



## Overview

# Grade 4 Mathematics Year At-A-Glance

How can we use mathematics to organize and make sense of our world? Students in fourth grade begin to leverage their understanding of number relationships by organizing and reasoning mathematically through a variety of contextual problems using multiple representations to justify their thinking. Students are given the time to explore and develop connections between fractions and decimals.

<b><u>Quarter 1</u></b>	<b>Unit 1: Building a Mathematical Community Through the Data Cycle (about 9 days)</b>	<b>Unit 2: Addition and Subtraction (about 14 days)</b>	<b>Unit 3: Fraction Number Sense and Probability (about 21 days)</b>	<b>Begin Unit 4: Multiplication and Division 1 (about 6 days)</b>
<b><u>Quarter 2</u></b>	<b>Complete Unit 4: Multiplication and Division 1 (about 17 days)</b>	<b>Unit 5: Statistics and Measurement (about 12 days)</b>	<b>Begin Unit 6: Decimal Number Sense and Computation (about 10 days)</b>	
<b><u>Quarter 3</u></b>	<b>Complete Unit 6: Decimal Number Sense and Computation (about 5 days)</b>	<b>Unit 7: Fraction Computation (about 12 days)</b>	<b>Unit 8: Geometry and Measurement (about 28 days)</b>	
<b><u>Quarter 4</u></b>	<b>Unit 9: Multiplication and Division 2 (about 23 days)</b>	<b>SOL Review &amp; Post SOL Reteaching (about 23 days)</b>		

\*\* 4.CE.2b should be addressed throughout the year.

Quarter 1: August 19 – October 31 (50 Days)

Quarter 1	Unit	Suggested Time	Standards of Learning
Quarter 1	<u>Unit 1: Building a Mathematical Community Through the Data Cycle</u>	About 9 days	4.PS.1 The student will apply the data cycle (formulate questions; collect or acquire data; organize and represent data; and analyze data and communicate results) with a focus on line graphs. [a, b]
	<u>Unit 2: Addition and Subtraction</u>	About 14 days Assessment Window: Week of 9/16/24	4.NS.1 The student will use place value understanding to read, write, and identify the place and value of each digit in a nine-digit whole number. 4.NS.2 The student will demonstrate an understanding of the base 10 system to compare and order whole numbers up to seven digits. 4.CE.1 The student will estimate, represent, solve, and justify solutions to single-step and multistep problems, including those in context, using addition and subtraction with whole numbers. 4.PFA.1 The student will identify, describe, extend, and create increasing and decreasing patterns (limited to addition, subtraction, and multiplication of whole numbers), including those in context, using various representations. [focus on addition and subtraction]
	<u>Unit 3: Fraction Number Sense and Probability</u>	About 21 days Assessment Window: Week of 10/21/24	4.NS.3 The student will use mathematical reasoning and justification to represent, compare, and order fractions (proper, improper, and mixed numbers with denominators 12 or less), with and without models. 4.PS.2 The student will model and determine the probability of an outcome of a simple event.
	<u>Begin Unit 4: Multiplication and Division 1</u>	About 6 days Assessment Window: Week of 12/2/24	4.CE.2 The student will estimate, represent, solve, and justify solutions to single-step and multistep problems, including those in context, using multiplication with whole numbers, and single-step problems, including those in context, using division with whole numbers; and recall with automaticity the multiplication facts through $12 \times 12$ and the corresponding division facts. [focus on two-digit dividend without remainders] 4.PFA.1 The student will identify, describe, extend, and create increasing and decreasing patterns (limited to addition, subtraction, and multiplication of whole numbers), including those in context, using various representations. [focus on multiplication] 4.MG.3 The student will use multiple representations to develop and use formulas to solve problems, including those in context, involving area and perimeter limited to rectangles and squares (in both U.S. Customary and metric units). [a, b, c, f] [focus on 1 digit by 1 digit, 1 digit by 2 digits, 1 digit by 3 digits]

\*\* 4.CE.2b should be addressed throughout the year.

Quarter 2	Unit	Suggested Time	Standards of Learning
Quarter 2	<u>Complete Unit 4: Multiplication and Division 1</u>	About 17 days  Assessment Window: Week of 12/2/24	4.CE.2 The student will estimate, represent, solve, and justify solutions to single-step and multistep problems, including those in context, using multiplication with whole numbers, and single-step problems, including those in context, using division with whole numbers; and recall with automaticity the multiplication facts through $12 \times 12$ and the corresponding division facts. [focus on two-digit dividend without remainders]  4.PFA.1 The student will identify, describe, extend, and create increasing and decreasing patterns (limited to <del>addition, subtraction,</del> and multiplication of whole numbers), including those in context, using various representations. [focus on multiplication]  4.MG.3 The student will use multiple representations to develop and use formulas to solve problems, including those in context, involving area and perimeter limited to rectangles and squares (in both U.S. Customary and metric units). [a, b, c, f] [focus on 1 digit by 1 digit, 1 digit by 2 digits, 1 digit by 3 digits]
	<u>Unit 5: Statistics and Measurement</u>	About 12 days  Assessment Window: Week of 12/16/24	4.MG.2 The student will solve single-step and multistep contextual problems involving elapsed time (limited to hours and minutes within a 12-hour period).  4.PS.1 The student will apply the data cycle (formulate questions; collect or acquire data; organize and represent data; and analyze data and communicate results) with a focus on line graphs.
	<u>Begin Unit 6: Decimal Number Sense and Computation</u>	About 15 days  Assessment Window: Week of 1/27/25	4.NS.4 The student will use mathematical reasoning and justification to represent, compare, and order decimals through thousandths, with and without models.  4.NS.5 The student will reason about the relationship between fractions and decimals (limited to halves, fourths, fifths, tenths, and hundredths) to identify and represent equivalencies.  4.CE.4 The student will estimate, represent, solve, and justify solutions to single-step and multistep problems, including those in context, using addition and subtraction of decimals through the thousandths, with and without models.

\*\* 4.CE.2b should be addressed throughout the year.

Quarter 3	Unit	Suggested Time	Standards of Learning
Quarter 3	<u>Complete Unit 6: Decimal Number Sense and Computation</u>	About 5 days  Assessment Window: Week of 1/27/25	<p>4.NS.4 The student will use mathematical reasoning and justification to represent, compare, and order decimals through thousandths, with and without models.</p> <p>4.NS.5 The student will reason about the relationship between fractions and decimals (limited to halves, fourths, fifths, tenths, and hundredths) to identify and represent equivalencies.</p> <p>4.CE.4 The student will estimate, represent, solve, and justify solutions to single-step and multistep problems, including those in context, using addition and subtraction of decimals through the thousandths, with and without models.</p>
	<u>Unit 7: Fraction Computation</u>	About 12 days  Assessment Window: Week of 2/10/25	<p>4.CE.3 The student will estimate, represent, solve, and justify solutions to single-step problems, including those in context, using addition and subtraction of fractions (proper, improper, and mixed numbers with like denominators of 2, 3, 4, 5, 6, 8, 10, and 12), with and without models; and solve single-step contextual problems involving multiplication of a whole number (12 or less) and a unit fraction, with models.</p>
	<u>Unit 8: Geometry and Measurement</u>	About 28 days  Assessment Window: Week of 3/24/25	<p>4.MG.1 The student will reason mathematically to solve problems, including those in context, that involve length, weight/mass, and liquid volume using U.S. Customary and metric units.</p> <p>4.MG.3 The student will use multiple representations to develop and use formulas to solve problems, including those in context, involving area and perimeter limited to rectangles and squares (in both U.S. Customary and metric units).</p> <p>4.MG.4 The student will identify, describe, and draw points, rays, line segments, angles, and lines, including intersecting, parallel, and perpendicular lines.</p> <p>4.MG.5 The student will classify and describe quadrilaterals (parallelograms, rectangles, squares, rhombi, and/or trapezoids) using specific properties and attributes.</p> <p>4.MG.6 The student will identify, describe, compare, and contrast plane and solid figures according to their characteristics (number of angles, vertices, edges, and the number and shape of faces), with and without models.</p>

\*\* 4.CE.2b should be addressed throughout the year.

Quarter 4: April 1 – June 12 (46 Days)

Quarter 4 Unit Guides will be released on March 11, 2025

Quarter 4	Unit	Suggested Time	Standards of Learning
Quarter 4	<u>Unit 9: Multiplication and Division 2</u>	About 23 days  Assessment Window: Week of 5/5/25	4.CE.2 The student will estimate, represent, solve, and justify solutions to single-step and multistep problems, including those in context, using multiplication with whole numbers, and single-step problems, including those in context, using division with whole numbers; and recall with automaticity the multiplication facts through $12 \times 12$ and the corresponding division facts. [focus on three-digit dividend with remainders]

\*\* 4.CE.2b should be addressed throughout the year.