

Mathematics 4th Grade

Common Core Standards for Mathematics

Content Standards

Operations and Algebraic Thinking

CCSS.MATH.CONTENT.4.OA.A: Use the four operations with whole numbers to solve problems.

CCSS.MATH.CONTENT.4.OA.B: Gain familiarity with factors and multiples.

CCSS.MATH.CONTENT.4.OA.C: Generate and analyze patterns.

Number and Operations in Base Ten

CCSS.MATH.CONTENT.4.NBT.A: Generalize place value understanding for multi-digit whole numbers.

CCSS.MATH.CONTENT.4.NBT.B: Use place value understanding and properties of operations to perform multi-digit arithmetic.

Number and Operations-Fractions

CCSS.MATH.CONTENT.4.NF.A: Extend understanding of fraction equivalence and ordering.

CCSS.MATH.CONTENT.4.NF.B: Build fractions from unit fractions.

CCSS.MATH.CONTENT.4.NF.C: Understand decimal notation for fractions, and compare decimal fractions.

Measurement and Data

CCSS.MATH.CONTENT.4.MD.A: Solve problems involving measurement and conversion of measurements.

CCSS.MATH.CONTENT.4.MD.B: Represent and interpret data.

CCSS.MATH.CONTENT.4.MD.C: Geometric measurement: understand concepts of angle and measure angles.

Geometry

CCSS.MATH.CONTENT.4.G.A: Draw and identify lines and angles, and classify shapes by properties of their lines and angles.

Mathematical Practices

CCSS.MATH.PRACTICE.MP1: Make sense of problems and persevere in solving them.

CCSS.MATH.PRACTICE.MP2: Reason abstractly and quantitatively.

CCSS.MATH.PRACTICE.MP3: Construct viable arguments and critique the reasoning of others.

CCSS.MATH.PRACTICE.MP4: Model with mathematics.

CCSS.MATH.PRACTICE.MP5: Use appropriate tools strategically.

CCSS.MATH.PRACTICE.MP6: Attend to precision.

CCSS.MATH.PRACTICE.MP7: Look for and make use of structure.

CCSS.MATH.PRACTICE.MP8: Look for and express regularity in repeated reasoning.

* Mathematical Practices are incorporated within all units.

Technology

Elmo, SMART Board, Chromebooks, laptop, *My Math* website

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Standards	Essential Questions	Content	Skills	Assessment	Resources
Place Value CCSS.MATH.CONTENT.4.NBT.A	Place Value How does place value help represent the value of numbers?	Place Value -Reading and writing numbers -Period -Standard, expanded, and word form -Model place value relationships -Comparing -Ordering -Rounding	Place Value -Read numbers appropriately -Recognize the value of a digit in its place -Write and understand the relationship of numbers in standard, expanded, and word form -Compare numbers -Order numbers -Round numbers	Place Value -Projects/Interactive Notebook -Quizzes -Test	Place Value - <i>My Math</i> by McGraw-Hill (2016) -Manipulatives
Addition and Subtraction: Whole Numbers CCSS.MATH.CONTENT.4.NBT.B	Addition and Subtraction: Whole Numbers How are different strategies used to add or subtract?	Addition and Subtraction: Whole Numbers -Sum -Difference -Addition properties -Subtraction rules -Estimation	Addition and Subtraction: Whole Numbers -Subtract across zeros -Add using borrowing -Subtract using regrouping -Estimate to specified place values to find sums and differences -Understand and apply addition properties and subtraction rules	Addition and Subtraction: Whole Numbers -Projects/Interactive Notebook -Quizzes -Test	Addition and Subtraction: Whole Numbers - <i>My Math</i> by McGraw-Hill (2016) -Manipulatives
Multiplication: Whole Numbers CCSS.MATH.CONTENT.4.NBT.B CCSS.MATH.CONTENT.4.OA.A	Multiplication: Whole Numbers How are multiplication and division related?	Multiplication: Whole Numbers -Multiple 10s, 100s, and 1000s -Estimation of products -Multiplication properties -Multiplication strategies -Regroup -Multi-step word problems	Multiplication: Whole Numbers -Multiply whole numbers of up to four digits by a one-digit whole number -Multiply two two-digit numbers -Estimate to specified place values to find products -Understand and apply multiplication properties -Apply different multiplication strategies -Understand place value to be able to regroup -Read and solve multi-step word problems	Multiplication: Whole Numbers -Projects/Interactive Notebook -Quizzes -Test	Multiplication: Whole Numbers - <i>My Math</i> by McGraw-Hill (2016) -Manipulatives

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Factors and Multiples CCSS.MATH.CONTENT.4.OA.B CCSS.MATH.CONTENT.4.OA.C	Factors and Multiples How do factors and multiples apply to multiplication and division?	Factors and Multiples -Prime number -Composite number -Factors -Multiples -Patterns -Order of operations -Divisibility rules	Factors and Multiples -Identify prime and composite numbers -Understand factors -List factors of a given number -Find multiples of a given number -Identify patterns in numbers -Understand divisibility rules	Factors and Multiples -Projects/Interactive Notebook -Quizzes -Test	Factors and Multiples - <i>My Math</i> by McGraw-Hill (2016) -Manipulatives
Division: Whole Numbers CCSS.MATH.CONTENT.4.NBT.B CCSS.MATH.CONTENT.4.OA.A	Division: Whole Numbers How does division affect numbers?	Division: Whole Numbers -Dividend -Divisor -Quotient -Remainder -Divide multiples of 10, 100, and 1000 -Estimation of quotients -Multi-step word problems -Distributive Property -Division strategies -Quotients with zeros	Division: Whole Numbers -Understand vocabulary and use to solve problems -Use estimation to divide -Understand and apply the Distributive Property -Understand how place value impacts division -Apply different division strategies -Use division to solve word problems -Divide with zeros -Divide whole numbers of up to four digits by a one-digit whole number	Division: Whole Numbers -Projects/Interactive Notebook -Quizzes -Test	Division: Whole Numbers - <i>My Math</i> by McGraw-Hill (2016) -Manipulatives

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Fractions CCSS.MATH.CONTENT.4.NF.A	Fractions How can different fractions name the same amount?	Fractions -Numerator -Denominator -Factors -Multiples -Prime -Composite -Equivalent fractions -Simplest form -Common denominators -Compare -Order -Mixed numbers -Improper fractions	Fractions -Understand and generate equivalent fractions -Make a fraction in simplest form -Find common denominators -Compare and order fractions -Convert mixed numbers to improper fractions -Convert improper fractions to mixed numbers	Fractions -Projects/Interactive Notebook -Quizzes -Test	Fractions - <i>My Math</i> by McGraw-Hill (2016) -Manipulatives
Fractions: Addition and Subtraction CCSS.MATH.CONTENT.NF.A CCSS.MATH.CONTENT.NF.B	Fractions: Addition and Subtraction How are operations used to model real world fractions?	Fractions: Addition and Subtraction -Add and subtract with like denominators -Models -Subtraction with renaming -Add and subtract mixed numbers -Multi-step word problems	Fractions: Addition and Subtraction -Add and subtract fractions with like denominators -Add and subtract mixed numbers with like denominators -Use models to add and subtract fractions and mixed numbers -Solve word problems including fractions	Fractions: Addition and Subtraction -Projects/Interactive Notebook -Quizzes -Test	Fractions: Addition and Subtraction - <i>My Math</i> by McGraw-Hill (2016) -Manipulatives
Fractions: Multiplication CCSS.MATH.CONTENT.NF.B	Fractions: Multiplication How is multiplication used to model real world fractions?	Fractions: Multiplication -Multiplication of a fraction by a whole number -Multiplication of a mixed number by a whole number -Multi-step problems	Fractions: Multiplication -Multiply fractions by whole numbers -Multiply mixed numbers by whole numbers -Solve word problems including fractions	Fractions: Multiplication -Projects/Interactive Notebook -Quizzes -Test	Fractions: Multiplication - <i>My Math</i> by McGraw-Hill (2016) -Manipulatives

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Standards	Essential Questions	Content	Skills	Assessment	Resources
Fractions and Decimals CCSS.MATH.CONTENT.NF.C	Fractions and Decimals How are fractions and decimals related?	Fractions and Decimals -Place value through hundredths -Modeling -Equivalent fractions and decimals -Money -Compare and order decimals	Fractions and Decimals -Read and write decimal numbers through hundredths place -Use place value and models to add fractions with denominator of 10 or 100 -Use equivalent fractions to add tenths and hundredths -Understand relationship of decimal numbers and money -Compare and order decimals through the hundredths place	Fractions and Decimals -Projects/Interactive Notebook -Quizzes -Test	Fractions and Decimals - <i>My Math</i> by McGraw-Hill (2016) -Manipulatives
Measurement and Data CCSS.MATH.CONTENT.MD.A CCSS.MATH.CONTENT.MD.B	Measurement and Data How can conversion of measurements help solve real world problems? How can algebraic knowledge be used to solve problems in the real world?	Measurement and Data -Units of length, weight, time, and volume -Metric system -Customary system -Conversion -Line plot -Multi-step problems	Measurement and Data -Convert measurements within a given system from larger units to smaller units -Make a line plot to display measurements in fractions -Solve problems using line plots -Use algebraic knowledge and formulas to solve real world problems -Use operations to solve measurement word problems	Measurement and Data -Projects/Interactive Notebook -Quizzes -Test	Measurement and Data - <i>My Math</i> by McGraw-Hill (2016) -Manipulatives

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Geometry CCSS.MATH.CONTENT.MD.C CCSS.MATH.CONTENT.G.A	Geometry How are different ideas about geometry connected?	Geometry -Points -Lines -Line segments -Rays -Angles -Angle measurement -Shapes -Properties -Perpendicular -Parallel -Intersecting lines -Line of symmetry -Complimentary angles -Supplementary angles -Circle	Geometry -Identify lines, line segment, ray, and angles -Identify parallel, perpendicular and intersecting lines -Classify angles -Classify triangles and quadrilaterals -Use a protractor to measure angles -Find and draw lines of symmetry -Join and separate angles -Understand relationship between angles and circles	Geometry -Projects/Interactive Notebook -Quizzes -Test	Geometry - <i>My Math</i> by McGraw-Hill (2016) -Manipulatives