

Grade: 5	Course: Math
Pacing: 6 weeks	
Unit: 1 - Whole Number Multiplication and Division	Big Idea: Chapter 1: Place Value and Whole Numbers Chapter 2: Understand Multiplication and Division of Whole Numbers Chapter 3: Practice Multiplication and Division of Whole Numbers
Content Area NJSLs Performance Expectations Addressed	Interdisciplinary Connections
<ul style="list-style-type: none"> 5.OA.A.1 Use parentheses, brackets, or braces in numerical expressions, and evaluate expressions with these symbols. 5.OA.A.2 Write simple expressions that record calculations with numbers, and interpret numerical expressions without evaluating them. <i>For example, express the calculation “add 8 and 7, then multiply by 2” as $2 \times (8 + 7)$. Recognize that $3 \times (18932 + 921)$ is three times as large as $18932 + 921$, without having to calculate the indicated sum or product.</i> 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. 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. 5.NBT.A.5 With accuracy and efficiency, multiply multi-digit whole numbers using the standard algorithm. 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 	English Language Arts <ul style="list-style-type: none"> SL.PE.5.1. Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 5 topics and texts, building on others’ ideas and expressing their own clearly. L.VL.5.2. Determine or clarify the meaning of unknown and multiple-meaning academic and domain-specific words and phrases based on grade 5 reading and content, choosing flexibly from a range of strategies. Science <ul style="list-style-type: none"> 5-PS1-3: Make observations and measurements to identify materials based on their properties.

<p>calculation by using equations, rectangular arrays, and/or area models.</p> <ul style="list-style-type: none"> 5.NF.B.5 Interpret multiplication as scaling (resizing), by: <ol style="list-style-type: none"> 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. <p>Standards for Mathematical Practice</p> <ul style="list-style-type: none"> MP.1 Make sense of problems and persevere in solving them. MP.2 Reason abstractly and quantitatively. MP.3 Construct viable arguments and critique the reasoning of others. MP.4 Model with mathematics. MP.5 Use appropriate tools strategically. MP.6 Attend to precision. MP.7 Look for and make use of structure. MP.8 Look for and express regularity in repeated reasoning. 	
<i>Computer Science and Design Thinking</i>	<i>Career Readiness, Life Literacies, and Key Skills</i>
<ul style="list-style-type: none"> 8.1.5.DA.1: Collect, organize, and display data in order to highlight relationships or support a claim. 8.1.5.DA.3: Organize and present collected data visually to communicate insights gained from different views of the data. 	<p>21st Century Skills</p> <ul style="list-style-type: none"> 9.4.5.IML.2: Create a visual representation to organize information about a problem or issue (e.g., 4.DL.B.5, 8.1.5.DA.3). <p>Technology</p> <ul style="list-style-type: none"> 9.4.5.TL.4: Compare and contrast artifacts produced individually to those developed collaboratively (e.g., 1.5.5.CR3a). <p>Career Readiness, Life Literacies, and Key Skills Practices:</p> <ul style="list-style-type: none"> Use technology to enhance productivity, increase collaboration and communicate effectively. Work productively in teams while using cultural/global competence.
<i>Student Learning Objectives (SLO)</i>	
Students will be able to...	

- evaluate numerical expressions that include grouping symbols (parentheses, brackets or braces).
- evaluate numerical expressions that include nested grouping symbols (for example, $3 \times [5 + (7 - 3)]$).
- write a simple numerical expression when given a verbal description.
- interpret the quantitative relationships in numerical expressions without evaluating (simplifying) the expression.
- explain that a digit in one place represents $\frac{1}{10}$ of what it would represent in the place to its left.
- explain that a digit in one place represents ten times what it would represent in the place to its right.
- explain patterns in the number of zeros of the product when multiplying a whole number by powers of 10.
- write powers of 10 using whole-number exponents.
- explain patterns in the placement of the decimal point when multiplying or dividing a decimal by powers of 10.
- multiply multi-digit whole numbers with accuracy and efficiency.
- multiply a whole number of up to a four digits by a whole number of up two digits using the standard algorithm with accuracy and efficiency.
- divide to find whole-number quotients of whole numbers with up to four-digit dividends and two-digit divisors using strategies based on place value, properties of operations, and the relationship between multiplication and division.
- represent these operations with equations, rectangular arrays, and area models.
- explain the calculation by referring to the model (equation, array, or area model).

Academic Vocabulary

Power, quotient, dividend, divisor, evaluate, product, place value, array, decimal

Essential Questions

- How do parentheses, brackets, and braces affect the way we solve expressions?
- Why is it important to follow the order of operations when solving numerical expressions?
- How can using the correct order of operations change the outcome of a math problem?
- How can I represent a word phrase or real-world situation as a numerical expression?
- What clues in a word problem help me write an accurate numerical expression?

Enduring Understandings

- Grouping symbols like parentheses, brackets, and braces show which operations to do first, changing how an expression is solved.
- Following the order of operations ensures that everyone solves expressions the same way and gets the correct answer.
- Changing the order of operations can lead to different results, so using the correct order is necessary for accuracy.
- Mathematical expressions can model real-world situations using numbers and operations without needing to solve them.

<ul style="list-style-type: none"> • How does the value of a digit change when its place changes in a number? • What patterns can I see in the place value system? • How can understanding place value help me read, write, and compare large numbers? • How does multiplying or dividing by 10 affect a number's value? • What happens to a number when I multiply or divide it by powers of 10? • Why does the decimal point move when I multiply or divide by powers of 10? • How can I use patterns to multiply and divide numbers by powers of 10 more efficiently? • How can I use place value strategies to multiply and divide multi-digit numbers accurately? • What strategies help me divide large numbers when the division doesn't come out evenly? • How does multiplying and dividing by powers of 10 affect decimal numbers? 	<ul style="list-style-type: none"> • Keywords and structure in a word problem guide how to translate it into a correct mathematical expression. • A digit's value increases or decreases by a factor of 10 each time it moves to the left or right in a number. • The place value system is based on patterns of tens that help us understand number relationships and size. • Place value helps us understand the size of numbers and compare, order, and write them correctly. • Multiplying by 10 increases a number's value tenfold; dividing by 10 decreases it by one-tenth. • Multiplying or dividing by powers of 10 shifts digits to the left or right, changing their place value. • The decimal point appears to move because the digits shift places based on multiplying or dividing by 10, 100, or 1,000. • Recognizing patterns in place value helps multiply and divide quickly and accurately by powers of 10. • Breaking numbers apart using place value makes multi-digit multiplication and division more manageable and accurate. • Estimating, using place value, and understanding remainders help solve division problems with large numbers. • Multiplying or dividing decimals by powers of 10 shifts the digits and changes the number's size without changing the digits themselves.
<i>Core Instruction/Supplemental Materials</i>	<i>Assessments</i>
<ul style="list-style-type: none"> • Go Math digital resources on HMH platform • Interactive Student Journal • Student Journal from Go Math • Reteach and Enrich resources from Go Math • Vocabulary Cards • "Math on the Spot" videos through HMH Go Math • iTools from HMH Go Math • HMH Go Math Supplemental Slides • Math Readers from Go Math • Boddle Math 	Formative <ul style="list-style-type: none"> • Oral assessment • Exit tickets • Quizzes • Journals • Graphic Organizers • Class discussion • Interactive online games • Teacher observation • Classwork Practice

- SumDog
- Prodigy
- Kahoot
- Quizizz
- Kahn Academy
- iReady Learning Path and Lessons materials
- Newspaper hunt to find numbers at least 6 digits long to write in each form
- Find estimated amounts in new stories, on the Internet, in newspapers, or magazines
- Round multidigit numbers to specific place values in a Rounding Rodeo
- View Math Antics videos for rounding, division, and multiplication
- Play Round and Roll game
- Play Rounding Numbers Pirate game on MathPlayground.com
- Teacher Created Materials
- [5.OA.A.1 Using Operations and Parentheses](#)
- [5.OA.A.1 Watch out for Parentheses 1](#)
- [5.NBT.A.1 Which number is it?](#)
- [5.NBT.A.1 Millions and Billions of People](#)
- [5.NBT.A.3 Placing Thousandths on the Number Line](#)
- [5.NBT.A.4 Rounding to Tenths and Hundredths](#)
- [5.NBT.B.5 Elmer's Multiplication Error](#)
- Holocaust Law - Read "Six Million Paperclips - The Making of a Children's Holocaust Memorial" by Dagmar Schroeder-Hildebrand and Peter W. Schroeder

- Discussion Trifolds
- Video logs
- Show What you Know
- Lesson Quick Checks
- Share and Show
- Mid Chapter Checkpoints
- Practice and Homework pages

Summative

- Tests
- Skills assessment/Benchmarks

Alternative

- Centers/activities/games
- Performance assessments
- Projects

Modifications/Differentiated Activities

Enrichment/Gifted and Talented

- Differentiated curriculum for the gifted learner.
- Regular classroom curricula and instruction that is adapted, modified, or replaced.

Multilingual Learners

- Alternate Responses
- Notes in Advance
- Extended Time
- Simplified Instruction (written and verbal)

<ul style="list-style-type: none"> • Educational opportunities consisting of a continuum of differentiated curricular options, instructional approaches and materials. • Integrated G&T programming into the general education school day. • Flexible groupings of students to facilitate differentiated instruction and curriculum. <p>Learning Environments:</p> <ul style="list-style-type: none"> • Extensive outside reading • Active classroom discussion • Innovative oral and written presentations • Deductive and inductive reasoning • Independent writing and research • Divergent thinking • Challenging problem solving situations • Interactive, independent and interdisciplinary activities 	<ul style="list-style-type: none"> • Online Dictionary • Use lots of visuals • Use physical activity; model, role-play • Repeat/Rephrase often • Use lower level materials when appropriate
<p>Special Education</p> <p>GENERAL MODIFICATIONS:</p> <ul style="list-style-type: none"> • Allow outlining, instead of writing for an essay or major project • Computerized spell-check support • Word bank of choices for answers to test questions • Provision of calculator and/or number line for math tests • Film or video supplements in place of reading text • Reworded questions in simpler language • Projects instead of written reports • Highlighting important words or phrases in reading assignments • Modified workload or length of assignments/tests • Modified time demands • Pass/no pass option • Modified grades based on IEP <p>BEHAVIOR MODIFICATIONS:</p> <ul style="list-style-type: none"> • Breaks between tasks • Cue expected behavior • Daily feedback to student • Use de-escalation strategies 	<p>At Risk (Intervention)</p> <ul style="list-style-type: none"> • Maximize use of community resources • Connect family to school and school activities • Support through transition • Help develop compensating strategies • Increase opportunity for positive peer group influences • Supplemental courses • Placement in small and interactive groups

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|---|--|
| <ul style="list-style-type: none">• Use positive reinforcement• Use proximity/touch control• Use peer supports and mentoring• Model expected behavior by adults• Have parent sign homework/behavior chart• Set and post class rules• Chart progress and maintain data | |
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Grade: 5	Course: Math
Pacing: 10 weeks	
Unit: 2 - Decimals	Big Idea: Chapter 4 - Place Value and Decimals Chapter 5 - Add and Subtract Decimals Chapter 6 - Multiply Decimals and Whole Numbers Chapter 7 - Multiply Decimals Chapter 8 - Divide Decimals
<i>Content Area NJSLs Performance Expectations Addressed</i>	<i>Interdisciplinary Connections</i>
<ul style="list-style-type: none"> 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. 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. 5.NBT.A.3. Read, write, and compare decimals to thousandths. <ul style="list-style-type: none"> a. Read and write decimals to thousandths using base-ten numerals, number names, and expanded form, e.g., $347.392 = 3 \times 100 + 4 \times 10 + 7 \times 1 + 3 \times (1/10) + 9 \times (1/100) + 2 \times (1/1000)$. b. Compare two decimals to thousandths based on meanings of the digits in each place, using $>$, $=$, and $<$ symbols to record the results of comparisons. 5.NBT.A.4. Use place value understanding to round decimals to any place 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 	English Language Arts <ul style="list-style-type: none"> SL.PE.5.1. Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 5 topics and texts, building on others' ideas and expressing their own clearly. L.VL.5.2. Determine or clarify the meaning of unknown and multiple-meaning academic and domain-specific words and phrases based on grade 5 reading and content, choosing flexibly from a range of strategies. Science <ul style="list-style-type: none"> 5-ESS2-2: Describe and graph the amounts of saltwater and freshwater in various reservoirs to provide evidence about the distribution of water on Earth.

<p>relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used</p> <p>Standards for Mathematical Practice</p> <ul style="list-style-type: none"> • MP.1 Make sense of problems and persevere in solving them. • MP.2 Reason abstractly and quantitatively. • MP.3 Construct viable arguments and critique the reasoning of others. • MP.4 Model with mathematics. • MP.5 Use appropriate tools strategically. • MP.6 Attend to precision. • MP.7 Look for and make use of structure. • MP.8 Look for and express regularity in repeated reasoning. 	
<i>Computer Science and Design Thinking</i>	<i>Career Readiness, Life Literacies, and Key Skills</i>
<ul style="list-style-type: none"> • 8.1.5.DA.1: Collect, organize, and display data in order to highlight relationships or support a claim. • 8.1.5.DA.3: Organize and present collected data visually to communicate insights gained from different views of the data. 	<p>21st Century Skills</p> <ul style="list-style-type: none"> • 9.4.5.IML.2: Create a visual representation to organize information about a problem or issue (e.g., 4.DL.B.5, 8.1.5.DA.3). <p>Technology</p> <ul style="list-style-type: none"> • 9.4.5.TL.4: Compare and contrast artifacts produced individually to those developed collaboratively (e.g., 1.5.5.CR3a). <p>Career Readiness, Life Literacies, and Key Skills Practices:</p> <ul style="list-style-type: none"> • Use technology to enhance productivity, increase collaboration and communicate effectively. • Work productively in teams while using cultural/global competence.
<i>Student Learning Objectives (SLO)</i>	
<p>Students will be able to...</p> <ul style="list-style-type: none"> • read and write decimals to thousandths using base-ten numerals. • read and write decimals to thousandths using number names. • read and write decimals to thousandths using expanded form. 	

- compare two decimals to thousandths using $>$, $=$, and $<$ symbols.
- compare decimals when each is presented in a different form (base-ten numeral, number name, and expanded form).
- round decimals to any place value.
- add and subtract decimals to hundredths using concrete models and drawings.
- multiply and divide decimals to hundredths using concrete models and drawings.
- add, subtract, multiply, and divide decimals to hundredths using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.
- add and subtract decimals to hundredths using concrete models and drawings.
- multiply and divide decimals to hundredths using concrete models and drawings.
- add, subtract, multiply, and divide decimals to hundredths using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.
- relate the strategy to the written method and explain the reasoning used.

Academic Vocabulary

Volume, unit cube, fraction, equivalent, dividend, divisor, quotient, estimate, mixed numbers, numerator, denominator, sum, difference, cubic unit

Essential Questions

- How does the position of a digit in a number affect its value?
- What patterns do I notice in how digits change as they move to the left or right in a number?
- How can I use my understanding of place value to explain relationships between digits?
- What happens to a number when I multiply or divide it by powers of 10?
- How can patterns in place value help me multiply or divide by 10, 100, or 1,000?
- Why does multiplying or dividing by powers of 10 affect where the decimal point is placed?
- How can I read and write decimals using place value correctly?
- How do I compare and order decimals to the thousandths place?
- What strategies help me determine which decimal is greater or less?

Enduring Understandings

- The value of a digit increases or decreases based on its position, following a base-ten pattern where each place is 10 times the value of the place to its right.
- Moving a digit one place to the left makes it 10 times greater, while moving it to the right makes it one-tenth its value.
- Place value helps explain how digits in different positions relate through multiplication or division by 10.
- Multiplying or dividing by powers of 10 shifts the digits, changing their place value without changing the digits themselves.
- Recognizing base-ten patterns allows us to multiply or divide quickly by simply moving the digits left or right.
- Shifting digits in powers of ten operations changes the location of the decimal point, making numbers larger or smaller.

<ul style="list-style-type: none"> • How can I use place value to round decimals to the nearest whole, tenth, or hundredth? • What steps do I follow to round a decimal correctly? • Why is rounding useful in real-world situations? • How can I use place value to help me add, subtract, multiply, and divide decimals accurately? • What strategies or models can I use to solve decimal problems and explain my thinking? • How is working with decimals similar to working with whole numbers? How is it different? • How can I use the relationship between operations (like multiplication and division) to solve decimal problems? • How do I know if my answer with decimals makes sense? • Why is it important to align decimal points when adding or subtracting decimals? 	<ul style="list-style-type: none"> • Each place in a decimal represents a fractional part of 10, and understanding this helps us read and write decimals precisely. • Comparing decimals requires understanding the value of digits in each place from left to right. • Comparing digits place-by-place and using place value helps determine which decimal is greater or less. • Place value tells us which digit to round and which digit to use for deciding how to round. • To round correctly, identify the place you're rounding to, check the digit to the right, and decide whether to round up or keep the digit the same. • Rounding helps estimate and simplify numbers in everyday situations like money, measurement, or time. • Understanding place value helps align digits correctly and ensure accurate calculations with decimals. • Using number lines, area models, and place value charts helps visualize decimal operations and explain reasoning. • Decimal operations follow similar rules to whole numbers, but require careful attention to place value and decimal points. • Inverse relationships between operations help check answers and solve problems using different strategies. • Estimating and checking the reasonableness of an answer helps confirm accuracy in decimal calculations. • Aligning decimal points ensures that digits are placed in the correct columns, leading to accurate sums and differences.
Core Instruction/Supplemental Materials	Assessments
<ul style="list-style-type: none"> • Go Math digital resources on HMH platform • Interactive Student Journal • Student Journal from Go Math • Reteach and Enrich resources from Go Math • Vocabulary Cards • "Math on the Spot" videos through HMH Go Math 	Formative <ul style="list-style-type: none"> • Oral assessment • Exit tickets • Quizzes • Journals • Graphic Organizers

- iTools from HMH Go Math
- HMH Go Math Supplemental Slides
- Math Readers from Go Math
- Boddle Math
- SumDog
- Prodigy
- Kahoot
- Quizizz
- Kahn Academy
- iReady Learning Path and Lessons materials
- Newspaper hunt to find numbers at least 6 digits long to write in each form
- Find estimated amounts in new stories, on the Internet, in newspapers, or magazines
- Round multidigit numbers to specific place values in a Rounding Rodeo
- View Math Antics videos for rounding, division, and multiplication
- Play Round and Roll game
- Play Rounding Numbers Pirate game on MathPlayground.com
- Teacher Created Materials
- [5.M.B.4 Breaking Apart Composite Solids](#)
- [5.M.B.4a using Volume to Understand the Associative Property of Multiplication](#)
- [5.M.B.4b Cari's Aquarium](#)
- [5.M.B Box of Clay](#)
- [5.NF.A.1 Making S'Mores](#)
- [5.NF.A.2 Do These Add Up?](#)
- [5.NF.A Measuring Cups](#)
- [5.NF.B.3 How Much Pie?](#)
- [5.NF.B.4b Chavone's Bathroom Tiles](#)
- Social Emotional Learning - HMH Math Reader "A Hundredth of a Second" by H. J. Laager
- Diversity, Equity and Inclusion - HMH Math Reader "Dewey and His

- Class discussion
- Interactive online games
- Teacher observation
- Classwork Practice
- Discussion Trifolds
- Video logs
- Show What you Know
- Lesson Quick Checks
- Share and Show
- Mid Chapter Checkpoints
- Practice and Homework pages

Summative

- Tests
- Skills assessment/Benchmarks

Alternative

- Centers/activities/games
- Performance assessments
- Projects

Decimals” by Kathleen Cannon	
Modifications/Differentiated Activities	
<p>Enrichment/Gifted and Talented</p> <ul style="list-style-type: none"> • Differentiated curriculum for the gifted learner. • Regular classroom curricula and instruction that is adapted, modified, or replaced. • Educational opportunities consisting of a continuum of differentiated curricular options, instructional approaches and materials. • Integrated G&T programming into the general education school day. • Flexible groupings of students to facilitate differentiated instruction and curriculum. <p>Learning Environments:</p> <ul style="list-style-type: none"> • Extensive outside reading • Active classroom discussion • Innovative oral and written presentations • Deductive and inductive reasoning • Independent writing and research • Divergent thinking • Challenging problem solving situations • Interactive, independent and interdisciplinary activities 	<p>Multilingual Learners</p> <ul style="list-style-type: none"> • Alternate Responses • Notes in Advance • Extended Time • Simplified Instruction (written and verbal) • Online Dictionary • Use lots of visuals • Use physical activity; model, role-play • Repeat/Rephrase often • Use lower level materials when appropriate
<p>Special Education</p> <p>GENERAL MODIFICATIONS:</p> <ul style="list-style-type: none"> • Allow outlining, instead of writing for an essay or major project • Computerized spell-check support • Word bank of choices for answers to test questions • Provision of calculator and/or number line for math tests • Film or video supplements in place of reading text • Reworded questions in simpler language • Projects instead of written reports • Highlighting important words or phrases in reading assignments • Modified workload or length of assignments/tests 	<p>At Risk (Intervention)</p> <ul style="list-style-type: none"> • Maximize use of community resources • Connect family to school and school activities • Support through transition • Help develop compensating strategies • Increase opportunity for positive peer group influences • Supplemental courses • Placement in small and interactive groups

- Modified time demands
- Pass/no pass option
- Modified grades based on IEP

BEHAVIOR MODIFICATIONS:

- Breaks between tasks
- Cue expected behavior
- Daily feedback to student
- Use de-escalation strategies
- Use positive reinforcement
- Use proximity/touch control
- Use peer supports and mentoring
- Model expected behavior by adults
- Have parent sign homework/behavior chart
- Set and post class rules
- Chart progress and maintain data

Grade: 5	Course: Math
Pacing: 10 weeks	
Unit: 3 - Fractions	Big Idea: Chapter 9 - Adding and Subtracting Fractions with Unlike Denominators Chapter 10 - Adding and Subtracting Fractions and Mixed Numbers with Unlike Denominators Chapter 11 - Multiply Fractions Chapter 12 - Divide Fractions Chapter 13 - Expressions
Content Area NJSL Performance Expectations Addressed	Interdisciplinary Connections
<ul style="list-style-type: none"> 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. <i>For example, $\frac{2}{3} + \frac{5}{4} = \frac{8}{12} + \frac{15}{12} = \frac{23}{12}$ (in general, $\frac{a}{b} + \frac{c}{d} = \frac{ad + bc}{bd}$).</i> 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. <i>For example, recognize an incorrect result $\frac{2}{5} + \frac{1}{2} = \frac{3}{7}$, by observing that $\frac{3}{7} < \frac{1}{2}$.</i> 5.NF.B.3 Interpret a fraction as division of the numerator by the denominator ($\frac{a}{b} = a \div b$). 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. <i>For example, interpret $\frac{3}{4}$ as the result of dividing 3 by 4, noting that $\frac{3}{4}$ multiplied by 4 equals 3, and that when 3 wholes are shared equally among 4 people each person</i> 	English Language Arts <ul style="list-style-type: none"> W.RW.5.7. Write routinely over extended time frames (time for research and revision) and shorter time frames (a single sitting or a day or two) for a range of tasks, purposes, and audiences. SL.PE.5.1. Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 5 topics and texts, building on others' ideas and expressing their own clearly. L.VL.5.2. Determine or clarify the meaning of unknown and multiple-meaning academic and domain-specific words and phrases based on grade 5 reading and content, choosing flexibly from a range of strategies. Science <ul style="list-style-type: none"> 5-ESS3-1: Obtain and combine information about ways individual communities use science ideas to protect the Earth's resources and environment.

has a share of size $\frac{3}{4}$. If 9 people want to share a 50-pound sack of rice equally by weight, how many pounds of rice should each person get? Between what two whole numbers does your answer lie?

- 5.NF.B.4 Apply and extend previous understandings of multiplication to multiply a fraction or whole number by a fraction.
 - a. 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 $a \times q \div b$. *For example, use a visual fraction model to show $(2/3) \times 4 = 8/3$, and create a story context for this equation. Do the same with $(2/3) \times (4/5) = 8/15$. (In general, $(a/b) \times (c/d) = ac/bd$.)*
 - b. 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.
- 5.NF.B.5 Interpret multiplication as scaling (resizing), by:
 - b. 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.
- 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
- 5.NF.B.7 Apply and extend previous understandings of division to divide unit fractions by whole numbers and whole numbers by unit fractions.
 - a. Interpret division of a unit fraction by a non-zero whole number, and compute such quotients. *For example, create a story context for $(1/3) \div 4$, and use a visual fraction model*

to show the quotient. Use the relationship between multiplication and division to explain that $(1/3) \div 4 = 1/12$ because $(1/12) \times 4 = 1/3$.

- b. Interpret division of a whole number by a unit fraction, and compute such quotients. *For example, create a story context for $4 \div (1/5)$, and use a visual fraction model to show the quotient. Use the relationship between multiplication and division to explain that $4 \div (1/5) = 20$ because $20 \times (1/5) = 4$.*
- c. 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. *For example, how much chocolate will each person get if 3 people share $1/2$ lb of chocolate equally? How many $1/3$ -cup servings are in 2 cups of raisins?*

Standards for Mathematical Practice

- MP.1 Make sense of problems and persevere in solving them.
- MP.2 Reason abstractly and quantitatively.
- MP.3 Construct viable arguments and critique the reasoning of others.
- MP.4 Model with mathematics.
- MP.5 Use appropriate tools strategically.
- MP.6 Attend to precision.
- MP.7 Look for and make use of structure.
- MP.8 Look for and express regularity in repeated reasoning.

Computer Science and Design Thinking

- 8.1.5.DA.1: Collect, organize, and display data in order to highlight relationships or support a claim.
- 8.1.5.DA.3: Organize and present collected data visually to communicate insights gained from different views of the data.

Career Readiness, Life Literacies, and Key Skills

21st Century Skills

- 9.4.5.IML.2: Create a visual representation to organize information about a problem or issue (e.g., 4.DL.B.5, 8.1.5.DA.3).

Technology

- 9.4.5.TL.4: Compare and contrast artifacts produced individually to those developed collaboratively (e.g., 1.5.5.CR3a).

Career Readiness, Life Literacies, and Key Skills Practices:

- Use technology to enhance productivity, increase collaboration and communicate effectively.
- Work productively in teams while using cultural/global competence.

Student Learning Objectives (SLO)

Students will be able to...

- produce an equivalent sum (or difference) of fractions with like denominators from the original sum (or difference) of fractions that has unlike denominators.
- add and subtract fractions with unlike denominators by replacing given fractions with equivalent fractions.
- add and subtract fractions, including mixed numbers, with unlike denominators to solve word problems.
- represent calculations and solutions with visual fraction models and equations
- estimate answers using benchmark fractions and explain whether the answer is reasonable.
- estimate answers by reasoning about the size of the fractions and explain whether the answer is reasonable.
- represent a fraction as a division statement ($a/b = a \div b$).
- divide whole numbers in order to solve real world problems, representing the quotient as a fraction or a mixed number.
- represent word problems involving division of whole numbers using visual fraction models and equations.
- for whole number or fraction q , represent $(a/b) \times q$ as a parts of a partition of q into b equal parts [e.g. using a visual fraction model, $(3/4) \times 5$ can be represented by 3 parts, after partitioning 5 objects into 4 equal parts].
- for whole number or fraction q , represent $(a/b) \times q$ as $a \times q \div b$ [e.g. showing that $(2/5) \times 3$ is equivalent to $(2 \times 3) \div 5$].
- from a story context, interpret $(a/b) \times q$ as a parts of a partition of q into b equal parts.
- tile a rectangle having fractional side lengths using unit squares of the appropriate unit fraction [e.g. given a $3 \frac{1}{4}$ inch \times $7 \frac{3}{4}$ inch rectangle, tile the rectangle using $\frac{1}{4}$ inch tiles].
- show that the area found by tiling with unit fraction tiles is the same as would be found by multiplying the side lengths.
- multiply fractional side lengths to find areas of rectangles.
- represent fraction products as rectangular areas.
- multiply a fraction by a whole number.
- multiply a fraction by a fraction, in general, if q is a fraction c/d , then $(a/b) \times (c/d) = a(1/b) \times c(1/d) = ac \times (1/b)(1/d) = ac(1/bd) = ac/bd$.

- compare the size of a product to the size of one of its factors, considering the size of the other factor (at least one factor is a fraction).
- explain why multiplying a given number by a fraction greater than 1 results in a product greater than the given number.
- explaining why multiplying a given number by a fraction less than 1 results in a product smaller than the given number.
- explain that multiplying a given number by a fraction equivalent to 1 does not change the product.
- multiply fractions and mixed numbers in order to solve real world problems.
- represent the solution to these real world problems with visual fraction models and equations.
- use a story context to interpret division of a unit fraction by a whole number.
- use a story context to interpret division of a whole number by a unit fraction.
- divide unit fractions by whole numbers to solve real world problems, using visual fraction models and equations to represent the problem.
- divide whole numbers by unit fractions to solve real world problems, using visual fraction models and equations to represent the problem.
- use a story context to interpret division of a unit fraction by a whole number.
- divide of a unit fraction by a whole number and represent with visual fraction models.
- divide of a whole number by a unit fraction and represent with visual fraction models.
- divide unit fractions by whole numbers to solve real-world problems, using visual fraction models and equations to represent the problem.
- divide whole numbers by unit fractions to solve real-world problems, using visual fraction models and equations to represent the problem.

Academic Vocabulary

Fraction, area, product, numerator, denominator, factor, division, unit fraction, divisor, dividend, quotient, power, exponent, place value, measurement units

Essential Questions

- How can I add or subtract fractions that have different denominators?
- What strategies can I use to find a common denominator?
- How can I use models and equations to solve fraction word problems?
- How can I represent a fraction as a division problem?
- What does a fraction tell me about how something is being shared or divided?
- How can I model and solve problems that involve multiplying fractions?
- What happens when I multiply a fraction by a whole number?

Enduring Understandings

- To add or subtract fractions with different denominators, I must find equivalent fractions with a common denominator.
- Finding a common denominator involves identifying common multiples or using the least common multiple of the denominators.
- Visual models and equations help me make sense of real-world fraction problems by representing the parts and their relationships clearly.
- A fraction represents the division of the numerator by the denominator (e.g., $\frac{3}{4}$ means 3 divided by 4).

<ul style="list-style-type: none"> • How does multiplying a fraction by a whole number show repeated parts of a whole? • How can I find the area of a rectangle when the sides are fractions? • How do area models help me understand multiplying fractions? • How does multiplying by a fraction change the size of a number? • What does it mean to scale a number up or down using a fraction? • How can I use multiplication of fractions to solve real-world problems? • How can I use visual models to help me solve problems with fractions? • How is dividing with unit fractions different from dividing with whole numbers? • What does it mean to divide a unit fraction by a whole number, or a whole number by a unit fraction? • How can I use models to show division with fractions? 	<ul style="list-style-type: none"> • A fraction shows how a whole is partitioned into equal parts and how many of those parts are being considered. • I can use area models, number lines, or repeated groups to show how multiplying fractions represents parts of a whole. • Multiplying a fraction by a whole number increases the fraction by that many groups of the fractional part. • Multiplying by a whole number is like adding the same fractional part repeatedly. • The area of a rectangle with fractional sides can be found by multiplying the length and width, just like with whole numbers. • Area models show how parts of a whole overlap, making it easier to see and understand the product of two fractions. • Multiplying by a fraction less than 1 makes the number smaller, and multiplying by a fraction greater than 1 makes it larger. • Scaling by a fraction resizes a number—fractions less than 1 shrink it (scaling down), and fractions greater than 1 enlarge it (scaling up). • Many real-world situations involve parts of parts, which I can solve using multiplication of fractions. • Visual models make abstract concepts more concrete and help me explain and check my reasoning. • Dividing with unit fractions involves thinking about how many times a small part fits into a whole, which is different from grouping whole numbers. • Dividing a unit fraction by a whole number results in even smaller parts, while dividing a whole number by a unit fraction tells how many of those parts fit into the whole. • Models like number lines, rectangles, or visual groupings help show how division with fractions works conceptually.
<p>Core Instruction/Supplemental Materials</p>	<p>Assessments</p>
<ul style="list-style-type: none"> • Go Math digital resources on HMH platform • Interactive Student Journal 	<p>Formative</p> <ul style="list-style-type: none"> • Oral assessment

- Student Journal from Go Math
- Reteach and Enrich resources from Go Math
- Vocabulary Cards
- "Math on the Spot" videos through HMH Go Math
- iTools from HMH Go Math
- HMH Go Math Supplemental Slides
- Math Readers from Go Math
- Boddle Math
- SumDog
- Prodigy
- Kahoot
- Quizizz
- Kahn Academy
- iReady Learning Path and Lessons materials
- Newspaper hunt to find numbers at least 6 digits long to write in each form
- Find estimated amounts in new stories, on the Internet, in newspapers, or magazines
- Round multidigit numbers to specific place values in a Rounding Rodeo
- View Math Antics videos for rounding, division, and multiplication
- Play Round and Roll game
- Play Rounding Numbers Pirate game on MathPlayground.com
- Teacher Created Materials
- [5.NF.B.4b New Park](#)
- [5.NF.B.5 Comparing Heights of Buildings](#)
- [5.NF.B.5 Grass Seedlings](#)
- [5.NF.B.5b Mrs. Gray's Homework Assignment](#)
- [5.NF.B.6 To Multiply or not to multiply?](#)
- [5.NF.B.7 Banana Pudding](#)
- [5.NBT.A.2 Multiplying Decimals by 10](#)
- [5.NBT.A.2 Marta's Multiplication Error](#)
- [5.NBT.B.7 The Value of Education](#)

- Exit tickets
- Quizzes
- Journals
- Graphic Organizers
- Class discussion
- Interactive online games
- Teacher observation
- Classwork Practice
- Discussion Trifolds
- Video logs
- Show What you Know
- Lesson Quick Checks
- Share and Show
- Mid Chapter Checkpoints
- Practice and Homework pages

Summative

- Tests
- Skills assessment/Benchmarks

Alternative

- Centers/activities/games
- Performance assessments
- Projects

<ul style="list-style-type: none"> • 5.M.A.1, 5.NF.B.3 Converting Fractions of a Unit into a Smaller Unit • Social Emotional Learning - HMH Math Readers “Cranking Out the Numbers” by H.J. Serden • Amistad Law: Read and discuss fractional and division connections within "The Other Side" by Jacqueline Woodson 	
<i>Modifications/Differentiated Activities</i>	
<p>Enrichment/Gifted and Talented</p> <ul style="list-style-type: none"> • Differentiated curriculum for the gifted learner. • Regular classroom curricula and instruction that is adapted, modified, or replaced. • Educational opportunities consisting of a continuum of differentiated curricular options, instructional approaches and materials. • Integrated G&T programming into the general education school day. • Flexible groupings of students to facilitate differentiated instruction and curriculum. <p>Learning Environments:</p> <ul style="list-style-type: none"> • Extensive outside reading • Active classroom discussion • Innovative oral and written presentations • Deductive and inductive reasoning • Independent writing and research • Divergent thinking • Challenging problem solving situations • Interactive, independent and interdisciplinary activities 	<p>Multilingual Learners</p> <ul style="list-style-type: none"> • Alternate Responses • Notes in Advance • Extended Time • Simplified Instruction (written and verbal) • Online Dictionary • Use lots of visuals • Use physical activity; model, role-play • Repeat/Rephrase often • Use lower level materials when appropriate
<p>Special Education</p> <p>GENERAL MODIFICATIONS:</p> <ul style="list-style-type: none"> • Allow outlining, instead of writing for an essay or major project • Computerized spell-check support • Word bank of choices for answers to test questions • Provision of calculator and/or number line for math tests 	<p>At Risk (Intervention)</p> <ul style="list-style-type: none"> • Maximize use of community resources • Connect family to school and school activities • Support through transition • Help develop compensating strategies • Increase opportunity for positive peer group influences

<ul style="list-style-type: none">• Film or video supplements in place of reading text• Reworded questions in simpler language• Projects instead of written reports• Highlighting important words or phrases in reading assignments• Modified workload or length of assignments/tests• Modified time demands• Pass/no pass option• Modified grades based on IEP <p>BEHAVIOR MODIFICATIONS:</p> <ul style="list-style-type: none">• Breaks between tasks• Cue expected behavior• Daily feedback to student• Use de-escalation strategies• Use positive reinforcement• Use proximity/touch control• Use peer supports and mentoring• Model expected behavior by adults• Have parent sign homework/behavior chart• Set and post class rules• Chart progress and maintain data	<ul style="list-style-type: none">• Supplemental courses• Placement in small and interactive groups
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Grade: 5	Course: Math
Pacing: 10 weeks	
Unit: 4 - Measurement, Data, Geometry	Big Idea: Chapter 14 - Perimeter and Area of Rectangles with Fractional and Decimal Side Lengths Chapter 15 - Classifying 2-D and 3-D Figures Chapter 16 - Volume Chapter 17 - Convert Units of Measure Chapter 18 - Graphs and Patterns Chapter 19 - Collect, Represent, and Interpret Data
<i>Content Area NJSLS Performance Expectations Addressed</i>	<i>Interdisciplinary Connections</i>
<ul style="list-style-type: none"> ● 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. ● 5.MD.B.2 Make a line plot to display a data set of measurements in fractions of a unit ($\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{8}$). Use operations on fractions for this grade to solve problems involving information presented in line plots. ● 5.MD.C.3 Recognize volume as an attribute of solid figures and understand concepts of volume measurement. <ul style="list-style-type: none"> ○ a. 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. ○ b. 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 ● 5.MD.C.4 Measure volumes by counting unit cubes, using cubic cm, cubic in., cubic ft., and non-standard units. 	English Language Arts <ul style="list-style-type: none"> ● SL.PE.5.1. Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 5 topics and texts, building on others’ ideas and expressing their own clearly. ● L.VL.5.2. Determine or clarify the meaning of unknown and multiple-meaning academic and domain-specific words and phrases based on grade 5 reading and content, choosing flexibly from a range of strategies. Science <ul style="list-style-type: none"> ● 5-PS1-2 Measure and graph quantities to provide evidence that regardless of the type of change that occurs when heating, cooling, or mixing substances, the total weight of matter is conserved.

- 5.MD.C.5 Relate volume to the operations of multiplication and addition and solve real world and mathematical problems involving volume.
 - a. 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.
 - 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.
 - c. Recognize volume as additive. Find volumes of solid figures composed of two non-overlapping right rectangular prisms by adding the volumes of the nonoverlapping parts, applying this technique to solve real world problems.
- 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).
- 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.
- 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. *For example, given the rule “Add 3” and the starting number 0, and*

given the rule “Add 6” and the starting number 0, generate terms in the resulting sequences, and observe that the terms in one sequence are twice the corresponding terms in the other sequence. Explain informally why this is so.

- 5.G.B.3 Understand that attributes belonging to a category of two-dimensional figures also belong to all subcategories of that category. *For example, all rectangles have four right angles and squares are rectangles, so all squares have four right angles.*
- 5.G.B.4 Classify two-dimensional figures in a hierarchy based on properties.
- 5.DL.A.1 Understand how different visualizations can highlight different aspects of data. Ask questions and interpret data visualizations to describe and analyze patterns.
- 5.DL.A.2 Develop strategies to collect, organize, and represent data of various types and from various sources. Communicate results digitally through a data visual (e.g. chart, storyboard, video presentation).
- 5.DL.A.3 Collect and clean data to be analyzable (e.g., make sure each entry is formatted correctly, deal with missing or incomplete data).
- 5.DL.A.4 Using appropriate visualizations (i.e. double line plot, double bar graph), analyze data across samples.
- 5.DL.B.5 Make a line plot to display a data set of measurements in fractions of a unit ($\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{8}$). Use operations on fractions for this grade to solve problems involving information presented in line plots. *For example, given different measurements of liquid in identical beakers, find the amount of liquid each beaker would contain if the total amount in all the beakers were redistributed equally.*
- 5.NBT.B.5 With accuracy and efficiency, multiply multi-digit whole numbers using the standard algorithm.
- 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.

<ul style="list-style-type: none"> • 5.NF.B.7 Apply and extend previous understandings of division to divide unit fractions by whole numbers and whole numbers by unit fractions. <ul style="list-style-type: none"> c. 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. <i>For example, how much chocolate will each person get if 3 people share $\frac{1}{2}$ lb of chocolate equally? How many $\frac{1}{3}$-cup servings are in 2 cups of raisins?</i> <p>Standards for Mathematical Practice</p> <ul style="list-style-type: none"> • MP.1 Make sense of problems and persevere in solving them. • MP.2 Reason abstractly and quantitatively. • MP.3 Construct viable arguments and critique the reasoning of others. • MP.4 Model with mathematics. • MP.5 Use appropriate tools strategically. • MP.6 Attend to precision. • MP.7 Look for and make use of structure. • MP.8 Look for and express regularity in repeated reasoning. 	
Computer Science and Design Thinking	Career Readiness, Life Literacies, and Key Skills
<ul style="list-style-type: none"> • 8.1.5.DA.1: Collect, organize, and display data in order to highlight relationships or support a claim. • 8.1.5.DA.3: Organize and present collected data visually to communicate insights gained from different views of the data. 	<p>21st Century Skills</p> <ul style="list-style-type: none"> • 9.4.5.IML.2: Create a visual representation to organize information about a problem or issue (e.g., 4.DL.B.5, 8.1.5.DA.3). <p>Technology</p> <ul style="list-style-type: none"> • 9.4.5.TL.4: Compare and contrast artifacts produced individually to those developed collaboratively (e.g., 1.5.5.CR3a). <p>Career Readiness, Life Literacies, and Key Skills Practices:</p> <ul style="list-style-type: none"> • Use technology to enhance productivity, increase collaboration and communicate effectively.

- Work productively in teams while using cultural/global competence.

Student Learning Objectives (SLO)

Students will be able to...

- convert from one measurement unit to another within a given measurement system (e.g., convert 5 cm to 0.05 m, convert minutes to hours).
- solve multi-step, real world problems that require conversions.
- count unit cubes in order to measure the volume of a solid.
- use unit cubes of centimeters, inches, and/or other units to measure volume.
- pack right rectangular prisms with cubes to find volume and multiply side lengths of the right rectangular prism to find volume, showing that they are the same.
- pack right rectangular prisms with cubes to find volume and multiply height by the area of the base, showing that they are the same.
- explain how both volume formulas relate to counting the cubes in one layer and multiplying that value by the number of layers (height).
- write the volume of an object as the product of three whole numbers.
- solve real-world and mathematical problems using the formulas $V = l \times w \times h$ and $V = B \times h$.
- find the volume of a composite solid composed of two right rectangular prisms.
- graph points defined by whole number coordinates in the first quadrant of the coordinate plane in order to represent real world and mathematical problems.
- interpret coordinates in context.
- use two rules to create two numerical patterns.
- compare corresponding terms (e.g. compare the first terms in each list, compare the second terms in each list, etc).
- identify the relationship between corresponding terms and write ordered pairs.
- graph the ordered pairs.
- classify two-dimensional figures (triangles, quadrilaterals) based on shared attributes (e.g. parallel sides, number of sides, angle size, side length, etc.).
- arrange the categories/subcategories of figures (e.g. squares, rectangles, trapezoids, etc) in a hierarchy based on attributes.
- identify attributes of a two-dimensional shape based on attributes of the categories to which it belongs.
- use measurement information to create a line plot.
- using measurement information presented in line plots, add, subtract, multiply and divide fractions in order to solve problems.

Academic Vocabulary

Coordinate plane, quadrant, ordered pair, triangle, rectangle, quadrilateral, side, angle, parallel, square, trapezoid, decimal, fraction, numerator, denominator, whole number, product, quotient, sum, difference

Essential Questions

- How can I convert measurements within the same system (e.g., inches to feet, grams to kilograms)?
- What strategies can I use to solve real-world problems that involve different units of measurement?
- Why is it important to understand how units of measurement relate to each other?
- How can I use a line plot to represent and analyze measurement data?
- How do I collect, organize, and display data in a meaningful way?
- How can I use operations to solve problems based on data shown in a line plot?
- What does volume measure, and how is it different from area?
- How can I find the volume of a rectangular prism?
- How does multiplication help me find volume?
- How can I apply what I know about volume to solve real-world problems?
- How can combining or separating shapes help me understand volume better?
- How can I use a coordinate grid to represent and solve real-world problems?
- How do I locate and describe points on a coordinate plane using ordered pairs?
- How can graphing on the coordinate plane help me understand patterns and relationships?
- How can I classify two-dimensional figures based on their attributes (e.g., sides, angles, symmetry)?
- What do all shapes in a category (like quadrilaterals or triangles) have in common?

Enduring Understandings

- Units within the same measurement system are related by consistent conversion ratios, and understanding these relationships allows for accurate conversions and comparisons.
- Applying knowledge of unit relationships and conversion strategies helps solve real-world problems involving measurement efficiently and accurately.
- Recognizing how measurement units relate ensures appropriate calculations, communication, and decision-making in real-world contexts.
- Line plots organize data clearly and make it easier to interpret patterns, compare values, and perform operations.
- Systematic data collection and organization help reveal trends and support decision-making.
- Applying addition, subtraction, multiplication, and division to data helps answer questions and draw conclusions about real-world scenarios.
- Volume measures the amount of space a solid figure occupies, while area measures the space within a two-dimensional surface.
- Volume of a rectangular prism can be found by multiplying its length, width, and height or by counting cubic units.
- Volume is a three-dimensional extension of repeated multiplication, showing the number of cubic units filling a solid figure.
- Understanding volume helps solve everyday problems involving packing, building, and storing objects.

<ul style="list-style-type: none"> • How do geometric properties help me understand relationships among different shapes? • Why is it helpful to group and organize shapes based on their characteristics? • 	<ul style="list-style-type: none"> • Breaking apart or composing solids from smaller prisms helps reinforce volume formulas and deepen understanding of spatial reasoning. • Coordinate grids help represent locations, model situations, and analyze movement and patterns in real-world problems. • Ordered pairs describe precise locations using horizontal and vertical coordinates, allowing for accurate placement and interpretation on the grid. • Plotting points and identifying patterns on a coordinate grid reveals relationships and changes between variables. • Two-dimensional figures can be grouped and compared based on properties such as angles, sides, and symmetry. • Shapes in the same category share specific defining attributes that distinguish them from other geometric figures.
<i>Core Instruction/Supplemental Materials</i>	<i>Assessments</i>
<ul style="list-style-type: none"> • Go Math digital resources on HMH platform • Interactive Student Journal • Student Journal from Go Math • Reteach and Enrich resources from Go Math • Vocabulary Cards • “Math on the Spot” videos through HMH Go Math • iTools from HMH Go Math • HMH Go Math Supplemental Slides • Math Readers from Go Math • Boddle Math • SumDog • Prodigy • Kahoot • Quizizz • Kahn Academy • iReady Learning Path and Lessons materials • Newspaper hunt to find numbers at least 6 digits long to write in each form 	<p>Formative</p> <ul style="list-style-type: none"> • Oral assessment • Exit tickets • Quizzes • Journals • Graphic Organizers • Class discussion • Interactive online games • Teacher observation • Classwork Practice • Discussion Trifolds • Video logs • Show What you Know • Lesson Quick Checks • Share and Show • Mid Chapter Checkpoints • Practice and Homework pages <p>Summative</p> <ul style="list-style-type: none"> • Tests

- Find estimated amounts in new stories, on the Internet, in newspapers, or magazines
- Round multidigit numbers to specific place values in a Rounding Rodeo
- View Math Antics videos for rounding, division, and multiplication
- Play Round and Roll game
- Play Rounding Numbers Pirate game on MathPlayground.com
- Teacher Created Materials
- [5.G.A.1 Battle Ship Using Grid Paper](#)
- [5.G.A.2 Meerkat Coordinate Plane Task](#)
- [5.OA.B.3 Sidewalk Patterns](#)
- [5.G.B.3 Always, Sometimes, Never](#)
- [5.G.B.4 What is a Trapezoid? \(Part 2\)](#)
- [5.DL.B.5, 5.NF.A.1 Fractions on a Line Plot](#)
- [5.NBT.B.7, 5.NF.B.3 What is 23 divided by 5?](#)
- [5.NF.B.7c Salad Dressing](#)
- Social Emotional Learning - HMH Math Readers “Graphing Practice” by Spencer Warren

- Skills assessment/Benchmarks
- Alternative**
- Centers/activities/games
 - Performance assessments
 - Projects

Modifications/Differentiated Activities

Enrichment/Gifted and Talented

- Differentiated curriculum for the gifted learner.
- Regular classroom curricula and instruction that is adapted, modified, or replaced.
- Educational opportunities consisting of a continuum of differentiated curricular options, instructional approaches and materials.
- Integrated G&T programming into the general education school day.
- Flexible groupings of students to facilitate differentiated instruction and curriculum.

Learning Environments:

Multilingual Learners

- Alternate Responses
- Notes in Advance
- Extended Time
- Simplified Instruction (written and verbal)
- Online Dictionary
- Use lots of visuals
- Use physical activity; model, role-play
- Repeat/Rephrase often
- Use lower level materials when appropriate

- Extensive outside reading
- Active classroom discussion
- Innovative oral and written presentations
- Deductive and inductive reasoning
- Independent writing and research
- Divergent thinking
- Challenging problem solving situations
- Interactive, independent and interdisciplinary activities

Special Education

GENERAL MODIFICATIONS:

- Allow outlining, instead of writing for an essay or major project
- Computerized spell-check support
- Word bank of choices for answers to test questions
- Provision of calculator and/or number line for math tests
- Film or video supplements in place of reading text
- Reworded questions in simpler language
- Projects instead of written reports
- Highlighting important words or phrases in reading assignments
- Modified workload or length of assignments/tests
- Modified time demands
- Pass/no pass option
- Modified grades based on IEP

BEHAVIOR MODIFICATIONS:

- Breaks between tasks
- Cue expected behavior
- Daily feedback to student
- Use de-escalation strategies
- Use positive reinforcement
- Use proximity/touch control
- Use peer supports and mentoring
- Model expected behavior by adults
- Have parent sign homework/behavior chart
- Set and post class rules
- Chart progress and maintain data

At Risk (Intervention)

- Maximize use of community resources
- Connect family to school and school activities
- Support through transition
- Help develop compensating strategies
- Increase opportunity for positive peer group influences
- Supplemental courses
- Placement in small and interactive groups