

[KY Math Standard \(link\)](#)

[FCPS Kindergarten Trajectory](#)

[K Unit 2 Google Link](#)

[Priority Content \(link\)](#)


Unit Title: Collect, Count and Measure		Estimated Time Frame: 35-45 days	
Essential Standards: K.MD.1, K.MD.3, K.G.1, K.G.2, K.G.6, K.CC.1, K.CC.2, K.CC.3, K.CC.4, K.CC.5, K.CC.6, K.OA.1, K.OA.2 <i>Supporting Standards:</i> K.CC.7, K.OA.4, K.OA.5, K.MD.2			
Big Idea(s) CRA explanations for Kindergarten Unit 2			
NUMBER: STRUCTURE & QUANTITY: Numbers have a specific order (forward & backward) and value. Numbers can be structured (composed/decomposed) in many ways.			
Essential Questions:		Common Misconceptions:	
<p>How can I describe the location of objects around me? How can I sort, compare and describe objects around me? How can a shape be compared and described? How do I build shapes?</p>		<ul style="list-style-type: none"> • Position words and their spatial placement • 2D and 3D shapes- Be sure shapes are presented in different orientations such as the vertex of a triangle not always being at the top. Some students may have difficulty identifying a shape with a non-traditional orientation. When this happens, have the student turn the shape until it looks like a traditional shape. 	

Standards for Mathematical Practice (bolded practices are emphasized in this unit)	Kentucky Interdisciplinary Literacy Practices	
<p>MP.1. Make sense of problems and persevere in solving them.</p> <p>MP.2. Reason abstractly and quantitatively.</p> <p>MP.3. Construct viable arguments and critique the reasoning of others.</p> <p>MP.4. Model with mathematics.</p> <p>MP.5. Use appropriate tools strategically.</p> <p>MP.6. Attend to precision.</p> <p>MP.7. Look for and make use of structure.</p> <p>MP.8. Look for and express regularity in repeated reasoning.</p>	<ol style="list-style-type: none"> 1. Recognize that text is anything that communicates a message. 2. Employ, develop, and refine schema to understand and create text. 3. View literacy experiences as transactional, interdisciplinary and transformational. 4. Utilize receptive and expressive language arts to better understand self, others, and the world. 5. Apply strategic practices, with scaffolding and then independently, to approach new literacy tasks. 6. Collaborate with others to create new meaning. 7. Utilize digital resources to learn and share with others. 8. Engage in specialized, discipline specific literacy practices. 9. Apply high level cognitive processes to think deeply and critically about text. 10. Develop a literacy identity that promotes lifelong learning. 	
Essential Standards: KAS Content Standards CRA explanations for Kindergarten Unit 2	Prerequisite Skills & Essential Vocabulary	Sample Learning Intentions* & Sample Success Criteria*
<p>KY.K.MD.1 Describe measurable attributes (length, height, weight, width, depth) of an object or a set of objects using appropriate vocabulary.</p> <p>For a single object, students verbally identify more than one attribute measured (wooden block - height, weight). Coherence KY.K.MD.1→KY.1.MD.2</p>	<ul style="list-style-type: none"> ● length ● width ● weight ● height ● depth 	<p>I am learning to describe ways to measure an object.</p> <p>I know I am successful when I can</p> <ul style="list-style-type: none"> ● identify ways to measure an object. ● describe measurable attributes of an object.

<p>KY.K.MD.3 Classify and sort objects or people by attributes. Limit objects or people in each category to be less than or equal to 10.</p> <p>For a group of 10 (or less) objects/people, students compare and order objects according to a common measurable attribute (height, weight, length, width, depth) shared by the objects (arranging 4 blocks from heaviest to lightest; arranging classmates from tallest to shortest). Coherence KY.K.MD.3→KY.1.MD.4</p>	<ul style="list-style-type: none"> ● circle ● hexagon ● square ● rectangle ● large ● small ● thick ● thin ● triangle ● side - one of the line segments that makes a flat, two-dimensional shape 	<p>I am learning to use measurable attributes to classify, sort, compare and order objects.</p> <p>I know I am successful when I can</p> <ul style="list-style-type: none"> ● sort objects by shape, size, and color. ● compare objects using the same attribute ● can order objects by measurable attributes.
<p>KY.K.G.1 Name and describe shapes in the environment.</p> <p>a. Describe objects in the environment using names of shapes.</p> <p>b. Describe the relative positions of these objects using terms above, below, in front of, behind and next to.</p> <p>MP.6</p> <p>For objects in student’s environment, the student accurately provides a shape name (squares, circles, triangles, rectangles, hexagons, cubes, cones, cylinders and spheres). (“The clock on the wall is a circle.” “The desktop is a rectangle.”) Students use positional language to describe the relationships between objects (“The clock is above the bulletin board.” “My desk is next to the computer table.”) Coherence KY.K.G.1 →KY.K.G.4</p>	<ul style="list-style-type: none"> ● beside ● below ● next to ● in front of ● above 	<p>I am learning to describe shapes in the environment.</p> <p>I am successful when I can</p> <ul style="list-style-type: none"> ● describe objects in the environment using names of 2D shapes ● describe the position of a shape.
<p>KY.K.G.2 Correctly name shapes regardless of orientations or overall size.</p> <p>MP.7</p>	<ul style="list-style-type: none"> ● square ● circle ● triangle 	<p>I am learning to name familiar 2-D shapes.</p>

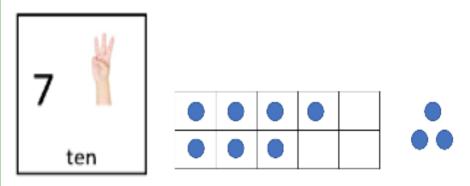
<p>Students identify and name shapes (squares, circles, triangles, rectangles, hexagons, cubes, cones, cylinders and spheres) regardless of size, orientation, or positioning. (The classroom window is a rectangle and this paper is a rectangle, too.) Coherence KY.K.G.2→KY.K.G.</p>	<ul style="list-style-type: none"> ● rectangle ● hexagon ● cube ● cone ● cylinder ● sphere 	<p>I am successful when I can</p> <ul style="list-style-type: none"> ● identify 2D shapes in different sizes, positions, and orientations.
<p>KY.K.G.6 Compose simple shapes to form larger shapes. MP.3, MP.5</p> <p>Students explore by using simple shapes to construct a larger shape. (Students arrange paper triangles to form a rectangle. Students arrange triangle pattern blocks to form a hexagon.) Coherence KY.K.G.6→KY.1.G.2</p>	<ul style="list-style-type: none"> ● combine ● construct 	<p>I am learning to use simple shapes to form larger shapes.</p> <p>I am successful when I can</p> <ul style="list-style-type: none"> ● construct 2-D shapes from smaller shapes.
<p>KY.K.CC.1 Count</p> <p>a. Count to 100 by ones and by tens.</p> <p>b. Count backwards from 30 by ones.</p> <p>Students verbally count forward by ones (1,2,3,4. . .) to 100 Students verbally count forward by tens (10, 20, 30. . .) to 100. Students verbally count backwards by ones (30, 29, 28, 27. . .) from 30. Coherence KY.K.CC.1→KY.1.NBT.1</p>	<ul style="list-style-type: none"> ● number ● numeral 	<p>I am learning to count forward and backward within 30.</p> <p>I know I am successful when I can</p> <ul style="list-style-type: none"> ● count forward to 30. ● count backward from 10.
<p>KY.K.CC.2 Count forward beginning from a given number within the known sequence within 100 (instead of having to begin at 1).</p> <p>Students verbally count forward starting at a number other than one (58, 59, 60, 61, 62. . .) within 100.</p>	<ul style="list-style-type: none"> ● forward ● backward ● count ● quantity 	<p>I am learning the verbal number sequences within 30.</p> <p>I know I am successful when I can</p> <ul style="list-style-type: none"> ● count forward from a given number within 30.

Coherence KY.K.CC.2→KY.1.NBT.1		<ul style="list-style-type: none"> ● count backward from a given number within 10. ● name a number before and after a given number within 10.
<p>KY.K.CC.3 Represent numbers.</p> <p>a. Write numbers from 0 to 20.</p> <p>b. Represent a number of objects with a written numeral 0-20 (with 0 representing a count of no objects).</p> <p>Students write all numerals in the range of 0-20 (1, 2, 3, 4, 5...) When students are given a written numeral, represent with objects within 20 (4...).</p> <p>Coherence KY.K.CC.3→KY.1.NBT.1</p>	<p>Object counting 1-5</p> <ul style="list-style-type: none"> ● labels – numbers as “names” ● sequence ● count 	<p>I am learning to... write numbers to tell “how many.”</p> <p>I know I am successful when I can</p> <ul style="list-style-type: none"> ● identify numerals 0-10 ● write numerals 0-10 ● write a numeral to match a group of objects up to 10
<p>KY.K.CC.4 Understand the relationship between numbers and quantities; connect counting to cardinality. (see corresponding notes below)</p> <p>a. When counting objects, say the number names in the standard order, pairing each object with one and only one number name and each number name with one and only one object.</p> <p>b. Understand that the last number name said, tells the number of objects counted. The number of objects is the same regardless of their arrangement or the order in which they were counted.</p> <p>c. Understand that each successive number name refers to a quantity that is one larger.</p>	<ul style="list-style-type: none"> ● quantity - how much there is or how many there are of something ● less - having a value that is not as great as another value ● more - greater quantity or amount 	<p>I am learning how numbers and quantities relate to each other.</p> <p>I know I am successful when I can</p> <ul style="list-style-type: none"> ● use one to one correspondence when counting objects to 15. ● match a number to a group of items up to 15. ● identify how many in a group up to 15. ● identify the next number is 1 more (1 larger) within 15. ● name one more or one fewer than a given number.

<p>Students understand each object being counted is given only one number name and this naming occurs in the correct sequence (one, two, three, four. . .). Once students conclude counting a group of objects in different arrangements, the student correctly identifies the amount of objects in that group (rather than recounting the group). Students verbally count by ones, connecting each number word with a quantity (or collection) as the count progresses. Coherence KY.K.CC.4→KY.1.OA.5</p>		
<p>KY.K.CC.5 Given a number from 1-20, count out that many objects. a. Count to answer “how many?” questions with as many as 20 things arranged in a line, a rectangular array, or a circle. b. Count to answer “how many?” questions with as many as 10 things in a scattered configuration. Coherence KY.K.CC.5→KY.1.NBT.1</p> <p>When presented with a numeral (in the range of 1-20), the student creates a collection of a like amount. When presented with a collection (in the range of 1-20) the student connects that collection to the correct numeral.</p> <p>When presented with collections in structured arrangements (line, circle, array and others) the student determines the quantity of that collection by counting.</p> 	<p>strategy – the thinking needed to help solve a problem</p>	<p>I am learning to tell how many objects, up to 15, are in a group.</p> <p>I know I am successful when I can</p> <ul style="list-style-type: none"> • tell how many objects there are 0- 15 in a group (line, circle, scatter, 10 frame, domino pattern) • count out objects to show numbers 0-15.

<p>KY.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.</p> <p>Compare two collections (each containing up to 10 objects) to determine whether one collection is greater than, less than, or equal to the other. Students use matching strategies (pairing items from the collections) or counting strategies (counting one collection and then the other). Note: Students do not need to use the relation symbols greater than ($>$), less than ($<$) and equal to ($=$) to compare groups of objects. Coherence KY.K.CC.6→KY.K.MD.3</p>	<ul style="list-style-type: none"> greater than- greater than is used to compare two numbers when the first number is larger than the second number (Symbols are not used in Kindergarten) less than - having a value that is not as great as another value equal - identical in value, amount, quantity, or same number as another 	<p>I am learning to compare two groups of items.</p> <p>I know I am successful when I can</p> <ul style="list-style-type: none"> match to tell which group is greater than, less than, or equal to the number of objects in another group within 10. count to tell which group is greater than, less than, or equal to the number of objects in another group within 10.
<p>KY.K.OA.1 Represent addition and subtraction with objects, fingers, mental images, drawings, sounds, acting out situations, verbal explanations, expressions, or equations.</p> <p>Students flexibly model or represent addition and subtraction tasks across a range of contexts rather than just becoming proficient with a single model or representation. See Table 1 in Appendix A. Note: Drawings need not show detail but should accurately represent the quantities involved in the task. Coherence KY.K.OA.1→KY.K.OA.2</p>	<ul style="list-style-type: none"> subtract – to “take away” or to remove part of a collection, or to find the difference between two collections, resulting in a smaller collection. add – combining a collection of objects with another collection of objects resulting in a larger collection. 	<p>I am learning to model addition and subtraction.</p> <p>I know I am successful when I can</p> <ul style="list-style-type: none"> find one more or one less than a number within 10. Identify the symbols to show one more or one less.
<p>KY.K.OA.2 Solve addition and subtraction word problems and add and subtract within 10 by using objects or drawings to represent the problem.</p>	<ul style="list-style-type: none"> story problem – a way to model mathematics using real world situations. 	<p>I am learning to solve word problems using objects or drawings.</p>

<p>Students flexibly model or represent addition and subtraction situations or context problems (involving sums and differences up to 10). See Table 1 in Appendix A. Note: Drawings need not show detail but accurately represent the quantities involved in the task. Coherence KY.K.OA.2→KY.1.OA.1</p>	<ul style="list-style-type: none"> • subtract – to “take away” or to remove part of a collection, or to find the difference between two collections, resulting in a smaller collection. • add – combining a collection of objects with another collection of objects resulting in a larger collection. 	<p>I will know I am successful when I can</p> <ul style="list-style-type: none"> • solve “add-to” word problems, up to 5, with objects or drawings. • solve one more or one less than problems within 10.
<p>Supporting Standards:</p>		
<p>KY.K.CC.7 Compare two numbers between 1 and 10 presented as written numerals.</p> <p>When presented with two numerals (between 1 and 10), students determine which numeral is greater than, less than, or equal to the other. Students express some mathematical reasoning regarding their determination (5 is larger than 3 because it has two more).</p> <p>Note: Students do not need to use the relation symbols greater than (>), less than (<) and equal to (=) to compare numbers between 1 and 10.</p> <p>Coherence KY.K.CC.7→KY.1.NBT.3</p>	<p>compare - to examine quantities</p>	<p>I am learning to compare two numbers within 10.</p> <p>I know I am successful when I can</p> <ul style="list-style-type: none"> • Identify which numeral is greater than, less than or equal to another number within 10. • explain why I think a number is greater than, less than or equal to another number within 10.
<p>KY.K.OA.4 For any number from 1 to 9, find the number that makes 10 when added to the given number by using</p>		<p>I am learning to find the number that will make 10 using objects, tools or drawings.</p>

<p>objects or drawings and record the answer with a drawing or equation.</p> <p>When presented with a numeral or collection of objects between 1-9, represent the corresponding number that makes 10 with objects or drawings. Students record these combinations using either drawings or numbers. Drawings need not show detail, but accurately represent the quantities involved in the task. Coherence KY.K.OA.4→KY.1.OA.6</p> 		<p>I know I am successful when I can</p> <ul style="list-style-type: none"> • add to a given number to make 10 with objects. • add to a given number to make 10 with drawings. • add to a given number to make 10 and record my answer with objects and drawings.
<p>KY.K.OA.5 Fluently add and subtract within 5. Students solve addition and subtraction tasks (with sums and differences within 5) efficiently, accurately, flexibly and appropriately. Being fluent means students choose flexibly among methods and strategies to solve contextual and mathematical problems, they understand and explain their approaches and they produce accurate answers efficiently. Students express mathematical reasoning regarding their responses (“5-3 equals 2 because when you move three back, you land on two”).</p> <p>Note: <i>Reaching fluency is an ongoing process that will take much of the year.</i></p> <p>Coherence KY.K.OA.5→KY.1.OA.6</p>	<ul style="list-style-type: none"> • subtract – to “take away” or to remove part of a collection, or to find the difference between two collections, resulting in a smaller collection. • add – combining a collection of objects with another collection of objects resulting in a larger collection. 	<p>I am learning to add and subtract within 5.</p> <p>I know I am successful when I can</p> <ul style="list-style-type: none"> • add and subtract using manipulatives. • add and subtract using finger patterns and five frames.

<p>KY.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.</p> <p>Students consider and compare a common measurable attribute shared by two objects (Which cup is taller and which is shorter? Which bucket of sand is heavier and which is lighter?). Coherence KY.K.MD.1→KY.1.MD.1</p>	<ul style="list-style-type: none"> • taller • shorter • heavier • lighter • longer 	<p>I am learning to compare two objects and describe the difference between them.</p> <p>I know I am successful when I can</p> <ul style="list-style-type: none"> • compare the lengths of two objects using the correct vocabulary. (taller, shorter, longer) • compare the weight of two objects using the vocabulary. (heavier and lighter)
<p>*Disclaimer: Success Criteria is the evidence students must produce to demonstrate learning. These examples are not comprehensive.</p>		
<p>Needed Manipulatives and Tools</p>		
<p>Attribute Blocks Pattern blocks 2D shapes (models and environmental examples) 3D shapes (models and environmental examples) Math Journal Counters (any type) Number Lines 10 Frames Non-Standard measurement items: Snap Cubes, Paper Clips... etc Balance/Scale</p>		
<p>Anchor Resources/Materials</p>		
<p>Investigations Unit 3 Investigations Unit 4</p>		

Classroom routines – Daily Planner Unit 3 [Attendance \(Count Around\); Calendar; Counting Jar & Today's Question](#)
Classroom Routines- Daily Planner [-Unit 4](#)

Diagnostic testing (such as SNAP/AVMR) (if school/teacher choice)

https://knk.kentuckymathematics.org/#!/page_knphome username: bluegrass password: math **great source for additional workshop tasks

[Math Learning Center Math Apps](#)

[Number Talk Images](#)

Summative Assessment

[Link to Common Unit Assessment](#)

These are the following assessments you can do individually or whole group with students to determine their skill level beginning, during, and after the unit:

Name 2D shape models

Name 2D shape in the environment

With smaller shapes construct a larger one. (2 triangles to make a square/rectangle; 2 squares to make a rectangle, etc)

Compare the lengths of 2 objects and tell the difference (longer/shorter/taller)

Sort shapes into 3 categories: size, shape, color

Order the objects based on length. (shortest to longest, etc)