

Grade: 5

Bullitt County Public Schools Suggested Pacing Guide

Subject: Mathematics

Standards to Be Taught Throughout Year

In Fifth Grade, spiraling review should be embedded in all assessments. Teachers will need to review previously taught standards throughout the year in order to build a strong foundation so that students can progress in math. MAP, common assessment and formative assessments will drive the instruction that needs to be taught throughout the year. This will ensure that instruction is differentiated based on individual student needs.

First 9 Weeks

Mathematical Practices:	Recommended Week(s)	Standard Number	Standard	Notes
1. Make sense of problems and persevere in solving them.	Week 1	5.NBT.1	Number and Operations in Base Ten – Understand the place value system 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.	Q1 - M/math
		5.NBT.2	Number and Operations in Base Ten – Understand the place value system 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.	Q1 pop on NBT on levels
3. Construct viable arguments and critique the reasoning of others.	Weeks 2-3	5.NBT.5	Number and Operations in Base Ten – Perform operations with multi-digit whole numbers and with decimals to hundredths Fluently multiply multi-digit whole numbers using the standard algorithm.	Q1
		5.NBT.6	Number and Operations in Base Ten – Perform operations with multi-digit whole numbers and with decimals to hundredths 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.	Q1
5. Use appropriate tools strategically.	Week 6	5.NBT.3	Number and Operations in Base Ten – Understand the place value system Read, write, and compare decimals to thousandths.	Q1
		5.NBT.3a	Read, write, and compare decimals to thousandths. Read and write decimals to thousandths using base-ten numerals, number names, and expanded form, e.g., 347.392 = 3 x 100 + 4 x 10 + 7 x 1 + 3 x (1/10) + 9 x (1/100) + 2 x (1/1000).	Q1
7. Look for and make use of structure.	Week 7	5.NBT.3b	Number and Operations in Base Ten – Understand the place value system Read, write, and compare decimals to thousandths. b. Compare two decimals to thousandths based on meanings of the digits in each place, using >, =, and < symbols to record the results of comparisons.	Q1
		5.NBT.4	Number and Operations in Base Ten – Understand the place value system Use place value understanding to round decimals to any place.	Q1

Cureka Module 1 - NBT
Math POP - NBT Individual POP

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<i>First 9 Weeks Continued</i>			
<i>Recommended Week(s)</i>	<i>Standard Number</i>	<i>Standard</i>	<i>Notes</i>
Week 9	5.NBT.7	Number and Operations in Base Ten – Perform operations with multi-digit whole numbers and with decimals to hundredths. 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.	Q1 ✓

		Second 9 Weeks		
Mathematical Practices:	Recommended Week	Standard Number	Standard	Notes
1. Make sense of problems and persevere in solving them.	Weeks 10-11	5.NBT.7	Number and Operations in Base Ten – Perform operations with multi-digit whole numbers and with decimals to hundredths. 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.	
2. Reason abstractly and quantitatively.		5.OA.1	Operation and Algebraic Thinking – Write and interpret numerical expressions Use parentheses, brackets, or braces in numerical expressions, and evaluate expressions with these symbols.	
3. Construct viable arguments and critique the reasoning of others.	Week 12	5.OA.2	Operation and Algebraic Thinking – Write and interpret numerical expressions 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>	
4. Model with Mathematics.		5.NF.1	Number and Operations/ Fractions – Use equivalent fractions as a strategy to add and subtract fractions 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>	
5. Use appropriate tools strategically.	Weeks 13- 14	5.NF.2	Number and Operations/ Fractions – Use equivalent fractions as a strategy to add and subtract fractions 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 an incorrect result $2/5 + 1/2 = 3/7$, by observing that $3/7 < 1/2$.</i>	
6. Attend to precision.			Geometry – Graph points on the coordinate plane to solve real-world and mathematical problems. 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).	
7. Look for and make use of structure.	Week 15	5.G.1	Geometry – Graph points on the coordinate plane to solve real-world and mathematical problems 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.	
8. Look for and express regularity in repeated reasoning.		5.G.2		

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<i>Second 9 Weeks Continued</i>			
<i>Recommended Week</i>	<i>Standard Number</i>	<i>Standard</i>	<i>Notes</i>
Week 16	5.OA.3	Operation and Algebraic Thinking – Analyze patterns and relationships 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. For example, given the rule "Add 3" and the starting number 0, generate terms in the resulting sequence, and observe that the terms in one sequence are twice the corresponding terms in the other sequence. Explain informally why this is so.	

Mathematical Practices		Third 9 Weeks		Notes
Recommended Week	Standard Number	Standard		
Week 17	5.OA.3	<p>Operation and Algebraic Thinking – Analyze patterns and relationships</p> <p>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, 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>		
Week 18	5.G.3	<p>Classify two-dimensional figures into categories based on their properties</p> <p>Understand that attributes belonging to a category of two-dimensional figures also belong to all subcategories of that category. <i>For example, all rectangles have four right angles and squares are rectangles, so all squares have four right angles.</i></p>		
Week 19	5.G.4	<p>Classify two-dimensional figures into categories based on their properties</p> <p>Classify two-dimensional figures in a hierarchy based on properties.</p>		
	5.NF.4	<p>Number and Operations /Fractions – Apply and extend previous understandings of multiplication and division to multiply a fraction or whole number by a fraction</p> <p>Apply and extend previous understandings of multiplication to multiply a fraction or whole number by a fraction.</p>		
Week 20	5.NF.4a	<p>Number and Operations/Fractions-Apply and extend previous understandings of multiplication and division to multiply a fraction or whole number by a fraction</p> <p>Apply and extend previous understandings of multiplication to multiply a fraction or whole number by a fraction.</p> <p>a. Interpret the product $(a/b) \times q$ as a parts of a partition of q into b equal parts; equivalently, as the result of a sequence of operations $a \times q \div b$. <i>For example, use a visual fraction model to show $(2/3) \times 4 = 8/3$, and create a story context for this equation. Do the same with $(2/3) \times (4/5) = 8/15$. (In general, $(a/b) \times (c/d) = ac/bd$.)</i></p>		
Week 21	5.NF.3	<p>Number and Operations/Fractions – Apply and extend previous understandings of multiplication and division to multiply and divide fractions.</p> <p>Interpret a fraction as division of the numerator by the denominator ($a/b = a \div b$). Solve word problems involving division of whole numbers leading to answers in the form of fractions or mixed numbers, e.g., by using visual fraction models or equations to represent the problem. <i>For example, interpret $3/4$ as the result of dividing 3 by 4, noting that $3/4$ multiplied by 4 equals 3, and that when 3 wholes are shared equally among 4 people each person has a share of size $3/4$. If 9 people want to share a 50-pound sack of rice equally by weight, how many pounds of rice should each person get? Between what two whole numbers does your answer lie?</i></p>		

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<i>Third 9 Weeks Continued</i>			
<i>Recommended Week(s)</i>	<i>Standard Number</i>	<i>Standard</i>	<i>Notes</i>
Week 22	5.NF.5	Number and Operations/Fractions – Apply and extend previous understandings of multiplication and division to multiply and divide fractions Interpret multiplication as scaling (resizing), by:	
	5.NF.5a	Number and Operations/Fractions – Apply and extend previous understandings of multiplication and division to multiply and divide fractions Interpret multiplication as scaling (resizing), by: a. Comparing the size of a product to the size of one factor on the basis of the size of the other factor, without performing the indicated multiplication.	
Week 23	5.NF.5b	Number and Operations/Fractions – Apply and extend previous understandings of multiplication and division to multiply and divide fractions Interpret multiplication as scaling (resizing), by: b. Explaining why multiplying a given number by a fraction greater than 1 results in a product greater than the given number (recognizing multiplication by whole numbers greater than 1 as a familiar case); explaining why multiplying a given number by a fraction less than 1 results in a product smaller than the given number; and relating the principle of fraction equivalence $a/b = (n \times a)/(n \times b)$ to the effect of multiplying a/b by 1.	
Week 24	5.NF.6	Number and Operations/Fractions – Apply and extend previous understandings of multiplication and division to multiply and divide fractions Solve real world problems involving multiplication of fractions and mixed numbers, e.g., by using visual fraction models or equations to represent the problem.	
Weeks 25-26	5.MD.1	Measurement and Data – Convert like measurement units within a given measurement system 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.	
Week 27	5.MD.2	Measurement and Data – Represent and interpret data 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>	