Grade 1 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 of the Standards of Learning have been taught by the end of the school-year, and that, as children move within the Division, their mathematics 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 90 minutes in Grade 1.** This should include an uninterrupted 75-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 created by the Teacher Focus Groups provide suggestions for learning experiences, assessments, and resources. These documents are available on the Mathematics Staff Communities site for each grade level.

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. Examples may include Number Talks, 3-Act Math, *Which One Doesn't Belong?*, *Splat!*, and *Greg Tang Math*. These types of activities are a critical element of mathematics instruction that provide essential practice and maintenance of key concepts and skills.

A sample schedule for Classroom Routines:

- Measurement Monday – money, time, weight, length, temperature
- Number Talk Tuesday
- Word Problem Wednesday
- Thinking Back Thursday – fractions, shapes, data
- Fluency Friday

Assessment Opportunities are provided throughout each unit. Each unit includes **Progress Checks** for select Focus Standards. The progress checks are intended to be used to determine student growth and guide ongoing instruction, not as a summative grade. **End of Unit Assessments** are provided for all units. Using **Assessment Regulation 661-1** as a guide, **assessment scoring guides** indicate achievement as follows:

- **S: meets grade level requirements using the rubric provided.**
- **S+: meets grade level requirements using the rubric provided AND answers ALL starred (*) questions correctly for that standard. *Starred (*) questions require understanding and connections that have not yet been taught.***

Students who do not demonstrate mastery should receive ongoing instruction and reassessment until mastery is met with at least a score of S (meets grade level requirements). <u>Reassessments can include: exit tickets, observations, student interview, and teacher-created assessments using the mastery assessment as a guide.</u>

Unit 1: Number and Data August 26 – September 25 (21 days)	
Focus Topics	**Standards of Learning**
Establish routines, procedures, organization, and use of manipulatives Daily Data Collection - attendance, weather, lunch choice ***(Continue to reinforce data concepts throughout the year through routines, etc.)*** ***NOTE: Number Sense and Computation concepts should be reviewed throughout the year through Classroom Routines***	1.12a
Number and Operations in base-ten	
• Teen Numbers	1.1a,1.2a
• Ordinal numbers first through tenth	1.3
• Review:	
○ Count forward to **100** orally	1.1a
○ Write numbers to **20**	1.1b
○ Count backwards from **10**	1.1c
○ Count forward orally by tens to **100** using objects	1.1d
○ Coin identification	1.8
○ Recognize penny, nickel, dime, and quarter and identify the value of each coin	
○ Order three or fewer sets up to **10**	1.2c
Introduce Symbols for Addition, Subtraction, and Equality (+, –, =)	1.15
Measurement and Data	
• Calendar	1.9b
• Graphing	1.12ab
Unit 1 End-of-Unit Assessment	**1.1ab ,1.2ab, 1.3, 1.12ab**
Objectives Completed	**1.3**

Unit 2: Addition and Time September 26 – October 17 (16 days)	
Focus Topics	**Standards of Learning**

Operations and Algebraic Thinking
• Addition Strategies:
  ○ counting on, rather than counting all;
  ○ think big, count small;
  ○ using the communicative property
  ○ "doubles" (e.g., 6 + 6 =__)
	1.7ab

• *Join* Problems (action involved)	1.6

GRADE 1: COMMON ADDITION AND SUBTRACTION PROBLEM TYPES		
Join (Result Unknown)	**Join (Change Unknown)**	**Join (Start Unknown)**
Sue had 9 pencils. Alex gave her 5 more pencils. How many pencils does Sue have altogether?	Sue had 9 pencils. Alex gave her some more pencils. Now Sue has 14 pencils. How many did Alex give her?	Sue had some pencils. Alex gave her 5 more. Now Sue has 14 pencils. How many pencils did Sue have to start with?

Measurement and Data • Introduce Time to the Hour	1.9a
• Money: Review the number of pennies equivalent to (equal to) a nickel, a dime, a quarter	1.8
Unit 2 End-of-Unit Assessment	**1.6, 1.7ab, 1.8, 1.9**
Objectives Completed	**None**

Unit 3: Number and Length October 18 – November 1 (11 days)	
Focus Topics	**Standards of Learning**

Number and Operations in Base-ten
• Count forward **<u>to 110</u>** orally and backwards **from 20** (start at any number and count forward and backward)
• Compare two numbers between **<u>0 and 50</u>** pictorially or with objects
• Order three or fewer sets up to **<u>50</u>**
 	
Nonstandard Measurement
• Compare Length (longer, shorter; taller, shorter; same as):
  ○ Measure
  ○ Estimate
	1.1ac
	
	1.2b
	1.2c
	
	1.10
	1.5b

Unit 3 End-of-Unit Assessment	**1.1ac, 1.2bc, 1.10**
Objectives Completed	**1.1a (assess *<u>orally</u>*)**

Unit 4: Subtraction, Addition and 2-D Shapes November 6 – November 26 (14 days)	
Focus Topics	**Standards of Learning**

Operations and Algebraic Thinking
• Subtraction Strategies
  ○ Take apart;
  ○ Take from;
  ○ Count- back
	1.7ab

• *Separate* Problems (action involved)	1.6

GRADE 1: COMMON ADDITION AND SUBTRACTION PROBLEM TYPES		
Separate (Result Unknown)	**Separate (Change Unknown)**	**Separate (Start Unknown)**
Brooke had 10 cookies. She gave 6 cookies to Joe. How many cookies does Brooke have now?	Brooke had 10 cookies. She gave some to Joe. She has 4 cookies left. How many cookies did Brooke give to Joe?	Brooke had some cookies. She gave 6 to Joe. Now she has 4 cookies left. How many cookies did Brooke start with?

Measurement and Geometry Plane figures: triangles, squares, rectangles, circles • Identify • Trace • Describe • Sort • Classify according to number of • sides, • vertices, • angles	1.11a 1.13
Representations of triangles, squares, rectangles, and circles • Identify • Describe in different environments regardless of orientation	1.11b
Pattern and Functions and Algebra • Sorting and Classifying	1.13
Unit 4 End-of-Unit Assessment	**1.6, 1.7ab,1.11ab, 1.13**
Objectives Completed	**1.11ab, 1.13**

Unit 5: Addition and Number **December 2 – December 20 (15 days)**	
Focus Topics	**Standards of Learning**

Operations and Algebraic Thinking
• Addition Strategies (sum is <u>**13**</u> and under)
  ○ Doubles plus-one
  ○ Doubles plus-two
	1.7ab

• *Join* Problems	1.6
Number and Operations in Base-ten • Identify tens and ones to **100** • Group a collection of up to **110** objects in tens and ones	1.2a
• Compare two numbers between <u>**0 and 70**</u> pictorially or with objects	1.2b
• Order three or fewer sets up to <u>**70**</u>	1.2c
Unit 5 End-of-Unit Assessment	**1.2abc, 1.6, 1.7ab**
Objectives Completed	**None**

GRADE 1: COMMON ADDITION AND SUBTRACTION PROBLEM TYPES		
Join (Result Unknown)	**Join (Change Unknown)**	**Join (Start Unknown)**
Sue had 9 pencils. Alex gave her 5 more pencils. How many pencils does Sue have altogether?	Sue had 9 pencils. Alex gave her some more pencils. Now Sue has 14 pencils. How many did Alex give her?	Sue had some pencils. Alex gave her 5 more. Now Sue has 14 pencils. How many pencils did Sue have to start with?

<table>
<tr><th colspan="2">Unit 6: Subtraction and Common Fractions
January 6 – January 24 (14 days)</th></tr>
<tr><th>Focus Topics</th><th>Standards of Learning</th></tr>
<tr><td>Operations and Algebraic Thinking
• Subtraction
○ Part/whole
○ Unknown addend
○ Count on/Think “addition”
○ Doubles</td><td>1.7ab</td></tr>
<tr><td>• Separate Problems
<table><tr><th colspan="3">GRADE 1: COMMON ADDITION AND SUBTRACTION PROBLEM TYPES</th></tr><tr><th>Separate
(Result Unknown)</th><th>Separate
(Change Unknown)</th><th>Separate
(Start Unknown)</th></tr><tr><td>Brooke had 10 cookies. She gave 6 cookies to Joe. How many cookies does Brooke have now?</td><td>Brooke had 10 cookies. She gave some to Joe. She has 4 cookies left. How many cookies did Brooke give to Joe?</td><td>Brooke had some cookies. She gave 6 to Joe. Now she has 4 cookies left. How many cookies did Brooke start with?</td></tr></table></td><td>1.6</td></tr>
<tr><td>Number and Number Sense
• Fractions of Whole – Fair shares for two or four sharers for halves and fourths
○ Represent
○ Solve practical problems
○ Name
○ Using models</td><td>1.4ab</td></tr>
<tr><td>Unit 6 End-of-Unit Assessment</td><td>1.6, 1.7ab, 1.4ab</td></tr>
<tr><td>Objectives Completed</td><td>None</td></tr>
</table>

Unit 7: Number, Time and Subtraction January 28 – February 14 (14 days)	
Focus Topics	**Standards of Learning**
Number and Operations in Base-ten • Comparing and Ordering two-digit numbers • Analyzing 100 • Finding Patterns on a 120 chart	1.2bc

Operations and Algebraic Thinking
• Subtraction
  ○ Unknown addend
  ○ Near doubles
	1.7ab

• *Part-Part-Whole* Problems	1.6

GRADE 1: COMMON ADDITION AND SUBTRACTION PROBLEM TYPES		
Part-Part-Whole (Whole Unknown)	**Part-Part-Whole (One Part Unknown)**	**Part-Part-Whole (Both Parts Unknown)**
Lisa has 4 red markers and 8 blue markers. How many markers does she have?	Lisa has 12 markers. Four of the markers are red, and the rest are blue. How many blue markers does Lisa have?	Lisa has a pack of red and blue markers. She has 12 markers in all. How many markers could be red? How many could be blue?

Measurement and Data • Introduce time to the **<u>half hour</u>** • Read and interpret calendar	1.9a 1.9b
Unit 7 End-of-Unit Assessment	**1.2bc,1.6,1.7ab, 1.9ab**
Objectives Completed	**1.9a**

Unit 8: Addition, Equality and Data February 18 – March 6 (14 days)	
Focus Topics	**Standards of Learning**

Operations and Algebraic Thinking
• Addition Strategies:
  ○ Using the associative property
  ○ Make ten strategy
  ○ Using the communicative property
	1.7ab

• *Part-Part-Whole* Problems	1.6

GRADE 1: COMMON ADDITION AND SUBTRACTION PROBLEM TYPES		
Part-Part-Whole (Whole Unknown)	**Part-Part-Whole (One Part Unknown)**	**Part-Part-Whole (Both Parts Unknown)**
Lisa has 4 red markers and 8 blue markers. How many markers does she have?	Lisa has 12 markers. Four of the markers are red, and the rest are blue. How many blue markers does Lisa have?	Lisa has a pack of red and blue markers. She has 12 markers in all. How many markers could be red? How many could be blue?

• Equality
  ○ Balancing equations: Revisit Equality [+, -, =]
  (e.g. 5 + 3 = 8, 8 = 5 + 3, 5 + 3 = 4 + 4)
	1.15

Measurement and Data ○ Collecting and Recording Data on a Tally Chart	1.12ab
Unit 8 End-of-Unit Assessment	**1.6.1.7ab, 1.12ab, 1.15**
Objectives Completed	**1.12ab, 1.15**

Unit 9: Subtraction and Number March 9 - April 3 (19 days)	
Focus Topics	**Standards of Learning**
Operations and Algebraic Thinking • Subtraction ○ Related facts/fact family ○ Counting on and back ○ Decomposing a number to bridge ten ○ Solving word problems with comparisons	1.7ab
• *Compare* Problems	1.6

GRADE 1: COMMON ADDITION AND SUBTRACTION PROBLEM TYPES		
Compare (Difference Unknown)	**Compare (Bigger Unknown)**	**Compare (Smaller Unknown)**
Ryan has 7 books and Chris has 2 books. How many more books does Ryan have than Chris? Ryan has 7 books. Chris has 2 books. How many fewer books does Chris have than Ryan?	Chris has 2 books. Ryan has 5 more books than Chris. How many books does Ryan have? Chris has 5 fewer books than Ryan. Chris has 2 books. How many books does Ryan have?	Ryan has 2 more books than Chris. Ryan has 7 books. How many books does Chris have? Chris has 5 fewer books than Ryan. Ryan has 7 books. How many books does Chris have?

Read and interpret calendar	1.9b
Estimation / Magnitude (e.g. **5, 50, 500)**	1.5ab
Number and Base Ten Operations • Tens and Ones ○ Representing number to **110** ○ Writing numbers to **110**	1.2a 1.1b
Unit 10 End-of-Unit Assessment	**1.1b, 1.2a, 1.5ab, 1.6, 1.7ab, 1.9b**
Objectives Completed	**1.1bc, 1.2a, 1.5ab, 1.9b**

Unit 10: Subtraction, Addition, Algebra, Patterns and Fractions April 14 – May 15 (24 days)	
Focus Topics	**Standards of Learning**
Number and Number Sense	
• Fractions of a Set	1.4ab

• Skip counting by twos, fives, and tens **<u>to 110</u>**
  ○ Using concrete objects
  ○ Starting at various multiples of 2, 5, or 10
	1.1d

Operations and Algebraic Thinking	

• Addition and Subtraction
  ○ Think addition
  ○ Make ten
	1.7ab

• *Compare* Problems	1.6

GRADE 1: COMMON ADDITION AND SUBTRACTION PROBLEM TYPES		
Compare (Difference Unknown)	**Compare (Bigger Unknown)**	**Compare (Smaller Unknown)**
Ryan has 7 books and Chris has 2 books. How many more books does Ryan have than Chris? Ryan has 7 books. Chris has 2 books. How many fewer books does Chris have than Ryan?	Chris has 2 books. Ryan has 5 more books than Chris. How many books does Ryan have? Chris has 5 fewer books than Ryan. Chris has 2 books. How many books does Ryan have?	Ryan has 2 more books than Chris. Ryan has 7 books. How many books does Chris have? Chris has 5 fewer books than Ryan. Ryan has 7 books. How many books does Chris have?

Patterns Functions and Algebra	

• **<u>Repeating</u>** Patterns
  ○ Identify
  ○ Describe
  ○ Extend
  ○ Create
○ Transfer (e.g. *red blue green* is the same as *ABC* is the same as *snap clap stomp*)
 	
• **<u>Growing</u>** Patterns (geometric, arithmetic)
  ○ Identify
  ○ Describe
  ○ Extend
  ○ Create
  ○ Transfer(e.g. *red blue, red red blue, red red red blue* is the same as *ABAABAAAB* is the same as *snap clap, snap snap clap, snap snap snap clap*)
	1.14

Unit 11 End-of-Unit Assessment	**1.1d, 1.4ab, 1.6, 1.7ab, 1.14**
Objectives Completed	**1.1d, 1.4ab, 1.6, 1.7ab, 1.14**

Unit 11: Number, Capacity, Mass, and Money **May 18 - June 12 (19 days)**	
Focus Topics	**Standards of Learning**

Measurement and Data
• Counting Collections with <u>Like</u> Coins [pennies, nickels, dimes] to **$1.00**
• Nonstandard Measurement
  ○ Length (longer, shorter; taller, shorter; same as)
  ○ Weight (lighter, heavier, the same as)
  ○ Capacity/Volume (more, less, equivalent)
 	
Number and Operations in Base Ten
• Place Value
  ○ Analyzing the 100 Chart
• Identify tens and ones to **100**
• Group a collection of up to **110** objects in tens and ones
• Compare two numbers between **<u>0 and 110</u>** pictorially or with objects
• Order three or fewer sets up to **<u>110</u>**
	1.8
	
	1.10
	
	1.2a
	
	1.2b
	1.2c

Unit 12 End-of-Unit Assessment	**1.2abc, 1.8, 1.10**
Objectives Completed	**1.2bc, 1.8, 1.10**