

## **Grade 5 Mathematics Prince William County Pacing Guide 2022-2023**

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, 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 in Canvas and on the Mathematics SharePoint Website. More information about accessing SharePoint will be coming soon.

**Classroom Routines** should be an integral part of the development of mathematics understanding. Each day should include a brief (10-15 minutes), deliberate, and carefully planned time for review of key concepts and skills. It is not expected that all skills are addressed every day; each teacher should determine which skills and at what level may be appropriate on a given day. PowerPoints with three number sense routines for each week and daily spiral review questions have been provided. Number sense routines and spiral review routines are available in Canvas in each module.

**Assessments** are provided for each unit. Each unit includes an End of Unit Assessment on the standards covered in that unit. Reassessments by standard are available in Mastery Connect as well as pdf format in Canvas. In addition, VDOE Just in Time Quick Checks are available in Mastery Connect when applicable as well as pdf format in Canvas. All assessments are intended to be used to determine student growth and guide ongoing instruction. Assessment scoring guides are designed to meet the criteria in assessment [Regulation 661-1](#).

<b>Unit 1: Problem Solving with Addition and Subtraction (includes perimeter problems)</b> <b>August 23 – September 7 (10 days)</b>	
<b>Focus Topics</b>	<b>Standards of Learning</b>
Create and solve single-step and multistep practical problems involving addition and subtraction of whole numbers. <ul style="list-style-type: none"> <li>Apply strategies, including place value and application of the properties of addition and multiplication to solve problems.</li> </ul>	5.4 (+ and -)
Solve practical problems that involve perimeter in standard units of measure.	5.8a
<i>Calculator permitted on all standards in Unit 1</i>	
<b>PWCS End-of-Unit Common Formative Assessment (Parts A and B): Problem Solving with Addition and Subtraction (includes perimeter)</b>	<b>5.4 (+ and -), 5.8a</b>
<b>Objectives Completed</b>	<b>5.4 (+ and -)</b>

<b>Unit 2: Problem Solving with Multiplication and Division (includes area and number properties)</b> <b>September 8 – October 4 (18 days)</b>	
<b>Focus Topics</b>	<b>Standards of Learning</b>
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"> <li>Use the context to interpret the quotient and the remainder.</li> <li>Apply strategies, including place value and application of the properties of addition and multiplication to solve problems.</li> </ul>	5.4
Solve practical problems that involve area in standard units of measure.	5.8a
Identify and describe characteristics of prime and composite numbers. <ul style="list-style-type: none"> <li>Demonstrate with concrete or pictorial representations and explain orally or in writing why a number is prime or composite.</li> </ul>	5.3a
Identify and describe characteristics of even and odd numbers. <ul style="list-style-type: none"> <li>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.</li> </ul>	5.3b
<i>Calculator permitted on all standards in Unit 2</i>	
<b>PWCS End-of-Unit Common Formative Assessment (Parts A and B): Multiplication and Division Computation &amp; Problem Solving</b>	<b>5.4, 5.8a, 5.3ab</b>
<b>Objectives Completed</b>	<b>5.4, 5.3ab</b>



<b>Unit 4: Data Analysis and Statistics</b> <b>November 7 – November 22 (10 days)</b>	
<b>Focus Topics</b>	<b>Standards of Learning</b>
Given a practical problem, represent data in line plots and stem-and-leaf plots.	5.16a
Interpret data represented in line plots and stem-and-leaf plots.	5.16b
Compare data represented in a line plot with the same data represented in a stem-and-leaf plot.	5.16c
Given a practical context, describe mean, median, and mode as measures of center.	5.17a
Given a practical context, describe mean as fair share.	5.17b
Given a practical context, describe the range of a set of data as a measure of spread.	5.17c
Given a practical context, determine the mean, median, mode, and range of a set of data.	5.17d
<i>Calculator permitted on all standards in Unit 4</i>	
<b>PWCS End-of-Unit Common Formative Assessment (Parts A and B): Data Analysis and Statistics</b>	<b>5.16abc, 5.17abcd</b>
<b>Objectives Completed</b>	

**Unit 5: Measurement**  
**November 28 - December 16 (15 days)**

<b>Focus Topics</b>	<b>Standards of Learning</b>
<p>Solve practical problems that involve perimeter, area, and volume in standard units of measure.</p> <ul style="list-style-type: none"> <li>• Develop a procedure for determining the area of a right triangle.</li> <li>• Develop a procedure for determining the volume of a rectangular prism using manipulatives.</li> </ul>	5.8a
<p>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.</p>	5.8b
<p>Given the equivalent measure of one unit, identify equivalent measurements within the metric system.</p>	5.9a
<p>Solve practical problems involving length, mass, and liquid volume using metric units.</p>	5.9b
<p>Solve practical problems related to elapsed time in hours and minutes within a 24-hour period.</p>	5.11
<i>Calculator permitted on all standards in Unit 5</i>	
<p><b>PWCS End-of-Unit Common Formative Assessment (Parts A and B): Measurement</b></p>	<b>5.8ab, 5.9ab, 5.11</b>
<p><b>Objectives Completed</b></p>	

<b>Unit 6: Computation and Problem Solving with Fractions January 3 – February 1 (19 days)</b>	
<b>Focus Topics</b>	<b>Standards of Learning</b>
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, <b>with models</b> .	5.6b*
<i>*Items measuring these SOLs will be completed <u>without</u> the use of a calculator.</i>	
<b>PWCS End-of-Unit Common Formative Assessment (Parts A and B): Fraction Computation</b>	<b>5.6ab</b>
<b>Objectives Completed</b>	

<b>Unit 7: Computation and Problem Solving with Decimals February 2 - February 25 (16 days)</b>	
<b>Focus Topics</b>	<b>Standards of Learning</b>
Estimate and determine the product and quotient of two numbers involving decimals. <ul style="list-style-type: none"> <li>• Divisors are limited to a single digit whole number, or a decimal expressed as tenths. (See all parameters in the Unit Guide)</li> <li>• Use multiple representations to model multiplication and division of decimals and whole numbers.</li> </ul>	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
<i>*Items measuring these SOLs will be completed <u>without</u> the use of a calculator.</i>	
<b>PWCS End-of-Unit Common Formative Assessment (Parts A and B): Decimal Computation</b>	<b>5.5ab</b>
<b>Objectives Completed</b>	

**Unit 8: Geometry**  
**February 27 – March 17 (15 days)**

<b>Focus Topics</b>	<b>Standards of Learning</b>
Identify and describe the diameter, radius, chord, and circumference of a circle. <ul style="list-style-type: none"> <li>• 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.</li> </ul>	5.10
Classify and measure right, acute, obtuse, and straight angles. <ul style="list-style-type: none"> <li>• Solve addition and subtraction problems to determine unknown angle measures on a diagram and practical problems.</li> </ul>	5.12
Classify triangles as right, acute, or obtuse and equilateral, scalene, or isosceles. <ul style="list-style-type: none"> <li>• Compare and contrast properties of triangles.</li> <li>• Identify congruent sides and right angles using geometric markings to denote properties of triangles</li> </ul>	5.13a
Investigate the sum of the interior angles in a triangle and determine an unknown angle measure. <ul style="list-style-type: none"> <li>• Use models to prove that the sum of the interior angles of a triangle is <math>180^\circ</math> and use that relationship to determine an unknown angle measure in a triangle.</li> </ul>	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"> <li>• Compare and contrast the characteristics of a given polygon that has been subdivided with the characteristics of the resulting parts.</li> </ul>	5.14b
<i>Calculator permitted on all standards in Unit 8</i>	
<b>PWCS End-of-Unit Common Formative Assessment (Parts A and B): Geometry</b>	<b>5.10, 5.12, 5.13ab,</b>
<b>Objectives Completed</b>	<b>5.14ab</b>

<b>Unit 9: Patterns, Functions, and Algebra</b> <b>March 21 – April 20 (17 days)</b>	
<b>Focus Topics</b>	<b>Standards of Learning</b>
Simplify <b>whole number</b> 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
<i>*Items measuring these SOLs will be completed <u>without</u> the use of a calculator.</i>	
<b>PWCS End-of-Unit Common Formative Assessment (Parts A and B): Patterns, Functions, and Algebra</b>	<b>5.7, 5.18, 5.19abcd</b>
<b>Objectives Completed</b>	

<b>Unit 10: Probability</b> <b>April 24 – May 5 (10 days)</b>	
<b>Focus Topics</b>	<b>Standards of Learning</b>
Predict and determine the probability of an outcome occurring by creating a sample space. <ul style="list-style-type: none"> <li>• Construct a sample space by using a tree diagram, list, or chart to identify all possible outcomes.</li> </ul>	5.15
Determine probability of an outcome using the Fundamental (Basic) Counting Principle.	5.15
<i>Calculator permitted on all standards in Unit 10</i>	
<b>PWCS End-of-Unit Common Formative Assessment (Parts A and B): Probability</b>	<b>5.15</b>
<b>Objectives Completed</b>	



<b>SOL Review and Testing May 8 – May 26 (15 days)</b>	
<b>Focus Topics</b>	<b>Standards of Learning</b>
All	All
<b>Post SOL Topics and SOL Test Retakes May 30 – June 15 (13 days)</b>	
<b>Focus Topics</b>	<b>Standards of Learning</b>
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