



## **FIFTH GRADE MATHEMATICS CURRICULUM**

### **Rochelle Park Mission Statement**

We envision an educational community, which inspires and empowers all students to become self-sufficient and to thrive in a complex, global society.

### **Rochelle Park Vision Statement**

- ❖ Establish and maintain a shared responsibility among home, school, and the greater community which fosters student learning, accountability, and citizenship.
  
- ❖ To provide curricula that enables all students to meet or exceed current national, state, and local standards.
  
- ❖ We will utilize a variety of formative and summative assessments in order to differentiate and guide instruction.
  
- ❖ The district, as a Professional Learning Community, will provide on-going professional development training and opportunities for collaboration among faculty and staff.



## PACING CHART

Chapter	Time Frame
Ch. 1: Place Value, Multiplication, and Expression	18 days
Ch. 2: Divide Whole Numbers	14 days
Ch. 3: Add and Subtract Decimals	18 days
Ch. 4: Multiply Decimals	12 days
Ch. 5: Divide Decimals	14 days
Ch. 6: Add and Subtract Fractions with Unlike Denominators	17 days
Ch. 7: Multiply Fractions	15 days
Ch. 8: Divide Fractions	11 days
Ch. 9: Algebra: Patterns and Graphing	12 days
Ch. 10: Convert Units of Measure	12 days
Ch. 11: Geometry and Volume	18 days



## **Mathematic Domains**

### Operations and Algebraic Thinking

- Represent and solve problems involving addition and subtraction.
- Understand and apply properties of operations and the relationship between addition and subtraction.
- Add and subtract within 20.
- Work with addition and subtraction equations.

### Number and Operations in Base Ten

- Extend the counting sequence.
- Understand place value.
- Use place value understanding and properties of operations to add and subtract.

### Measurement and Data

- Measure lengths indirectly and by iterating length units.
- Tell and write time.
- Represent and interpret data.

### Geometry

- Reason with shapes and their attributes.

## **Mathematical Practices**

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

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8. Look for and express regularity in repeated reasoning.



### 8.1 Educational Technology

All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaborate and to create and communicate knowledge.

### 8.2 Technology Education, Engineering, Design, and Computational Thinking-Programming

All students will develop an understanding of the nature and impact of technology, engineering, technological design, computational thinking and the designed world as they relate to the individual, global society, and the environment.

## Educational Technology

**Indicators:** 8.1.5.A.1, 8.1.5.A.2, 8.1.5.A.3

- Select and use the appropriate digital tools and resources to accomplish a variety of tasks including solving problems.
- Format a document using word processing application to enhance text and include graphics, symbols and/or pictures.
- Use a graphic organizer to organize information about problem or issue.



## 21<sup>st</sup> Century Life and Careers Skills

**Indicators:** 9.1.8.A.6, 9.1.8.B.2, 9.1.4.B.7, 9.1.8.B.9, 9.1.8.D.1, 9.1.8.E.4, 9.1.8.E.6

- Explain how income affects spending decisions.
- Construct a simple personal savings and spending plan based on various sources of income.
- Construct a budget to save for long-term, short-term, and charitable goals.
- Determine the most appropriate use of various financial products and services.
- Determine how saving contributes to financial well-being.
- Prioritize personal wants and needs when making purchases.
- Compare the values of goods or services from different sellers when purchasing large quantities and small quantities.

## Career Ready Practices

**Indicators:** CRP2, CRP3, CRP4, CRP6, CRP8, CRP11, CRP12

- Apply appropriate academic technical skills
- Attend to personal health and financial well-being
- Communicate clearly and effectively and with reason
- Demonstrate creativity and innovation
- Utilize critical thinking to make sense of problems and persevere in solving them.
- Use technology to enhance productivity.
- Work productively in teams while using cultural global competence.

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<b>Grade:</b> Fifth		<b>Content:</b> Mathematics	
<b>Domain:</b> Number and Operations in Base Ten, Operations and Algebraic Thinking		<b>Topic:</b> Place Value, Multiplication, and Expressions	<b>Time Frame:</b> 15-18 days
<b>Standards:</b> 5.OA.A.1      5.NBT.A.2 5.OA.A.2      5.NBT.B.5 5.NBT.A.1      5.NBT.B.6		<b>Focus Mathematical Practices:</b> MP1: Make sense of problems and persevere in solving them MP8: Look for and express regularity and repeated reasoning.	<b>PARCC Model Content Framework:</b> Major Content: 5.NBT.A, 5.NBT.B Supporting Content: n/a Additional Content: 5.OA.A

Essential Questions	Enduring Understandings
<ul style="list-style-type: none"> <li>• How can you use place value, multiplication, and expressions to represent and solve problems?</li> <li>• How do you read, write, and represent whole numbers through hundred millions?</li> <li>• How can you use properties of operations to solve problems?</li> <li>• How can you use an exponent to show powers of ten?</li> <li>• How can you use a basic fact and pattern to multiply one and two-digit numbers?</li> <li>• How is multiplication used to solve a division problem?</li> <li>• How can you use a numerical expression and order of operations to find the solution to a problem?</li> </ul>	<ul style="list-style-type: none"> <li>• Use parentheses, brackets, or braces in numerical expressions, and evaluate expressions with these symbols.</li> <li>• Write simple expressions that record calculations with numbers, and interpret numerical expressions without evaluating them.</li> <li>• Explain patterns in the number of zeros of the product when multiplying a number by powers of 10.</li> <li>• Fluently multiply multi-digit whole numbers using the standard algorithm.</li> <li>• 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.</li> </ul>



Skills	NJDOE Model Curriculum (Student Learning Objectives)
<p>Students will be able to:</p> <ul style="list-style-type: none"> <li>● Read and write whole numbers through hundred millions.</li> <li>● Use properties of operations to solve problems.</li> <li>● Write and evaluate repeated factors in exponent form.</li> <li>● Use a basic fact and a patter to multiply mentally by multiples of 10, 100, and 1000.</li> <li>● Multiply by one-digit and multi-digit numbers.</li> <li>● Use multiplication to solve division problems.</li> <li>● Write numerical expressions and use order of operations, including parenthesis, brackets and braces to evaluate numerical expressions.</li> </ul>	<p>Students will know how to:</p> <ul style="list-style-type: none"> <li>● Evaluate numerical expressions with parentheses, brackets or braces.</li> <li>● Write numerical expressions when given a word problem or scenario in words and use words to interpret numerical expressions.</li> <li>● Recognize and explain patterns of the number of zeros and the placement of the decimal point in a product or quotient when a number is multiplied or divided by powers of 10.</li> <li>● Fluently multiply multi-digit whole numbers using the standard algorithm.</li> <li>● Describe the place value of numeral digits relative to both the place to the right and the place to the left</li> </ul>

Vocabulary	Resources	Assessment/Project
<p>base Distributive Property evaluate exponent inverse operations numerical expression order of operation period</p>	<ul style="list-style-type: none"> <li>● GOMath Lessons 1.1-1.12</li> <li>● GOMath iTools and eGlossary (Think Central)</li> <li>● GOMath! Animated Math Models</li> <li>● Corresponding Go Math! Grab and Go for Activities/Literature/Games</li> <li>● HMH Mega Math</li> <li>● Corresponding GOMath! Daily Routines</li> <li>● <a href="https://www-k6.thinkcentral.com/ePC/start.do">https://www-k6.thinkcentral.com/ePC/start.do</a></li> <li>● <a href="http://www.corestandards.org/Math">http://www.corestandards.org/Math</a></li> <li>● <a href="http://www.xtramath.org">http://www.xtramath.org</a></li> </ul>	<ul style="list-style-type: none"> <li>● Ongoing teacher observations (ie exit cards, think, pair share, or numbered heads together)</li> <li>● Workbook pages</li> <li>● Center Work and activities</li> <li>● Mixed Practice and Cumulative Review</li> <li>● Math Journals</li> <li>● Do Now's</li> <li>● Topic/Unit 1 Test</li> </ul>



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Differentiated Instruction		Interdisciplinary Connections
RTI/ELL	Enrichment	
<ul style="list-style-type: none"> <li>● Number line</li> <li>● Multiple Response Strategies</li> <li>● Extra time for assigned tasks</li> <li>● Adjust length of assignment</li> <li>● Repeat, clarify, or reword directions</li> <li>● Provide a warning for transitions</li> <li>● Mini-breaks between tasks</li> <li>● Precise step-by-step directions</li> <li>● Small group instruction</li> <li>● Read directions aloud</li> <li>● Consistent routine</li> <li>● Frequent feedback</li> </ul>	<ul style="list-style-type: none"> <li>● Math Journals</li> <li>● Chromebook</li> <li>● Open ended activities</li> <li>● Supplemental materials</li> <li>● Learning Centers</li> <li>● Tiered/Multi-level activities</li> <li>● Independent Student Options</li> </ul>	<p><b>Social Studies Connection:</b> Students will discuss population and represent increases using powers of 10.</p> <p><b>Plan a Day at the Amusement Park:</b> Students will practice multiplication skills by using admission fees/extras to find out the total amount for the entire class.</p>

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<b>Grade:</b> Fifth		<b>Content:</b> Mathematics	
<b>Domain:</b> Number and Operations in Base Ten, Number and Operations/Fractions		<b>Topic:</b> Divide Whole Numbers	<b>Time Frame:</b> 11-14 days
<b>Standards:</b> 5.NBT.B.6 5.NF.B.3		<b>Focus Mathematical Practices:</b> MP1: Make sense of problems and persevere in solving them. MP4: Model with mathematics. MP7: Look for and make use of structure.	<b>PARCC Model Content Framework:</b> Major Content: 5.NBT.B, 5.NF.B Supporting Content: n/a Additional Content: n/a

Essential Questions	Enduring Understandings
<ul style="list-style-type: none"> <li>● How can you divide whole numbers?</li> <li>● How can you tell where to place the first digit of a quotient to solve and check division problems?</li> <li>● How can you use base ten blocks to model and understand the division of whole numbers?</li> <li>● How can you use compatible numbers to estimate and adjust quotients?</li> <li>● How can you divide by two-digit divisors?</li> <li>● How do you interpret the remainder of a division problem?</li> <li>● How can the strategy draw a diagram help you solve a division problem?</li> </ul>	<ul style="list-style-type: none"> <li>● 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.</li> <li>● Interpret a fraction as division of the numerator by the denominator. Solve word problems involving division of whole numbers leading to answers in the form of fractions or mixed numbers.</li> </ul>

Skills	NJDOE Model Curriculum (Student Learning Objectives)
<p><b>Students will be able to:</b></p> <ul style="list-style-type: none"> <li>● Place the first digit in the quotient and divide 3 and 4 digit dividends by one-digit divisors.</li> <li>● Model division with two-digit divisors using base ten blocks.</li> <li>● Estimate and adjust quotients using compatible numbers.</li> <li>● Divide by two-digit divisors.</li> <li>● Solve division problems and decide how to interpret their remainder.</li> <li>● Solve problems by using the strategy draw a diagram.</li> </ul>	<p><b>Students will know how to:</b></p> <ul style="list-style-type: none"> <li>● Calculate whole number quotients with 4-digit dividends and 2-digit divisors and explain answers with equations, rectangular arrays, and area models.</li> <li>● Interpret a fraction as a division of the numerator by the denominator; solve word problems where division of whole numbers leads to fractional or mixed number answers.</li> </ul>

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Vocabulary	Resources	Assessment/Project
<p>compatible numbers estimate remainder</p>	<ul style="list-style-type: none"> <li>● GOMath Lessons 2.1-2.9</li> <li>● GOMath iTools and eGlossary (Think Central)</li> <li>● GOMath! Animated Math Models</li> <li>● Corresponding Go Math! Grab and Go for Activities/Literature/Games</li> <li>● HMH Mega Math</li> <li>● Corresponding GOMath! Daily Routines</li> <li>● <a href="https://www-k6.thinkcentral.com/ePC/start.do">https://www-k6.thinkcentral.com/ePC/start.do</a></li> <li>● <a href="http://www.corestandards.org/Math">http://www.corestandards.org/Math</a></li> <li>● <a href="http://www.xtramath.org">http://www.xtramath.org</a></li> </ul>	<ul style="list-style-type: none"> <li>● Ongoing teacher observations (ie exit cards, think, pair share, or numbered heads together)</li> <li>● Workbook pages</li> <li>● Center Work and activities</li> <li>● Mixed Practice and Cumulative Review</li> <li>● Math Journals</li> <li>● Do Now's</li> <li>● Topic/Unit 2 Test</li> </ul>
Differentiated Instruction		Interdisciplinary Connections
RTI/ELL	Enrichment	<p><b>Social Studies Connection:</b> Plan a Trip in United States, students will find the number of miles between current location and destination and divide the number of days traveled to find miles/day.</p> <p><b>Science Connection:</b> Students will be given distance of each planet, the speed at which they will travel, and using division will figure out the time it will take to arrive at each planet.</p>
<ul style="list-style-type: none"> <li>● Number line</li> <li>● Multiple Response Strategies</li> <li>● Extra time for assigned tasks</li> <li>● Adjust length of assignment</li> <li>● Repeat, clarify, or reword directions</li> <li>● Provide a warning for transitions</li> <li>● Mini-breaks between tasks</li> <li>● Precise step-by-step directions</li> <li>● Small group instruction</li> <li>● Read directions aloud</li> <li>● Consistent routine</li> <li>● Frequent feedback</li> </ul>	<ul style="list-style-type: none"> <li>● Math Journals</li> <li>● Chromebook</li> <li>● Open ended activities</li> <li>● Supplemental materials</li> <li>● Learning Centers</li> <li>● Tiered/Multi-level activities</li> <li>● Independent Student Options</li> </ul>	

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<b>Grade:</b> Fifth		<b>Content:</b> Mathematics
<b>Domain:</b> Number and Operations in Base Ten	<b>Topic:</b> Add and Subtract Decimals	<b>Time Frame:</b> 15-18 days
<b>Standards:</b> 5.NBT.A.1 5.NBT.A.3 5.NBT.A.4 5.NBT.B.7	<b>Focus Mathematical Practices:</b> MP3: Construct viable arguments and critique the reasoning of others. MP8: Look for and express regularity and repeated reasoning.	<b>PARCC Model Content Framework:</b> Major Content: 5.NBT.A, 5.NBT.B Supporting Content: n/a Additional Content: n/a

Essential Questions	Enduring Understandings
<ul style="list-style-type: none"> <li>● How can you add and subtract decimals?</li> <li>● How do you read, write, and represent decimals through thousandths?</li> <li>● How can you use place value to compare, order, and round decimals?</li> <li>● How can you estimate decimal sums and differences?</li> <li>● How can place value help you add and subtract decimals?</li> <li>● How can you use addition or subtraction to describe a pattern or create a sequence with decimals?</li> <li>● How can the strategy make a table help you keep track of your bank account balance?</li> </ul>	<ul style="list-style-type: none"> <li>● 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.</li> <li>● Read, write, and compare decimals to thousandths.</li> <li>● Use place value understanding to round decimals to any place.</li> <li>● 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.</li> </ul>

Skills	NJDOE Model Curriculum (Student Learning Objectives)
<p><b>Students will be able to:</b></p> <ul style="list-style-type: none"> <li>● Model, read, and write decimals through thousandths.</li> <li>● Compare, order, and round decimals to any place.</li> <li>● Make reasonable estimates of decimal sums and differences.</li> <li>● Add and subtract decimals using place value.</li> <li>● Identify, describe, and create numeric patterns with decimals.</li> <li>● Solve problems using make a table strategy.</li> </ul>	<p><b>Students will know how to:</b></p> <ul style="list-style-type: none"> <li>● Explain the “ten times” or 1/10 relationships for place values in multi-digit numbers moving right or left across the places.</li> <li>● Compare decimals to thousandths based on the value of the digits in each place.</li> <li>● 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.</li> </ul>

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Vocabulary	Resources	Assessment/Project
sequence term thousandths	<ul style="list-style-type: none"> <li>● GOMath Lessons 3.1-3.12</li> <li>● GOMath iTools and eGlossary (Think Central)</li> <li>● GOMath! Animated Math Models</li> <li>● Corresponding Go Math! Grab and Go for Activities/Literature/Games</li> <li>● HMH Mega Math</li> <li>● Corresponding GOMath! Daily Routines</li> <li>● <a href="https://www-k6.thinkcentral.com/ePC/start.do">https://www-k6.thinkcentral.com/ePC/start.do</a></li> <li>● <a href="http://www.corestandards.org/Math">http://www.corestandards.org/Math</a></li> <li>● <a href="http://www.xtramath.org">http://www.xtramath.org</a></li> </ul>	<ul style="list-style-type: none"> <li>● Ongoing teacher observations (ie exit cards, think, pair share, or numbered heads together)</li> <li>● Workbook pages</li> <li>● Center Work and activities</li> <li>● Mixed Practice and Cumulative Review</li> <li>● Math Journals</li> <li>● Do Now's</li> <li>● Topic/Unit 3 Test</li> </ul>
Differentiated Instruction		Interdisciplinary Connections
RTI/ELL	Enrichment	<p><b>Social Studies Connection:</b> Students maintain a balance in a checkbook based on assignments throughout the year. They will learn to write out a check and use it towards a purchase in a “school store” at the end of the year.</p> <p><b>Science Connection:</b> Students will log precipitation for a month and compare amounts day to day or week to week, and find differences in amounts.</p>
<ul style="list-style-type: none"> <li>● Number line</li> <li>● Multiple Response Strategies</li> <li>● Extra time for assigned tasks</li> <li>● Adjust length of assignment</li> <li>● Repeat, clarify, or reword directions</li> <li>● Provide a warning for transitions</li> <li>● Mini-breaks between tasks</li> <li>● Precise step-by-step directions</li> <li>● Small group instruction</li> <li>● Read directions aloud</li> <li>● Consistent routine</li> <li>● Frequent feedback</li> </ul>	<ul style="list-style-type: none"> <li>● Math Journals</li> <li>● Chromebook</li> <li>● Open ended activities</li> <li>● Supplemental materials</li> <li>● Learning Centers</li> <li>● Tiered/Multi-level activities</li> <li>● Independent Student Options</li> </ul>	

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<b>Grade:</b> Fifth		<b>Content:</b> Mathematics
<b>Domain:</b> Number and Operations in Base Ten	<b>Topic:</b> Multiply Decimals	<b>Time Frame:</b> 10-12 days
<b>Standards:</b> 5.NBT.A.2 5.NBT.B.7	<b>Focus Mathematical Practices:</b> MP7: Look for and made use of structure MP8: Look for and express regularity and repeated reasoning.	<b>PARCC Model Content Framework:</b> Major Content: 5.NBT.A, 5.NBT.B Supporting Content: n/a Additional Content: n/a

Essential Questions	Enduring Understandings
<ul style="list-style-type: none"> <li>● How can you solve decimal multiplication problems?</li> <li>● How can patterns help you place the decimal point in a product?</li> <li>● How can you use a model, drawing, or place value to multiply a decimal and a whole number?</li> <li>● How can the strategy draw a diagram help you solve a decimal multiplication problem?</li> <li>● What strategies can you use to place a decimal point in a product?</li> <li>● How do you know you have the correct number of decimal places in your product?</li> </ul>	<ul style="list-style-type: none"> <li>● Explain patterns in the number of zeros of the product when multiplying a number by powers of 10.</li> <li>● Use whole-number exponents to denote powers of 10.</li> <li>● Multiply 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.</li> </ul>

Skills	NJDOE Model Curriculum (Student Learning Objectives)
<p><b>Students will be able to:</b></p> <ul style="list-style-type: none"> <li>● Find patterns and products when multiplying powers of ten.</li> <li>● Multiply decimal and whole numbers using place value.</li> <li>● Solve problems using the strategy draw a diagram using money.</li> <li>● Place the decimal point in decimal multiplication.</li> <li>● Multiply decimals with zeros in the product.</li> </ul>	<p><b>Students will know how to:</b></p> <ul style="list-style-type: none"> <li>● Recognize and explain patterns of the number of zeros and the placement of the decimal point in a product or quotient when a number is multiplied or divided by powers of 10.</li> <li>● Multiply 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.</li> </ul>



Vocabulary	Resources	Assessment/Project
<p>expanded form pattern</p>	<ul style="list-style-type: none"> <li>● GOMath Lessons 4.1-4.8</li> <li>● GOMath iTools and eGlossary (Think Central)</li> <li>● GOMath! Animated Math Models</li> <li>● Corresponding Go Math! Grab and Go for Activities/Literature/Games</li> <li>● HMH Mega Math</li> <li>● Corresponding GOMath! Daily Routines</li> <li>● <a href="https://www-k6.thinkcentral.com/ePC/start.do">https://www-k6.thinkcentral.com/ePC/start.do</a></li> <li>● <a href="http://www.corestandards.org/Math">http://www.corestandards.org/Math</a></li> <li>● <a href="http://www.xtramath.org">http://www.xtramath.org</a></li> </ul>	<ul style="list-style-type: none"> <li>● Ongoing teacher observations (ie exit cards, think, pair share, or numbered heads together)</li> <li>● Workbook pages</li> <li>● Center Work and activities</li> <li>● Mixed Practice and Cumulative Review</li> <li>● Math Journals</li> <li>● Do Now's</li> <li>● Topic/Unit 4 Test</li> </ul>
Differentiated Instruction		Interdisciplinary Connections
RTI/ELL	Enrichment	<p><b>Social Studies Connection:</b> Students have menus with prices and need to find the total after purchasing a certain amount of items.</p> <p><b>Literature Connection:</b> In a journal, students will keep track and find out how much someone gets paid in a month if they start with a penny and double each day.</p>
<ul style="list-style-type: none"> <li>● Number line</li> <li>● Multiple Response Strategies</li> <li>● Extra time for assigned tasks</li> <li>● Adjust length of assignment</li> <li>● Repeat, clarify, or reword directions</li> <li>● Provide a warning for transitions</li> <li>● Mini-breaks between tasks</li> <li>● Precise step-by-step directions</li> <li>● Small group instruction</li> <li>● Read directions aloud</li> <li>● Consistent routine</li> <li>● Frequent feedback</li> </ul>	<ul style="list-style-type: none"> <li>● Math Journals</li> <li>● Chromebook</li> <li>● Open ended activities</li> <li>● Supplemental materials</li> <li>● Learning Centers</li> <li>● Tiered/Multi-level activities</li> <li>● Independent Student Options</li> </ul>	

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<b>Grade:</b> Fifth		<b>Content:</b> Mathematics
<b>Domain:</b> Number and Operations in Base Ten	<b>Topic:</b> Divide Decimals	<b>Time Frame:</b> 11-14 days
<b>Standards:</b> 5.NBT.A.2 5.NBT.B.7	<b>Focus Mathematical Practices:</b> MP4: Model with mathematics MP7: Look for and make sue of structure.	<b>PARCC Model Content Framework:</b> Major Content: 5.NBT.A, 5.NBT.B Supporting Content: n/a Additional Content: n/a

Essential Questions	Enduring Understandings
<ul style="list-style-type: none"> <li>● How can you solve decimal division problems?</li> <li>● How can patterns help you place a decimal point in a quotient?</li> <li>● How can you use a model to divide a decimal by a whole number?</li> <li>● How can you estimate decimal quotients?</li> <li>● How can you divide decimals by whole numbers?</li> <li>● How can you use a model to divide by a decimal?</li> <li>● How can you place the decimal point in the quotient?</li> <li>● When do you write a 0 in the dividend to find a quotient?</li> <li>● How do you use the strategy work backward to solve multi-step decimal problems?</li> </ul>	<ul style="list-style-type: none"> <li>● Explain patterns in the number of zeros of the product when multiplying a number by powers of 10.</li> <li>● Use whole-number exponents to denote powers of 10.</li> <li>● 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.</li> </ul>

Skills	NJDOE Model Curriculum (Student Learning Objectives)
<p><b>Students will be able to:</b></p> <ul style="list-style-type: none"> <li>● Find patterns in quotients when dividing by powers of 10.</li> <li>● Model division of decimals by whole numbers.</li> <li>● Estimate decimal quotients.</li> <li>● Divide decimals by whole numbers.</li> <li>● Model division by using decimals.</li> <li>● Place the decimal point in decimal division.</li> <li>● Write a zero in the dividend to find a quotient.</li> </ul> <p>Solve mutli-step decimal problems using the strategy work backwards.</p>	<p><b>Students will know how to:</b></p> <ul style="list-style-type: none"> <li>● Recognize and explain patterns of the number of zeros and the placement of the decimal point in a product or quotient when a number is multiplied or divided by powers of 10.</li> <li>● 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.: 2</li> </ul>



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Vocabulary	Resources	Assessment/Project
	<ul style="list-style-type: none"> <li>● GOMath Lessons 5.1-5.8</li> <li>● GOMath iTools and eGlossary (Think Central)</li> <li>● GOMath! Animated Math Models</li> <li>● Corresponding Go Math! Grab and Go for Activities/Literature/Games</li> <li>● HMH Mega Math</li> <li>● Corresponding GOMath! Daily Routines</li> <li>● <a href="https://www-k6.thinkcentral.com/ePC/start.do">https://www-k6.thinkcentral.com/ePC/start.do</a></li> <li>● <a href="http://www.corestandards.org/Math">http://www.corestandards.org/Math</a></li> <li>● <a href="http://www.xtramath.org">http://www.xtramath.org</a></li> </ul>	<ul style="list-style-type: none"> <li>● Ongoing teacher observations (ie exit cards, think, pair share, or numbered heads together)</li> <li>● Workbook pages</li> <li>● Center Work and activities</li> <li>● Mixed Practice and Cumulative Review</li> <li>● Math Journals</li> <li>● Do Now's</li> <li>● Topic/Unit 5 Test</li> </ul>
Differentiated Instruction		Interdisciplinary Connections
RTI/ELL	Enrichment	<p><b>Menu Math:</b> Sports</p> <p><b>Literature Connection:</b> Students will read about relating decimal division to money and finding the lowest price.</p> <p><b>Social Studies:</b> Students will estimate/divide decimals by whole numbers to compare unit prices.</p>
<ul style="list-style-type: none"> <li>● Number line</li> <li>● Multiple Response Strategies</li> <li>● Extra time for assigned tasks</li> <li>● Adjust length of assignment</li> <li>● Repeat, clarify, or reword directions</li> <li>● Provide a warning for transitions</li> <li>● Mini-breaks between tasks</li> <li>● Precise step-by-step directions</li> <li>● Small group instruction</li> <li>● Read directions aloud</li> <li>● Consistent routine</li> <li>● Frequent feedback</li> </ul>	<ul style="list-style-type: none"> <li>● Math Journals</li> <li>● Chromebook</li> <li>● Open ended activities</li> <li>● Supplemental materials</li> <li>● Learning Centers</li> <li>● Tiered/Multi-level activities</li> <li>● Independent Student Options</li> </ul>	

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<b>Grade:</b> Fifth		<b>Content:</b> Mathematics
<b>Domain:</b> Number and Operations - Fractions	<b>Topic:</b> Add and Subtract Fractions with Unlike Denominators	<b>Time Frame:</b> 14-17 days
<b>Standards:</b> 5.NF.A.1 5.NF.A.2 5.OA.A.2	<b>Focus Mathematical Practices:</b> MP2: Reason abstractly and quantitatively MP4: Model with mathematics	<b>PARCC Model Content Framework:</b> Major Content: 5.NF.A Supporting Content: n/a Additional Content: 5.OA.A

Essential Questions	Enduring Understandings
<ul style="list-style-type: none"> <li>● How can you add and subtract fractions with unlike denominators?</li> <li>● How can you use models to add and subtract fractions that have different denominators?</li> <li>● How can you make reasonable estimates of fraction sums and differences?</li> <li>● How can you rewrite a pair of fractions so they have a common denominator?</li> <li>● How can you use a common denominator to add and subtract fractions with unlike denominators?</li> <li>● How can you add and subtract mixed numbers with unlike denominators?</li> <li>● How can you use renaming to find the difference of two mixed numbers?</li> <li>● How can you use addition or subtraction to describe a pattern or create a sequence with fractions?</li> <li>● How can the strategy work backward help you solve a problem with fractions that involve addition and subtraction?</li> <li>● How can properties help you add fractions with unlike denominators?</li> </ul>	<ul style="list-style-type: none"> <li>● Add and subtract fractions with unlike denominators by replacing given fractions with equivalent fractions in such a way as to produce an equivalent sum or difference of fractions with like denominators.</li> <li>● Solve word problems involving addition and subtraction of fractions referring to the same whole, including cases with unlike denominators.</li> <li>● Use benchmark fractions and number sense of fractions to estimate mentally and assess the reasonableness of answers.</li> <li>● Write simple expressions that record calculations with numbers, and interpret numerical expressions without evaluating them.</li> </ul>

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Skills	NJDOE Model Curriculum (Student Learning Objectives)
<p><b>Students will be able to:</b></p> <ul style="list-style-type: none"> <li>● Use models to add and subtract fractions with unlike denominators</li> <li>● Make reasonable estimates of fraction sums and differences.</li> <li>● Find a common denominator or a least common denominator to write equivalent fractions.</li> <li>● Use equivalent fractions to add and subtract fractions</li> <li>● Add and subtract mixed numbers with unlike denominators</li> <li>● Rename to find the difference of two mixed numbers</li> <li>● Identify, describe and create numeric patterns with fractions.</li> <li>● Solve problems using the strategy work backwards.</li> </ul> <p>Add fractions and mixed numbers with unlike denominators using properties.</p>	<p><b>Students will know how to:</b></p> <ul style="list-style-type: none"> <li>● Use the standard algorithm to multiply 3-digit whole numbers by 1-digit whole numbers.</li> <li>● Write numerical expressions when given a word problem or a scenario in words and use words to interpret numerical expressions.</li> <li>● Add and subtract fractions with unlike denominators by replacing the given fractions with equivalent fractions having like denominators.</li> <li>● Solve word problems involving adding or subtracting fractions including unlike denominators, and determine if the answer to the word problem is reasonable, using estimations with benchmark fractions.</li> </ul>

Vocabulary	Resources	Assessment/Project
<p>common denominator</p>	<ul style="list-style-type: none"> <li>● GOMath Lessons 6.1-6.10</li> <li>● GOMath iTools and eGlossary (Think Central)</li> <li>● GOMath! Animated Math Models</li> <li>● Corresponding Go Math! Grab and Go for Activities/Literature/Games</li> <li>● HMH Mega Math</li> <li>● Corresponding GOMath! Daily Routines</li> <li>● <a href="https://www-k6.thinkcentral.com/ePC/start.do">https://www-k6.thinkcentral.com/ePC/start.do</a></li> <li>● <a href="http://www.corestandards.org/Math">http://www.corestandards.org/Math</a></li> <li>● <a href="http://www.xtramath.org">http://www.xtramath.org</a></li> </ul>	<ul style="list-style-type: none"> <li>● Ongoing teacher observations (ie exit cards, think, pair share, or numbered heads together)</li> <li>● Workbook pages</li> <li>● Center Work and activities</li> <li>● Mixed Practice and Cumulative Review</li> <li>● Math Journals</li> <li>● Do Now's</li> <li>● Topic/Unit 6 Test</li> </ul>

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Differentiated Instruction		Interdisciplinary Connections
RTI/ELL	Enrichment	
<ul style="list-style-type: none"> <li>● Number line</li> <li>● Multiple Response Strategies</li> <li>● Extra time for assigned tasks</li> <li>● Adjust length of assignment</li> <li>● Repeat, clarify, or reword directions</li> <li>● Provide a warning for transitions</li> <li>● Mini-breaks between tasks</li> <li>● Precise step-by-step directions</li> <li>● Small group instruction</li> <li>● Read directions aloud</li> <li>● Consistent routine</li> <li>● Frequent feedback</li> </ul>	<ul style="list-style-type: none"> <li>● Math Journals</li> <li>● Chromebook</li> <li>● Open ended activities</li> <li>● Supplemental materials</li> <li>● Learning Centers</li> <li>● Tiered/Multi-level activities</li> <li>● Independent Student Options</li> </ul>	<p><b>Social Studies Connection:</b> Students will calculate lengths of times for various historical events using fractions</p> <p><b>Literature Connection:</b> <u>Fossil Hunters</u>- Students read and use facts about fossils to add and subtract fractions.</p> <p><b>Literature Connection:</b> <u>Table Soccer, Anyone?</u>- Students read about a carpentry project that involves adding and subtracting mixed numbers.</p>

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<b>Grade:</b> Fifth		<b>Content:</b> Mathematics
<b>Domain:</b> Number and Operations - Fractions	<b>Topic:</b> Multiply Fractions	<b>Time Frame:</b> 13-15 days
<b>Standards:</b> 5.NF.B.4 5.NF.B.5 5.NF.B.6	<b>Focus Mathematical Practices:</b> MP3: Construct viable arguments and critique the reasoning of others MP5: Use appropriate tools strategically	<b>PARCC Model Content Framework:</b> Major Content: 5.NF.B Supporting Content: n/a Additional Content: n/a

Essential Questions	Enduring Understandings
<ul style="list-style-type: none"> <li>● How do you multiply fractions?</li> <li>● How can you find a fractional part of a group?</li> <li>● How can you use a model to show the product of a fraction and a whole number?</li> <li>● How can you find the product of a fraction and a whole number without using a model?</li> <li>● How can you use an area model to show the product of two fractions?</li> <li>● How does the size of the product compare to the size of one factor when multiplying fractions?</li> <li>● How can you use a unit tile to find the area of a rectangle with fractional side lengths?</li> <li>● How does the size of the product compare to the size of one factor when multiplying fractions greater than 1?</li> <li>● How do you multiply mixed numbers?</li> <li>● How can you use the strategy guess check and revise to solve problems with fractions?</li> </ul>	<ul style="list-style-type: none"> <li>● Apply and understand previous understandings of multiplication to multiply a fraction or a whole number by a fraction.</li> <li>● Interpret the product <math>(a/b) \times q</math> as a parts of a partition of <math>q</math> into <math>b</math> equal parts; as a result of a sequence of operations <math>a \times q / b</math></li> <li>● 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.</li> <li>● Multiply fractional side lengths to find areas of rectangles, and represent fraction products as rectangular areas.</li> <li>● Interpret multiplication as scaling (resizing).</li> <li>● Solve real world problems involving multiplication of fractions and mixed numbers.</li> </ul>



Skills	NJDOE Model Curriculum (Student Learning Objectives)
<p><b>Students will be able to:</b></p> <ul style="list-style-type: none"> <li>● Model to find the fractional part of a group.</li> <li>● Model the product of a fraction and a whole number.</li> <li>● Multiply fractions and whole numbers.</li> <li>● Multiply fractions using models.</li> <li>● Relate the size of a product compared to the size of one factor when multiplying fractions.</li> <li>● Multiply fractions</li> <li>● Use a model to multiply two mixed numbers and find the area of a rectangle.</li> <li>● Relate the size of the product to the factors when multiplying fractions greater than 1.</li> <li>● Multiply mixed numbers.</li> <li>● Solve problems using the strategy guess check and revise.</li> </ul>	<p><b>Students will know how to:</b></p> <ul style="list-style-type: none"> <li>● Multiply fractions by whole numbers and draw visual models or create story contexts.</li> <li>● Find the area of a rectangle with fractional side lengths by tiling unit squares and multiplying side lengths.</li> <li>● Explain how a product is related to the magnitude of the factors.</li> <li>● Solve real world math problems involving multiplication of fractions, using visual fraction models or equations to represent the problem.</li> </ul>

Vocabulary	Resources	Assessment/Project
	<ul style="list-style-type: none"> <li>● GOMath Lessons 7.1-7.10</li> <li>● GOMath iTools and eGlossary (Think Central)</li> <li>● GOMath! Animated Math Models</li> <li>● Corresponding Go Math! Grab and Go for Activities/Literature/Games</li> <li>● HMH Mega Math</li> <li>● Corresponding GOMath! Daily Routines</li> <li>● <a href="https://www-k6.thinkcentral.com/ePC/start.do">https://www-k6.thinkcentral.com/ePC/start.do</a></li> <li>● <a href="http://www.corestandards.org/Math">http://www.corestandards.org/Math</a></li> <li>● <a href="http://www.xtramath.org">http://www.xtramath.org</a></li> </ul>	<ul style="list-style-type: none"> <li>● Ongoing teacher observations (ie exit cards, think, pair share, or numbered heads together)</li> <li>● Workbook pages</li> <li>● Center Work and activities</li> <li>● Mixed Practice and Cumulative Review</li> <li>● Math Journals</li> <li>● Do Now's</li> <li>● Topic/Unit 7 Test</li> </ul>

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Differentiated Instruction		Interdisciplinary Connections
RTI/ELL	Enrichment	
<ul style="list-style-type: none"> <li>● Number line</li> <li>● Multiple Response Strategies</li> <li>● Extra time for assigned tasks</li> <li>● Adjust length of assignment</li> <li>● Repeat, clarify, or reword directions</li> <li>● Provide a warning for transitions</li> <li>● Mini-breaks between tasks</li> <li>● Precise step-by-step directions</li> <li>● Small group instruction</li> <li>● Read directions aloud</li> <li>● Consistent routine</li> <li>● Frequent feedback</li> </ul>	<ul style="list-style-type: none"> <li>● Math Journals</li> <li>● Chromebook</li> <li>● Open ended activities</li> <li>● Supplemental materials</li> <li>● Learning Centers</li> <li>● Tiered/Multi-level activities</li> <li>● Independent Student Options</li> </ul>	<p><b>Literature Connection:</b> <u>Cranking Out Numbers</u>: Students read about multiplying fractions to triple a recipe for ice cream.</p> <p><b>Social Studies Connection:</b> Students will represent land mass using fractions. (example 1/10 of the East Coast is the Gulf of Mexico)</p>

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<b>Grade:</b> Fifth		<b>Content:</b> Mathematics
<b>Domain:</b> Number and Operations - Fractions	<b>Topic:</b> Divide Fractions	<b>Time Frame:</b> 8-11 days
<b>Standards:</b> 5.NF.B.3 5.NF.B.7	<b>Focus Mathematical Practices:</b> MP2: Reason abstractly and quantitatively MP4: Model with mathematics	<b>PARCC Model Content Framework:</b> Major Content: 5.NF.B Supporting Content: n/a Additional Content: n/a

Essential Questions	Enduring Understandings
<ul style="list-style-type: none"> <li>• What strategies can you use to solve division problems involving fractions?</li> <li>• How do you divide a whole number by a fraction and a fraction by a whole number?</li> <li>• How can the strategy draw a diagram help you solve fraction division problems by writing a multiplication sentence?</li> <li>• How does a fraction represent division?</li> <li>• How can you divide fractions by solving a related multiplication sentence?</li> <li>• How can you use diagrams, equations and story problems to represent division?</li> </ul>	<ul style="list-style-type: none"> <li>• Interpret a fraction as division of the numerator by the denominator.</li> <li>• Apply and extend previous understandings of division to divide unit fractions by whole numbers and whole numbers by unit fractions.</li> <li>• Interpret division of a unit fraction by a non-zero whole number, and compute such quotients.</li> <li>• Interpret division of a whole number by a unit fraction, and compute such quotients.</li> <li>• Solve real world problems involving division of unit fractions by non-zero whole numbers and division of whole numbers by unit fractions.</li> </ul>

Skills	NJDOE Model Curriculum (Student Learning Objectives)
<p><b>Students will be able to:</b></p> <ul style="list-style-type: none"> <li>• Divide a whole number by a fraction and divide a fraction by a whole number.</li> <li>• Solve problems using the strategy draw a diagram.</li> <li>• Interpret a fraction as division and solve whole number division problems that result in a fraction or mixed number.</li> </ul>	<p><b>Students will know how to:</b></p> <ul style="list-style-type: none"> <li>• Interpret a fraction as a division of the numerator by the denominator; solve word problems where division of whole numbers leads to fractional or mixed number answer.</li> <li>• Divide a unit fraction by a non-zero whole number and interpret by creating a story context or visual fraction model.</li> <li>• Divide a whole number by a unit fraction and interpret by creating story context or visual fraction model.</li> <li>• Solve real world problems involving division of unit fractions by whole numbers or whole numbers by unit fractions.</li> </ul>



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Vocabulary	Resources	Assessment/Project
	<ul style="list-style-type: none"> <li>● GOMath Lessons 8.1-8.5</li> <li>● GOMath iTools and eGlossary (Think Central)</li> <li>● GOMath! Animated Math Models</li> <li>● Corresponding Go Math! Grab and Go for Activities/Literature/Games</li> <li>● HMH Mega Math</li> <li>● Corresponding GOMath! Daily Routines</li> <li>● <a href="https://www-k6.thinkcentral.com/ePC/start.do">https://www-k6.thinkcentral.com/ePC/start.do</a></li> <li>● <a href="http://www.corestandards.org/Math">http://www.corestandards.org/Math</a></li> <li>● <a href="http://www.xtramath.org">http://www.xtramath.org</a></li> </ul>	<ul style="list-style-type: none"> <li>● Ongoing teacher observations (ie exit cards, think, pair share, or numbered heads together)</li> <li>● Workbook pages</li> <li>● Center Work and activities</li> <li>● Mixed Practice and Cumulative Review</li> <li>● Math Journals</li> <li>● Do Now's</li> <li>● Topic/Unit 8 Test</li> </ul>
Differentiated Instruction		Interdisciplinary Connections
RTI/ELL	Enrichment	<p><b>Science Connection:</b> Habitats- Students will discuss animal habitats and use calculations to find out how resources are divided up among them.</p> <p><b>Geography Connection:</b> Hiking Trail- Discuss the length of a variety of hiking trails around the world and calculate by division the length of time it would take to hike portions of the trail.</p>
<ul style="list-style-type: none"> <li>● Number line</li> <li>● Multiple Response Strategies</li> <li>● Extra time for assigned tasks</li> <li>● Adjust length of assignment</li> <li>● Repeat, clarify, or reword directions</li> <li>● Provide a warning for transitions</li> <li>● Mini-breaks between tasks</li> <li>● Precise step-by-step directions</li> <li>● Small group instruction</li> <li>● Read directions aloud</li> <li>● Consistent routine</li> <li>● Frequent feedback</li> </ul>	<ul style="list-style-type: none"> <li>● Math Journals</li> <li>● Chromebook</li> <li>● Open ended activities</li> <li>● Supplemental materials</li> <li>● Learning Centers</li> <li>● Tiered/Multi-level activities</li> <li>● Independent Student Options</li> </ul>	

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<b>Grade:</b> Fifth		<b>Content:</b> Mathematics	
<b>Domain:</b> Operations and Algebraic Thinking, Measurement and Data, Geometry		<b>Topic:</b> Algebra: Patterns and Graphing	<b>Time Frame:</b> 10-12 days
<b>Standards:</b> 5.OA.B.3 5.MD.B.2 5.G.A.1 5.G.A.2		<b>Focus Mathematical Practices:</b> MP4: Model with mathematics MP8: Look for and express regularity in repeated reasoning	<b>PARCC Model Content Framework:</b> Major Content: n/a Supporting Content: 5.MD.B Additional Content: 5.OA.B, 5.G.A

Essential Questions	Enduring Understandings
<ul style="list-style-type: none"> <li>● How can you use line plots, coordinate grids, and patterns to help you graph and interpret data?</li> <li>● How can a line plot help you find an average with data given in fractions?</li> <li>● How can you identify and plot points on a coordinate grid?</li> <li>● How can you use a coordinate grid to display data collected in an experiment?</li> <li>● How can you use a line graph to display and analyze real world data?</li> <li>● How can you identify a relationship between two numerical patterns?</li> <li>● How can you use the strategy solve a simpler problem to help you solve a problem with patterns?</li> <li>● How can you write and graph ordered pairs on a coordinate grid using two numerical patterns?</li> </ul>	<ul style="list-style-type: none"> <li>● Generate two numerical patterns using two given rules.</li> <li>● Identify apparent relationships between corresponding terms.</li> <li>● Form ordered pairs consisting of corresponding terms of the two patterns, and graph the ordered pairs on the coordinate plane.</li> <li>● Make a line plot to display a data set of measurements in fractions of a unit</li> <li>● Use operations on fractions to solve problems involving information presented in line plots.</li> <li>● 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 plan located by using ordered pairs of numbers, called it coordinates.</li> <li>● Represent real world and mathematical problems by graphing points in the first quadrant in the coordinate plane, and interpret coordinate values of points in the context of the solution.</li> </ul>



Skills	NJDOE Model Curriculum (Student Learning Objectives)
<p><b>Students will be able to:</b></p> <ul style="list-style-type: none"> <li>● Make and use line plots with fractions to solve problems</li> <li>● Graph and name points on a coordinate grid using ordered pairs</li> <li>● Collect and graph data on a coordinate grid</li> <li>● Analyze and display data in a line graph</li> <li>● Use two rules to generate a numerical pattern and identify a relationship between the corresponding terms in the patterns</li> <li>● Solve problems using the strategy solve a simpler problem</li> <li>● Graph the relationship between two numerical patterns on a coordinate grid</li> </ul>	<p><b>Students will know how to:</b></p> <ul style="list-style-type: none"> <li>● Use a pair of perpendicular number lines (axes) to define a coordinate system, with the intersection of the lines (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 (coordinates).</li> <li>● 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.</li> <li>● Generate two numerical patterns using two given rules.</li> <li>● Make a line plot to display a data set of measurements in fractions of a unit.</li> </ul>

Vocabulary	Resources	Assessment/Project
<p>interval line graph ordered pair origin scale x-axi s x-coordinat e y-axis y-coordinate</p>	<ul style="list-style-type: none"> <li>● GOMath Lessons 9.1-9.7</li> <li>● GOMath iTools and eGlossary (Think Central)</li> <li>● GOMath! Animated Math Models</li> <li>● Corresponding Go Math! Grab and Go for Activities/Literature/Games</li> <li>● HMH Mega Math</li> <li>● Corresponding GOMath! Daily Routines</li> <li>● <a href="https://www-k6.thinkcentral.com/ePC/start.do">https://www-k6.thinkcentral.com/ePC/start.do</a></li> <li>● <a href="http://www.corestandards.org/Math">http://www.corestandards.org/Math</a></li> <li>● <a href="http://www.xtramath.org">http://www.xtramath.org</a></li> </ul>	<ul style="list-style-type: none"> <li>● Ongoing teacher observations (ie exit cards, think, pair share, or numbered heads together)</li> <li>● Workbook pages</li> <li>● Center Work and activities</li> <li>● Mixed Practice and Cumulative Review</li> <li>● Math Journals</li> <li>● Do Now's</li> <li>● Topic/Unit 9 Test</li> </ul>

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Differentiated Instruction		Interdisciplinary Connections
RTI/ELL	Enrichment	
<ul style="list-style-type: none"> <li>● Number line</li> <li>● Multiple Response Strategies</li> <li>● Extra time for assigned tasks</li> <li>● Adjust length of assignment</li> <li>● Repeat, clarify, or reword directions</li> <li>● Provide a warning for transitions</li> <li>● Mini-breaks between tasks</li> <li>● Precise step-by-step directions</li> <li>● Small group instruction</li> <li>● Read directions aloud</li> <li>● Consistent routine</li> <li>● Frequent feedback</li> </ul>	<ul style="list-style-type: none"> <li>● Math Journals</li> <li>● Chromebook</li> <li>● Open ended activities</li> <li>● Supplemental materials</li> <li>● Learning Centers</li> <li>● Tiered/Multi-level activities</li> <li>● Independent Student Options</li> </ul>	<p><b>Science Connection:</b> Students will conduct experiments and present the results by constructing graphs.</p> <p><b>Literature Connection:</b> <u>Is This a Career For You?</u>, students read about careers that require reading coordinate grids.</p>

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<b>Grade:</b> Fifth		<b>Content:</b> Mathematics	
<b>Domain:</b> Measurement and Data		<b>Topic:</b> Convert Units of Measure	
<b>Standards:</b> 5.MD.A.1		<b>Time Frame:</b> 10-12 days	
		<b>PARCC Model Content Framework:</b> Major Content: n/a Supporting Content: 5.MD.A Additional Content: n/a	
		<b>Focus Mathematical Practices:</b> MP1: Make sense of problems and persevere in solving them MP7: Look for and make use of structure.	

Essential Questions	Enduring Understandings
<ul style="list-style-type: none"> <li>• What strategies can you use to compare and convert measurements?</li> <li>• How can you compare and convert customary units of length, capacity, and weight?</li> <li>• How can you solve multi-step problems that include measurement conversions?</li> <li>• How can you compare and convert metric units?</li> <li>• How can you use the strategy make a table to help solve problems about customary and metric conversions?</li> <li>• How can you solve elapsed time problems by converting units of time?</li> </ul>	<ul style="list-style-type: none"> <li>• Convert among different-sized standard measurements within a given measurement system.</li> </ul>

Skills	NJDOE Model Curriculum (Student Learning Objectives)
<p><b>Students will be able to:</b></p> <ul style="list-style-type: none"> <li>• Compare, contrast, and convert customary units of length, capacity, and weight.</li> <li>• Convert measurement units to solve multi-step problems.</li> <li>• Compare, contrast, and convert metric units.</li> <li>• Solve problems about customary and metric conversions using the strategy make a table.</li> <li>• Convert units of time to solve elapsed time problems.</li> </ul>	<p><b>Students will know how to:</b></p> <ul style="list-style-type: none"> <li>• Convert standard measurement units within the same system.</li> </ul>

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Vocabulary	Resources	Assessment/Project
capacity decimeter decameter milligram milliliter millimeter weight	<ul style="list-style-type: none"> <li>● GOMath Lessons 10.1-10.7</li> <li>● GOMath iTools and eGlossary (Think Central)</li> <li>● GOMath! Animated Math Models</li> <li>● Corresponding Go Math! Grab and Go for Activities/Literature/Games</li> <li>● HMH Mega Math</li> <li>● Corresponding GOMath! Daily Routines</li> <li>● <a href="https://www-k6.thinkcentral.com/ePC/start.do">https://www-k6.thinkcentral.com/ePC/start.do</a></li> <li>● <a href="http://www.corestandards.org/Math">http://www.corestandards.org/Math</a></li> <li>● <a href="http://www.xtramath.org">http://www.xtramath.org</a></li> </ul>	<ul style="list-style-type: none"> <li>● Ongoing teacher observations (ie exit cards, think, pair share, or numbered heads together)</li> <li>● Workbook pages</li> <li>● Center Work and activities</li> <li>● Mixed Practice and Cumulative Review</li> <li>● Math Journals</li> <li>● Do Now's</li> <li>● Topic/Unit 10 Test</li> </ul>
Differentiated Instruction		Interdisciplinary Connections
RTI/ELL	Enrichment	<p><b>Literature Connection:</b> <u>A Math Mix-Up</u>: Students read about a mix-up in customary and metric measurements that led to the NASA's Mars Climate Orbiter crashing into Mars.</p> <p><b>Culinary Arts:</b> Students will discuss recipes and how to measure ingredients correctly.</p>
<ul style="list-style-type: none"> <li>● Number line</li> <li>● Multiple Response Strategies</li> <li>● Extra time for assigned tasks</li> <li>● Adjust length of assignment</li> <li>● Repeat, clarify, or reword directions</li> <li>● Provide a warning for transitions</li> <li>● Mini-breaks between tasks</li> <li>● Precise step-by-step directions</li> <li>● Small group instruction</li> <li>● Read directions aloud</li> <li>● Consistent routine</li> <li>● Frequent feedback</li> </ul>	<ul style="list-style-type: none"> <li>● Math Journals</li> <li>● Chromebook</li> <li>● Open ended activities</li> <li>● Supplemental materials</li> <li>● Learning Centers</li> <li>● Tiered/Multi-level activities</li> <li>● Independent Student Options</li> </ul>	

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<b>Grade:</b> Fifth		<b>Content:</b> Mathematics	
<b>Domain:</b> Measurement and Data, Geometry		<b>Topic:</b> Geometry and Volume	
<b>Standards:</b> 5.MD.C.3a, 3b 5.MD.C.4 5.MD.C.5a, 5b, 5c 5.G.B.3 5.G.B.4		<b>Time Frame:</b> 15-18 days	
<b>Focus Mathematical Practices:</b> MP4: Model with mathematics MP5: Use appropriate tools strategically		<b>PARCC Model Content Framework:</b> Major Content: 5.MD.C Supporting Content: n/a Additional Content: 5.G.B	

Essential Questions	Enduring Understandings
<ul style="list-style-type: none"> <li>● How do unit cubes help you build solid figures and understand the volume of a rectangular prism?</li> <li>● How can you identify and classify polygons and triangles?</li> <li>● How can you classify and compare quadrilaterals?</li> <li>● How can you use the strategy act it out to approximate whether the sides of a figure are congruent?</li> <li>● How can you identify, describe, and classify three-dimensional figures?</li> <li>● What is a unit cube and how can you use it to build a solid figure and find the volume of a rectangular prism?</li> <li>● How can you use an everyday object to estimate the volume of a rectangular prism?</li> <li>● How can you find the volume of a rectangular prism and combined regular prisms?</li> <li>● How can you use a formula to find the volume of a rectangular prism?</li> <li>● How can you use the strategy make a table to compare different rectangular prisms with the same volume?</li> </ul>	<ul style="list-style-type: none"> <li>● Recognize volume as an attribute of solid figures and understand concepts of volume measurement.</li> <li>● Measure volume by counting unit cubes, using cubic cm, cubic in, cubic ft, and improvised units.</li> <li>● Relate volume to the operations of addition and multiplication and solve real world and mathematical problems involving volume.</li> <li>● Understand that attributes belonging to a category of two-dimensional figures also belong to all subcategories of that category.</li> <li>● Classify two-dimensional figures in a hierarchy based on properties.</li> </ul>



Skills	NJDOE Model Curriculum (Student Learning Objectives)
<p><b>Students will be able to:</b></p> <ul style="list-style-type: none"> <li>● Identify and classify polygons.</li> <li>● Classify and draw triangles using their properties.</li> <li>● Classify and compare quadrilaterals using their properties.</li> <li>● Solve problems using the strategy act it out.</li> <li>● Identify, describe, and classify three-dimensional figures.</li> <li>● Understand unit cubes and how they can be used to build a solid figure.</li> <li>● Count unit cubes that fill a solid figure to find volume.</li> <li>● Estimate the volume of a rectangular prism.</li> <li>● Find the volume of rectangular prisms and combine rectangular prisms.</li> <li>● Use a formula to find the volume of a rectangular prism.</li> <li>● Use the strategy make a table to compare volumes.</li> </ul>	<p><b>Students will know how to:</b></p> <ul style="list-style-type: none"> <li>● Understand and measure volume by counting the total number of same size cubic units required to fill a figure without gaps or overlaps.</li> <li>● Know a cube with a side length of 1 unit in called a “unit cube” and can be used to measure volume.</li> <li>● Show that the volume of a right rectangular prism found by counting all the unit cubes is the same as the formulas <math>V = l \times w \times h</math>, <math>V = B \times h</math></li> <li>● Explain how both volume formulas relate to counting the cubes in one layer and multiplying that value by the number of layers (height).</li> <li>● Find the volume of a composite solid figure composed of two non-overlapping right rectangular prisms.</li> <li>● Apply formulas to solve real world and mathematical problems involving volumes of right rectangular prisms and composites of same.</li> <li>● Identify attributes of a two-dimensional shape based on attributes of the groups and categories in which the shape belongs.</li> <li>● Classify two-dimensional figures in a hierarchy based on properties.</li> </ul>

Vocabulary		Resources	Assessment/Project
base	pentagonal prism	<ul style="list-style-type: none"> <li>● GOMath Lessons 11.1-11.12</li> <li>● GOMath iTools and eGlossary (Think Central)</li> <li>● GOMath! Animated Math Models</li> <li>● Corresponding Go Math! Grab and Go for Activities/Literature/Games</li> <li>● HMH Mega Math</li> <li>● Corresponding GOMath! Daily Routines</li> <li>● <a href="https://www-k6.thinkcentral.com/ePC/start.do">https://www-k6.thinkcentral.com/ePC/start.do</a></li> <li>● <a href="http://www.corestandards.org/Math">http://www.corestandards.org/Math</a></li> <li>● <a href="http://www.xtramath.org">http://www.xtramath.org</a></li> </ul>	<ul style="list-style-type: none"> <li>● Ongoing teacher observations (ie exit cards, think, pair share, or numbered heads together)</li> <li>● Workbook pages</li> <li>● Center Work and activities</li> <li>● Mixed Practice and Cumulative Review</li> <li>● Math Journals</li> <li>● Do Now's</li> <li>● Topic/Unit 11 Test</li> </ul>
congruent	pentagonal pyramid		
cubic unit	polyhedron		
decagonal prism	prism		
equilateral triangle	pyramid		
heptagon	regular polygon		
hexagonal prism	scalene triangle		
isosceles triangle	unit cube		
lateral face	volume		
nonagon			
octagonal prism			



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Differentiated Instruction		Interdisciplinary Connections
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