Wilson County Schools
Recommended Pacing for Grade 5 Math
2025 - 2026

District Expectations		
District Math Initiatives	**All K-5 teachers**	District Math Initiatives Document **(Updated)**
Math Block Expectations	**All K-5 teachers**	• Non-Negotiables • The CRA Model for Core Math Instructions: Building Deep Understanding • The Universal Application of CRA • Recommended Manipulatives and Their Uses By Grade Level • Must-Have Manipulatives • What is Happening in the Math Classroom?

Quarter 1	Quarter 2	Quarter 3	Quarter 4
8/25/2025 - 10/16/2025 38 Instructional Days	**10/20/2025 - 12/19/2025** 39 Instructional Days	**1/6/2026 - 3/12/2026** 46 Instructional Days	**3/16/2026 - 6/3/2025** 39 Instructional and 10 EOG Days
Assessments	**Assessments**	**Assessments**	**Assessments**
	Benchmark Window 10/20/2025 - 10/27/2025	**Benchmark Window** 1/12/2026 - 1/20/2026	**Benchmark Window** 1/12/2026 - 1/20/2026
STAR Math District **BOY Assessment Window** 9/15/2025 - 9/19/2025	**STAR Math District** **MOY Assessment Window** 12/1/2025 - 12/12/2025		**STAR Math** **EOY Assessment Window** 4/14/2026 - 4/21/2026

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STAR Math Progress Monitoring Tier 1 (Optional) Tier 2 & Tier 3 (Required) 10/1/25 - 10/31/25 *Be mindful of the dates so that your PM does not fall into the District BOY window.	**STAR Math Progress Monitoring** Tier 1 (Optional) Tier 2 & Tier 3 (Required) 11/1/25 - 11/30/25 *Be mindful of the dates so that your PM does not fall into the District MOY window.	**STAR Math Progress Monitoring** Tier 1 (Optional) Tier 2 & Tier 3 (Required) 1/6/26 - 1/31/26 2/1/26 - 2/28/26 3/1/26 - 3/31/26 *Be mindful of the dates so that your PM does not fall into the District EOY window.	**STAR Math Progress Monitoring** Tier 1 (Optional) Tier 2 & Tier 3 (Required) 5/1/26 - 5/31/26 *Be mindful of the dates so that your PM does not fall into the District MOY window.

EOG Test Specifications

- When planning instruction, consider the weight of the strand in determining the amount of instructional time you spend on that strand throughout the school year.
- DOK (Depth of Knowledge) Question Distribution
  - DOK 1: 30 - 40%
  - DOK 2: 50 - 60%
  - DOK 3: 8 - 10%
- Calculator
  - Active: 50%
  - Inactive: 50%
- Item Count:
  - Operational: 40
  - Field Test: 8

Domain	[redacted]	Grade 5
Operations and Algebraic Thinking		9–13%
Number and Operations in Base Ten		25–29%
Number and Operations – Fractions		39–43%
Measurement and Data, Geometry		19–23%
Total		**100%**

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MasteryConnect Benchmarks

- Students should have ample opportunity to practice with grid paper, plain paper, and notebook (optional).
- Practice with a handheld calculator as well as the online calculator should be provided throughout the year. Students should choose the calculator that works best for them.
- ALL students will have the read aloud option as a designated feature and should practice with read aloud throughout the year.

Priority Standards for Benchmark 1	Priority Standards for Benchmark 2	Priority Standards for Benchmark 3

• OA 2
• OA 3
• NBT 5
• MD 4
• MD 5
• G 1
 	
**Other standards may be embedded in the priority standards. (Ex. Multiplying a two-digit number by a one digit number may be embedded in finding the area of a rectangle.)*
	• NBT1
	• NBT 6
	• NF 4
	• NF 7
	• MD 2
	
	Plus all standards from Benchmark 1
	
	**Other standards may be embedded in the priority standards. (Ex. Multiplying a two-digit number by a one digit number may be embedded in finding the area of a rectangle.)*
		• NBT 3
		• NBT 7 (All operations)
		• NF 1
		  ○ Addition
		  ○ Subtraction
		• NF 3
		• MD 1
		• G 3
		
		Plus all standards from Benchmarks 1 and 2
		
		**Other standards may be embedded in the priority standards. (Ex. Multiplying a two-digit number by a one digit number may be embedded in finding the area of a rectangle.*

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Quarter 1

8/25/2025 - 10/16/2025
38 Instructional Days

Cluster 1 - Creating Classroom Community through Data and Graphing
2 - 3 Weeks

The North Carolina Collaborative for Mathematics Learning (NC2ML) emphasizes fostering a **positive and respectful learning environment** where students develop **strong problem-solving mindsets**. This involves encouraging students to **view mistakes as learning opportunities, fostering responsibility for their own learning, and promoting respect for diverse ideas through productive mathematical discourse**. The framework also highlights the integration of **data analysis and pattern recognition** into the curriculum, starting with accessible data standards and progressing to more complex graphing and coordinate plane concepts in fifth grade. Successful implementation requires dedicated time to **establish clear classroom norms, routines, and expectations** for math instruction and **active student participation in mathematical discussions.** Fifth graders are introduced to **line graphs**, building on their fourth-grade experience with frequency tables, scaled bar graphs, and line plots. A key skill for students is distinguishing between **categorical and numerical data**, especially recognizing data that **changes over time** as suitable for line graphs on a coordinate plane. Furthermore, tasks involving **visual and shape patterns** offer excellent opportunities for classroom discussions, helping students d**evelop mathematical communication skills and connect different representations of patterns**.

Date	Cluster	Content Standards	Notes
8/25 - 8/29	Cluster 1	**NC.5.MD.2** Represent and interpret data. ● Collect data by asking a question that yields data that changes over time. ● Make and interpret a representation of data using a line graph. ● Determine whether a survey question will yield categorical or numerical data, or data that changes over time. **NC.5.G.1** Graph points in the first quadrant of a coordinate plane, and identify and interpret the x and y coordinates to solve problems.	
9/1 - 9/5	Cluster 1		Holiday
9/15 - 9/19	Cluster 1		STAR Math BOY

		NC.5.OA.3 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. ● Graph the ordered pairs on a coordinate plane.	

Cluster 2 - Using Models to Explore Properties of Multiplication and Division
4 - 5 Weeks

Students learn about **volume** by building rectangular prisms with unit cubes, fostering a s**hared vocabulary (e.g., rows, columns, layers, length, width, height)** that connects to symbolic notation like 3×4×5. This hands-on experience helps them develop the volume formula and understand the **associative property of multiplication**, seeing that a prism's volume remains constant regardless of its orientation. The curriculum also reinforces **mental and alternative multiplication and division strategies** from fourth grade, such as area models and length models, linking them to the associative property and applying them to **real-world problems**. Importantly, this initial exploration of volume and related properties focuses on **conceptual understanding through various strategies, rather than introducing standard multiplication and division algorithms.**

Date	Cluster	Content Standards	Notes
9/22 - 9/26	Cluster 2	**NC.5.OA.2** Write, explain, and evaluate numerical expressions involving the four operations to solve up to two step problems. Include expressions involving: ● Parentheses, using the order of operations. ● Commutative, associative and distributive properties. **NC.5.NBT.5** Demonstrate fluency with the multiplication of two whole numbers up to a three-digit number by a two-digit number using the standard algorithm. **NC.5.NBT.6** Find quotients with remainders when dividing whole numbers with up to	
9/29 - 10/3	Cluster 2		
10/6 - 10/10	Cluster 2		
10/13 - 10/17	Cluster 2		10/16 End of Quarter 10/17 Optional Workday

		four-digit dividends and two-digit divisors using rectangular arrays, area models, repeated subtraction, partial quotients, and/or the relationship between multiplication and division. Use models to make connections and develop the algorithm. **NC.5.MD.4** Recognize volume as an attribute of solid figures and measure volume by counting unit cubes, using cubic centimeters, cubic inches, cubic feet, and improvised units. **NC.5.MD.5** Relate volume to the operations of multiplication and addition. ● Find the volume of a rectangular prism with whole-number side lengths by packing it with unit cubes, and show that the volume is the same as would be found by multiplying the edge lengths. ● Build understanding of the volume formula for rectangular prisms with whole-number edge lengths in the context of solving problems. ● Find volume of solid figures with one-digit dimensions composed of two non-overlapping rectangular prisms.	

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Quarter 2

10/20/2025 - 12/19/2025
39 Instructional Days

Cluster 3 - Use Place Value Strategies To Add And Subtract Whole Numbers
3 - 4 Weeks

This curriculum cluster focuses on extending students' understanding of multiplication and division to include **fractions**, emphasizing that the core meaning of these operations remains unchanged. They continue to use area and length models to solve problems rather than developing the algorithm. Students learn to interpret fractions as the **division of a numerator by a denominator** through fair-sharing problems, initially with whole number division leading to fractional remainders, and then with solutions less than one. Using **models and drawings** is crucial as students explore dividing unit fractions by whole numbers and solving "multiple groups" problems involving whole numbers and fractions. Students need the chance to create their own drawings when working on tasks rather than always being presented with pre-made fraction materials that are already shared fairly for them. The goal is to **build a conceptual foundation** for multiplying a fraction by a fraction, which will be further developed in a later cluster, and to enable students to **assess the reasonableness** of their answers by considering the size of factors and their products. This approach prioritizes **conceptual understanding through modeling** over algorithmic memorization, with an emphasis on specific denominators appropriate for fifth grade.

Date	Cluster	Content Standards	Notes
10/20 - 10/24	Cluster 2 / Cluster 3	**NC.5.NF.3** Use fractions to model and solve division problems. ● Interpret a fraction as an equal sharing context, where a quantity is divided into equal parts. ● Model and interpret a fraction as the division of the numerator by the denominator. ● Solve one-step word problems involving division of whole numbers leading to answers in the form of fractions and mixed numbers, with denominators of 2, 3, 4, 5, 6, 8, 10, and 12, using area, length, and set models or equations.	Benchmarks
10/27 - 10/31	Cluster 3		
11/3 - 11/7	Cluster 3		Mandatory Workday
11/10 - 11/14	Cluster 3		Holiday
11/17 - 11/21	Cluster 3		

		NC.5.NF.4 Apply and extend previous understandings of multiplication to multiply a fraction or whole number by a fraction, including mixed numbers. ● Use area and length models to multiply two fractions [a fraction by a whole number], with the denominators 2, 3, 4. ● Explain why multiplying a given number by a fraction greater than 1 results in a product greater than the given number and when multiplying a given number by a fraction less than 1 results in a product smaller than the given number. ● Solve one-step word problems involving multiplication of fractions using models to develop the algorithm. **NC.5.NF.7** Solve one-step word problems involving division of unit fractions by non-zero whole numbers and division of whole numbers by unit fractions using area and length models, and equations to represent the problem. **NC.5.OA.2** Write, explain, and evaluate numerical expressions involving the four operations to solve up to two step problems. Include expressions involving: ● Parentheses, using the order of operations. ● Commutative, associative and distributive properties.	

Cluster 4 - Develop Multi-Digit Multiplication And Division Strategies Through Meaningful Contexts And Models
3 - 4 Weeks

Cluster 4 aims to enhance students' **number sense** by exploring **place value** from one million to thousandths. Students engage in estimation activities and use various tools, like calculators, place value blocks, and meter sticks, to discover that a digit's value is ten times greater than the digit to its right and ten times less than the digit to its left. They apply these place value concepts to **metric conversions** and deepen their understanding of decimals through hands-on activities involving length and area models, comparing decimals up to thousandths. Students continue to use metric conversion tables to solve problems. Furthermore, students **collect and graph metric**

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measurement data that changes over time, reinforcing their understanding of line graphs. A crucial consideration is providing **ample opportunities for concrete modeling** and guiding students to **communicate** their observations about place value with precise mathematical language, addressing potential misconceptions that arise when multiplying by ten.

Date	Cluster	Content Standards	Notes
11/24 - 11/25	Cluster 4	**NC.5.NBT.1** Explain the patterns in the place value system from one million to the thousandths place. ● Explain 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. ● Explain patterns in products and quotients when numbers are multiplied by 1,000, 100, 10, 0.1, and 0.01 and/or divided by 10 and 100. **NC.5.NBT.3** Read, write, and compare decimals to thousandths. ● Write decimals using base-ten numerals, number names, and expanded form. ● Compare two decimals to thousandths based on the value of the digits in each place, using >, =, and < symbols to record the results of comparisons. **NC.5.MD.2** Represent and interpret data. ● Collect data by asking a question that yields data that changes over time. ● Make and interpret a representation of data using a line graph. ● Determine whether a survey question will yield categorical or numerical data, or data that changes over time.	Optional Workday, Thanksgiving Holidays
12/1 - 12/5	Cluster 4		STAR Math Window opens
12/8 - 12/12	Cluster 4		STAR Math Window closes
12/15 -12/19	Cluster 4		End of Quarter 12/19 Early Release
12/22 - 1/1	Winter Break		

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Quarter 3

1/6/2026 - 3/12/2026
46 Instructional Days

Cluster 5 - Using Models to Add and Subtract Decimals and Fractions
4 - 5 Weeks

This curriculum cluster advances students' understanding from place value to **decimal computation**, emphasizing that the f**undamental meanings of addition and subtraction remain consistent** across whole numbers, fractions, and decimals. Students utilize length and area models to add and subtract decimals within **real-world contexts**, while also deepening their grasp of **equivalent fractions** through relational thinking and fair-sharing problems. This leads to the development of strategies for adding and subtracting fractions with **unlike denominators**, where students learn to express both fractions in terms of a common unit fraction. Throughout, they learn to name quantities in various ways (decimals, fractions, mixed numbers) and use benchmark fractions to estimate and check the reasonableness of their solutions. The focus remains on **conceptual understanding through concrete models**, with students **progressing** from situations where only one denominator needs to be changed to those requiring both, ultimately laying the groundwork for **algorithmic mastery in sixth grade.**

Date	Cluster	Content Standards	Notes
1/2 1/5 - 1/9	Review Cluster 3 / Cluster 4	**NC.5.NF.1** Add and subtract fractions, including mixed numbers, with unlike denominators using related fractions: halves, fourths and eighths; thirds, sixths, and twelfths; fifths, tenths, and hundredths. ● Use benchmark fractions and number sense of fractions to estimate mentally and assess the reasonableness of answers. ● Solve one- and two-step word problems in context using area and length models to develop the algorithm. Represent the word problem in an equation. **NC.5.NBT.7** Compute and solve real-world problems with multi-digit whole numbers and decimal numbers.	1/2 - Optional Workday 1/5 - Mandatory Workday
1/12 - 1/16	Cluster 5		Benchmarks
1/19 - 1/23	Cluster 5		Holiday
1/26 - 1/30	Cluster 5		
2/2 - 2/6	Cluster 5		
2/9 - 2/13	Cluster 5		
2/16 - 2/20	Cluster 5		2/11 Early Release

		● Add and subtract decimals to thousandths using models, drawings or strategies based on place value. ~~● Multiply decimals with a product to thousandths using models, drawings, or strategies based on place value.~~ ~~● Divide a whole number by a decimal and divide a decimal by a whole number, using repeated subtraction or area models. Decimals should be limited to hundredths.~~ ● Use estimation strategies to assess reasonableness of answers. **NC.5.OA.2** Write, explain, and evaluate numerical expressions involving the four operations to solve up to two step problems. Include expressions involving: ● Parentheses, using the order of operations. ● Commutative, associative and distributive properties.	

Cluster 6 - Using Models to Multiply and Divide Whole Numbers, Decimals, and Fractions
5 - 6 Weeks

This cluster focuses on developing students' fluency in **multiplication and division** through word problems and real-world tasks, including measurement contexts. Students will connect **area models** and partial products to the standard algorithm for multiplying whole numbers, aiming for fluency by the end of this cluster. While they begin to **develop the division algorithm** by connecting models and strategies, fluency is **not expected** until sixth grade, with emphasis on reasoning about **remainders in practical situations**. The curriculum also extends to multiplying **fractions by fractions** using area and length models, though algorithmic development for fraction and decimal operations is deferred to sixth grade. Measurement serves as a rich context for exploring these operations, incorporating both metric conversions and customary unit conversions (using conversion tables), where students are encouraged to assess the reasonableness of their answers within real-world scenarios. **The content provides opportunities to revisit concepts from earlier clusters, such as data analysis, patterns, and volume.**

2/16 - 2/20	Cluster 6	**NC.5.MD.1** Given a conversion chart, use multiplicative reasoning to solve one-step conversion problems within a given measurement system.	2/11 Early Release
2/23 - 2/27	Cluster 6		

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3/2 - 3/6	Cluster 6	**NC.5.NBT.5** Demonstrate fluency with the multiplication of two whole numbers up to a three-digit number by a two-digit number using the standard algorithm. **NC.5.NBT.6** Find quotients with remainders when dividing whole numbers with up to four-digit dividends and two-digit divisors using rectangular arrays, area models, repeated subtraction, partial quotients, and/or the relationship between multiplication and division. Use models to make connections and develop the algorithm. **NC.5.NBT.7** Compute and solve real-world problems with multi-digit whole numbers and decimal numbers. ● ~~Add and subtract decimals to thousandths using models, drawings or strategies based on place value.~~ ● Multiply decimals with a product to thousandths using models, drawings, or strategies based on place value. ● Divide a whole number by a decimal and divide a decimal by a whole number, using repeated subtraction or area models. Decimals should be limited to hundredths. ● Use estimation strategies to assess reasonableness of answers. **NC.5.NF.4** Apply and extend previous understandings of multiplication to multiply a fraction or whole number by a fraction, including mixed numbers. ● Use area and length models to multiply two fractions, with the denominators 2, 3, 4. ● Explain why multiplying a given number by a fraction greater than 1 results in a product greater than the given number and when multiplying a given number by a fraction less than 1 results in a product smaller than the given number. ● Solve one-step word problems involving multiplication of fractions using	
3/9 - 3/13	Cluster 6		Optional Workday
3/16 - 3/20	Cluster 6		

		models to develop the algorithm. **NC.5.NF.7** Solve one-step word problems involving division of unit fractions by non-zero whole numbers and division of whole numbers by unit fractions using area and length models, and equations to represent the problem. **NC.5.OA.2** Write, explain, and evaluate numerical expressions involving the four operations to solve up to two step problems. Include expressions involving: ● Parentheses, using the order of operations. ● Commutative, associative and distributive properties.	

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Quarter 4

3/16/2026 - 6/3/2025
39 Instructional and 10 EOG Days

Cluster 6 - Using Models to Multiply and Divide Whole Numbers, Decimals, and Fractions
5 - 6 Weeks

Date	Cluster	Content Standards	Notes
3/23 - 3/27	Cluster 6	*Continue Cluster 6*	Benchmarks
3/30 - 4/3	Cluster 6		Holiday
4/6 - 4/10	Spring Break		Spring Break

Cluster 7 - Classifying Quadrilaterals
1 - 2 Weeks

In fifth grade, students move beyond simply identifying quadrilaterals to **classifying them into a hierarchy**, a more advanced geometric concept. This involves using **minimal defining lists** to understand the essential properties that define a shape and its subsets. Students demonstrate their understanding by evaluating **true/false statements** about quadrilateral classifications and justifying their reasoning. It's crucial to provide students with **ample opportunities to sort, draw, and sketch a variety of quadrilaterals**, including those with **non-traditional orientations**, to ensure they focus on relevant properties. Educators should also be aware of differing definitions for quadrilaterals across resources, aligning with official state definitions for testing purposes. This classification work can be effectively integrated with **coordinate graphing**, a concept explored earlier in the curriculum.

4/13 - 4/17	Cluster 7	**NC.5.G.1** Graph points in the first quadrant of a coordinate plane, and identify and interpret the x and y coordinates to solve problems. **NC.5.G.3**	Star Math Opens 4/14
4/20 - 4/24	Cluster 7		Star Math Closes 4/21

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		Classify quadrilaterals into categories based on their properties. ● Explain that attributes belonging to a category of quadrilaterals also belong to all subcategories of that category. ● Classify quadrilaterals in a hierarchy based on properties.	
4/27 - 5/1	Review		Optional Workday
5/4 - 5/8	Review		
5/11 - 5/15	Review		
5/18 - 5/22	Review	***EOG WEEK***	
5/25 - 5/29	Remediate / Enrich		
6/1 - 6/3	Remediate / Enrich		