



Gulfport School District
PACING GUIDE
FOURTH GRADE
2009-2010
MATHEMATICS

QTR		COMPETENCY/OBJECTIVES
NUMBER AND OPERATIONS		
		1. Understand relationships among numbers, use the four basic operations, compute fluently, and make reasonable estimates.
1		a. Add and subtract up to <u>five-digit</u> whole numbers with and without regrouping. (DOK 1)
2		b. Add and subtract decimals through hundredths. (DOK 1)
1		c. Explain two or more methods of multiplying whole numbers (one-and two-digits) with justification. (DOK 2)
1 intro 2 1digit 3 2digit		d. Explain two or more methods of dividing four-digit dividends by one- and two-digit divisors, with and without remainders, and justify the processes. (DOK 2)
3 like	3 intro unlike	e. Add and subtract fractions with <u>like</u> denominators. (DOK 1) <ul style="list-style-type: none"> • (Qtr 3) GSD 1: Add and subtract fractions with <u>unlike</u> denominators.
3		f. Model and identify equivalent fractions. (DOK 2)
3		g. Represent equivalence relationships between fractions and decimals using concrete materials, diagrams, or other models. (DOK 1)
1		h. Estimate products and quotients of whole numbers to include strategies such as rounding. (DOK 2). <ul style="list-style-type: none"> • (Qtr 1) GSD 2: Round whole numbers to one hundred thousand and round decimal numbers through hundredths. Explain reasoning.
1		i. Recall multiplication and division facts. (DOK 1) Moved from 3rd grade.
1		j. Compose and decompose five-digit numbers and decimals through hundredths, with representations in words, physical models, and expanded and standard forms. (DOK 1) <ul style="list-style-type: none"> • (Qtr 2) GSD 3: Read and write five-digit whole numbers, decimal numbers through hundredths, and fractions. • (Qtr 1) GSD 4: Write five-digit numbers in word, standard and expanded form.
3		k. Determine and use benchmark numbers such as 0, 0.5 (1/2), and 1 to judge the magnitude of whole numbers, decimals, and fractions. (DOK 2)
2		l. Model and identify factors and multiples of whole numbers. (DOK 1)
1		GSD 5: Count change from \$5.00.
1		GSD 6: Count change from \$10.00.
1 intro 3 test		GSD 7: Apply problem-solving techniques to solve one- and two-step problems involving the basic operations.
1 whole 1 deci 3 fracs		GSD 8: Order and compare five-digit whole numbers, decimal numbers through hundredths, and fractions with denominators of twelve or less.



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ALGEBRA		
		2. Explain, analyze, and generate patterns, relationships, and functions using algebraic symbols. Demonstrate an understanding of the properties of the basic operations.
2		a. Analyze a given numeric pattern and generate a similar pattern. (DOK 2)
2		b. Determine the value of variables in equations; justify the process used to make the determination. (DOK 2)
2		c. Construct input/output function tables and generalize the rule using words, models, and symbols. (DOK 3)
2		d. Explain the properties of the basic operations using models, numbers and variables: (DOK 2)
2		1) Zero property of multiplication;
2		2) Associative property of addition and multiplication;
2		3) Commutative property of addition and multiplication;
2		4) Identity property of addition and multiplication;
2		5) Distributive properties of multiplication over addition and subtraction.
1		e. Demonstrate and explain the inverse operations of addition/subtraction and multiplication/division. (DOK 2)
3		GSD 9 Introduction Skill: Concept of prime numbers
GEOMETRY		
		3. Analyze characteristics, properties, and relationships of two-and three-dimensional geometric shapes. Use coordinate geometry.
4		a. Analyze and describe the similarities and differences between and among two-and three-dimensional geometric shapes, figures, and models using mathematical language. (DOK 2) <ul style="list-style-type: none"> • GSD 10: Identify and create congruent and similar figures.
4		b. Identify and analyze the relationship between and among points, lines (including parallel, perpendicular, and intersecting), line segments, angles (right, acute, obtuse) and rays. (DOK 2)
4		c. Identify transformations (rotations (turns), reflections (flips), and translations (slides)) of two-dimensional figures. (DOK 1)
4		d. Locate ordered pairs in the first quadrant coordinate plane. (DOK 1)
4		GSD 11: Define and label the parts of a circle: center, radius, diameter, and chord. Explain circumference of a circle.



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MEASUREMENT		
		4. Evaluate and justify measurable attributes of objects, units, systems, and processes. Perform measurements.
3		a. Measure a given object to the nearest eighth of an inch. (DOK 2)
3		b. Convert capacity, weight/mass, and length <u>within</u> the English System of measurement. (DOK 1)
3		bb. Convert capacity, weight/mass, and length within the metric system of measurement involving real life situations. (DOK 1)
3		c. Describe relationships of rectangular area to numerical multiplication. (DOK 2)
3		d. Use appropriate tools to determine, estimate, and compare units for measurement of weight/mass, area, <u>size of angle</u> , <u>temperature</u> , length, distance, and volume in English and metric systems and <u>time</u> in real-life situations. <ul style="list-style-type: none"> • (Qtr 3) GSD 12: Solve problems with elapsed time using hrs, mins, days, wks, months, & yrs. • (Qtr 3) GSD 13: Determine the scale of various thermometers in increments of two, five, and ten degrees. • (Qtr 3) GSD 14: Use formulas to compute the perimeter and area of rectangles, triangles, and parallelograms.
DATA ANALYSIS AND PROBABILITY		
		5. Formulate and analyze data. Evaluate inferences and predictions.
2		a. Draw, label, and interpret bar graphs, line graphs, and stem & leaf plots.(DOK 2)
2		b. Find and interpret the mean, mode, median, and range of a set of data. (DOK 2)
3		c. Compare data and interpret quantities represented on tables and graphs including line graphs, bar graphs, frequency tables, and stem-and-leaf plots to make predictions and solve problems based on the information. (DOK 3)
2		GSD 15: Demonstrate finding the probability using various manipulatives. Express probability in terms of a ratio (a/b).