Third Grade Kansas College & Career Readiness Standards for MATH

Record keeping of implementation: PINK= WEEKLY (Once or Twice/Week) BLUE=DAILY (3 or MORE X/Week) ALL OTHERS=Dates Listed

Operations and Algebraic Thinking: Solving Multiplication and Division Problems	
OA1	Interpret products of whole numbers, e.g., interpret 5x7 as the total number of objects in 5 groups of 7 objects each. For example, describe a context in which a total number of objects can be expressed as 5x7.
dates ---->	
OA2	Interpret whole-number quotients of whole numbers, e.g., interpret 56/8 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 nubmer of shares or a number of groups can be expressed as 56/8.
dates ---->	
OA3	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.
dates ---->	
OA4	Determine the unknown whole number in a multiplication or division equation relating three whole numbers. For example, determine the unknown number that makes the equation true in each of the equations 8x?=48, 5=__/3, 6x6=?.
dates ---->	
Operations and Algebraic Thinking: Multiplication and Division Properties	
OA5	Apply properties of operations as strategies to mulitiply and divide. Examples: If 6x4=24 is known, then 4x6 is also known (commutative property of X). 3x5x2 can be found by 3x5=15, then 15x2=30, or by 5x2=10, then 3x10=30 (Associative Prop of X). Knowing that 8x5=40 and 8x2=16, one can find 8x7 as 8x(5+2)=(8x5)+(8x2)=40+16=56 (Distributive Prop).
dates ---->	
OA6	Understand division as an unknown-factor problem. For example, find 32/8 by finding the number that makes 32 when multiplied by 8.
dates ---->	
Operations and Algebraic Thinking: Multiply and divide within 100.	
OA7	Fluently multiply & divide within 100, using strategies such as the relationship between multiplication & division (eg., knowing that 8x5=40, one knows 40/5=8) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers.
dates ---->	
Operations and Algebraic Thinking: Two-step problems and arithmetic patterns	
OA8	Solve two-step word problems using the four operations. Represent these problems u sing equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.
dates ---->	
OA9	Identify arithmetic patterns (including patterns in the addition table or multipliation table), and explain them using properties of operations. 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.
dates ---->	

Number and Operations in Base Ten: Multi-digit arithmetic																									
NBT1	Use place value understanding to round whole numbers to the nearest 10 or 100.																								
dates ---->																									
NBT2	Fluently add and subtract within 1000 using strategies and alforithms based on place value, properties of operations, and/or the relationship between addition and subtraction.																								
dates ---->																									
NBT3	Multiply one-digit whole numbers by multiples of 10 in the range 10-90 (eg., 9x80, 5x60) using strategies based on place value and properties of operations.																								
dates ---->																									
Number and Operations-Fractions: Develop understanding of fractions as numbers.																									
NF1	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*.																								
dates ---->																									
NF2	Understand a fraction as a number on the number line; represent fractions on a number line diagram.																								
dates ---->																									
NF2a	Represent a fraction 1/*b* on a number line diagram by defining the interval from 0 to 1 as the whole and partitioning it into *b* equal parts. Recognize that each part has size 1/*b* and that the endpoint of the part based at 0 locates the number 1/*b* on the number line.																								
dates ---->																									
NF2b	Represent a fraction *a/b* on a number line diagram by marking off a lengths 1/*b* from 0. Recognize that the resulting interval has size *a/b* and that its endpoint locates the number *a/b* on the number line.																								
dates ---->																									
NF3	Explain equivalence of fractions in special cases, and compare fractions by reasoning about there size.																								
dates ---->																									
NF3a	Understand two fractions as equivalent (equal) if they are the same size, or the same point on the number line.																								
dates ---->																									
NF3b	Recognize and generate simple equivalent fractions, e.g., 1/2=2/4, 4/6=2/3. Explain why the fractions are equivalent, eg., by using a visual fraction model.																								
dates ---->																									
NF3c	Express whole numbers as fractions, and recognize fractions that are equivalent to whole numbers. Ex: Express 3 in the form 3=3/1;recognize that 6/1=6; locate 4/4 and one at the same point.																								
dates ---->																									
NF3d	Compare two fractions with the same numerator or the same denominator by reasoning about their sizes. Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of camparisons with the symbols >,=, or <, and justify the conclusions, e.g., by using visual fraction model.																								
dates ---->																									

Measurement and Data: Time, volume, and mass	
MD1	Tell and write time to the nearest minute and measure time intercals 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.
dates ---->	
MD2	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*.
dates ---->	
Measurement and Data: Working with data	
MD3	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 informaitno presented in scaled bar graphs. *For example, draw a bar graph in which each square in the bar graph might represent 5 pets.*
dates ---->	
MD4	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.
dates ---->	
Measurement and Data: Area	
MD5	Recognize area as an attribute of plan figures and understand concepts of area measurement.
dates ---->	
MD5a	A square with side length 1 unit, called "a unit square," is said to have "one square unit" of area, and can be used to measure area.
dates ---->	
MD5b	A plan figure which can be covered without gaps or overlaps by *n* unit squares is said to have an area of *n* square units.
dates ---->	
MD6	Measure areas by countning unit squares (square cm, square m, square in, square ft, and improvised units).
dates ---->	
MD7	Relate area to the operations of multiplication and addition.
dates ---->	
MD7a	Find the area of a rectangle with whole-number side lengths by tiling it, and show that the area is the same as would be found by multiplying the side lengths.
dates ---->	
MD7b	Multiply side lengths to find areas of rectangles with whole-number side lengths in the context of solving real world and mathematical problems, and represent whole-number products as rectangular areas in mathematical reasoning.
dates ---->	
MD7c	Use tiling to show in a concrete case that the area of a rectangle with whole-number side lengths *a* and *b* + *c* is the sum of *a* x *b* and *a* x *c*. Use area models to represent the distributive property in mathematical reasoning.
dates ---->	
MD7d	Recognize area as additive. Find areas of rectilinear figures by decomposing them into non-overlapping rectangles and adding the areas of the non-overlapping parts, applying this technique to solve real world problems.
dates ---->	
Measurement and Data: Perimeter	
MD8	Solve real world & 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.
dates ---->	

Geometry: Reasoning with shapes																									
G1	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 square as examples of quadrilaterals, and draw examples of quadrilaterals that do not belong to any of these subcategories.																							
dates ---->																									
G2	Partition shapes into parts with equal areas. Express the area of each part as a unit fraction of the whole. *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.*																							
dates ---->																									