> <p>Level I AA Students will: EE1.G.1-2. Recognize a shape. <i>Ex.</i> Given a circle and asked “Show me circle,” point to the circle.</p>

<p>1.G.3 Partition circles and rectangles into two and four equal shares, describe the shares using the words <i>halves</i>, <i>fourths</i>, and <i>quarters</i>, and use the phrases <i>half of</i>, <i>fourth of</i>, and <i>quarter of</i>. Describe the whole as two of, or four of the shares. Understand for these examples that decomposing into more equal shares creates smaller shares.</p>	<p>EE1.G.3. Put together pieces to make a shape that relates to the whole (i.e., two semicircles to make a circle, two squares to make a rectangle).</p>	<p>Level IV AA Students will: EE1.G.3. Demonstrate part and whole terminology understanding. <i>Ex.</i> Given an array of different shapes such as tangrams, select and put them together to make a circle, square, or triangle.</p> <p>Level III AA Students will: EE1.G.3. Put together pieces to make a shape that relates to the whole (i.e., two semicircles to make a circle, two squares to make a rectangle).</p> <p>Level II AA Students will: EE1.G.3. Using a template or a model, put together two pieces. <i>Ex.</i> Using an inset puzzle as a model, put together a whole circle from half circle puzzle parts.</p> <p>Level I AA Students will: EE1.G.3. Using a two-piece template or a model, insert the missing piece. <i>Ex.</i> Use a touch window to click and drag a shape from shape bank to insert into outline in picture. <i>Ex.</i> Using a one-shape puzzle, insert missing piece.</p>
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COMMON CORE ELEMENTS AND ACHIEVEMENT DESCRIPTORS FOR FIRST GRADE

First Grade Mathematics Standards

CCSS Grade-Level Clusters	Common Core EE	Instructional Achievement Level Descriptor
Operations and Algebraic Thinking		
<p>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.²</p>	<p>EE1.OA.1. When solving problems with sums up to 10, students will determine the math functions of putting together and taking apart.</p>	<p>Level IV AA Students will: EE1.OA.1. When solving word problems with sums up to 20, students will determine the math functions of putting together and taking apart.</p> <p>Level III AA Students will: EE1.OA.1. When solving problems within 10, students will determine the math functions of putting together and taking apart. <i>Ex.</i> After the teacher shows six blocks and removes two, label the action as “take away” or informal language with the same meaning.</p> <p>Level II AA Students will: EE1.OA.1. Put together or take away. <i>Ex.</i> Take away one crayon from the box.</p> <p>Level I AA Students will: EE1.OA.1. Follow directions to put together.</p>
<p>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.</p>	<p>EE1.OA.2. Use “putting together” to solve problems with two sets.</p>	<p>Level IV AA Students will: EE1.OA.2. Use “putting together” to solve problems using three sets.</p> <p>Level III AA Students will: EE1.OA.2. Use “putting together” to solve problems with two sets.</p> <p>Level II AA Students will: EE1.OA.2. Use “putting together” to solve a problem with one set and adding one more.</p> <p>Level I AA Students will: EE1.OA.2. Indicate two equal sets.</p>
<p>1.OA.3 Apply properties of operations as strategies to add and subtract. <i>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</i></p>	<p>EE1.OA.3. Add more to a group to show both groups have the same or equal quantity.</p>	<p>Level IV AA Students will: EE1.OA.3. Create two groups that have the same or equal quantity. <i>Ex.</i> Fill two book bags with five books each.</p> <p>Level III AA Students will: EE1.OA.3. Add more to a group to show both groups have the same or equal quantity.</p>

<p><i>numbers can be added to make a ten, so $2 + 6 + 4 = 2 + 10 = 12$. (Associative property of addition.)</i></p>		<p>Level II AA Students will: EE1.OA.3. Recognize two groups that have the same or equal quantity. <i>Ex. When presented with two groups of items, indicate if they have the same quantity. "Are they equal?"</i></p> <p>Level I AA Students will: EE1.OA.3. Match two groups of equal objects. <i>Ex. Given two blocks and shown a model of two blocks together, duplicate the model.</i></p>
<p>1.OA.4. N/A Covered in EE1.OA.5.b</p>	<p>EE1.OA.4.</p>	
<p>1.OA.5. Relate counting to addition and subtraction (e.g., by counting on 2 to add 2).</p>	<p>EE1.OA.5.a. Use manipulatives or visual representations to indicate the number that results when adding one more.</p>	<p>Level IV AA Students will: EE1.OA.5.a. Indicate the numeral that results when adding more to the known addend of sums up to 20.</p> <p>Level III AA Students will: EE1.OA.5. 5.a. Use manipulatives or visual representations to indicate the numeral that results when adding more to the known addend of sums up to 20.</p> <p>Level II AA Students will: EE1.OA.5.a. With manipulatives or visual representation, indicate the number that results when adding one more to any number up to 20.</p> <p>Level I AA Students will: EE1.OA.5. Indicate the number that results when adding one more to any number up to 5.</p>
	<p>EE1.OA.5.a. Use manipulatives or visual representations to indicate the number that results when subtracting one less.</p>	<p>Level IV AA Students will: EE1.OA.5.a. Indicate the numeral that results when subtracting any number within 20.</p> <p>Level III AA Students will: EE1.OA.5. 5.a. Use manipulatives or visual representations, indicate the numeral that results when subtracting any number within 20.</p> <p>Level II AA Students will: EE1.OA.5.a. With manipulatives or visual representation, indicate the numeral that results when subtracting one from any number up to 20.</p> <p>Level I AA Students will: EE1.OA.5. Indicate the numeral that results when subtracting one from any number up to 5.</p>
<p>1.OA.6. N/A. Covered in EE1.OA.5.a-b</p>	<p>EE1.OA.6</p>	
<p>1.OA.7. Covered in E1.OA.3.</p>	<p>EE1.OA.7.</p>	

Number and Operations Base Ten		
<p>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.</p>	<p>EE1.NBT.1.a. Count by ones.</p>	<p>Level IV AA Students will: EE1.NBT.1.a. Count by ones from 1 - 30. <i>Ex.</i> Recite the count sequence 1 – 30. <i>Ex.</i> Sing numbers to 30.</p> <p>Level III AA Students will: EE1NBT.1.a. Count by ones 1-20. <i>Ex.</i> Recite the count sequence 1 – 20. <i>Ex.</i> Sing numbers to 20.</p> <p>Level II AA Students will: EE1.NBT.1.a. Count by ones 1- 10. <i>Ex.</i> Participate in a classroom chant 1 -10. <i>Ex.</i> Recite numbers 1-10. <i>Ex.</i> Sing numbers 1-10.</p> <p>Level I AA Students will: EE1.NBT.1.a. Count by ones to 1-2. <i>Ex.</i> Sing numbers up to two with teacher. <i>Ex.</i> Count along using a voice output communicative device that will count in order (1-2) upon each activation.</p>
	<p>EE1.NBT.1.b. Count as many as 10 objects and represent the quantity with the corresponding numeral.</p>	<p>Level IV AA Students will: EE1.NBT.1.b. Count up to 20 objects and represent the quantity with a numeral.</p> <p>Level III AA Students will: EE1.NBT.1.b. Count as many as 10 objects and represent the quantity with the corresponding numeral. <i>Ex.</i> Teacher will show the student numeral nine and ask them to give them that many blocks. <i>Ex.</i> When shown the number five, count five crayons.</p> <p>Level II AA Students will: EE1.NBT.1.b. Count as many as five objects and/or represent the quantity with the appropriate numeral. <i>Ex.</i> Tap objects while counting.</p> <p>Level I AA Students will: EE1.NBT.1.b. Count up to two objects.</p>
<p>1.NBT.2. Understand that the two digits of a two-digit number represent amounts of tens and</p>	<p>EE1.NBT.2. Create sets of 10.</p>	<p>Level IV AA Students will: EE1.NBT.2. Create multiple sets of ten with an odd number of objects (remainders).</p>

<p>ones. Understand the following as special cases:</p> <p>a. 10 can be thought of as a bundle of ten ones — called a “ten.”</p> <p>b. The numbers from 11 to 19 are composed of a ten and one, two, three, four, five, six, seven, eight, or nine ones.</p> <p>c. 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)</p>		<p>Level III AA Students will: EE1.NBT.2. Create sets of 10.</p> <p>Level II AA Students will: EE1.NBT.2. Create one set of 10. <i>Ex.</i> Instructor creates one set of 10 using a jig, model, or template for the student to match another set of 10.</p> <p>Level I AA Students will: EE1.NBT.2. Match a given set of 10 to another set of 10.</p>
<p>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 $<$.</p>	<p>EE1NBT.3. Compare two groups of items (10 or fewer) when the quantity of items in each group is similar.</p>	<p>Level IV AA Students will: EE1.NBT.3. Choose the set of items that are more than 10 and less than 10 when the sets differ by 3 or fewer. <i>Ex.</i> Given two stacks of blocks, which has more than 10, which has less than 10?</p> <p>Level III AA Students will: EE1.NBT.3. Compare two groups of 10 or fewer items when the quantity of items in each group is similar.</p> <p>Level II AA Students will: EE1.NBT.3. Choose the matching set of items (4-8 items). <i>Ex.</i> Given three pencil boxes, identify which two pencil boxes contain the same number of items.</p> <p>Level I AA Students will: 1.EE1.NBT.3. Choose the matching set of items (1-3 items).</p>
<p>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.</p>	<p>EE1NBT.4. Create sets of ten.</p>	<p>Level IV AA Students will: EE1.NBT.4. Create sets of ten. <i>Ex.</i> Given a bowl of pennies, and make sets of 10 with different numbers of pennies. <i>Ex.</i> Given lanyards or string and two colors of beads, create bracelets with varying combinations of 10 colored beads. (One bracelet with 10 blue beads, one bracelet with five blue beads, five red beads, etc.).</p> <p>Level III AA Students will: EE1.NBT.4. Create sets of ten.</p> <p>Level II AA Students will: EE1.NBT.4. Match sets of ten to teacher models.</p> <p>Level I AA Students will: EE1.1NBT.4. Match a set of five to a teacher model.</p>

1.NBT.5. N/A	EE1NBT.5.	
<p>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.</p>	<p>EE1.NBT.6. Decompose numbers less than or equal to 10 in one way.</p>	<p>Level IV AA Students will: EE1.NBT.6. Decompose numbers less than or equal to 10 in more than one way. <i>Ex.</i> Given 10 or fewer bean bags and two baskets, toss bean bags into baskets, creating different sets each time using a dry erase board to track quantities. <i>Ex.</i> Given 10 or fewer counting blocks, arrange them into two different group combinations.</p> <p>Level III AA Students will: EE1.NBT.6. Decompose numbers less than or equal to ten in one way.</p> <p>Level II AA Students will: EE1.NBT.6. Decompose numbers less than or equal to ten using a teacher model.</p> <p>Level I AA Students will: EE1.NBT.6. Decompose numbers less than or equal to 5 using a teacher model.</p>
Measurement and Data		
<p>1.MD.1. Order three objects by length; compare the lengths of two objects indirectly by using a third object.</p> <p>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. <i>Limit to contexts where the object being measured is spanned by a whole number of length units with no gaps or overlaps.</i></p>	<p>EE1.MD.1-2 Use appropriate vocabulary to describe the length of an object using the language of longer/shorter, taller/shorter.</p>	<p>Level IV AA Students will: EE1.MD.1-2. Measure and compare two similar objects aligned at the same starting point, and describe which is longer/shorter, taller/shorter. <i>Ex.</i> Indicate who is taller and who is shorter when two students stand side-by-side. <i>Ex.</i> Measure the height of their desks and the height of the teacher’s desk with interlocking cubes and then lay them down horizontally side-by-side on a table to compare.</p> <p>Level III AA Students will: EE1.MD.1-2. Use appropriate vocabulary to describe the length of an object using the language of longer/shorter, taller/shorter. <i>Ex.</i> Given two pieces of string placed side-by-side, use “longer” and “shorter” to describe their relative lengths (e.g., “Look at these two objects and tell me about their length.”).</p> <p>Level II AA Students will: EEK.MD.1-2. Select from two everyday objects based on the stated attribute (long/short, tall/short). <i>Ex.</i> Using a model, select the one that is shorter from two options (e.g., using two sets of pictures the teacher says “Here are two boys. This one is shorter.” “Here are two dogs. Show me the shorter one.”).</p> <p>Level I AA Students will: EE1.MD.1-2. When presented with a manipulatives, demonstrates long and short. <i>Ex.</i> When presented with a model, use clay to make a “long snake and a short snake” and compare them. <i>Ex.</i> First sit and then stand to explore short and tall (e.g., Stand up; Now you are tall. Sit down; Now you are short.)</p>

<p>1.MD.3. Tell and write time in hours and half-hours using analog and digital clocks.</p>	<p>EE1.MD.3.a. Demonstrate an understanding of the terms “tomorrow, yesterday, and today.”</p>	<p>Level IV AA Students will: EE1.MD.3.a. Use the words “today, tomorrow, and yesterday” with a calendar to refer to personal activities and events. <i>Ex.</i> Using lunch menu, answer questions such as, “What did you have for lunch yesterday?”, “What did you eat today?”, and “What will you have tomorrow?” <i>Ex.</i> If today is Monday, what day is tomorrow?</p> <p>Level III AA Students will: EE1.MD.3.a. Demonstrate understanding of the terms “tomorrow, yesterday, and today.” <i>Ex.</i> Given a classroom calendar, find a picture of an activity that fits with “What happens tomorrow?” <i>Ex.</i> Given a calendar, find “Today” and place a sticker on it. <i>Ex.</i> Use a calendar to determine the day before and the day after today. <i>Ex.</i> If today is Tuesday, what is tomorrow?</p> <p>Level II AA Students will: EE1.MD.3.a. Indicate understanding of the term today. <i>Ex.</i> When asked, identify today. <i>Ex.</i> When shown two picture cards of daily activities, select the event that happens today. <i>Ex.</i> During calendar activity, answer the question, “Show me today on the calendar. What is the weather like today?”</p> <p>Level I AA Students will: EE1.MD.3.a. Identify an activity that will take place “today.” <i>Ex.</i> Look at visual schedule and using picture symbol, indicate the music symbol to represent the current activity.</p>
	<p>EE1.MD.3.b. Demonstrate an understanding that telling time is the same every day.</p>	<p>Level IV AA Students will: EE1.MD.3.b. Demonstrate an understanding of telling time with a clock or watch related to real-life context. <i>Ex.</i> Match noon on an analog clock to lunch. <i>Ex.</i> Match the current time on a clock with the appropriate activity from a picture schedule.</p> <p>Level III AA Students will: EE1.MD.3.b. Demonstrate an understanding that time is the same every day. <i>Ex.</i> Teacher announces “time to go home” and asks, “Does this happen every morning or every afternoon?”</p> <p>Level II AA Students will: EE1.MD.3.b. Demonstrate an understanding of the use of a clock (time). <i>Ex.</i> Indicate the use of a clock when asked what tool is needed to tell time.</p> <p>Level I AA Students will: EE1.MD.3.b. Recognize representations of different parts of the day; morning, noon, and night. <i>Ex.</i> Point to a picture of a bed when prompted. <i>Ex.</i> Point to a picture of a sunrise when prompted. <i>Ex.</i> Point to a clock when prompted. <i>Ex.</i> Points to food pictures to indicate meal times.</p>

<p>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.</p>	<p>EE1.MD.4. Interpret data in two categories to determine whether there are more or less in each category.</p>	<p>Level IV AA Students will: EE1.MD.4. Collect and count data into at least two categories to determine whether there are more or less in one category than in another. <i>Ex.</i> Collect data about class choices and categorize the count to determine which is the favorite (e.g., hot lunch choices, milk choices, any activity where you are counting and tallying in two or more choices).</p> <p>Level III AA Students will: 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.</p> <p>Level II AA Students will: EE1.MD.4. Put objects and choices into categories. <i>Ex.</i> Tape a paper doll to attendance chart to represent oneself (e.g., Each girl has a paper doll representing “girl” and each boy has one representing “boy.” After students tape their dolls to the attendance chart, the teacher counts the number of boys and the number of girls on the chart.).</p> <p>Level I AA Students will: EE1.MD.4. Participate in data collection by voting or otherwise choosing. <i>Ex.</i> Indicate pencil or crayon when asked, “Do you like pencils or crayons better?”</p>
<p>Geometry</p>		
<p>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.</p> <p>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.</p>	<p>1.G.1-2. Identify common two-dimensional shapes: square, circle, triangle, and rectangle.</p>	<p>Level IV AA Students will: EE1.G.1-2. Identify attributes of common two-dimensional shapes: square, circle, triangle, and rectangle. <i>Ex.</i> Given shapes of different sizes, and orientations, sort by shape attribute.</p> <p>Level III AA Students will: EE1.G.1-2. Identify common two-dimensional shapes: square, circle, triangle, and rectangle. <i>Ex.</i> Given an array of shapes, identify the shape when asked.</p> <p>Level II AA Students will: EE1.G.1-2. Match shape to shape <i>Ex.</i> Match a two-dimensional shape to a two-dimensional shape in their environment.</p> <p>Level I AA Students will: EE1.G.1-2. Recognize a shape. <i>Ex.</i> Given a circle and asked “Show me circle,” point to the circle.</p>

<p>1.G.3 Partition circles and rectangles into two and four equal shares, describe the shares using the words <i>halves</i>, <i>fourths</i>, and <i>quarters</i>, and use the phrases <i>half of</i>, <i>fourth of</i>, and <i>quarter of</i>. Describe the whole as two of, or four of the shares. Understand for these examples that decomposing into more equal shares creates smaller shares.</p>	<p>EE1.G.3. Put together pieces to make a shape that relates to the whole (i.e., two semicircles to make a circle, two squares to make a rectangle).</p>	<p>Level IV AA Students will: EE1.G.3. Demonstrate part and whole terminology understanding. <i>Ex.</i> Given an array of different shapes such as tangrams, select and put them together to make a circle, square, or triangle.</p> <p>Level III AA Students will: EE1.G.3. Put together pieces to make a shape that relates to the whole (i.e., two semicircles to make a circle, two squares to make a rectangle).</p> <p>Level II AA Students will: EE1.G.3. Using a template or a model, put together two pieces. <i>Ex.</i> Using an inset puzzle as a model, put together a whole circle from half circle puzzle parts.</p> <p>Level I AA Students will: EE1.G.3. Using a two-piece template or a model, insert the missing piece. <i>Ex.</i> Use a touch window to click and drag a shape from shape bank to insert into outline in picture. <i>Ex.</i> Using a one-shape puzzle, insert missing piece.</p>
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COMMON CORE ESSENTIAL ELEMENTS AND ACHIEVEMENT DESCRIPTORS FOR THIRD GRADE
Third Grade Math Standards

CCSS Grade-Level Clusters	Common Core EE	Instructional Achievement Level Descriptor
Operations and Algebraic Thinking		
<p>Represent and solve problems involving multiplication and division.</p> <p>3.OA.1 Interpret products of whole numbers, e.g., interpret 5×7 as the total number of objects in 5 groups of 7 objects each. <i>For example, describe a context in which a total number of objects can be expressed as 5×7.</i></p> <p>3.OA.2 Interpret whole-number quotients of whole numbers, e.g., interpret $56 \div 8$ as the number of objects in each share when 56 objects are partitioned equally into 8 shares, or as a number of shares when 56 objects are partitioned into equal shares of 8 objects each. For example, describe a context in which a number of shares or a number of groups can be expressed as $56 \div 8$.</p>	<p>EE3.OA.1-4 Represent and solve problems</p>	<p>Level IV AA Students will: EE3.OA.1-2 Use repeated addition to find the total number of objects arranged in a square or rectangle array.</p> <p>Level III AA Students will: EE3.OA.1-2 Use repeated addition in equal groups to find the total number of objects to find the sum.</p> <p>Level II AA Students will: EE3.OA.1-2 Use addition to find the total number of objects.</p> <p>Level I AA Students will: EE3.OA.1-2 Identify which group has more or less when objects are added or taken away.</p>
<p>3.OA.3 Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.</p> <p>3.OA.4 Determine the unknown whole number in a multiplication or division equation relating three whole numbers.</p>		<p>Make 3.OA.1-4</p>

<p>Understand properties of multiplication and the relationship between multiplication and division</p> <p>3.0 A5 Apply properties of operations as strategies to multiply and divide. <i>Examples: If $6 \times 4 = 24$ is known, then $4 \times 6 = 24$ is also known. (Commutative property of multiplication.) $3 \times 5 \times 2$ can be found by $3 \times 5 = 15$, then $15 \times 2 = 30$, or by $5 \times 2 = 10$, then $3 \times 10 = 30$. (Associative property of multiplication.) Knowing that $8 \times 5 = 40$ and $8 \times 2 = 16$, one can find 8×7 as $8 \times (5 + 2) = (8 \times 5) + (8 \times 2) = 40 + 16 = 56$. (Distributive property.)</i></p> <p>3.0 A6 Understand division as an unknown-factor problem. <i>For example, find $32 \div 8$ by finding the number that makes 32 when multiplied by 8.</i></p>	<p>EE3.0 A5-6 Build foundation for multiplication and division.</p>	<p>Level IV AA Students will: EE3.0 A5. Represent repeated addition. Build more than one model.</p> <p>Level III AA Students will: EE3.0 A5. Represents repeated addition. Build one model.</p> <p>Level II AA Students will: EE3.0 A5. Identify a representation of repeated addition.</p> <p>Level I AA Students will: EE3.0 A5. Match a representation of repeated addition.</p> <hr/> <p>Level IV AA Students will: EE3.0 A6 Share equally collections of up to 30 items between 2-4 people to solve real life story problems.</p> <p>Level III AA Students will: EE3.0 A6. Share equally collections of up to 20 items between 2-4 people to solve real life story problems.</p> <p>Level II AA Students will: EE3.0 A6. Share equally collections of up to 10 items between 2-4 people to solve real life story problems.</p> <p>Level I AA Students will: EE3.0 A6. Share equally collections of 1-8 items between 2 people to solve real life story problems.</p>
<p>Multiply and divide within 100</p> <p>3.0A.7 Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that $8 \times 5 = 40$, one knows $40 \div 5 = 8$) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers.</p>	<p>EE3.0 A7 Fluently use math strategies</p>	<p>Level IV AA Students will: EE3.0A.7. Solve a multiplication and/or division number sentence within 50..</p> <p>Level III AA Students will: EE3.0A.7. Identify the array that solves a multiplication number sentence of multiples of 1's, 2's, and 5's up to 30.</p> <p>Level II AA Students will: EE3.0A.7. Identify the array that solves a multiplication number sentence of multiples of 1's and 2's up to 20.</p> <p>Level I AA Students will: EE3.0A.7. Match the array that solves a multiplication number sentence of 1's and 2's up to 20.</p>
<p>Solve problems involving the four operations, and identify and explain patterns in arithmetic.</p>	<p>EE3.OA.8 Add/subtract to solve real world</p>	<p>Level IV AA Students will: EE3.OA.8 Add/subtract to solve real world multi step story problems using various problem solving models.</p>

<p>3.OA.8 Solve two-step word problems using the four operations. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.</p> <p>3.OA.9 Identify arithmetic patterns (including patterns in the addition table or multiplication table), and explain them using properties of operations. <i>For example, observe that 4 times a number is always even, and explain why 4 times a number can be decomposed into two equal addends.</i></p>	<p>one-step story problems.</p> <p>EE3.OA.9 Identify arithmetic patterns</p>	<p>Level III AA Students will: EE3.OA.8 Add/subtract to solve real world one step story problems by representation in pictures or objects.</p> <p>Level II AA Students will: EE3.OA.8 Add to solve word problems identified through symbol representation.</p> <p>Level I AA Students will: EE3.OA.8 Identify the object(s) that appear in real world one step story problems.</p> <hr/> <p>Level IV AA Students will: EE3.OA.9 Complete a complex arithmetic pattern. <i>Ex. Complete the pattern using more than two numbers - ABCABC...</i></p> <p>Level III AA Students will: EE3.OA.9 Identify arithmetic patterns. <i>Ex. When provided arithmetic patterns on a hundreds chart identify the next number in the pattern.</i></p> <p>Level II AA Students will: EE3.OA.9 Identify a pattern.</p> <p>Level I AA Students will: EE3.OA.9 Follow a pattern.</p>
<p>Numbers and Operations Base Ten</p>		
<p>Use place value understanding and properties of operations to perform multi-digit arithmetic.</p> <p>3.NBT.1 Use place value understanding to round whole numbers to the nearest 10 or 100.</p> <p>3.NBT.2 Fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.</p> <p>3.NBT.3 Multiply one-digit whole numbers by multiples of 10 in the range 10–90 (e.g., 9×80, 5×60) using strategies based on place value and properties of operations.</p>	<p>EE3.NBT.1-3 Understand place value</p>	<p>Level IV AA Students will: EE3.NBT.1 Identify the two 10s a number comes in between and tell which is closest. <i>Ex. Is 13 closer to 10 or 20?</i></p> <p>Level III AA Students will: EE3.NBT.1 Identify the two 10s a number comes in between on a number line.</p> <p>Level II AA Students will: EE3.NBT.1 Identify 10s on a number line.</p> <p>Level I AA Students will: EE3.NBT.1 Identify a number.</p> <hr/> <p>Level IV AA Students will: EE3.NBT.2 Identify place value to 50.</p>

		<p>Level III AA Students will: EE3.NBT.2 Identify the number in the 10s place value.</p> <p>Level II AA Students will: EE3.NBT.2 Count to 10 using 1:1 correspondence.</p> <p>Level I AA Students will: EE3.NBT.2 Identify more or less.</p> <hr/> <p>Level IV AA Students will: EE3.NBT.3 Compare multiples of 10 up to 50.</p> <p>Level III AA Students will: EE3.NBT.3 Count by 10s up to 50.</p> <p>Level II AA Students will: EE3.NBT.3 Identify whole numbers to 10.</p> <p>Level I AA Students will: EE3.NBT.3 Count to 10.</p>
Numbers and Operations - Fractions		
<p>Develop understanding of fractions as numbers</p> <p>3.NF.1 Understand a fraction $1/b$ as the quantity formed by 1 part when a whole is partitioned into b equal parts; understand a fraction a/b as the quantity formed by a parts of size $1/b$.</p> <p>3.NF.2 Understand a fraction as a number on the number line; represent fractions on a number line diagram.</p> <p>3.NF.3 Explain equivalence of fractions in special cases, and compare fractions by reasoning about their size.</p>	<p>EE3.NF.1-3 Understand fractions</p>	<p>Level IV AA Students will: EE3.NF.1-2 Identify halves or fourths as related to the whole.</p> <p>Level III AA Students will: EE3.NF.1-2 Differentiate a fractional part from a whole.</p> <p>Level II AA Students will: EE3.NF.1-2 Recognize that fractions are part of a whole.</p> <p>Level I AA Students will: EE3.NF.1-2 Identify a whole.</p> <p>** Third grade AA students are not developmentally ready for this, therefore standards 3.NF.1 and 3.NF.2 were combined.</p> <hr/> <p>Level IV AA Students will: EE3.NF.3 Use symbolic representation for each equal part of a fraction.</p>

		<p>Level III AA Students will: EE3.NF.3 Differentiate between equal parts of a whole.</p> <p>Level II AA Students will: EE3.NF.3 Differentiate between two equal parts of a whole.</p> <p>Level I AA Students will: EE3.NF.3 Identify equal parts.</p>
Measurement and Data		
<p>Solve problems involving measurement and estimation of intervals of time, liquid volumes and masses of objects.</p> <p>3.MD.1 Tell and write time to the nearest minute and measure time intervals in minutes. Solve word problems involving addition and subtraction of time intervals in minutes, e.g., by representing the problem on a number line diagram.</p> <p>3.MD.2 Measure and estimate liquid volumes and masses of objects using standard units of grams (g), kilograms (kg), and liters (l).6 Add, subtract, multiply, or divide to solve one-step word problems involving masses or volumes that are given in the same units, e.g., by using drawings (such as a beaker with a measurement scale) to represent the problem.</p>	<p>EE3.MD.1 Tell time to the hour on a clock</p> <p>EE3.MD.2 Identify standard units of measure for mass and liquid.</p>	<p>Level IV AA Students will: EE3.MD.1 Tell time to the half hour using a clock.</p> <p>Level III AA Students will: EE3.MD.1 Tell time to the hour on a clock.</p> <p>Level II AA Students will: EE3.MD.1 Identify which is the hour on a clock.</p> <p>Level I AA Students will: EE3.MD.1 Differentiate a clock from other measurement tools as a tool for telling time.</p> <hr/> <p>Level IV AA Students will: EE3.MD.2 Measure liquid volumes and masses of objects using standard units of grams (g), kilograms (kg) and liters (l).</p> <p>Level III AA Students will: EE3.MD.2 Identify standard units of measure for mass and liquid.</p> <p>Level II AA Students will: EE3.MD.2 Select the appropriate tool to measure a solid or a liquid.</p> <p>Level I AA Students will: EE3.MD.2 Determine if an object is a solid or a liquid.</p>
<p>Represent and interpret data</p> <p>3.MD.3 Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. Solve one- and two-step “how many more” and “how many less” problems using information presented in</p>	<p>EE3.MD.3-4 Represent and interpret data</p>	<p>Level IV AA Students will: EE3.MD.3 Interpret data to answer questions.</p> <p>Level III AA Students will: EE3.MD.3 Use picture or bar graph data to answer questions about data.</p>

<p>scaled bar graphs. <i>For example, draw a bar graph in which each square in the bar graph might represent 5 pets.</i></p> <p>3.MD.4 Generate measurement data by measuring lengths using rulers marked with halves and fourths of an inch. Show the data by making a line plot, where the horizontal scale is marked off in appropriate units—whole numbers, halves, or quarters.</p>		<p>Level II AA Students will: EE3.MD.3 Organize data.</p> <p>Level I AA Students will: EE3.MD.3 Collect data</p> <hr/> <p>Level IV AA Students will: EE3.MD.4 Measure length of objects using standard tools such as rulers, yardsticks and meter sticks, by repeating the use of the measurement tool/unit.</p> <p>Level III AA Students will: EE3.MD.4 Measure length of objects using standard tools such as rulers, yardsticks and meter sticks.</p> <p>Level II AA Students will: EE3.MD.4 Measure length with non-standard units of measurement.</p> <p>Level I AA Students will: EE3.MD.4 Place a standard measuring tool where one would begin to measure the length of an object.</p>
<p>Geometric measurement: understand concepts of area and relate area to multiplication and addition.</p> <p>3.MD.5 Recognize area as an attribute of plane figures and understand concepts of area measurement.</p> <p>3.MD.6 Measure areas by counting unit squares (square cm, square m, square in, square ft, and improvised units).</p> <p>3.MD.7 Relate area to the operations of multiplication and addition.</p>	<p>EE3.MD.5 a. & b.-7 a-d Understand concepts of area</p>	<p>Level IV AA Students will: EE3.MD.5-7 Find the area of rectangles with whole number side lengths by counting unit squares.</p> <p>Level III AA Students will: EE3.MD.5-7 Complete the area of a given rectangle with whole number side lengths.</p> <p>Level II AA Students will: EE3.MD.5-7 Identify two side lengths of a given area.</p> <p>Level I AA Students will: EE3.MD.5-7 Identify one side length of a given area.</p> <hr/> <p>** Standards 3.MD.5-7 are all addressed through these leveled descriptors.</p>
<p>Geometric measurement: recognize perimeter as an attribute of plane figures and distinguish between linear and area measures.</p> <p>3.MD.8 Solve real world and mathematical problems involving perimeters of polygons, including finding the perimeter given the side lengths, finding an unknown side length, and exhibiting rectangles with the same</p>	<p>EE3.MD.8 Build understanding of perimeter</p>	<p>Level IV AA Students will: EE3.MD.8 Find the perimeter of rectangles by counting the number of unit squares that fit around the shape.</p> <p>Level III AA Students will: EE3.MD.8 Place unit squares around the perimeter of a given rectangle.</p> <p>Level II AA Students will: EE3.MD.8 Trace the perimeter of a given rectangle.</p>

perimeter and different areas or with the same area and different perimeters.		Level I AA Students will: EE3.MD.8 Identify the sides of a rectangle.
Geometry		
<p>Reason with shapes and their attributes.</p> <p>3.G.1 Understand that shapes in different categories (e.g., rhombuses, rectangles, and others) may share attributes (e.g., having four sides), and that the shared attributes can define a larger category (e.g., quadrilaterals). Recognize rhombuses, rectangles, and squares as examples of quadrilaterals, and draw examples of quadrilaterals that do not belong to any of these subcategories.</p> <p>3.G.2 Partition shapes into parts with equal areas. Express the area of each part as a unit fraction of the whole. <i>For example, partition a shape into 4 parts with equal area, and describe the area of each part as 1/4 of the area of the shape.</i></p>	<p>EE3.G.1 Recognize shapes</p> <p>EE3.G.2 Recognize that shapes can be partitioned into equal areas.</p>	<p>Level IV AA Students will: EE3.G.1 Identify the shared attributes of shapes in different categories.</p> <p>Level III AA Students will: EE3.G.1 Recognize that shapes in different categories can share attributes.</p> <p>Level II AA Students will: EE3.G.1 Sort shapes by attributes.</p> <p>Level I AA Students will: EE3.G.1 Match shapes.</p> <hr/> <p>Level IV AA Students will: EE3.G.2 Given shapes with multiple lines of symmetry will be able to identify equal areas.</p> <p>Level III AA Students will: EE3.G.2 Recognize that shapes can be partitioned into equal areas.</p> <p>Level II AA Students will: EE3.G.2 Create shapes.</p> <p>Level I AA Students will: EE3.G.2 Match shapes.</p>

COMMON CORE ESSENTIAL ELEMENTS AND ACHIEVEMENT DESCRIPTORS FOR THIRD GRADE

Third Grade Math Standards

CCSS Grade-Level Clusters	Common Core EE	Instructional Achievement Level Descriptor
Operations and Algebraic Thinking		
<p>Represent and solve problems involving multiplication and division.</p> <p>3.OA.1 Interpret products of whole numbers, e.g., interpret 5×7 as the total number of objects in 5 groups of 7 objects each. <i>For example, describe a context in which a total number of objects can be expressed as 5×7.</i></p> <p>3.OA.2 Interpret whole-number quotients of whole numbers, e.g., interpret $56 \div 8$ as the number of objects in each share when 56 objects are partitioned equally into 8 shares, or as a number of shares when 56 objects are partitioned into equal shares of 8 objects each. For example, describe a context in which a number of shares or a number of groups can be expressed as $56 \div 8$.</p> <p>3.OA.3 Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.</p> <p>3.OA.4 Determine the unknown whole number in a multiplication or division equation relating three whole numbers.</p>	<p>EE3.OA.1-4 Represent and solve problems</p>	<p>Level IV AA Students will: EE3.OA.1-2 Use repeated addition to find the total number of objects arranged in a square or rectangle array.</p> <p>Level III AA Students will: EE3.OA.1-2 Use repeated addition in equal groups to find the total number of objects to find the sum.</p> <p>Level II AA Students will: EE3.OA.1-2 Use addition to find the total number of objects.</p> <p>Level I AA Students will: EE3.OA.1-2 Identify which group has more or less when objects are added or taken away.</p>
		<p>Make 3.OA.1-4</p>

<p>Understand properties of multiplication and the relationship between multiplication and division</p> <p>3.0 A5 Apply properties of operations as strategies to multiply and divide. <i>Examples: If $6 \times 4 = 24$ is known, then $4 \times 6 = 24$ is also known. (Commutative property of multiplication.) $3 \times 5 \times 2$ can be found by $3 \times 5 = 15$, then $15 \times 2 = 30$, or by $5 \times 2 = 10$, then $3 \times 10 = 30$. (Associative property of multiplication.) Knowing that $8 \times 5 = 40$ and $8 \times 2 = 16$, one can find 8×7 as $8 \times (5 + 2) = (8 \times 5) + (8 \times 2) = 40 + 16 = 56$. (Distributive property.)</i></p> <p>3.0 A6 Understand division as an unknown-factor problem. <i>For example, find $32 \div 8$ by finding the number that makes 32 when multiplied by 8.</i></p>	<p>EE3.0 A5-6 Build foundation for multiplication and division.</p>	<p>Level IV AA Students will: EE3.0 A5. Represent repeated addition. Build more than one model.</p> <p>Level III AA Students will: EE3.0 A5. Represents repeated addition. Build one model.</p> <p>Level II AA Students will: EE3.0 A5. Identify a representation of repeated addition.</p> <p>Level I AA Students will: EE3.0 A5. Match a representation of repeated addition.</p> <hr/> <p>Level IV AA Students will: EE3.0 A6 Share equally collections of up to 30 items between 2-4 people to solve real life story problems.</p> <p>Level III AA Students will: EE3.0 A6. Share equally collections of up to 20 items between 2-4 people to solve real life story problems.</p> <p>Level II AA Students will: EE3.0 A6. Share equally collections of up to 10 items between 2-4 people to solve real life story problems.</p> <p>Level I AA Students will: EE3.0 A6. Share equally collections of 1-8 items between 2 people to solve real life story problems.</p>
<p>Multiply and divide within 100</p> <p>3.0A.7 Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that $8 \times 5 = 40$, one knows $40 \div 5 = 8$) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers.</p>	<p>EE3.0 A7 Fluently use math strategies</p>	<p>Level IV AA Students will: EE3.0A.7. Solve a multiplication and/or division number sentence within 50..</p> <p>Level III AA Students will: EE3.0A.7. Identify the array that solves a multiplication number sentence of multiples of 1's, 2's, and 5's up to 30.</p> <p>Level II AA Students will: EE3.0A.7. Identify the array that solves a multiplication number sentence of multiples of 1's and 2's up to 20.</p> <p>Level I AA Students will: EE3.0A.7. Match the array that solves a multiplication number sentence of 1's and 2's up to 20.</p>
<p>Solve problems involving the four operations, and identify and explain patterns in arithmetic.</p> <p>3.OA.8 Solve two-step word problems using the four operations. Represent these problems using</p>	<p>EE3.OA.8 Add/subtract to solve real world one-step story problems.</p>	<p>Level IV AA Students will: EE3.OA.8 Add/subtract to solve real world multi step story problems using various problem solving models.</p> <p>Level III AA Students will: EE3.OA.8 Add/subtract to solve real world one step story problems by representation in pictures or objects.</p>

<p>equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.</p> <p>3.OA.9 Identify arithmetic patterns (including patterns in the addition table or multiplication table), and explain them using properties of operations. <i>For example, observe that 4 times a number is always even, and explain why 4 times a number can be decomposed into two equal addends.</i></p>	<p>EE3.OA.9 Identify arithmetic patterns</p>	<p>Level II AA Students will: EE3.OA.8 Add to solve word problems identified through symbol representation.</p> <p>Level I AA Students will: EE3.OA.8 Identify the object(s) that appear in real world one step story problems.</p> <hr/> <p>Level IV AA Students will: EE3.OA.9 Complete a complex arithmetic pattern. <i>Ex. Complete the pattern using more than two numbers - ABCABC...</i></p> <p>Level III AA Students will: EE3.OA.9 Identify arithmetic patterns. <i>Ex. When provided arithmetic patterns on a hundreds chart identify the next number in the pattern.</i></p> <p>Level II AA Students will: EE3.OA.9 Identify a pattern.</p> <p>Level I AA Students will: EE3.OA.9 Follow a pattern.</p>
<p>Numbers and Operations Base Ten</p>		
<p>Use place value understanding and properties of operations to perform multi-digit arithmetic.</p> <p>3.NBT.1 Use place value understanding to round whole numbers to the nearest 10 or 100.</p> <p>3.NBT.2 Fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.</p> <p>3.NBT.3 Multiply one-digit whole numbers by multiples of 10 in the range 10–90 (e.g., 9×80, 5×60) using strategies based on place value and properties of operations.</p>	<p>EE3.NBT.1-3 Understand place value</p>	<p>Level IV AA Students will: EE3.NBT.1 Identify the two 10s a number comes in between and tell which is closest. <i>Ex. Is 13 closer to 10 or 20?</i></p> <p>Level III AA Students will: EE3.NBT.1 Identify the two 10s a number comes in between on a number line.</p> <p>Level II AA Students will: EE3.NBT.1 Identify 10s on a number line.</p> <p>Level I AA Students will: EE3.NBT.1 Identify a number.</p> <hr/> <p>Level IV AA Students will: EE3.NBT.2 Identify place value to 50.</p> <p>Level III AA Students will: EE3.NBT.2 Identify the number in the 10s place value.</p>

		<p>Level II AA Students will: EE3.NBT.2 Count to 10 using 1:1 correspondence.</p> <p>Level I AA Students will: EE3.NBT.2 Identify more or less.</p> <hr/> <p>Level IV AA Students will: EE3.NBT.3 Compare multiples of 10 up to 50.</p> <p>Level III AA Students will: EE3.NBT.3 Count by 10s up to 50.</p> <p>Level II AA Students will: EE3.NBT.3 Identify whole numbers to 10.</p> <p>Level I AA Students will: EE3.NBT.3 Count to 10.</p>
Numbers and Operations - Fractions		
<p>Develop understanding of fractions as numbers</p> <p>3.NF.1 Understand a fraction $1/b$ as the quantity formed by 1 part when a whole is partitioned into b equal parts; understand a fraction a/b as the quantity formed by a parts of size $1/b$.</p> <p>3.NF.2 Understand a fraction as a number on the number line; represent fractions on a number line diagram.</p> <p>3.NF.3 Explain equivalence of fractions in special cases, and compare fractions by reasoning about their size.</p>	<p>EE3.NF.1-3 Understand fractions</p>	<p>Level IV AA Students will: EE3.NF.1-2 Identify halves or fourths as related to the whole.</p> <p>Level III AA Students will: EE3.NF.1-2 Differentiate a fractional part from a whole.</p> <p>Level II AA Students will: EE3.NF.1-2 Recognize that fractions are part of a whole.</p> <p>Level I AA Students will: EE3.NF.1-2 Identify a whole.</p> <p>** Third grade AA students are not developmentally ready for this, therefore standards 3.NF.1 and 3.NF.2 were combined.</p> <hr/> <p>Level IV AA Students will: EE3.NF.3 Use symbolic representation for each equal part of a fraction.</p> <p>Level III AA Students will: EE3.NF.3 Differentiate between equal parts of a whole.</p>

		<p>Level II AA Students will: EE3.NF.3 Differentiate between two equal parts of a whole.</p> <p>Level I AA Students will: EE3.NF.3 Identify equal parts.</p>
Measurement and Data		
<p>Solve problems involving measurement and estimation of intervals of time, liquid volumes and masses of objects.</p> <p>3.MD.1 Tell and write time to the nearest minute and measure time intervals in minutes. Solve word problems involving addition and subtraction of time intervals in minutes, e.g., by representing the problem on a number line diagram.</p> <p>3.MD.2 Measure and estimate liquid volumes and masses of objects using standard units of grams (g), kilograms (kg), and liters (l).6 Add, subtract, multiply, or divide to solve one-step word problems involving masses or volumes that are given in the same units, e.g., by using drawings (such as a beaker with a measurement scale) to represent the problem.</p>	<p>EE3.MD.1 Tell time to the hour on a clock</p> <p>EE3.MD.2 Identify standard units of measure for mass and liquid.</p>	<p>Level IV AA Students will: EE3.MD.1 Tell time to the half hour using a clock.</p> <p>Level III AA Students will: EE3.MD.1 Tell time to the hour on a clock.</p> <p>Level II AA Students will: EE3.MD.1 Identify which is the hour on a clock.</p> <p>Level I AA Students will: EE3.MD.1 Differentiate a clock from other measurement tools as a tool for telling time.</p> <hr/> <p>Level IV AA Students will: EE3.MD.2 Measure liquid volumes and masses of objects using standard units of grams (g), kilograms (kg) and liters (l).</p> <p>Level III AA Students will: EE3.MD.2 Identify standard units of measure for mass and liquid.</p> <p>Level II AA Students will: EE3.MD.2 Select the appropriate tool to measure a solid or a liquid.</p> <p>Level I AA Students will: EE3.MD.2 Determine if an object is a solid or a liquid.</p>
<p>Represent and interpret data</p> <p>3.MD.3 Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. Solve one- and two-step “how many more” and “how many less” problems using information presented in scaled bar graphs. <i>For example, draw a bar graph in which each square in the bar graph might represent</i></p>	<p>EE3.MD.3-4 Represent and interpret data</p>	<p>Level IV AA Students will: EE3.MD.3 Interpret data to answer questions.</p> <p>Level III AA Students will: EE3.MD.3 Use picture or bar graph data to answer questions about data.</p> <p>Level II AA Students will: EE3.MD.3 Organize data.</p>

<p>5 pets.</p> <p>3.MD.4 Generate measurement data by measuring lengths using rulers marked with halves and fourths of an inch. Show the data by making a line plot, where the horizontal scale is marked off in appropriate units—whole numbers, halves, or quarters.</p>		<p>Level I AA Students will: EE3.MD.3 Collect data</p> <hr/> <p>Level IV AA Students will: EE3.MD.4 Measure length of objects using standard tools such as rulers, yardsticks and meter sticks, by repeating the use of the measurement tool/unit.</p> <p>Level III AA Students will: EE3.MD.4 Measure length of objects using standard tools such as rulers, yardsticks and meter sticks.</p> <p>Level II AA Students will: EE3.MD.4 Measure length with non-standard units of measurement.</p> <p>Level I AA Students will: EE3.MD.4 Place a standard measuring tool where one would begin to measure the length of an object.</p>
<p>Geometric measurement: understand concepts of area and relate area to multiplication and addition.</p> <p>3.MD.5 Recognize area as an attribute of plane figures and understand concepts of area measurement.</p> <p>3.MD.6 Measure areas by counting unit squares (square cm, square m, square in, square ft, and improvised units).</p> <p>3.MD.7 Relate area to the operations of multiplication and addition.</p>	<p>EE3.MD.5 a. & b.-7 a-d Understand concepts of area</p>	<p>Level IV AA Students will: EE3.MD.5-7 Find the area of rectangles with whole number side lengths by counting unit squares.</p> <p>Level III AA Students will: EE3.MD.5-7 Complete the area of a given rectangle with whole number side lengths.</p> <p>Level II AA Students will: EE3.MD.5-7 Identify two side lengths of a given area.</p> <p>Level I AA Students will: EE3.MD.5-7 Identify one side length of a given area.</p> <hr/> <p>** Standards 3.MD.5-7 are all addressed through these leveled descriptors.</p>
<p>Geometric measurement: recognize perimeter as an attribute of plane figures and distinguish between linear and area measures.</p> <p>3.MD.8 Solve real world and mathematical problems involving perimeters of polygons, including finding the perimeter given the side lengths, finding an unknown side length, and exhibiting rectangles with the same perimeter and different areas or with the same area and different perimeters.</p>	<p>EE3.MD.8 Build understanding of perimeter</p>	<p>Level IV AA Students will: EE3.MD.8 Find the perimeter of rectangles by counting the number of unit squares that fit around the shape.</p> <p>Level III AA Students will: EE3.MD.8 Place unit squares around the perimeter of a given rectangle.</p> <p>Level II AA Students will: EE3.MD.8 Trace the perimeter of a given rectangle.</p>

		<p>Level I AA Students will: EE3.MD.8 Identify the sides of a rectangle.</p>
Geometry		
<p>Reason with shapes and their attributes.</p> <p>3.G.1 Understand that shapes in different categories (e.g., rhombuses, rectangles, and others) may share attributes (e.g., having four sides), and that the shared attributes can define a larger category (e.g., quadrilaterals). Recognize rhombuses, rectangles, and squares as examples of quadrilaterals, and draw examples of quadrilaterals that do not belong to any of these subcategories.</p> <p>3.G.2 Partition shapes into parts with equal areas. Express the area of each part as a unit fraction of the whole. <i>For example, partition a shape into 4 parts with equal area, and describe the area of each part as 1/4 of the area of the shape.</i></p>	<p>EE3.G.1 Recognize shapes</p> <p>EE3.G.2 Recognize that shapes can be partitioned into equal areas.</p>	<p>Level IV AA Students will: EE3.G.1 Identify the shared attributes of shapes in different categories.</p> <p>Level III AA Students will: EE3.G.1 Recognize that shapes in different categories can share attributes.</p> <p>Level II AA Students will: EE3.G.1 Sort shapes by attributes.</p> <p>Level I AA Students will: EE3.G.1 Match shapes.</p> <hr/> <p>Level IV AA Students will: EE3.G.2 Given shapes with multiple lines of symmetry will be able to identify equal areas.</p> <p>Level III AA Students will: EE3.G.2 Recognize that shapes can be partitioned into equal areas.</p> <p>Level II AA Students will: EE3.G.2 Create shapes.</p> <p>Level I AA Students will: EE3.G.2 Match shapes.</p>

COMMON CORE ELEMENTS AND ACHIEVEMENT DESCRIPTORS FOR FOURTH GRADE

Fourth Grade Mathematics Standards: Operations and Algebraic Thinking

CCSS Grade-Level Clusters	Common Core EE	Instructional Achievement Level Descriptor
Operations and Algebraic Thinking		
<p>Use the four operations with whole numbers to solve problems.</p> <p>4.OA.1 Interpret a multiplication equation as a comparison, e.g., interpret $35 = 5 \times 7$ as a statement that 35 is 5 times as many as 7 and 7 times as many as 5. Represent verbal statements of multiplicative comparisons as multiplication equations.</p>	<p>EE4.OA.1 Use operations to solve problems.</p>	<p>Level IV AA Students will: EE4.OA.1. Apply repeated addition to solve a multiplication problem represented with numbers.</p> <p>Level III AA Students will: EE4.OA.1. Demonstrate the connection between repeated addition and multiplication.</p> <p>Level II AA Students will: EE4.OA.1. Demonstrate repeated addition to sums of 10.</p> <p>Level I AA Students will: EE4.OA.1. Make a set of 10 and count to 10.</p>
<p>4.OA.2 Multiply or divide to solve word problems involving multiplicative comparison, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem, distinguishing multiplicative comparison from additive comparison.</p> <p>4.OA.3 Solve multistep word problems posed with whole numbers and having whole-number answers using the four operations, including problems in which remainders must be interpreted. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.</p>	<p>EE4.OA.2-3 Use operations to solve word problems.</p>	<p>Level IV AA Students will: EE4.OA.2-3. Solve two-step problems using addition or subtraction when a number in the problem is unknown.</p> <p>Level III AA Students will: EE4.OA.2-3. Solve one-step problems using addition or subtraction.</p> <p>Level II AA Students will: EE4.OA.2-3. Solve one-step addition or subtraction problems up to 10.</p> <p>Level I AA Students will: EE4.OA.2-3. Add up to 5. ** Standard 4.OA.2-3 were combined due to the similar nature of solving word problems.</p>
<p>Gain familiarity with factors and multiples</p> <p>4.OA.4 Find all factor pairs for a whole number in the range 1–100. Recognize that a whole number is a multiple of each of its factors. Determine whether a given whole number in the range 1–100 is a multiple of a given one-digit number.</p>	<p>EE4.OA.4 Build understanding of multiplication and division.</p>	<p>Level IV AA Students will: EE4.OA.4 Show multiple ways to arrive at the same product. <i>Ex.</i> Given an equation on a dry erase board ($2 \times 4 = 8$) make equal groups to show possible factors for 8. (1 group of 8, 2 groups of 4, 4 groups of 2)</p> <p>Level III AA Students will: EE4.OA.4 Show one way to arrive at a product.</p>

<p>Determine whether a given whole number in the range 1–100 is prime or composite.</p>		<p>Level II AA Students will: EE4.OA.4 Make equal sets and count to determine the product.</p> <p>Level I AA Students will: EE4.OA.4 Replicate one way to arrive at a product.</p>
<p>Generate and analyze patterns.</p> <p>4.OA.5 Generate a number or shape pattern that follows a given rule. Identify apparent features of the pattern that were not explicit in the rule itself. <i>For example, given the rule “Add 3” and the starting number 1, generate terms in the resulting sequence and observe that the terms appear to alternate between odd and even numbers. Explain informally why the numbers will continue to alternate in this way.</i></p>	<p>EE4.OA.5 Analyze patterns.</p>	<p>Level IV AA Students will: EE4.OA.5 Create a pattern based on a given rule and their prediction of what comes next. <i>Ex. Given an AABCAABC rule, create a pattern based on the rule.</i></p> <p>Level III AA Students will: EE4.OA.5 Use repeating patterns to make predictions.</p> <p>Level II AA Students will: EE4.OA.5 Replicate a pattern.</p> <p>Level I AA Students will: EE4.OA.5 Identify a pattern.</p>
<p>Numbers and Operations in Base Ten</p>		
<p>Generalize place value understanding for multi-digit whole numbers.</p> <p>4.NBT.1 Recognize that in a multi-digit whole number, a digit in one place represents ten times what it represents in the place to its right. <i>For example, recognize that $700 \div 70 = 10$ by applying concepts of place value and division.</i></p>	<p>EE4.NBT.1 Compare numbers to each other based on place value groups.</p>	<p>Level IV AA Students will: EE4.NBT.1 Compare numbers to each other based on place value groups by composing and decomposing greater than 50. <i>Ex. Given a number over 50, use place value blocks to indicate the value of each digit.</i></p> <p>Level III AA Students will: EE4.NBT.1. Compare numbers to each other based on place value groups by composing and decomposing up to 50.</p> <p>Level II AA Students will: EE4.NBT.1 Compose and decompose whole numbers to 20.</p> <p>Level I AA Students will: EE4.NBT.1 Identify whole numbers to 20.</p>
<p>4.NBT.2 Read and write multi-digit whole numbers using base-ten numerals, number names, and expanded form. Compare two multi-digit numbers based on meanings of the digits in each place, using $>$, $=$, and $<$ symbols to record the results of comparisons.</p>	<p>EE4.NBT.2 Compare whole numbers.</p>	<p>Level IV AA Students will: EE4.NBT.2 Compare a variety of whole numbers using symbols ($<$, $>$, $=$). <i>Ex. Utilize the number line to compare two numbers greater than 50 and place a card with the correct symbol on the line to show the relationship ($<$, $>$, $=$).</i></p> <p>Level III AA Students will: EE4.NBT.2. Compare 2 whole numbers ($<$, $>$, $=$).</p>

		<p>Level II AA Students will: EE4.NBT.2 Compare whole numbers (<, >, =) from 0-20.</p> <p>Level I AA Students will: EE4.NBT.2 Compare whole numbers, (<, >) from 0-10.</p>
<p>4.NBT.3 Use place value understanding to round multi-digit whole numbers to any place.</p>	<p>EE4.NBT.3 Round one and two digit whole numbers.</p>	<p>Level IV AA Students will: EE4.NBT.3 Round one- and two-digit numbers greater than 50, to the nearest 10. Ex. Using a hundreds chart and a given number between 50-100, round to the nearest 10's place.</p> <p>Level III AA Students will: EE4.NBT.3 Round one- and two-digit numbers from 0-50, to the nearest 10.</p> <p>Level II AA Students will: EE4.NBT.3 Round one- and two-digit numbers from 0-30, to the nearest 10.</p> <p>Level I AA Students will: EE4.NBT.3 Identify numbers that are more or less than 5.</p>
<p>Use place value understanding and properties of operations to perform multi-digit arithmetic.</p> <p>4.NBT.4 Fluently add and subtract multi-digit whole numbers using the standard algorithm.</p>	<p>EE4.NBT.4 Add and subtract double-digit whole numbers.</p>	<p>Level IV AA Students will: EE4.NBT.4 Add and subtract multi-digit whole numbers.</p> <p>Level III AA Students will: EE4.NBT.4 Add and subtract double-digit whole numbers.</p> <p>Level II AA Students will: EE4.NBT.4 Solve addition with numbers 20-50 and subtraction problems with numbers 0-20.</p> <p>Level I AA Students will: EE4.NBT.4 Solve single digit addition problems.</p>
<p>4.NBT.5 Multiply a whole number of up to four digits by a one-digit whole number, and multiply two two-digit numbers, using strategies based on place value and the properties of operations. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.</p> <p>4.NBT.6 Find whole-number quotients and remainders with up to four-digit dividends and one-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Illustrate and explain the calculation by</p>	<p>EE5.NBT.5-6 Extend understanding of multiplication and division.</p>	<p>Level IV AA Students will: EE4.NBT.5-6 Illustrate multiplication and division by making 2 equal sized groups up to 10.</p> <p>Level III AA Students will: EE4.NBT.5-6 Illustrate multiplication by making 2 equal sized groups up to 10.</p> <p>Level II AA Students will: EE4.NBT.5-6 Identify two equal groups.</p> <p>Level I AA Students will: EE4.NBT.5-6 Match two equal groups.</p>

<p>using equations, rectangular arrays, and/or area models.</p>		<p>** Standards 4.NBT.5-6 were combined to scaffold the learning of multiplication and division.</p>
<p>Number and Operations - Fractions</p>		
<p>Extend understanding of fraction equivalence and ordering.</p> <p>4.NF.1 Explain why a fraction a/b is equivalent to a fraction $(n \times a)/(n \times b)$ by using visual fraction models, with attention to how the number and size of the parts differ even though the two fractions themselves are the same size. Use this principle to recognize and generate equivalent fractions.</p> <p>4.NF.2 Compare two fractions with different numerators and different denominators, e.g., by creating common denominators or numerators, or by comparing to a benchmark fraction such as $1/2$. Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with symbols $>$, $=$, or $<$, and justify the conclusions, e.g., by using a visual fraction model.</p>	<p>EE4.NF.1-2 Extend understanding of fractions.</p>	<p>Level IV AA Students will: EE4.NF.1-2 Understand two fractions having unlike denominators are equivalent if they represent the same size portion of a whole. <i>Ex.</i> Given two squares of paper, one scored for $1/2$s and one scored for $1/8$s, fold the each paper as scored, then unfold the paper scored for $1/8$s and compare to the one folded into $1/2$ to find the same size portion (e.g., $4/8 = 1/2$).</p> <div style="text-align: center;">  </div> <p><i>Ex.</i> Use tangrams.</p> <p>Level III AA Students will: EE4.NF.1-2. Understand $2/4 = 1/2$.</p> <p>Level II AA Students will: EE4.NF.1-2 Understand $4/4$ or $2/2 = 1$.</p> <p>Level I AA Students will: EE4.NF.1-2 Understand that two halves is equivalent to one whole.</p> <p>**Standards 4.NF.1 and 4.NF.2 were combined due to the difficulty of fractions.</p>
<p>Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers.</p> <p>4.NF.3 Understand a fraction a/b with $a > 1$ as a sum of fractions $1/b$.</p>	<p>EE4.NF.3a-d-4 a-c Apply understanding of fractions in relationship to operations on whole numbers.</p>	<p>Level IV AA Students will: EE4.NF.3 Use a real world model to determine the sum and difference of two fractions.</p> <p>Level III AA Students will: EE4.NF.3 Use a real world model to determine the sum of two fractions.</p> <p>Level II AA Students will: EE4.NF.3 Identify halves or fourths as related to the whole.</p>

<p>4.NF.4 Apply and extend previous understandings of multiplication to multiply a fraction by a whole number.</p>		<p>Level I AA Students will: EE4.NF.3 Match halves or fourths as related to the whole.</p> <hr/> <p>Level IV AA Students will: EE4.NF.4 Demonstrate that multiplying a fraction by a whole number is similar to taking a fraction of each whole piece and summing them together.</p> <p>Level III AA Students will: EE4.NF.4 Use a model to determine the multiplication of two fractions.</p> <p>Level II AA Students will: EE4.NF.4 Recognize that multiplying a fraction by a whole number is similar to taking a fraction of each whole piece and summing them together.</p> <p>Level I AA Students will: EE4.NF.4 Recognize fraction parts equal a whole.</p>
<p>Understand decimal notation for fractions and compare decimal fractions.</p> <p>4.NF.5 Express a fraction with denominator 10 as an equivalent fraction with denominator 100, and use this technique to add two fractions with respective denominators 10 and 100.4 <i>For example, express $3/10$ as $30/100$, and add $3/10 + 4/100 = 34/100$.</i></p> <p>4.NF.6 Use decimal notation for fractions with denominators 10 or 100. <i>For example, rewrite 0.62 as $62/100$; describe a length as 0.62 meters; locate 0.62 on a number line diagram.</i></p> <p>4.NF.7 Compare two decimals to hundredths by reasoning about their size. Recognize that comparisons are valid only when the two decimals refer to the same whole. Record the results of comparisons with the symbols $>$, $=$, or $<$, and justify the conclusions, e.g., by using a visual model.</p>	<p>EE4.NF.5-7 Extend understanding of 10ths and 100ths.</p>	<p>Level IV AA Students will: EE4.NF.5 Demonstrate/show $1/10$ and $10/100$ as a fraction on a provided graphic organizer.</p> <p>Level III AA Students will: EE4.NF.5 Label $1/10$ and $10/100$ on a given representation of each.</p> <p>Level II AA Students will: EE4.NF.5 Identify a given representation of $1/10$.</p> <hr/> <p>Level I AA Students will: EE4.NF.5 Match a given representation of $1/10$.</p> <hr/> <p>Level IV AA Students will: EE4.NF.6-7 Compare two decimals to 10ths.</p> <p>Level III AA Students will: EE4.NF.6-7 Label two decimals to the 10ths when given a representation of each.</p> <p>Level II AA Students will: EE4.NF.6-7 Label one decimals to the 10ths when given a representation.</p>

		<p>Level I AA Students will: EE4.NF.6-7 Match visual representations of 10^{ths}.</p> <p>** Standards 4.NF.6 and 4.NF.7 require similar skills to complete tasks therefore they were combined.</p>
Measurement and Data		
<p>Solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit.</p> <p>4.MD.1 Know relative sizes of measurement units within one system of units including km, m, cm; kg, g; lb, oz.; l, ml; hr, min, sec. Within a single system of measurement, express measurements in a larger unit in terms of a smaller unit. Record measurement equivalents in a two column table. <i>For example, know that 1 ft is 12 times as long as 1 in. Express the length of a 4 ft snake as 48 in. Generate a conversion table for feet and inches listing the number pairs (1, 12), (2, 24), (3, 36), ...</i></p> <p>4.MD.2 Use the four operations to solve word problems involving distances, intervals of time, liquid volumes, masses of objects, and money, including problems involving simple fractions or decimals, and problems that require expressing measurements given in a larger unit in terms of a smaller unit. Represent measurement quantities using diagrams such as number line diagrams that feature a measurement scale.</p> <p>4.MD.3 Apply the area and perimeter formulas for rectangles in real world and mathematical problems. <i>For example, find the width of a rectangular room given the area of the flooring and the length, by viewing the area formula as a multiplication equation with an unknown factor.</i></p>	<p>EE4.MD.1-3 Solve problems involving measurement.</p>	<p>Level IV AA Students will: EE4.MD.1 Solve problems by demonstrating whole units can be broken into smaller units. <i>Ex. 1 ft. is the same as 12 inches.</i></p> <p>Level III AA Students will: EE4.MD.1 Identify the smaller measurement units that divide a larger unit within a measurement system. <i>Ex. Identify the inches within a foot.</i></p> <p>Level II AA Students will: EE4.MD.1 Identify standard units of measure.</p> <p>Level I AA Students will: EE4.MD.1 Use measurement tools.</p> <hr/> <p>Level IV AA Students will: EE4.MD.2 Use the appropriate measurement tools to solve problems. (i.e. ruler, yardstick, clock, teaspoon, cup, gallon, etc.)</p> <p>Level III AA Students will: EE4.MD.2 Select the appropriate measurement tool from two related options to solve problems.</p> <p>Level II AA Students will: EE4.MD.2 Select the appropriate measurement tool from two unrelated options to solve problems.</p> <p>Level I AA Students will: EE4.MD.2 Identify measurement tools.</p> <hr/> <p>Level IV AA Students will: EE4.MD.3 Find the perimeter and area of rectangles with whole number side lengths by counting unit squares.</p> <p>Level III AA Students will: EE4.MD.3 Identify the perimeter and area of rectangles with whole number side lengths by counting unit squares.</p>

		<p>Level II AA Students will: EE4.MD.3 Find the area of rectangles with whole number side lengths by counting unit squares.</p> <p>Level I AA Students will: EE4.MD.3 Match the area of a rectangle.</p>
<p>Represent and interpret data</p> <p>4.MD.4 Make a line plot to display a data set of measurements in fractions of a unit ($\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{8}$). Solve problems involving addition and subtraction of fractions by using information presented in line plots. <i>For example, from a line plot find and interpret the difference in length between the longest and shortest specimens in an insect collection.</i></p>	<p>EE4.MD.4 Represent and interpret data.</p>	<p>Level IV AA Students will: EE4.MD.4a Insert data into a graph to represent a data set with a scale equal to 10. (0-10 by 1's) <i>Ex. Using a bar graph enter one unit for each student to show their favorite activity in the correct category (lunch, physical therapy, music, PE) to determine most popular and least popular.</i> <i>Ex. Go to the lost and found, categorize and count types of items and graph them to determine most and least.</i></p> <p>Level III AA Students will: EE4.MD.4a Insert data to a pre-constructed bar graph template.</p> <p>Level II AA Students will: EE4.MD.4a Identify an appropriate scale for the data set.</p> <p>Level I AA Students will: EE4.MD.4a Given a topic, identify appropriate data to collect.</p> <hr/> <p>Level IV AA Students will: EE4.MD.4b Create questions that can be answered by data on a provided picture and bar graph. <i>Ex. Cut simple graphs from newspapers/magazines and glue them onto card stock, create questions/answers based on the graph.</i> <i>Ex. Create questions/answers based on the information from a graph showing class preferences between two different activities.</i></p> <p>Level III AA Students will: EE4.MD.4b Interpret data from a variety of graphs to answer questions.</p> <p>Level II AA Students will: EE4.MD.4b. Make observational statements about data in a picture and bar graph.</p> <p>Level I AA Students will: EE4.MD.4b Demonstrate awareness that symbols may be used to represent objects and events.</p>
<p>Geometric measurement: understand concepts of angle and measure angles.</p> <p>4.MD.5 Recognize angles as geometric shapes that are formed wherever two rays share a</p>	<p>EE4.MD.5/7 Recognize angles in geometric shapes.</p>	<p>Level IV AA Students will: EE4.MD.5/7 Label different types of angles in geometric shapes.</p> <p>Level III AA Students will: EE4.MD.5/7 Recognize angles in geometric shapes.</p>

<p>common endpoint, and understand concepts of angle measurement:</p> <p><i>a.</i> An angle is measured with reference to a circle with its center at the common endpoint of the rays, by considering the fraction of the circular arc between the points where the two rays intersect the circle. An angle that turns through $\frac{1}{360}$ of a circle is called a “one-degree angle,” and can be used to measure angles.</p> <p><i>b.</i> An angle that turns through n one-degree angles is said to have an angle measure of n degrees.</p> <p>4.MD.6 Measure angles in whole-number degrees using a protractor. Sketch angles of specified measure.</p> <p>4.MD.7 Recognize angle measure as additive. When an angle is decomposed into non-overlapping parts, the angle measure of the whole is the sum of the angle measures of the parts. Solve addition and subtraction problems to find unknown angles on a diagram in real world and mathematical problems, e.g., by using an equation with a symbol for the unknown angle measure.</p>	<p>EE4.MD.6 Identify angles as larger and smaller.</p>	<p>Level II AA Students will: EE4.MD.5/7 Identify an angle.</p> <p>Level I AA Students will: EE4.MD.5/7 Identify shapes that contain angles.</p> <p>** Standards EE4.MD.5 and EE4.MD.7 use the same skills in relationship to angles therefore they were combined.</p> <hr/> <p>Level IV AA Students will: EE4.MD.6 Construct angles of various sizes.</p> <p>Level III AA Students will: EE4.MD.6 Identify angles as larger and smaller.</p> <p>Level II AA Students will: EE4.MD.6 Differentiate angles in shapes.</p> <p>Level I AA Students will: EE4.MD.6 Replicate an angle.</p>
<p>Geometry</p>		
<p>Draw and identify lines and angles and classify shapes by properties of their lines and angles.</p> <p>4.G.1 Draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines. Identify these in two-dimensional figures.</p> <p>4.G.2 Classify two-dimensional figures based on the presence or absence of parallel or perpendicular lines, or the presence or absence of angles of a specified size. Recognize right triangles</p>	<p>EE4.G.1-3 Identify lines, angles, and properties of shapes.</p>	<p>Level IV AA Students will: EE4.G.1 Create a representation of parallel and intersecting lines.</p> <p>Level III AA Students will: EE4.G.1 Distinguish between parallel and intersecting lines.</p> <p>Level II AA Students will: EE4.G.1 Identify an intersecting line.</p> <p>Level I AA Students will: EE4.G.1 Identify a line.</p>

as a category, and identify right triangles.

4.G.3 Recognize a line of symmetry for a two-dimensional figure as a line across the figure such that the figure can be folded along the line into matching parts. Identify line-symmetric figures and draw lines of symmetry.

Level IV AA Students will:

EE4.G.2 Classify shapes according to attributes.

Ex. After reading "The Button Box," determine which attributes can be used to sort geometric buttons (buttons can also be felt by visually impaired students or teacher can trace the shapes into the palm of a hand).

Ex. Given several shapes, classify the shapes according to attributes such as shape and angles. (Teacher will trace geometric shape into student's palm and, after given choices of shapes, activate a switch to indicate a category of attribute.)

Level III AA Students will:

EE4.G.2 Distinguish between different attributes of shapes (lines, curves, angles)

Level II AA Students will:

EE4.G.2 Identify attributes of geometric shapes.

Level I AA Students will:

EE4.G.2 Identify curves.

Level IV AA Students will:

EE4.G.3 Locate the line of symmetry in a geometric shape.

Ex. Fold paper, in a geometric shape, and have student trace the fold line to identify the line of symmetry.

Ex. Using magnetic shapes, match a given pattern of shapes to create a symmetrical design.

Level III AA Students will:

EE4.G.3 Recognize a line of symmetry in a simple shape.

Level II AA Students will:

EE4.G.3 Place a line of symmetry on a simple shape.

Level I AA Students will:

EE4.G.3 Match a line of symmetry on a simple shape (square, triangle, rectangle)

COMMON CORE ELEMENTS AND ACHIEVEMENT DESCRIPTORS FOR FIFTH GRADE

Fifth Grade Mathematics Standards

CCSS Grade-Level Clusters	Common Core EE	Instructional Achievement Level Descriptor
Operations and Algebraic Thinking		
<p>Write and interpret numerical expressions</p> <p>5.OA.1 Use parentheses, brackets, or braces in numerical expressions, and evaluate expressions with these symbols.</p> <p>5.OA.2 Write simple expressions that record calculations with numbers, and interpret numerical expressions without evaluating them. <i>For example, express the calculation “add 8 and 7, then multiply by 2” as $2 \times (8 + 7)$. Recognize that $3 \times (18932 + 921)$ is three times as large as $18932 + 921$, without having to calculate the indicated sum or product.</i></p>	<p>EE5.OA.1-2 Write numerical expressions.</p>	<p>Level IV AA Students will: EE5.OA.1-2 Solve simple one-step equations ($_ \pm$ a constant up to 5 =) in input/output boxes, add visual <i>Ex. $? + 3 =$ triangle</i></p> <p>Level III AA Students will: EE5.OA.1-2 Generate a math sentence using appropriate symbols (<, >, +, -, =).</p> <p>Level II AA Students will: EE5.OA.1-2 Identify a math sentence which uses appropriate symbols (<, >, +, -, =).</p> <p>Level I AA Students will: EE5.OA.1-2 Identify a math symbol (<, >, +, -, =).</p> <p><i>** Standards EE.5.OA.1 and EE.5.OA.2 require similar skills at this level therefore they are combined.</i></p>
<p>Analyze patterns and relationships</p> <p>5.OA.3 Generate two numerical patterns using two given rules. Identify apparent relationships between corresponding terms. Form ordered pairs consisting of corresponding terms from the two patterns, and graph the ordered pairs on a coordinate plane. <i>For example, given the rule “Add 3” and the starting number 0, and given the rule “Add 6” and the starting number 0, generate terms in the resulting sequences, and observe that the terms in one sequence are twice the corresponding terms in the other sequence. Explain informally why this is so.</i></p>	<p>EE5.OA.3 Identify and extend numerical patterns.</p>	<p>Level IV AA Students will: EE5.OA.3 When given a rule, generate the pattern. <i>Ex. Show me a pattern that increases by 2 and starts at 0, i.e. 0,2,4,6...</i></p> <p>Level III AA Students will: EE5.OA.3 Identify and extend numerical patterns.</p> <p>Level II AA Students will: EE5.OA.3 Extend a picture pattern.</p> <p>Level I AA Students will: EE5.OA.3 Repeat a pattern.</p>
Numbers and Operations in Base Ten		
<p>Understand the place value system.</p> <p>5.NBT.1 Recognize that in a multi-digit number, a digit in one place represents 10 times as much as it represents in the place to its right and 1/10 of what it represents in the place to its left.</p>	<p>EE5.NBT.1-4 Understand the place value system.</p>	<p>Level IV AA Students will: EE5.NBT.1 Compare numbers by composing and decomposing in two different ways. <i>Ex. Decompose numbers by place value and compare by hundreds, tens, and ones (with the understanding that one 100, two 10s, and three ones combined is 123 ones). Ex. Compose numbers based on place value and compare to another number on the number line. Ex. Compare two numbers with different numbers in the tens place (e.g., 20 compared to 60 on the number</i></p>

5.NBT.2 Explain patterns in the number of zeros of the product when multiplying a number by powers of 10, and explain patterns in the placement of the decimal point when a decimal is multiplied or divided by a power of 10. Use whole-number exponents to denote powers of 10.

5.NBT.3 Read, write, and compare decimals to thousandths.

a. Read and write decimals to thousandths using base-ten numerals, number names, and expanded form, e.g., $347.392 = 3 \times 100 + 4 \times 10 + 7 \times 1 + 3 \times (1/10) + 9 \times (1/100) + 2 \times (1/1000)$.

b. Compare two decimals to thousandths based on meanings of the digits in each place, using $>$, $=$, and $<$ symbols to record the results of comparisons.

5.NBT.4 Use place value understanding to round decimals to any place.

line and explain 20 has two 10s or 20 ones and 60 is made of six 10s or 60 ones as it is written.

Level III AA Students will:

EE5.NBT.1 Compare numbers to each other based on place value groups by composing and decomposing to 99.

Level II AA Students will:

EE5.NBT.1 Compare numbers to 50

Level I AA Students will:

EE5.NBT.1 Compare numbers 20

Level IV AA Students will:

EE5.NBT.2 Extend patterns in the number of 0's when multiplying by the powers of 10 up to 1000, order numbers to 100.

Ex. Place numbers in order.

Level III AA Students will:

EE5.NBT.2 Recognize patterns in the number of 0's when multiplying a number by powers of 10.

Level II AA Students will:

EE5.NBT.2 Order multiples of 10 ranging from 0-50, from least to greatest

Level I AA Students will:

EE5.NBT.2 Indicate the sequential order of numbers to 20.

Level IV AA Students will:

EE5.NBT.3 Round 3 digit whole numbers to hundreds place.

Ex. Choose card with correct answer on it after being presented a three-digit number and told to round to nearest hundreds place value.

Ex. Given a three-digit number, generate (speaks, types, etc.) the answer for rounding to the nearest hundreds place value.

Level III AA Students will:

EE5.NBT.3 Round 2 digit whole numbers between 50 and 90 to nearest ten .

Level II AA Students will:

EE5.NBT.3 Round 2 digit whole numbers between 10 and 50 to the nearest ten.

		<p>Level I AA Students will: EE5.NBT.3 Determine if a single digit number is closer to 0 or ten..</p>
<p>Perform operations with multi-digit whole numbers and with decimals to hundredths.</p> <p>5.NBT.5 Fluently multiply multi-digit whole numbers using the standard algorithm.</p> <p>5.NBT.6 Find whole-number quotients of whole numbers with up to four-digit dividends and two-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.</p> <p>5.NBT.7 Add, subtract, multiply, and divide decimals to hundredths, 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.</p>	<p>EE5.NBT.5-7 Perform operations with whole numbers.</p>	<p>Level IV AA Students will: EE5.NBT.5-7 Perform operations with multi-digit whole numbers (0-100).</p> <p>Level III AA Students will: EE5.NBT.5-7 Solve addition and subtraction problems when initial is unknown ($__ + 2 = 10$; $__ - 2 = 8$).</p> <p>Level II AA Students will: EE5.NBT.5-7 Use concrete objects to solve addition and subtraction problems.</p> <p>Level I AA Students will: EE5.NBT.5-7 Duplicate addition/subtraction problems using concrete objects.</p> <p>** Standards 5.NBT.5-7 cover overlapping skills therefore they were combined.</p>
<p>Number and Operations - Fractions</p>		
<p>Use equivalent fractions as a strategy to add and subtract fractions.</p> <p>5.NF.1 Add and subtract fractions with unlike denominators (including mixed numbers) by replacing given fractions with equivalent fractions in such a way as to produce an equivalent sum or difference of fractions with like denominators. <i>For example, $2/3 + 5/4 = 8/12 + 15/12 = 23/12$. (In general, $a/b + c/d = (ad + bc)/bd$.)</i></p> <p>5.NF.2 Solve word problems involving addition and subtraction of fractions referring to the same whole, including cases of unlike denominators, e.g., by using visual fraction models or equations to represent the problem. Use benchmark fractions and number sense of fractions to estimate mentally and assess the reasonableness of answers. <i>For example, recognize</i></p>	<p>EE5.NF.1-2 Develop an understanding of addition and subtraction with fractions.</p>	<p>Level IV AA Students will: EE5.NF.1 Add and subtract fractions with like denominators to make a whole (halves, thirds, fourths).</p> <p>Level III AA Students will: EE5.NF.1 Add fractions with like denominators to make a whole (halves, fourths).</p> <p>Level II AA Students will: EE5.NF.1 Identify halves, and fourths.</p> <p>Level I AA Students will: EE5.NF.1 Match halves, and fourths.</p> <hr/> <p>Level IV AA Students will: EE5.NF.2 Solve word problems by adding and subtracting fractions with like denominators (halves, thirds, fourths).</p>

<p><i>an incorrect result $2/5 + 1/2 = 3/7$, by observing that $3/7 < 1/2$.</i></p>		<p>Level III AA Students will: EE5.NF.2 Solve word problems by adding fractions with like denominators (halves, thirds, fourths).</p> <p>Level II AA Students will: EE5.NF.2 Identify halves, thirds and fourths.</p> <p>Level I AA Students will: EE5.NF.2 Match halves, thirds and fourths.</p>
<p>Apply and extend previous understandings of multiplication and division to multiply and divide fractions.</p> <p>5.NF.3 , 5.NF.4, 5.NF.5, 5.NF.6, 5.NF.7 N/A</p>	<p>EE5.NF.3-7 N/A</p>	
<p>Measurement and Data</p>		
<p>Convert like measurement units within a given measurement system.</p> <p>5.MD.1 Convert among different-sized standard measurement units within a given measurement system (e.g., convert 5 cm to 0.05 m), and use these conversions in solving multi-step, real world problems.</p>	<p>EE5.MD.1 Solve measurement problems</p>	<p>Level IV AA Students will: EE5.MD.1 Solve measurement problems across at least 3 standard measurement units (time, length, mass, money).</p> <p>Level III AA Students will: EE5.MD.1 Solve measurement problems across at least 2 standard measurement units (time, length, mass, money).</p> <p>Level II AA Students will: EE5.MD.1 Solve measurement problems across at least 1 standard measurement unit (time, length, mass, money).</p> <p>Level I AA Students will: EE5.MD.1 Identify customary units.</p>
<p>Represent and Interpret Data</p> <p>5.MD.2 Make a line plot to display a data set of measurements in fractions of a unit ($1/2$, $1/4$, $1/8$). Use operations on fractions for this grade to solve problems involving information presented in line plots. <i>For example, given different measurements of liquid in identical beakers, find the amount of liquid each beaker would contain if the total amount in all the beakers were redistributed equally.</i></p>	<p>EE5.MD.2 Represent and interpret data</p>	<p>Level IV AA Students will: EE5.MD.2 Collect, organize and interpret data. Create a graph and display the data on a <i>Ex.</i> Count number of students who like dogs and number who like cats. Show where on the graph to put the bar for dogs and for cats and where to indicate the number of votes and enter the results on the graph. Determine if the result shown seems reasonable and why (e.g., graph shows that students have more snakes as pets than dogs). <i>Ex.</i> Based on class observation (how many wore red today), determine how to graph data and show graph telling which was more, less, or the same.</p> <p>Level III AA Students will: EE5.MD.2 Represent and interpret data on a picture, line plot or bar graph given a model and a graph to complete.</p>

		<p>Level II AA Students will: EE5.MD.2 Display data on a picture, line plot or bar graph..</p> <p>Level I AA Students will: EE5.MD.2 Identify a simple graph.</p>
<p>Geometric measurement: understand concepts of volume and relate volume to multiplication and addition.</p> <p>5.MD.3 Recognize volume as an attribute of solid figures and understand concepts of volume measurement.</p> <p><i>a.</i> A cube with side length 1 unit, called a “unit cube,” is said to have “one cubic unit” of volume, and can be used to measure volume.</p> <p><i>b.</i> A solid figure which can be packed without gaps or overlaps using n unit cubes is said to have a volume of n cubic units.</p> <p>5.MD.4 Measure volumes by counting unit cubes, using cubic cm, cubic in, cubic ft, and improvised units.</p> <p>5.MD.5 Relate volume to the operations of multiplication and addition and solve real world and mathematical problems involving volume.</p> <p><i>a.</i> Find the volume of a right rectangular prism with whole-number side lengths by packing it with unit cubes, and show that the volume is the same as would be found by multiplying the edge lengths, equivalently by multiplying the height by the area of the base. Represent threefold whole-number products as volumes, e.g., to represent the associative property of multiplication.</p> <p><i>b.</i> Apply the formulas $V = l \times w \times h$ and $V = b \times h$ for rectangular prisms to find volumes of right rectangular prisms with whole number edge lengths in the context of solving real world and mathematical problems.</p>	<p>EE5.MD.3-5 Determine volume of a cube by counting units of measure.</p>	<p>Level IV AA Students will: EE5.MD.3-5 Figure volume of a cube using mathematical operations.</p> <p>Level III AA Students will: EE5.MD.3-5 Determine volume of a cube by counting units of measure.</p> <p>Level II AA Students will: EE5.MD.3-5 Identify objects that have volume.</p> <p>Level I AA Students will: E5.MD.3-5 Demonstrate solid or liquid, full or empty.</p> <p>** Standards 5.MD.3-5 require similar skills at this level therefore they are combined.</p>

c. Recognize volume as additive. Find volumes of solid figures composed of two non-overlapping right rectangular prisms by adding the volumes of the non-overlapping parts, applying this technique to solve real world problems.

Geometry

Graph points on the coordinate plane to solve real- world and mathematical problems.

5.G.1 Use a pair of perpendicular number lines, called axes, to define a coordinate system, with the intersection of the lines (the origin) arranged to coincide with the 0 on each line and a given point in the plane located by using an ordered pair of numbers, called its coordinates. Understand that the first number indicates how far to travel from the origin in the direction of one axis, and the second number indicates how far to travel in the direction of the second axis, with the convention that the names of the two axes and the coordinates correspond (e.g., x-axis and x-coordinate, y-axis and y-coordinate).

5.G.2 Represent real world and mathematical problems by graphing points in the first quadrant of the coordinate plane, and interpret coordinate values of points in the context of the situation.

EE5.G.1-2 Graph points

Level IV AA Students will:
EE5.G.1-2 Sort into quadrant tables and describe figures by two common attributes.
Ex. Sort figures by color and shape.
Ex. Sort figures by congruent and non-congruent.
Ex. Sort figures by angle and number of sides.

Blue circles	Red circles
Blue squares	Red squares

Level III AA Students will:
EE5.G.1-2 Sort figures and describe the common attributes such as angles, number of sides, corners (dimension), and color.

Level II AA Students will:
EE5.G.1-2 Sort figures based on a given attribute.

Level I AA Students will:
EE5.G.1-2 Match figures based on a given attribute.

** Standards 5.G.1 and 5.G.2 require complementary skills therefore they were combined.

Classify two-dimensional figures into categories based on their properties.

5.G.3 Understand that attributes belonging to a category of two-dimensional figures also belong to all subcategories of that category. *For example, all rectangles have four right angles and squares are rectangles, so all squares have four right angles.*

5.G.4 Classify two-dimensional figures in a hierarchy based on properties.

EE5.G.3-4 Classify two-dimensional figures

Level IV AA Students will:
EE5.G.3-4 Sort two-dimensional into quadrant tables and describe figures by two common attributes.
Ex. Sort two-dimensional figures by color and shape.
Ex. Sort two-dimensional figures by congruent and non-congruent.
Ex. Sort two-dimensional figures by angle and number of sides.

Blue circles	Red circles
Blue squares	Red squares

Level III AA Students will:
EE5.G.3-4 Sort two-dimensional figures and describe the common attributes such as angles, number of sides, corners (dimension), and color.

		<p>Level II AA Students will: EE5.G.3-4 Sort two-dimensional figures based on a given attribute.</p> <p>Level I AA Students will: EE5.G.3-4 Indicate two-dimensional shapes named.</p> <p>** Standards 5.G.3 and 5.G.4 require complementary skills therefore they were combined.</p>
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