









Elementary/Middle - 5th Grade Math

North Boone CUSD 200

UNITS (8/8 SELECTED)

SUGGESTED DURATION

 Unit 1: Whole Numbers, Expressions, and Volume	<i>26 lessons</i>
 Unit 2: Add and Subtract Fractions and Mixed Numbers	<i>12 lessons</i>
 Unit 3: Multiply Fractions and Mixed Numbers	<i>11 lessons</i>
 Unit 4: Divide Fractions and Convert Customary Units	<i>15 lessons</i>
 Unit 5: Add and Subtract Decimals	<i>10 lessons</i>
 Unit 6: Multiply Decimals	<i>11 lessons</i>
 Unit 7: Divide Decimals and Convert Metric Units	<i>10 lessons</i>
 Unit 8: Graphs, Patterns, and Geometry	<i>9 lessons</i>

Unit 1: Whole Numbers, Expressions, and Volume

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STANDARDS

National Common Core State Standards - Grade 5 - Mathematics

CCSS.Math.Content.5.NBT.B.5

Fluently multiply multi-digit whole numbers using the standard algorithm.

CCSS.Math.Content.5.NBT.B.6

Find whole-number quotients of whole numbers with up to four-digit dividends and two-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.

CCSS.Math.Content.5.OA.A.1

Use parentheses, brackets, or braces in numerical expressions, and evaluate expressions with these symbols.

CCSS.Math.Content.5.MD.C.5

Relate volume to the operations of multiplication and addition and solve real world and mathematical problems involving volume.

CCSS.Math.Content.5.NF.B.3

Interpret a fraction as division of the numerator by the denominator ($a/b = a \div b$). Solve word problems involving division of whole numbers leading to answers in the form of fractions or mixed numbers, e.g., by using visual fraction models or equations to represent the problem.

CCSS.Math.Content.5.NBT.A.1

Recognize 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.

CCSS.Math.Content.5.NBT.A.2

Explain patterns in the number of zeros of the product when multiplying a number by powers of 10, and explain patterns in the placement of the decimal point when a decimal is multiplied or divided by a power of 10. Use whole-number exponents to denote powers of 10.

CCSS.Math.Content.5.NBT.A

Understand the place value system.

CCSS.Math.Content.5.NBT.B

Perform operations with multi-digit whole numbers and with decimals to hundredths.

Unit 1: Whole Numbers, Expressions, and Volume

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CCSS.Math.Content.5.OA.A
Write and interpret numerical expressions.
CCSS.Math.Content.5.OA.A.2
Write simple expressions that record calculations with numbers, and interpret numerical expressions without evaluating them.
CCSS.Math.Content.5.MD.C
Geometric measurement: understand concepts of volume and relate volume to multiplication and to addition.
CCSS.Math.Content.5.MD.C.3a
A cube with side length 1 unit, called a "unit cube," is said to have "one cubic unit" of volume, and can be used to measure volume.
CCSS.Math.Content.5.MD.C.4
Measure volumes by counting unit cubes, using cubic cm, cubic in, cubic ft, and improvised units.
CCSS.Math.Content.5.MD.C.3b
A solid figure which can be packed without gaps or overlaps using n unit cubes is said to have a volume of n cubic units.
CCSS.Math.Content.5.MD.C.5a
Find the volume of a right 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, equivalently by multiplying the height by the area of the base. Represent threefold whole-number products as volumes, e.g., to represent the associative property of multiplication.
CCSS.Math.Content.5.MD.C.5b
Apply the formulas $V = l \times w \times h$ and $V = b \times h$ for rectangular prisms to find volumes of right rectangular prisms with whole-number edge lengths in the context of solving real world and mathematical problems.
CCSS.Math.Content.5.MD.C.5c
Recognize volume as additive. Find volumes of solid figures composed of two non-overlapping right rectangular prisms by adding the volumes of the non-overlapping parts, applying this technique to solve real world problems.
CCSS.Math.Content.5.MD.C.3
Recognize volume as an attribute of solid figures and understand concepts of volume measurement.

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PRIORITY STANDARDS

CCSS.Math.Content.5.NBT.B.5: Fluently multiply multi-digit whole numbers using the standard algorithm.

CCSS.Math.Content.5.NBT.B.6: Find whole-number quotients of whole numbers with up to four-digit dividends and two-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.

CCSS.Math.Content.5.OA.A.1: Use parentheses, brackets, or braces in numerical expressions, and evaluate expressions with these symbols.

CCSS.Math.Content.5.MD.C.5: Relate volume to the operations of multiplication and addition and solve real world and mathematical problems involving volume.

CCSS.Math.Content.5.NF.B.3: Interpret a fraction as division of the numerator by the denominator ($a/b = a \div b$). Solve word problems involving division of whole numbers leading to answers in the form of fractions or mixed numbers, e.g., by using visual fraction models or equations to represent the problem.

Unit 1: Whole Numbers, Expressions, and Volume

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LEARNING PLAN

Learning Targets / Focusing Questions:

- I can describe place-value relationships in multi-digit whole numbers.
- I can rewrite expressions involving the product of a 1-digit number and a power of 10 as a whole number.
- I can use mental math to find the product of any two numbers that have one nonzero digit and are multiples of 10, 100, or 1,000.
- I can multiply multi-digit whole numbers by 1-digit numbers using regrouping and place value.
- I can multiply multi-digit whole numbers by 2-digit or 3-digit numbers.
- I can set up and solve multistep problems with at least two steps.
- I can use an array or an area model to solve a division problem.
- I can find the quotient of numbers up to four digits divided by 2-digit divisors using visual models.
- I can estimate quotients of division problems using compatible numbers.
- I can use partial quotients to divide a multi-digit number by a 2-digit divisor.
- I can use strategies based on place value to divide 3- and 4-digit dividends by 2-digit divisors.
- I can solve a division problem and interpret the remainder in the context of the problem.
- I can adjust a digit in a whole-number quotient based on whether an estimate is too low or too high.
- I can solve a division problem by using a bar model or an equation.
- I can write a numerical expression to model a real-world situation, and I can interpret a numerical expression.
- I can compare numerical expressions which are written with one expression in terms of the other.
- I can evaluate a numerical expression using the order of operations.
- I can describe how to use grouping symbols in a numerical expression and place parentheses so an expression has a given value.
- I can build solid figures using unit cubes.
- I can use unit cubes to find the volume of a right rectangular prism.
- I can use an everyday object to estimate the volume of a right rectangular prism.
- I can find the volume of a right rectangular prism using the area of the base and the height.
- I can use a formula to find the volume of a right rectangular prism.
- I can find the volume of a figure composed of right rectangular prisms.

Unit Resources:

- HMH Into Math 2020 - Grade 5

Summary of Learning Activities:

Quarter 1:

- Module 1: Whole Number Place Value and Multiplication
 - 1.1 Recognize the 10 to 1 Relationship Among Place Value Positions
 - 1.2 Use Powers of 10 and Exponents
 - 1.3 Use a Pattern to Multiply by Multiples of 10, 100, and 1,000

Unit 1: Whole Numbers, Expressions, and Volume

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- 1.4 Multiply by 1-Digit Numbers
- 1.5 Multiply by Multi-Digit Numbers
- 1.6 Develop Multiplication Fluency
- Module 2: Understand Division of Whole Numbers
 - 2.1 Relate Multiplication to Division
 - 2.2 Represent Division with 2-Digit Divisors
 - 2.3 Estimate with 2-Digit Divisors
 - 2.4 Use Partial Quotients
- Module 3: Practice Division of Whole Numbers
 - 3.1 Divide by 2-Digit Divisors
 - 3.2 Interpret the Remainder
 - 3.3 Adjust Quotients
 - 3.4 Practice with Division
- Module 4: Expressions
 - 4.1 Write Numerical Expressions
 - 4.2 Interpret Numerical Expressions
 - 4.3 Evaluate Numerical Expressions
 - 4.4 Use Grouping Symbols
- Module 5: Volume
 - 5.1 Use Unit Cubes to Build Solid Figures
 - 5.2 Understand Volume
 - 5.3 Estimate Volume
 - 5.4 Find Volume of Right Rectangular Prisms

Quarter 2:

- Module 5 (continued)
 - 5.5 Apply Volume Formulas
 - 5.6 Find Volume of Composed Figures

Unit 2: Add and Subtract Fractions and Mixed Numbers

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STANDARDS

National Common Core State Standards - Grade 5 - Mathematics

CCSS.Math.Content.5.NF.A.1

Add and subtract fractions with unlike denominators (including mixed numbers) by replacing given fractions with equivalent fractions in such a way as to produce an equivalent sum or difference of fractions with like denominators.

CCSS.Math.Content.5.NF.A.2

Solve word problems involving addition and subtraction of fractions referring to the same whole, including cases of unlike denominators, e.g., by using visual fraction models or equations to represent the problem. Use benchmark fractions and number sense of fractions to estimate mentally and assess the reasonableness of answers.

CCSS.Math.Content.5.NF.A

Use equivalent fractions as a strategy to add and subtract fractions.

PRIORITY STANDARDS

CCSS.Math.Content.5.NF.A.1: Add and subtract fractions with unlike denominators (including mixed numbers) by replacing given fractions with equivalent fractions in such a way as to produce an equivalent sum or difference of fractions with like denominators.

CCSS.Math.Content.5.NF.A.2: Solve word problems involving addition and subtraction of fractions referring to the same whole, including cases of unlike denominators, e.g., by using visual fraction models or equations to represent the problem. Use benchmark fractions and number sense of fractions to estimate mentally and assess the reasonableness of answers.

Unit 2: Add and Subtract Fractions and Mixed Numbers

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LEARNING PLAN

Learning Targets / Focusing Questions:

- I can make a visual model to represent the addition or subtraction of fractions with different-sized parts.
- I can represent the sum of fractions with different-sized parts using a visual model.
- I can represent the difference between fractions with different-sized parts using a visual model.
- I can generate equivalent fractions for given fractions using a common denominator.
- I can use benchmarks to estimate a sum or difference of fractions with unlike denominators.
- I can add and subtract fractions with unlike denominators using a common denominator and assess reasonableness.
- I can add and subtract mixed numbers with unlike denominators and assess reasonableness.
- I can subtract mixed numbers by renaming.
- I can apply the properties of addition to add fractions and mixed numbers.
- I can solve an addition or subtraction word problem by using an equation to model the problem.

Unit Resources:

- HMH Into Math 2020 - Grade 5

Summary of Learning Activities:

Quarter 2:

- Module 6: Understand Addition and Subtraction of Fractions with Unlike Denominators
 - 6.1 Represent Fraction Sums and Differences
 - 6.2 Represent Addition with Different-Sized Parts
 - 6.3 Represent Subtraction with Different-Sized Parts
 - 6.4 Rewrite Fractions with a Common Denominator
- Module 7: Add and Subtract Fractions and Mixed Numbers with Unlike Denominators
 - 7.1 Use Benchmarks and Number Sense to Estimate
 - 7.2 Assess Reasonableness of Fraction Sums and Differences
 - 7.3 Assess Reasonableness of Mixed Number Sums and Differences
 - 7.4 Rename Mixed Numbers to Subtract
 - 7.5 Apply Properties of Addition
 - 7.6 Practice Addition and Subtraction Using Equations

Unit 3: Multiply Fractions and Mixed Numbers

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STANDARDS

National Common Core State Standards - Grade 5 - Mathematics

CCSS.Math.Content.5.NF.B.4a

Interpret the product $(a/b) \times q$ as a parts of a partition of q into b equal parts; equivalently, as the result of a sequence of operations $a \times q \div b$.

CCSS.Math.Content.5.NF.B.4b

Find the area of a rectangle with fractional side lengths by tiling it with unit squares of the appropriate unit fraction side lengths, and show that the area is the same as would be found by multiplying the side lengths. Multiply fractional side lengths to find areas of rectangles, and represent fraction products as rectangular areas.

CCSS.Math.Content.5.NF.B.5a

Comparing the size of a product to the size of one factor on the basis of the size of the other factor, without performing the indicated multiplication.

CCSS.Math.Content.5.NF.B.5b

Explaining why multiplying a given number by a fraction greater than 1 results in a product greater than the given number (recognizing multiplication by whole numbers greater than 1 as a familiar case); explaining why multiplying a given number by a fraction less than 1 results in a product smaller than the given number; and relating the principle of fraction equivalence $a/b = (n \times a)/(n \times b)$ to the effect of multiplying a/b by 1.

CCSS.Math.Content.5.NF.B.6

Solve real world problems involving multiplication of fractions and mixed numbers, e.g., by using visual fraction models or equations to represent the problem.

CCSS.Math.Content.5.NF.B

Apply and extend previous understandings of multiplication and division to multiply and divide fractions.

CCSS.Math.Content.5.NF.B.4

Apply and extend previous understandings of multiplication to multiply a fraction or whole number by a fraction.

CCSS.Math.Content.5.NF.B.5

Interpret multiplication as scaling (resizing), by:

Unit 3: Multiply Fractions and Mixed Numbers

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PRIORITY STANDARDS

CCSS.Math.Content.5.NF.B.4a: Interpret the product $(a/b) \times q$ as a parts of a partition of q into b equal parts; equivalently, as the result of a sequence of operations $a \times q \div b$.

CCSS.Math.Content.5.NF.B.4b: Find the area of a rectangle with fractional side lengths by tiling it with unit squares of the appropriate unit fraction side lengths, and show that the area is the same as would be found by multiplying the side lengths. Multiply fractional side lengths to find areas of rectangles, and represent fraction products as rectangular areas.

CCSS.Math.Content.5.NF.B.5a: Comparing the size of a product to the size of one factor on the basis of the size of the other factor, without performing the indicated multiplication.

CCSS.Math.Content.5.NF.B.5b: Explaining why multiplying a given number by a fraction greater than 1 results in a product greater than the given number (recognizing multiplication by whole numbers greater than 1 as a familiar case); explaining why multiplying a given number by a fraction less than 1 results in a product smaller than the given number; and relating the principle of fraction equivalence $a/b = (n \times a)/(n \times b)$ to the effect of multiplying a/b by 1.

CCSS.Math.Content.5.NF.B.6: Solve real world problems involving multiplication of fractions and mixed numbers, e.g., by using visual fraction models or equations to represent the problem.

Unit 3: Multiply Fractions and Mixed Numbers

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LEARNING PLAN

Learning Targets / Focusing Questions:

- I can find a fractional part of a group by using a visual model to solve a problem.
- I can find the product of a whole number and a fraction using a visual model.
- I can solve a problem by multiplying unit fractions using a visual model.
- I can multiply fractions using a visual model.
- I can find the product of fractions using an area model.
- I can explain how the size of the product compares to the size of one factor.
- I can solve problems involving the multiplication of a whole number or fraction by a fraction.
- I can use an area model to multiply mixed numbers.
- I can solve real world problems involving multiplication of mixed numbers by writing an equation to model the problem.
- I can solve a real world problem by writing a multiplication equation to model the problem.
- I can solve multiplication problems with fractions and mixed numbers to find the area of rectangles.

Unit Resources:

- HMH Into Math 2020 - Grade 5

Summary of Learning Activities:

Quarter 2:

- Module 8: Understand Multiplication of Fractions
 - 8.1 Explore Groups of Equal Shares to Show Multiplication
 - 8.2 Represent Multiplication of Whole Numbers by Fractions
 - 8.3 Represent Multiplication with Unit Fractions
 - 8.4 Represent Multiplication of Fractions
 - 8.5 Use Representations of Area to Develop Procedures
 - 8.6 Interpret Fraction Multiplication as Scaling
 - 8.7 Multiply Fractions
- Module 9: Understand and Apply Multiplication of Mixed Numbers
 - 9.1 Explore Area and Mixed Numbers
 - 9.2 Multiply Mixed Numbers
 - 9.3 Practice Multiplication with Fractions and Mixed Numbers
 - 9.4 Apply Fraction Multiplication to Find Area

Unit 4: Divide Fractions and Convert Customary Units

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STANDARDS

National Common Core State Standards - Grade 5 - Mathematics

CCSS.Math.Content.5.NF.B.3

Interpret a fraction as division of the numerator by the denominator ($a/b = a \div b$). Solve word problems involving division of whole numbers leading to answers in the form of fractions or mixed numbers, e.g., by using visual fraction models or equations to represent the problem.

CCSS.Math.Content.5.NF.B

Apply and extend previous understandings of multiplication and division to multiply and divide fractions.

CCSS.Math.Content.5.NF.B.7a

Interpret division of a unit fraction by a non-zero whole number, and compute such quotients.

CCSS.Math.Content.5.NF.B.7c

Solve real world problems involving division of unit fractions by non-zero whole numbers and division of whole numbers by unit fractions, e.g., by using visual fraction models and equations to represent the problem.

CCSS.Math.Content.5.NF.B.7b

Interpret division of a whole number by a unit fraction, and compute such quotients.

CCSS.Math.Content.5.MD.A

Convert like measurement units within a given measurement system.

CCSS.Math.Content.5.MD.A.1

Convert among different-sized standard measurement units within a given measurement system (e.g., convert 5 cm to 0.05 m), and use these conversions in solving multi-step, real world problems.

CCSS.Math.Content.5.MD.B.2

Make a line plot to display a data set of measurements in fractions of a unit ($1/2$, $1/4$, $1/8$). Use operations on fractions for this grade to solve problems involving information presented in line plots.

CCSS.Math.Content.5.NF.B.7

Apply and extend previous understandings of division to divide unit fractions by whole numbers and whole numbers by unit fractions.

Unit 4: Divide Fractions and Convert Customary Units

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PRIORITY STANDARDS

CCSS.Math.Content.5.NF.B.3: Interpret a fraction as division of the numerator by the denominator ($a/b = a \div b$). Solve word problems involving division of whole numbers leading to answers in the form of fractions or mixed numbers, e.g., by using visual fraction models or equations to represent the problem.

Unit 4: Divide Fractions and Convert Customary Units

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LEARNING PLAN

Learning Targets / Focusing Questions:

- I can interpret fractions as representing division of whole numbers.
- I can divide a unit fraction by a whole number using a visual fraction model.
- I can create a story context and use a visual model to interpret the division of a unit fraction by a whole number.
- I can divide a whole number by a unit fraction using a visual fraction model.
- I can create a story context and use a visual fraction model to interpret the division of a whole number by a unit fraction.
- I can divide a whole number by a unit fraction or a unit fraction by a whole number using a related multiplication equation.
- I can represent division of a whole number by a unit fraction using visual fraction models and equations.
- I can create a story context for a given equation and use a visual fraction model to represent the quotient.
- I can represent division of a unit fraction by a whole number using visual fraction models and equations.
- I can create a story context for a given equation and use a visual fraction model to represent the quotient.
- I can solve problems involving the division of fractions and whole numbers.
- I can compare and convert customary units of measurement.
- I can solve multistep problems that include customary measurement conversions.
- I can make a line plot to display data in fractional measurements and use the line plot to solve problems.
- I can solve elapsed time problems by converting units of time.

Unit Resources:

- HMH Into Math 2020 - Grade 5

Summary of Learning Activities:

Quarter 2:

- Module 10: Understand Division with Whole Numbers and Unit Fractions
 - 10.1 Interpret a Fraction as Division
 - 10.2 Represent and Find the Size of Equal Parts

Quarter 3:

- Module 10 (continued)
 - 10.3 Use Representations of Division of Fractions by Whole Numbers
 - 10.4 Represent and Find the Number of Equal-Sized parts
 - 10.5 Use Representations of Division of Whole Numbers by Unit Fractions
- Module 11: Divide with Whole Numbers and Unit Fractions
 - 11.1 Relate Multiplication and Division of Fractions
 - 11.2 Divide Whole Numbers by Unit Fractions

Unit 4: Divide Fractions and Convert Customary Units

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- 11.3 Interpret and Solve Division of a Whole Number by a Unit Fraction
- 11.4 Divide Unit Fractions by Whole Numbers
- 11.5 Interpret and Solve Division of a Unit Fraction by a Whole Number
- 11.6 Solve Division Problems Using Visual Models and Equations
- Module 12: Customary Measurement
 - 12.1 Convert Customary measurements
 - 12.2 Solve Multi-Step Customary measurement Problems
 - 12.3 Represent and Interpret Measurement Data in Line Plots
 - 12.4 Convert Time and Find Elapsed Time

Unit 5: Add and Subtract Decimals

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STANDARDS

National Common Core State Standards - Grade 5 - Mathematics

CCSS.Math.Content.5.NBT.A.4

Use place value understanding to round decimals to any place.

CCSS.Math.Content.5.NBT.B.7

Add, subtract, multiply, and divide decimals to hundredths, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used.

CCSS.Math.Content.5.NBT.A

Understand the place value system.

CCSS.Math.Content.5.NBT.A.1

Recognize 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 $\frac{1}{10}$ of what it represents in the place to its left.

CCSS.Math.Content.5.NBT.B

Perform operations with multi-digit whole numbers and with decimals to hundredths.

CCSS.Math.Content.5.NBT.A.3

Read, write, and compare decimals to thousandths.

CCSS.Math.Content.5.NBT.A.3a

Read and write decimals to thousandths using base-ten numerals, number names, and expanded form, e.g., $347.392 = 3 \times 100 + 4 \times 10 + 7 \times 1 + 3 \times (1/10) + 9 \times (1/100) + 2 \times (1/1000)$.

CCSS.Math.Content.5.NBT.A.3b

Compare two decimals to thousandths based on meanings of the digits in each place, using $>$, $=$, and $<$ symbols to record the results of comparisons.

PRIORITY STANDARDS

CCSS.Math.Content.5.NBT.A.4: Use place value understanding to round decimals to any place.

CCSS.Math.Content.5.NBT.B.7: Add, subtract, multiply, and divide decimals to hundredths, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used.

Unit 5: Add and Subtract Decimals

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LEARNING PLAN

Learning Targets / Focusing Questions:

- I can describe the relationship between two decimal place-value positions to the thousandths place.
- I can read, write, and represent decimals to thousandths.
- I can use an understanding of place value to round decimals to a given place.
- I can use place value to compare and order decimals to thousandths.
- I can use concrete models or drawings to represent decimal addition.
- I can use concrete models or drawings to represent decimal subtraction.
- I can use benchmarks or rounding to check the reasonableness of decimal sums and differences.
- I can use a written method and strategies based on place value to add decimals.
- I can use a written method and strategies based on place value to subtract decimals.
- I can add and subtract decimals by using reasoning and strategies involving addition properties or friendly numbers.

Unit Resources:

- HMH Into Math 2020 - Grade 5

Summary of Learning Activities:

Quarter 3:

- Module 13: Decimal Place Value
 - 13.1 Understand Thousandths
 - 13.2 Read and Write Decimals to Thousandths
 - 13.3 Round Decimals
 - 13.4 Compare and Order Decimals
- Module 14: Add and Subtract Decimals
 - 14.1 Represent Decimal Addition
 - 14.2 Represent Decimal Subtraction
 - 14.3 Assess Reasonableness of Sums and Differences
 - 14.4 Add Decimals
 - 14.5 Subtract Decimals
 - 14.6 Use Strategies and Reasoning to Add and Subtract

Unit 6: Multiply Decimals

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STANDARDS

National Common Core State Standards - Grade 5 - Mathematics

CCSS.Math.Content.5.NBT.B.7

Add, subtract, multiply, and divide decimals to hundredths, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used.

CCSS.Math.Content.5.NBT.B

Perform operations with multi-digit whole numbers and with decimals to hundredths.

CCSS.Math.Content.5.NBT.A

Understand the place value system.

CCSS.Math.Content.5.NBT.A.2

Explain patterns in the number of zeros of the product when multiplying a number by powers of 10, and explain patterns in the placement of the decimal point when a decimal is multiplied or divided by a power of 10. Use whole-number exponents to denote powers of 10.

PRIORITY STANDARDS

CCSS.Math.Content.5.NBT.B.7: Add, subtract, multiply, and divide decimals to hundredths, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used.

Unit 6: Multiply Decimals

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LEARNING PLAN

Learning Targets / Focusing Questions:

- I can multiply decimals by powers of 10 that are both greater than and less than 1.
- I can represent the product of a decimal less than one and a whole number using a visual model.
- I can assess the reasonableness of the product of a decimal less than one and a whole number.
- I can multiply a decimal by a 1-digit whole number using the Distributive Property, partial products, and an area model.
- I can use an area model and place-value patterns to multiply a decimal by a 2-digit whole number.
- I can use a bar model to solve a multistep problem that uses multiplication.
- I can find the product of two decimals to the tenths place by using a decimal model.
- I can multiply two decimal numbers by applying an understanding of place value.
- I can write the correct number of zeros in the product of two decimal numbers.

Unit Resources:

- HMH Into Math 2020 - Grade 5

Summary of Learning Activities:

Quarter 3:

- Module 15: Multiply Decimals and Whole Numbers
 - 15.1 Understand Decimal Multiplication Patterns

Quarter 4:

- Module 15 (continued)
 - 15.2 Represent Multiplication with Decimals and Whole Numbers
 - 15.3 Assess Reasonableness of Products
 - 15.4 Multiply Decimals by 1-Digit Whole Numbers
 - 15.5 Multiply Decimals by 2-Digit Whole Numbers
 - 15.6 Solve Problems Using Bar Models
- Module 16: Multiply Decimals
 - 16.1 Represent Decimal Multiplication
 - 16.2 Multiply Decimals
 - 16.3 Multiply Decimals with Zeros in the Product

Unit 7: Divide Decimals and Convert Metric Units

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STANDARDS

National Common Core State Standards - Grade 5 - Mathematics

CCSS.Math.Content.5.NBT.B.7

Add, subtract, multiply, and divide decimals to hundredths, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used.

CCSS.Math.Content.5.NBT.B

Perform operations with multi-digit whole numbers and with decimals to hundredths.

CCSS.Math.Content.5.NBT.A.2

Explain patterns in the number of zeros of the product when multiplying a number by powers of 10, and explain patterns in the placement of the decimal point when a decimal is multiplied or divided by a power of 10. Use whole-number exponents to denote powers of 10.

CCSS.Math.Content.5.MD.A

Convert like measurement units within a given measurement system.

CCSS.Math.Content.5.MD.A.1

Convert among different-sized standard measurement units within a given measurement system (e.g., convert 5 cm to 0.05 m), and use these conversions in solving multi-step, real world problems.

PRIORITY STANDARDS

CCSS.Math.Content.5.NBT.B.7: Add, subtract, multiply, and divide decimals to hundredths, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used.

Unit 7: Divide Decimals and Convert Metric Units

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LEARNING PLAN

Learning Targets / Focusing Questions:

- I can use patterns to place the decimal point in a quotient.
- I can use a concrete or visual model to divide a decimal by a whole number.
- I can estimate the quotient of a decimal division problem by using compatible numbers.
- I can divide a decimal by a whole number.
- I can divide a decimal by a decimal using a visual model.
- I can divide a decimal by a decimal.
- I can find a quotient by writing a zero in the dividend.
- I can convert between any two metric units of length, liquid volume, or mass.
- I can solve problems involving conversions within the same system of measurement.
- I can solve a multistep problem that includes measurement conversions.

Unit Resources:

- HMH Into Math 2020 - Grade 5

Summary of Learning Activities:

Quarter 4:

- Module 17: Divide Decimals
 - 17.1 Understand Decimal Division Patterns
 - 17.2 Represent Division of Decimals by Whole Numbers
 - 17.3 Assess Reasonableness of Quotients
 - 17.4 Divide Decimals by Whole Numbers
 - 17.5 Represent Decimal Division
 - 17.6 Divide Decimals
 - 17.7 Write Zeros in the Dividend
- Module 18: Customary and Metric Measurement
 - 18.2 Understand Metric Conversions
 - 18.2 Solve Customary and Metric Conversion Problems
 - 18.3 Solve Multistep Measurement Problems

Unit 8: Graphs, Patterns, and Geometry

Elementary/Middle - 5th Grade Math - Last Updated on July 20, 2021

STANDARDS

National Common Core State Standards - Grade 5 - Mathematics

CCSS.Math.Content.5.G.A.2

Represent real world and mathematical problems by graphing points in the first quadrant of the coordinate plane, and interpret coordinate values of points in the context of the situation.

CCSS.Math.Content.5.G.B.3

Understand that attributes belonging to a category of two-dimensional figures also belong to all subcategories of that category.

CCSS.Math.Content.5.G.A

Graph points on the coordinate plane to solve real-world and mathematical problems.

CCSS.Math.Content.5.G.B

Classify two-dimensional figures into categories based on their properties.

CCSS.Math.Content.5.G.A.1

Use a pair of perpendicular number lines, called axes, to define a coordinate system, with the intersection of the lines (the origin) arranged to coincide with the 0 on each line and a given point in the plane located by using an ordered pair of numbers, called its coordinates. Understand that the first number indicates how far to travel from the origin in the direction of one axis, and the second number indicates how far to travel in the direction of the second axis, with the convention that the names of the two axes and the coordinates correspond (e.g., x-axis and x-coordinate, y-axis and y-coordinate).

CCSS.Math.Content.5.OA.B.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, and graph the ordered pairs on a coordinate plane.

CCSS.Math.Content.5.OA.B

Analyze patterns and relationships.

CCSS.Math.Content.5.G.B.4

Classify two-dimensional figures in a hierarchy based on properties.

Unit 8: Graphs, Patterns, and Geometry

Elementary/Middle - 5th Grade Math - Last Updated on July 20, 2021

PRIORITY STANDARDS

CCSS.Math.Content.5.G.A.2: Represent real world and mathematical problems by graphing points in the first quadrant of the coordinate plane, and interpret coordinate values of points in the context of the situation.

CCSS.Math.Content.5.G.B.3: Understand that attributes belonging to a category of two-dimensional figures also belong to all subcategories of that category.

LEARNING PLAN

Learning Targets / Focusing Questions:

- I can identify and describe a point in a coordinate system.
- I can graph a point on a coordinate grid and interpret the coordinate values.
- I can use coordinate graphing to represent and solve problems.
- I can use two rules to generate numerical patterns, write ordered pairs using corresponding terms, and identify a relationship between them.
- I can write and graph ordered pairs on a coordinate grid using two numerical patterns.
- I can identify and classify polygons.
- I can classify triangles.
- I can classify and compare quadrilaterals.
- I can compare and classify two-dimensional figures using Venn diagrams.

Unit Resources:

- HMH Into Math 2020 - Grade 5

Summary of Learning Activities:

Quarter 4

- Module 19: Graphs and Patterns
 - 19.1 Describe a Coordinate System
 - 19.2 Understand Ordered Pairs
 - 19.3 Use Ordered Pairs to Represent Problems
 - 19.4 Generate and Identify Numerical Patterns
 - 19.5 Identify and Graph Relationships and Patterns
- Module 20: Classify Two-Dimensional Figures
 - 20.1 Identify and Classify Polygons
 - 20.2 Classify and Organize Triangles
 - 20.3 Classify and Organize Quadrilaterals
 - 20.4 Use Venn Diagrams to Classify Two-Dimensional Figures