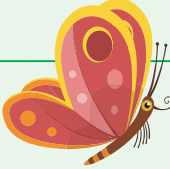



# Kentucky Academic Standards



## KINDERGARTEN

Domain	Cluster	Standard	Code	Mathseeds Lesson #			Additional Mathseeds Resources	
				Knowledge and Skills	Assessment	Higher Order Thinking Skills	Fluency	Assessment
				Online Lesson, Printable Resources, & Problem Solving Tasks	End-of-lesson Quiz	Critical Thinking and Problem Solving Interactives	Driving Tests (DT) Mental Minute (MM)	Printable Achievement Standards Assessment
Counting and Cardinality	Know number names and the count sequence.	Count to 100 by ones and by tens; Count backwards from 30; Count forwards beginning from a given number; Write numbers from 0 to 20; Represent a number of objects with a written numeral.	KY.K.CC.1a KY.K.CC.1b KY.K.CC.2 KY.K.CC.3a KY.K.CC.3b	1, 2, 3, 5, 7, 10, 11, 12, 14, 16, 17, 18, 19, 20, 21, 25, 28, 33, 41, 43, 45, 46, 48, 50			DT Kindergarten Number 2, 4, 5, 9–13, 16, 17, 21, 23	Kindergarten Number Test 1, 2
	Count to tell the number of objects.	Understand the relationship between numbers and quantities; Connect counting to cardinality; Count to answer “how many?” questions.	KY.K.CC.4 KY.K.CC.5	5, 7, 8, 11, 12, 16, 25, 31, 33, 36, 43, 45, 47, 48, 50, 63		12, 19, 30, 31, 46, 47	DT Kindergarten Number 1, 3, 14, 15, 22	Kindergarten Number Test 2
	Compare numbers.	Identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group; Compare two numbers.	KY.K.CC.6 KY.K.CC.7	18, 22, 31, 41, 43, 45, 46		38	DT Kindergarten Number 6–8, 18–20	Kindergarten Number Test 3
Operations and Algebraic Thinking	Understand addition as putting together and adding to, and understand subtraction as taking apart and taking from.	Represent addition and subtraction; Solve addition and subtraction word problems and add and subtract within 10; Decompose numbers less than or equal to 10; Find the number that makes 10 when added to the given number; Fluently add and subtract within 5.	KY.K.OA.1 KY.K.OA.2 KY.K.OA.3 KY.K.OA.4 KY.K.OA.5	21, 24, 25, 30, 31, 32, 34, 36, 40, 41, 45, 46, 47, 49, 50		34, 36, 40, 41	DT Kindergarten Operations 1–14, 16–20 MM Addition Sprints MM Subtraction Sprints	Kindergarten Operations Test 1–4
Numbers and Operations in Base Ten	Working with numbers 11–19 to gain foundations for place value.	Compose and decompose numbers from 11 to 19 using quantities of ten ones and some further ones.	KY.K.NBT.1	41, 43, 45, 46, 48, 50		43, 46, 47	DT Kindergarten Operations 2, 6, 9	Kindergarten Number Test 4
Measurement and Data	Describe and compare measurable attributes.	Describe measurable attributes (length, height) of an object or a set of objects; Directly compare two objects with a measurable attribute to see which object has “more of”/“less of” the attribute and describe the difference.		13, 26			DT Kindergarten Measurement 2, 3, 5, 6, 9, 10	Kindergarten Measurement Test 1–3
		Describe measurable attributes (weight) of an object or a set of objects; Directly compare two objects with a measurable attribute to see which object has “more of”/“less of” the attribute and describe the difference.		29, 73, 135		135	DT Kindergarten Measurement 7, 8, 12	Kindergarten Measurement Test 4 Grade 2 Measurement: Informal Units Test 6, 7
		Describe measurable attributes (depth) of an object or a set of objects; Directly compare two objects with a measurable attribute to see which object has “more of”/“less of” the attribute and describe the difference.	KY.K.MD.1 KYY.MD.2	38, 89, 116		38	DT Kindergarten Measurement 11, 15, 16, 20 DT Grade 1 Measurement 11, 17–19 DT Grade 2 Measurement 8	Kindergarten Measurement Test 5 Grade 1 Measurement: Length and Capacity Test 6, 7 Grade 2 Measurement: Informal Units Test 4, 5
		Describe measurable attributes of an object or a set of objects; Directly compare two objects with a measurable attribute to see which object has “more of”/“less of” the attribute and describe the difference.		39, 42, 109		37, 109	DT Kindergarten Measurement 1, 4, 13, 14, 17–19 DT Grade 2 Measurement 1–5, 14, 16	Kindergarten Measurement Test 6, 7 Grade 2 Measurement: Time Test 4, 5
	Classify objects and count the number of objects in each category.	Classify and sort objects or people by attributes.	KY.K.MD.3				DT Kindergarten Data 1–10	Kindergarten Data Test 1, 2
	Identify coins by name.	Recognize and identify coins by name (penny, nickel, dime, quarter).	KYY.MD.4					Kindergarten Number Test 5
Geometry	Identify and describe shapes. & Analyze, compare, create and compose shapes.	Describe the relative positions of these objects.	KY.K.G.1b	57, 78, 94		57, 78, 94	DT Kindergarten Geometry 9–11, 13, 14 DT Grade 1 Geometry 4, 5, 11, 12, 14–16 DT Grade 2 Geometry 2, 8, 11, 13	Kindergarten Geometry Test 5, 6 Grade 1 Geometry: Shape Test 7, 8
		Name and describe shapes in the environment; Correctly name shapes (2D) regardless of orientations or overall size; Identify shapes as two-dimensional; Describe the similarities, differences and attributes of two dimensional shapes using different sizes and orientation; Model shapes in the world.	KY.K.G.1a KY.K.G.2 KY.K.G.3	4, 6, 9, 15, 23, 27, 37		6, 8, 15, 23, 27	DT Kindergarten Geometry 1–8, 19, 20	Kindergarten Geometry Test 1, 3
		Name and describe shapes in the environment; Correctly name shapes (3D) regardless of orientations or overall size; Identify shapes as three-dimensional; Describe the similarities, differences and attributes of two dimensional shapes using different sizes and orientation; Model shapes in the world.	KY.K.G.4 KY.K.G.5	35, 44			DT Kindergarten Geometry 15–23	Kindergarten Geometry Test 2, 3
		Compose simple shapes to form larger shapes.	KY.K.G.6				DT Kindergarten Geometry 12	Kindergarten Geometry Test 4

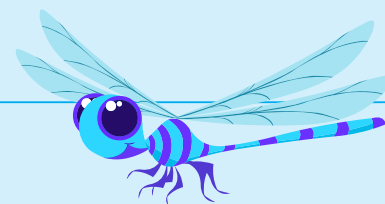


# Kentucky Academic Standards



## GRADE 1

				Mathseeds Lesson #			Additional Mathseeds Resources	
Domain	Cluster	Standard	Code	Knowledge and Skills	Assessment	Higher Order Thinking Skills	Fluency	Assessment
				Online Lesson, Printable Resources, & Problem Solving Tasks	End-of-lesson Quiz	Critical Thinking and Problem Solving Interactives	Driving Tests (DT) Mental Minute (MM)	Printable Achievement Standards Assessment
Operations and Algebraic Thinking	Represent and solve problems using addition and subtraction.	Use addition and subtraction within 20 to solve word problems; Solve word problems that call for addition of three whole numbers.	KY.1.OA.1 KY.1.OA.2	51, 53, 58, 65, 68, 72, 85, 91		65, 68, 77, 83, 91, 93	<b>DT</b> Grade 1 Operations 2 <b>MM</b> Addition Sprints <b>MM</b> Subtraction Sprints	<b>Grade 1 Number and Algebra: Operations</b> Tests 3, 4
	Understand and apply properties of operations and the relationship between addition and subtraction.	Apply properties of operations as strategies to add and subtract; Understand subtraction as an unknown-addend problem.	KY.1.OA.3 KY.1.OA.4	93, 100		93	<b>DT</b> Grade 1 Operations 6, 16 <b>MM</b> Addition Sprints <b>MM</b> Subtraction Sprints	<b>Grade 1 Number and Algebra: Operations</b> Test 5
	Add and subtract within 20.	Relate counting to addition and subtraction; Add and subtract within 20.	KY.1.OA.5 KY.1.OA.6	56, 58, 68, 72, 77, 85		56, 68, 77	<b>DT</b> Grade 1 Operations 1, 3, 4, 5, 7, 9 <b>MM</b> Addition Sprints <b>MM</b> Subtraction Sprints	<b>Grade 1 Number and Algebra: Operations</b> Test 1, 2
	Work with addition and subtraction equations.	Understand the meaning of the equal sign and determine if equations involving addition and subtraction are true or false.	KY.1.OA.7	76			<b>DT</b> Grade 1 Operations 10, 11 <b>MM</b> Addition Sprints <b>MM</b> Subtraction Sprints	
		Determine the unknown whole number in an addition or subtraction equation relating three whole numbers.	KY.1.OA.8	51, 53, 56, 58, 65, 68, 72, 85, 91, 93, 95, 96, 98, 100			<b>DT</b> Grade 1 Operations 8, 10, 11 <b>MM</b> Addition Sprints <b>MM</b> Subtraction Sprints	
Numbers and Operations in Base Ten	Extend the counting sequence.	Count forward to and backward from 120; Read and write numerals and represent a number of objects with a written numeral.	KY.1.NBT.1	60, 67, 75, 81, 86, 90		60, 67	<b>DT</b> Grade 1 Number 1–6, 8, 11–17, 21–24	
	Understand place value.	Understand the two-digits of a two-digit number represent amounts of tens and ones.	KY.1.NBT.2	88		88	<b>DT</b> Grade 1 Number 9, 10, 19	<b>Grade 1 Number and Algebra: Whole Numbers</b> Test 1–5
		Compare two two-digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols $>$ , $=$ , and $<$ .	KY.1.NBT.3	56, 60, 81, 86		60, 80, 83	<b>DT</b> Grade 1 Number 7, 18	<b>Grade 1 Number and Algebra: Whole Numbers</b> Test 6
	Use place value understanding and properties of operations to add and subtract.	Add within 100, including adding a two-digit number and a one-digit number; Add a two-digit number and a multiple of 10.	KY.1.NBT.4	88, 95, 96, 98		96	<b>DT</b> Grade 1 Operations 18 <b>MM</b> Addition Sprints <b>MM</b> Subtraction Sprints	<b>Grade 1 Number and Algebra: Operations</b> Test 6
		Given a two-digit number, mentally find 10 more or 10 less than the number; Subtract multiples of 10 in the range 10-90 from multiples of 10 in the range 10-90.	KY.1.NBT.5 KY.1.NBT.6	79, 98			<b>DT</b> Grade 1 Operations 13, 14, 19, 20 <b>MM</b> Addition Sprints <b>MM</b> Subtraction Sprints	<b>Grade 1 Number and Algebra: Patterns</b> Test 1–7
Measurement and Data	Measure lengths indirectly and by iterating length units.	Order three objects by length; Compare the lengths of two objects indirectly by using a third object; Express the length of an object as a whole number of same-size length units.	KY.1.MD.1 KY.1.MD.2	55, 84			<b>DT</b> Grade 1 Measurement 2, 4, 13, 14	<b>Grade 1 Measurement: Length</b> Tests 1–5
	Word with time and money.	Tell and write time in hours and half-hours using analog and digital clocks.	KY.1.MD.3a	54, 70, 87		87	<b>DT</b> Grade 1 Measurement 1, 8, 9, 10, 15	<b>Grade 1 Measurement: Time</b> Tests 1–5
		Identify the coins by values (penny, nickel, dime, quarter).	KY.1.MD.3b	64, 83, 92		83	<b>DT</b> Grade 1 Measurement 3, 5–7, 12	<b>Grade 1 Number and Algebra: Fractions and Money</b> Test 4–8
	Understand and apply the statistics process.	Investigate questions involving categorical data.	KY.1.MD.4	80, 97		80	<b>DT</b> Grade 1 Data 1–4, 6, 9, 10, 12–16	<b>Grade 1 Statistics: Data</b> Tests 1–5
Geometry	Reason with shapes and their attributes.	Distinguish between defining attributes versus non-defining attributes; Build and draw shapes to possess defining attributes; Compose two-dimensional shapes and three-dimensional shapes to create a composite shapes to compose new shapes from the composite shapes.	KY.1.G.1 KY.1.G.2	52, 62, 69, 99		69	<b>DT</b> Grade 1 Geometry 9, 10, 13	<b>Grade 1 Geometry: Shape</b> Test 1–7 <b>Grade 1 Number and Algebra: Fractions and Money</b> Test 1, 2
		Partition circles and rectangles into two and four equal shares, describe the shares.	KY.1.G.3	61, 66			<b>DT</b> Grade 1 Patterns and Fractions 3, 5, 6, 11, 13, 14	<b>Grade 1 Number and Algebra: Fractions and Money</b> Test 1–3, 7

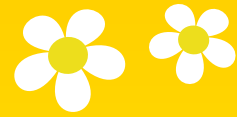




# Kentucky Academic Standards



## GRADE 2



				Mathseeds Lesson #			Additional Mathseeds Resources	
Domain	Cluster	Standard	Code	Knowledge and Skills	Assessment	Higher Order Thinking Skills	Fluency	Assessment
				Online Lesson, Printable Resources, & Problem Solving Tasks	End-of-lesson Quiz	Critical Thinking and Problem Solving Interactives	Driving Tests (DT) Mental Minute (MM)	Printable Achievement Standards Assessment
Operations and Algebraic Thinking	Represent and solve problems involving addition and subtraction.	Use addition and subtraction within 100 to solve one- and two-step word problems.	KY.2.OA.1	103, 110, 111, 113, 118, 120, 124, 128, 131, 133, 134, 137, 139, 148, 150		112, 118, 124, 125, 128, 132, 133, 134, 136, 139, 144, 146, 147, 150	<b>MM</b> Addition Sprints <b>MM</b> Subtraction Sprints	<b>Grade 2 Number and Algebra: Addition and Subtraction</b> Test 9
	Add and subtract with 20.	Fluently add and subtract within 20 using mental strategies.	KY.2.OA.2	142			<b>DT</b> Grade 2 Operations 2, 5, 22 <b>MM</b> Addition Sprints <b>MM</b> Subtraction Sprints	<b>Grade 2 Number and Algebra: Addition and Subtraction</b> Test 1
	Work with equal groups of objects to gain foundation for multiplication.	Determine whether a group of objects has an odd or even number of members; Write an equation to express an even number a sum of two equal addends.	KY.2.OA.3	108			<b>DT</b> Grade 2 Operations 3	<b>Grade 2 Number and Algebra: Numbers to 1000</b> Test 6
		Use addition to find the total number of objects arranged in rectangular array; Write an equation to express the total as a sum of equal addends.	KY.2.OA.4	111, 113, 115, 130		113, 130, 136	<b>DT</b> Grade 2 Operations 8, 9, 10, 19 <b>MM</b> Multiplication Sprints	<b>Grade 2 Number and Algebra: Equal Groups</b> Test 1–5
Numbers and Operations in Base Ten	Understand place value.	Understand that the three digits of a three-digit number represent amounts of hundreds, tens and ones.	KY.2.NBT.1	101, 105, 106		105	<b>DT</b> Grade 2 Number 4, 8, 16, 18–22	<b>Grade 2 Number and Algebra: Numbers to 1000</b> Test 5, 8
		Count forwards and backwards within 1000; Skip-count by 5s, 10s and 100s.	KY.2.NBT.2	101, 105, 106, 117, 129		105, 112, 132, 133	<b>DT</b> Grade 2 Number 2, 3, 6, 7, 9–13, 17 <b>DT</b> Grade 2 Patterns and Fractions 1–4, 6–10, 13	<b>Grade 2 Number and Algebra: Number Patterns</b> Test 1–7
		Read and write numbers to 1000 using base-ten numerals, number names and expanded form.	KY.2.NBT.3	106			<b>DT</b> Grade 2 Number 1, 5, 23, 24	<b>Grade 2 Number and Algebra: Numbers to 1000</b> Test 1, 2, 3, 4
		Compare two three-digit numbers based on meanings of the hundreds, tens and ones digits, using >, =, and < symbols to record the results of comparisons.	KY.2.NBT.4	122			<b>DT</b> Grade 2 Number 14, 15	<b>Grade 2 Number and Algebra: Numbers to 1000</b> Test 7
	Use place value understanding and properties of operations to add and subtract.	Fluently add and subtract within 100 using strategies based on place value, properties of operations and/or the relationship between addition and subtraction; Add up to four two-digit numbers using strategies based on place value and properties of operations.	KY.2.NBT.5 KY.2.NBT.6	103, 110, 118, 120, 124, 133, 144, 146, 150		118, 124, 133, 139, 144, 146, 150	<b>DT</b> Grade 2 Operations 1, 4, 7, 13–17, 20, 23 <b>MM</b> Addition Sprints <b>MM</b> Subtraction Sprints	<b>Grade 2 Number and Algebra: Addition and Subtraction</b> Test 2–4, 7
		Add and subtract within 1000.	KY.2.NBT.7	128, 129, 134, 144, 146		134, 144, 146	<b>DT</b> Grade 2 Operations 18, 24, 25, 26 <b>MM</b> Addition Sprints <b>MM</b> Subtraction Sprints	<b>Grade 2 Number and Algebra: Addition and Subtraction</b> Test 5, 6, 8
		Mentally add 10 or 100 to a given number 100–900 and mentally subtract 10 or 100 from a given number 100–900.	KY.2.NBT.8	148			<b>DT</b> Grade 2 Operations 27, 28 <b>MM</b> Addition Sprints <b>MM</b> Subtraction Sprints	
Measurement and Data	Measure and estimate lengths in standard unit.	Measure the length of an object by selecting and using appropriate tools; Estimate lengths using units of inches, feet, yards, centimeters and meters; Measure to determine how much longer one object is than another.	KY.2.MD.1 KY.2.MD.2 KY.2.MD.3 KY.2.MD.4	104, 126			<b>DT</b> Grade 2 Measurement 9, 11, 13, 15, 21–24	<b>Grade 2 Measurement: Informal Units</b> Test 3–7
	Relate addition and subtraction to length.	Use addition and subtraction within 100 to solve word problems involving lengths; Represent whole number as lengths from 0 on a number line.	KY.2.MD.5 KY.2.MD.6	141			<b>DT</b> Grade 2 Measurement 19	<b>Grade 2 Measurement: Informal Units</b> Test 8
	Work with time and money.	Tell and write time from analog and digital clocks to the nearest five minutes, using a.m. and p.m.	KY.2.MD.7	109, 114, 123, 127			<b>DT</b> Grade 2 Measurement 7, 20	<b>Grade 2 Measurement: Time</b> Test 1–6
		Solve word problems with adding and subtracting within 100 using the \$ and ¢ symbols appropriately.	KY.2.MD.8	64, 83, 92, 125, 147, 159		125, 147	<b>DT</b> Grade 1 Measurement 3, 5, 6, 7, 12 <b>DT</b> Grade 2 Measurement 12	<b>Grade 1 Number and Algebra: Fractions and Money</b> Tests 4–8 <b>Grade 2 Number and Algebra: Fractions and Money</b> Test 4–7
	Understand and apply the statistics process.	Investigate questions involving measurement; Create a pictograph and a bar graph to represent a data set with up to four categories; Solve simple operation problems using information presented in a bar graph.	KY.2.MD.9 KY.2.MD.10	143			<b>DT</b> Grade 2 Data and Chance 1, 4, 5, 7–14	<b>Grade 2 Statistics: Data</b> Test 1–5
Geometry	Reason with shapes and their attributes.	Recognize and draw shapes having specified attributes, such as a given number of angles or sides; Identify triangles, quadrilaterals, pentagons, hexagons and cubes.	KY.2.G.1	119, 121, 145		102, 119, 121, 140	<b>DT</b> Grade 2 Geometry 3–7, 10	<b>Grade 2 Geometry: Shapes</b> Test 1–5
		Partition a rectangle into rows and columns of same-size squares and count to find the total number of them; Partition circles and rectangles into two, three or four equal shares; Describe the shares using the words halves, thirds, half of, a third of, etc.	KY.2.G.2 KY.2.G.3	132			<b>DT</b> Grade 2 Patterns and Fractions 11, 12, 14, 16	<b>Grade 2 Number and Algebra: Fractions and Money</b> Test 1–3

# Kentucky Academic Standards



## GRADE 3

Domain	Cluster	Standard	Code	Mathseeds Lesson #			Additional Mathseeds Resources	
				Knowledge and Skills	Assessment	Higher Order Thinking Skills	Fluency	Assessment
				Online Lesson, Printable Resources, & Problem Solving Tasks	End-of-lesson Quiz	Critical Thinking and Problem Solving Interactives	Driving Tests (DT) Mental Minute (MM)	Printable Achievement Standards Assessment
Operations and Algebraic Thinking	Represent and solve problems involving multiplication and division.	Interpret and demonstrate products of whole numbers.	KY.3.OA.1	74, 155		153, 168, 176, 181, 186, 188, 196	<b>MM</b> Multiplication Sprints	
		Interpret and demonstrate whole-number quotients of whole numbers, where objects are partitioned into equal shares.	KY.3.OA.2	71, 136, 165, 181, 190			<b>MM</b> Division Sprints	
		Use multiplication and division within 100 to solve word problems.	KY.3.OA.3	168, 196		168, 196	<b>MM</b> Multiplication Sprints <b>MM</b> Division Sprints	
		Determine the unknown whole number in a multiplication or division equation relating three whole numbers.	KY.3.OA.4	186		186	<b>MM</b> Multiplication Sprints <b>MM</b> Division Sprints	
	Understand properties of multiplication and the relationship between multiplication and division.	Apply properties of operations as strategies to multiply and divide; Understand division as an unknown-factor problem.	KY.3.OA.5 KY.3.OA.6	181, 190		181	<b>MM</b> Multiplication Sprints <b>MM</b> Division Sprints	
	Multiply and divide within 100.	Fluently multiply and divide within 100.	KY.3.OA.7	155, 158, 165, 171, 176, 196, 199		186, 188, 193, 199	<b>MM</b> Multiplication Sprints <b>MM</b> Division Sprints	
	Solve problems involving the four operations and identify and explain patterns in arithmetic.	Use various strategies to solve two-step word problems using the four operations; Represent these problems using equations with a letter standing for the unknown quantity.	KY.3.OA.8	183, 188, 195		183, 188, 195	<b>MM</b> Addition Sprints <b>MM</b> Subtraction Sprints <b>MM</b> Multiplication Sprints <b>MM</b> Division Sprints	
		Identify arithmetic patterns and explain them using properties of operations.	KY.3.OA.9	77, 79, 90, 153, 158, 166, 195		77		
Numbers and Operations in Base Ten	Use place value understanding and properties of operations to perform multi-digit arithmetic.	Use place value understanding to round whole numbers to the nearest 10 or 100.	KY.3.NBT.1	129, 194		194		
		Fluently add and subtract within 1000.	KY.3.NBT.2	163, 170, 173, 178		170, 172, 178, 183, 188, 195	<b>MM</b> Addition Sprints <b>MM</b> Subtraction Sprints	
		Multiply one-digit whole numbers by multiples of 10 in the range of 10-90 using strategies based on place value and properties of operations.	KY.3.NBT.3	193			<b>MM</b> Multiplication Sprints	
Numbers and Operations- Fractions	Develop understanding of fractions as numbers.	Understand a fraction $\frac{1}{b}$ as the quantity formed by 1 part when a whole is partitioned into b equal parts; Understand a fraction $\frac{a}{b}$ as the quantity formed by a parts of size $\frac{1}{b}$ .	KY.3.NF.1	138, 175		175		
		Understand a fraction as a number on the number line; Represent fractions on a number line.	KY.3.NF.2	160, 191				
		Explain equivalence of fractions in special cases and compare fractions by reasoning about their size.	KY.3.NF.3	180, 191, 197		180, 197		
Measurement and Data	Solve problems involving measurement and estimation of intervals of time, liquid volumes and masses of objects.	Tell and write time to the nearest minute and measure elapsed time intervals in minutes; Solve word problems involving addition and subtraction of time intervals within and across the hour in minutes.	KY.3.MD.1	162, 179, 185, 189				
		Measure and estimate masses and liquid volumes of objects using standard units of grams (g), kilograms (kg) and liters (L); Add, subtract, multiply, or divide to solve one-step word problems involving masses or volumes that are given in the same units.	KY.3.MD.2	116, 135, 154, 172		154		
	Understand and apply the statistics process.	Investigate questions involving categorical data; Investigate questions involving numerical data.	KY.3.MD.3 KY.3.MD.4	174, 182, 187, 198				
	Geometric measurement	Understanding concepts of area and relate area to multiplication and to addition.	KY.3.MD.5 KY.3.MD.6 KY.3.MD.7	59, 149, 157, 200		182		
		Recognize perimeter as an attribute of plane figures and distinguish between linear and area measures.	KY.3.MD.8	192				
	Reason with shapes and their attributes.	Classify polygons by attributes.	KY.3.G.1	169, 184				

