

Grade 5 Mathematics Prince William County Pacing Guide 2019-2020

Teacher focus groups have assigned a given number of days to each unit based on their experiences and knowledge of the curriculum. It is critical that teachers stay as close as possible to the pacing guidelines to ensure that all the Standards of Learning have been taught prior to the SOL assessment, and that, as children move within the Division, their math instruction remains coherent. Ongoing review should occur throughout the year.

Prince William County Regulation 602-1 describes the organization of the instructional day. Mathematics is allotted 75 minutes in grade 5. This should include an uninterrupted 60-minute block of time for the lesson and an additional 15-minute block to be used for classroom routines, number talks, ten-minute math, spiral review and/or other selected review activities. These types of activities are a critical element of mathematics instruction that provide essential practice and maintenance of key concepts and skills.

Teachers may find the full wording of the objectives, along with the essential knowledge and skills to be learned, in the Unit Guides. The Unit Guides were created by the Teacher Focus Groups and provide a deeper look at the curriculum as well as suggestions for learning experiences, assessments, and resources. These documents are available on the [Mathematics Staff Communities](#) page for each grade level.

Classroom Routines and On-Going Spiral Review
<p>Teachers are expected to provide 10-15 minutes of spiral review each day. Topics should focus on areas that have previously been taught but may need continued reinforcement or practice. Spiral review interactive whiteboard files are available for each unit on the Math Staff Communities page which teacher may choose to use. The spiral review materials will focus on the following concepts:</p> <ul style="list-style-type: none"> • Fraction and Decimal Number Sense • Computation and Patterns • Measurement • Current Concepts

August 26 – September 6 (8 days)	
Unit 1: Problem Solving with Addition and Subtraction (includes perimeter)	
Focus Topics	Standards of Learning
<p>Create and solve single-step and multistep practical problems involving addition and subtraction of whole numbers.</p> <ul style="list-style-type: none"> • Apply strategies, including place value and application of the properties of addition and multiplication to solve problems. 	<p>5.4 (+ and -)</p> <p>EKS 5.4</p>
<p>Solve practical problems that involve perimeter in standard units of measure.</p>	<p>5.8a</p>
<p>PWCS End-of-Unit Common Formative Assessment (Parts A and B): Problem Solving with Addition and Subtraction (includes perimeter)</p>	<p>5.4 (+ and -), 5.8a</p>
<p>Objectives completed</p>	<p>5.4 (+ and -)</p>

September 9 – October 2 (18 days)	
Unit 2: Problem Solving with Multiplication and Division <i>(includes area)</i>	
Focus Topics	Standards of Learning
Create and solve single-step and multi-step practical problems involving addition, subtraction, multiplication, and division (with and without remainders) of whole numbers. <ul style="list-style-type: none"> • Use the context to interpret the quotient and the remainder. • Apply strategies, including place value and application of the properties of addition and multiplication to solve problems. 	5.4 (x and ÷) EKS 5.4 EKS 5.4
Solve practical problems that involve area in standard units of measure.	5.8a
PWCS End-of-Unit Common Formative Assessment (Parts A and B): Multiplication and Division Computation & Problem Solving	5.4 (x and ÷) 5.8a
Objectives completed	5.4 (x and ÷)

October 3 – October 25 (16 days)	
Unit 3: Measurement	
Focus Topics	Standards of Learning
Solve practical problems that involve perimeter, area, and volume in standard units of measure. <ul style="list-style-type: none"> • Develop a procedure for determining the area of a right triangle. • Develop a procedure for determining the volume of a rectangular prism using manipulatives. 	5.8a EKS 5.8a EKS 5.8a
Differentiate among perimeter, area, and volume and identify whether the application of the concept of perimeter, area, or volume is appropriate for a given situation.	5.8b
Given the equivalent measure of one unit, identify equivalent measurements within the metric system.	5.9a
Solve practical problems involving length, mass, and liquid volume using metric units.	5.9b
Solve practical problems related to elapsed time in hours and minutes within a 24-hour period.	5.11
PWCS End-of-Unit Common Formative Assessment (Parts A and B): Measurement	5.8ab, 5.9ab, 5.11
Objectives completed	

October 28 - December 6 (24 days) Unit 4: Fraction and Decimal Number Sense	
Focus Topics	Standards of Learning
<p>Represent and identify equivalencies among fractions and decimals, with and without models.</p> <ul style="list-style-type: none"> • Represent fractions with denominators that are thirds, eighths, and factors of 100 in their equivalent decimal form with concrete or pictorial models. • Represent decimals in their equivalent fraction form (thirds, eighths, and factors of 100) with concrete or pictorial models. <p>Given a decimal through thousandths, round to the nearest whole number, tenth, or hundredth.</p> <ul style="list-style-type: none"> ○ Read decimals correctly, reinforce place value of the digits in the numbers as they are discussed. <p>Compare and order fractions, mixed numbers, and/or decimals in a given set from least to greatest and greatest to least.</p> <ul style="list-style-type: none"> • Use the symbols $>$, $<$, $=$, and \neq to compare decimals through thousandths, fractions (proper or improper fractions), and/or mixed numbers, having denominators of 12 or less. 	<p>5.2a</p> <p>EKS 5.2a</p> <p>EKS 5.2a</p> <p>5.1</p> <p>5.1</p> <p>5.2b</p> <p>EKS 5.2b</p>
PWCS End-of-Unit Common Formative Assessment (Parts A and B): Fraction and Decimal Number Sense	
Objective completed	5.1, 5.2ab

December 9 – December 20 (10 days) Unit 5: Data Analysis and Statistics	
Focus Topics	Standards of Learning
<p>Given a practical problem, represent data in line plots and stem-and-leaf plots.</p> <p>Interpret data represented in line plots and stem-and-leaf plots.</p> <p>Compare data represented in a line plot with the same data represented in a stem-and-leaf plot.</p> <p>Given a practical context, describe mean, median, and mode as measures of center.</p> <p>Given a practical context, describe mean as fair share.</p> <p>Given a practical context, describe the range of a set of data as a measure of spread.</p> <p>Given a practical context, determine the mean, median, mode, and range of a set of data.</p>	<p>5.16a</p> <p>5.16b</p> <p>5.16c</p> <p>5.17a</p> <p>5.17b</p> <p>5.17c</p> <p>5.17d</p>
PWCS End-of-Unit Common Formative Assessment (Parts A and B): Data Analysis and Statistics	
Objectives completed	5.16abc, 5.17abcd

January 6 – February 4 (20 days)	
Unit 6: Computation and Problem Solving with Fractions	
Focus Topics	Standards of Learning
Solve single-step and multistep practical problems involving addition and subtraction with fractions and mixed numbers.	5.6a
Solve single-step practical problems involving multiplication of a whole number, limited to 12 or less, and a proper fraction, with models .	5.6b
PWCS End-of-Unit Common Formative Assessment (Parts A and B): Fraction Computation	5.6ab
Objective completed	

February 5 - February 25 (14 days)	
Unit 7: Computation and Problem Solving with Decimals	
Focus Topics	Standards of Learning
Estimate and determine the product and quotient of two numbers involving decimals. <ul style="list-style-type: none"> • Divisors are limited to a single digit whole number or a decimal expressed as tenths. (See all parameters in the Unit Guide) • Use multiple representations to model multiplication and division of decimals and whole numbers. 	5.5a EKS 5.5a EKS 5.5a
Create and solve single-step and multistep practical problems involving addition, subtraction, and multiplication of decimals, and create and solve single-step practical problems involving division of decimals.	5.5b
PWCS End-of-Unit Common Formative Assessment (Parts A and B): Decimal Computation	5.5ab
Objective completed	

February 26 – March 20 (18 days)
Unit 8: Patterns, Functions, and Algebra

Focus Topics	Standards of Learning
Identify and describe characteristics of prime and composite numbers. <ul style="list-style-type: none"> • Demonstrate with concrete or pictorial representations and explain orally or in writing why a number is prime or composite. 	5.3a EKS 5.3a
Identify and describe characteristics of even and odd numbers. <ul style="list-style-type: none"> • Demonstrate with concrete or pictorial representations and explain orally or in writing why a number is even or odd, and why the sum or difference of two numbers is even or odd. 	5.3b EKS 5.3b
Simplify whole number numerical expressions, using the order of operations limited to addition, subtraction, multiplication, and division. Expressions may contain parentheses.	5.7
Identify, describe, create, express, and extend number patterns found in objects, pictures, numbers, and tables.	5.18
Investigate and describe the concept of variable.	5.19a
Write an equation to represent a given mathematical relationship, using a variable.	5.19b
Use an expression with a variable to represent a given verbal expression involving one operation.	5.19c
Create a problem situation based on a given equation, using a single variable and one operation.	5.19d
PWCS End-of-Unit Common Formative Assessment (Parts A and B): Patterns, Functions, and Algebra	5.3ab, 5.7, 5.17, 5.18, 5.19abcd
Objectives completed	

March 23 – April 17 (14 days)	
Unit 9: Geometry	
Focus Topics	Standards of
Identify and describe the diameter, radius, chord, and circumference of a circle. <ul style="list-style-type: none"> Investigate and describe the relationship between the diameter and radius, between the diameter and chord, between the radius and the circumference, and between the diameter and circumference. 	5.10 EKS 5.10
Classify and measure right, acute, obtuse, and straight angles. <ul style="list-style-type: none"> Solve addition and subtraction problems to determine unknown angle measures on a diagram and practical problems. 	5.12 EKS 5.12
Classify triangles as right, acute, or obtuse and equilateral, scalene, or isosceles. <ul style="list-style-type: none"> Compare and contrast properties of triangles. Identify congruent sides and right angles using geometric markings to denote properties of triangles 	5.13a EKS 5.13a EKS 5.13a
Investigate the sum of the interior angles in a triangle and determine an unknown angle measure. <ul style="list-style-type: none"> Use models to prove that the sum of the interior angles of a triangle is 180°, and use that relationship to determine an unknown angle measure in a triangle. 	5.13b EKS 5.13b
Recognize and apply transformations, such as translation, reflection, and rotation).	5.14a
Investigate and describe the results of combining and subdividing polygons. <ul style="list-style-type: none"> Compare and contrast the characteristics of a given polygon that has been subdivided with the characteristics of the resulting parts. 	5.14b EKS 5.14b
PWCS End-of-Unit Common Formative Assessment (Parts A and B): Geometry	5.10, 5.12, 5.13ab, 5.14ab
Objectives completed	

April 20 – May 1 (10 days)	
Unit 10: Probability	
Focus Topics	Standards of Learning
Predict and determine the probability of an outcome occurring by creating a sample space. <ul style="list-style-type: none"> Construct a sample space by using a tree diagram, list, or chart to identify all possible outcomes. 	5.15 EKS 5.15
Determine probability of an outcome using the Fundamental (Basic) Counting Principle.	5.15
PWCS End-of-Unit Common Formative Assessment (Parts A and B): Probability	5.15
Objective completed	

May 4 – May 22 (15 days) SOL Review and Testing	
Focus Topics	Standards of Learning
All	All

May 26 – June 12 (14 days) Post SOL Topics and SOL Test Retakes	
Focus Topics	Standards of Learning
Math topics should be taught based on teacher’s judgment regarding what students need most in preparation for 6th grade. Suggestions will be provided in the unit guide.	TBD by teacher