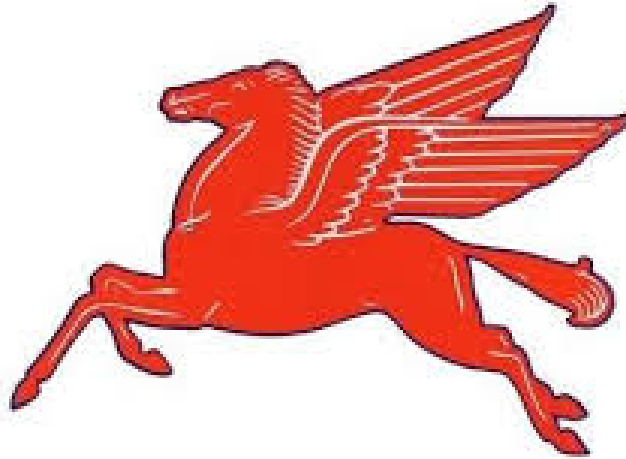


Curriculum Management System

PAULSBORO PUBLIC SCHOOLS



Mathematics - Grade 6

UPDATED 2020-2021

For adoption by all regular education programs as specified and for adoption or adaptation by all Special Education Programs in accordance with Board of Education Policy.

Board Approved: October 2021

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Paulsboro Public Schools

Mission Statement

The mission of the Paulsboro School District is to work with students, parents, educators, and community to develop excellence in education while preparing each student to be viable and productive citizens in society. Our goal is to develop the unique potential of the whole student by creating a challenging and diverse learning climate that prepares students for the 21st Century and is rich in tradition and pride.

(#) GRADE PACING CHART (2020-2021)

TOPIC	# OF DAYS	DATES	COMMENTS
<i>1 – Algebra: Understand Numerical and Algebraic Expressions</i>	12	9/8-9/23	
2- Algebra: Solve Equations and Inequalities	10	9/24-10/07	
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12- Divide Fractions by Fractions	11	2/25-3/12	
13- Solve Area Problems	8	3/15-3/26	
14- Solve Surface Area and Volume Problems	7	3/29-4/14	

15- Measures of Center and Variability	6	4/15-4/23	
16- Display and Summarize Data	8	4/26-5/06	

*Depending on state testing, the tentative dates for topics 10-16 may change

DEFINITIONS

NJ Student Learning Standards - Clear and specific benchmarks for students’ achievement in various content areas. The standards ensure that each child receives a “thorough and efficient education”.

21st Century Life and Careers Standards - These skills that are comprised of the “12 Career Ready Practices” and Standards 9.1 through 9.4. The organization of these standards intends to enable students to make informed decisions that prepare them to engage as active citizens in global society and be prepared for the opportunities of the 21st century workplace.

ELA Companion Standards - Consists of standards for reading and writing in History, Social Studies, Science and Technical subjects. ELA curricula

Gifted and Talented Learners - Students with high-ability who may need more depth and complexity in instruction.

Special Education Learners - Students in need of supports and interventions to improve student achievement

English Language Learners – Students with a native language other than English or who are at varying degrees of English language proficiency.

QUARTER 1 – Big Idea: Expressions and Equations Topic: Algebra-Understand Numerical and Algebraic Expressions Algebra-Solve Equations and Inequalities			
Standards: NJ Student Learning Standards: 6.EE.A.1 Write and evaluate numerical expressions involving whole number exponents. 6.EE.A.2a Write expressions that record operations with numbers and with letters standing for numbers. 6.EE.A.2b Identify parts of an expression using mathematical terms (sum, term, product, factor, quotient, coefficient) view one of more parts of an expression as a single entity. 6.EE.A.2c Include expressions that arise from formulas used in real world problems. Perform arithmetic operations, including those involving whole number exponents, in the conventional order when there are no parentheses to specify a particular order 6.EE.B.5 Understand solving as equation or inequality as a process of answering a question: which values from a specified set, if any, make the equation or inequality true? Use substitution to determine whether a given number in a set makes an equation or inequality true.	GOAL		
	SWBAT <ul style="list-style-type: none"> • Understand numerical and algebraic expressions and evaluate and simplify equivalent expressions • Evaluate addition, subtraction, multiplication and division equations 		
	<table border="0" style="width: 100%;"> <tr> <th style="text-align: left; width: 50%;">Essential Questions</th> <th style="text-align: left; width: 50%;">Assessments</th> </tr> </table>	Essential Questions	Assessments
	Essential Questions	Assessments	
<table border="0" style="width: 100%;"> <tr> <td style="width: 50%; vertical-align: top;"> What are expressions and how can they be written and evaluated? What procedures can be used to solve equations and inequalities? </td> <td style="width: 50%; vertical-align: top;"> <ul style="list-style-type: none"> • Placement Test, print or online • Topic One Assessment, print or online • Topic Two Assessment, print or online </td> </tr> </table>	What are expressions and how can they be written and evaluated? What procedures can be used to solve equations and inequalities?	<ul style="list-style-type: none"> • Placement Test, print or online • Topic One Assessment, print or online • Topic Two Assessment, print or online 	
What are expressions and how can they be written and evaluated? What procedures can be used to solve equations and inequalities?	<ul style="list-style-type: none"> • Placement Test, print or online • Topic One Assessment, print or online • Topic Two Assessment, print or online 		
Enduring Understanding	Resources		
Topic 1 applies and extends previous understandings of arithmetic and numerical expressions to algebraic expressions. Grade 6 students interpret, evaluate, and write algebraic expressions,	EnVision 2.0 Common Core Grade 6 https://www.savvasrealize.com/community/home Manipulative Set		

6.EE.B.6 Use variables to represent numbers and write expressions when solving a real-world or mathematical problem; understand that a variable can represent an unknown number, or, depending on the purpose at hand, any number in a specified set.

6.EE.B.7 Solve real-world and mathematical problems by writing and solving equations of the form $x + p = q$ and $px = q$ for cases in which p , q and x are all nonnegative rational numbers.

6.EE.B.8 Write an inequality of the form $x > a$ or $x < a$ to represent a constraint or condition in a real-world or mathematical problem. Recognize that inequalities of the form $x > a$ or $x < a$ have infinitely many solutions; represent solutions of such inequalities on number line diagrams

21st Century Life and Careers:

CRP2. Apply appropriate academic and technical skills

CRP4. Communicate clearly and effectively and with reason.

CRP6. Demonstrate creativity and innovation.

CRP8. Utilize critical thinking to make sense of problems and persevere in solving them

CRP11. Use technology to enhance productivity.

CRP12. Work productively in teams while using cultural global competence.

Technology Standards:

8.1.5.A.1 Select and use the appropriate digital tools and resources to accomplish a variety of tasks including solving problems

including ones with exponents, related to both mathematical and real world contexts. Topic 2 focuses on solving one-step equations and simple inequalities. Students develop a deep understanding of algebraic equations, and solve them by applying properties of equality and inverse operations. Solutions to inequalities are graphed on a number line.

8.1.5.A.4 Graph data using a spreadsheet, analyze and produce a report that explains the analysis of the data.

8.2.5.C.4 Collaborate and brainstorm with peers to solve a problem evaluating all solutions to provide the best results with supporting sketches or models.

8.2.5.D.3 Follow step by step directions to assemble a product or solve a problem

ELA Companion Standards in History, Social Studies, Science & Technical Subjects:

LA.RH.6-8.4 Determine the meaning of words and phrases as they are used in a text, including vocabulary specific to domains related to history/social studies.

LA.RH.6-8.5 Describe how a text presents information (e.g., sequentially, comparatively, causally)

LA.RH.6-8.7 Integrate visual information (e.g., in charts, graphs, photographs, videos, or maps) with other information in print and digital texts.

Anchor Standards:

LA.L.6.4.A Use context (e.g., the overall meaning of a sentence or paragraph; a word's position or function in a sentence) as a clue to the meaning of a word or phrase.

LA.L.6.6 Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases; gather vocabulary knowledge when considering a word or phrase important to comprehension or expression

LA.SL.6.1 Engage effectively in a range of collaborative discussions (one-on-one, in groups,

and teacher-led) with diverse partners on grade 6 topics, texts, and issues, building on others' ideas and expressing their own clearly.

MODIFICATIONS:

Special Education:

Students Hands on activity, cooperative learning, peer tutoring, extended time, reteach in utilizing various methods. Utilize remediation resources which include assessment and intervention, in planning and instruction.

English Language Learners:

Provide hands-on activities and explanations.
Use reduced text, so that print is not so dense.
Assess comprehension through demonstration or other alternative means (gestures, drawings).
Give instructions/directions in writing and orally.
Use of translation dictionaries to locate words in the native language.
Use English Learners resources such as study guides, assessments and a visual glossary.

At-Risk Students:

Hands on activities cooperative learning, reteach using various methods. Make use of remediation lessons and quizzes when appropriate.

Gifted and Talented Students:

Utilize Pre-AP Resources such as the pacing, assignment and best practices guide.

QUARTER 1 -
Big Idea: The Number System
Topic: Rational Numbers
Algebra- Coordinate Geometry

Algebra-Patterns and Equations

Standards:

NJ Student Learning Standards:

6.NS.C.5 Understand that positive and negative numbers are used together to describe quantities having opposite directions or values (e.g., temperature above/below zero, elevation above/below sea level, credits/debits, positive/negative electric charge); use positive and negative numbers to represent quantities in real-world contexts, explaining the meaning of 0 in each situation

6.NS.C.6 Understand a rational number as a point on the number line. Extend number line diagrams and coordinate axes familiar from previous grades to represent points on the line and in the plane with negative number coordinates.

6.NS.C.6a Recognize opposite signs of numbers as indicating locations on opposite sides of 0 on the number line; recognize that the opposite of the opposite of a number is the number itself, e.g., $-(-3) = 3$, and that 0 is its own opposite

6.NS.C.6b Understand signs of numbers in ordered pairs as indicating locations in quadrants of the coordinate plane; recognize that when two ordered pairs differ only by signs, the locations of the points are related by reflections across one or both axes.

6.NS.C.6c Find and position integers and other rational numbers on a horizontal or vertical number line diagram; find and position pairs of integers and other rational numbers on a coordinate plane.

GOAL

SWBAT

- Understand positive and negative integers and how to position them on a number line
- Compare and order integers
- Identify and graph point with rational number coordinates on the coordinate plane
- Use absolute value to find distances between points with the same first coordinate or the same second coordinate on the corresponding plane
- Identify dependent and independent variables
- Analyze the relationships between variables by using tables and write equations to represent the relationships
- Graph linear equations on a coordinate plane

Essential Questions

Assessments

- What are integers and rational numbers?
- How can you compare and order rational numbers?
- How are points graphed as a coordinate plane?
- How can equations be written?
- What patterns can be found in tables of values?
- How are equations that can relate real-world quantities graphed?

- Topic Three Assessment, print or online
- Topic Four Assessment, print or online
- Topic 1-4 Cumulative/ Benchmark Assessment
- Topic Five Assessment, print or online

<p>6.NS.C.7a Interpret statements of inequality as statements about the relative position of two numbers on a number line diagram.</p> <p>6.NS.C.7b Write, interpret, and explain statements of order for rational numbers in real-world contexts</p> <p>6.NS.C.7d Distinguish comparisons of absolute value from statements about order.</p> <p>6.G.A.3 Draw polygons in the coordinate plane given coordinates for the vertices; use coordinates to find the length of a side joining points with the same first coordinate or the same second coordinate. Apply these techniques in the context of solving real-world and mathematical problems.</p> <p>6.EE.B.5 Understand solving an equation or inequality as a process of answering a question: which values from a specified set, if any, make the equation or inequality true? Use substitution to determine whether a given number in a specified set makes an equation or inequality true</p> <p>6.EE.C.9 Use variables to represent two quantities in a real-world problem that change in relationship to one another; write an equation to express one quantity, thought of as the dependent variable, in terms of the other quantity, thought of as the independent variable. Analyze the relationship between the dependent and independent variables using graphs and tables, and relate these to the equation</p> <p>21st Century Life and Careers: CRP2. Apply appropriate academic and technical skills</p>		
	<p>Enduring Understanding</p> <p>Topics 3 and 4 focus on applying and extending previous understandings of numbers to the system of rational numbers, including developing a deep understanding of integers and other rational numbers and locating points associated with rational number ordered pairs on the coordinate plane.</p> <p>Topic 5 focuses on deep understanding of the relationship between two quantities when one quantity, the dependent variable, changes in relationship to the other quantity, the independent variable. The relationship can be represented in an equation, table or graph.</p>	<p>Resources</p> <p>EnVision 2.0 Common Core Grade 6 https://www.savvasrealize.com/community/home Manipulative Set</p>

CRP4. Communicate clearly and effectively and with reason.
CRP6. Demonstrate creativity and innovation.
CRP8. Utilize critical thinking to make sense of problems and persevere in solving them
CRP11. Use technology to enhance productivity.
CRP12. Work productively in teams while using cultural global competence.

Technology Standards:

8.1.5.A.1 Select and use the appropriate digital tools and resources to accomplish a variety of tasks including solving problems

8.1.5.A.4 Graph data using a spreadsheet, analyze and produce a report that explains the analysis of the data.

8.2.5.C.4 Collaborate and brainstorm with peers to solve a problem evaluating all solutions to provide the best results with supporting sketches or models.

8.2.5.D.3 Follow step by step directions to assemble a product or solve a problem

ELA Companion Standards in History, Social Studies, Science & Technical Subjects:

LA.RH.6-8.4 Determine the meaning of words and phrases as they are used in a text, including vocabulary specific to domains related to history/social studies.

LA.RH.6-8.5 Describe how a text presents information (e.g., sequentially, comparatively, causally)

LA.RH.6-8.7 Integrate visual information (e.g., in charts, graphs, photographs, videos, or maps) with other information in print and digital texts.

Anchor Standards:

LA.L.6.4.A Use context (e.g., the overall meaning of a sentence or paragraph; a word's position or function in a sentence) as a clue to the meaning of a word or phrase.

LA.L.6.6 Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases; gather vocabulary knowledge when considering a word or phrase important to comprehension or expression

LA.SL.6.1 Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 6 topics, texts, and issues, building on others' ideas and expressing their own clearly.

MODIFICATIONS:

Special Education:

Students Hands on activity, cooperative learning, peer tutoring, extended time, reteach in utilizing various methods. Utilize remediation resources which include assessment and intervention, in planning and instruction.

English Language Learners:

Provide hands-on activities and explanations.
Use reduced text, so that print is not so dense.
Assess comprehension through demonstration or other alternative means (gestures, drawings).
Give instructions/directions in writing and orally.

<p>Use of translation dictionaries to locate words in the native language. Use English Learners resources such as study guides, assessments and a visual glossary. At-Risk Students: Hands on activities cooperative learning, reteach using various methods. Make use of remediation lessons and quizzes when appropriate. Gifted and Talented Students: Utilize Pre-AP Resources such as the pacing, assignment and best practices guide.</p>		
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QUARTER 2 -
Big Idea: The Number System
Topic: Fluently Divide Whole Numbers
Fluently Add, Subtract, Multiply and Divide Decimals
Common Factors and Multiples

<p>Standards: NJ Student Learning Standards: 6.NS.B.2 Fluently divide multi-digit numbers using the standard algorithm. 6.NS.B.3 Fluently add, subtract, multiply, and divide multi-digit decimals using the standard algorithm for each operation. 6.NS.B.4 Find the greatest common factor of two whole numbers less than or equal to 100 and the least common multiple of two whole numbers less than or equal to 12. Use the distributive property to express a sum of two whole numbers 1–100 with a common factor as a multiple of a sum of two whole numbers with no common factor.</p>	GOAL	
	<p>SWBAT</p> <ul style="list-style-type: none"> • Divide whole numbers • Evaluate expressions involving division by using subdivision and order of operations • Fluently add, subtract, multiply and divide decimals • Find the GCF and LCM of two whole numbers 	
	Essential Questions	Assessments
	<p>How are quotients of multi-digit numbers found?</p> <p>How can you fluently add, subtract, multiply, and divide decimals?</p> <p>How can you find common factors and multiples of numbers?</p>	<ul style="list-style-type: none"> • Topic Six Assessment, print or online • Topic Seven Assessment, print or online • Topic Eight Assessment, print or online • Topic 1-8 Cumulative/Benchmark Assessment

<p>6.EE.A.2a Write expressions that record operations with numbers and with letters standing for numbers</p> <p>6.EE.A.2c Evaluate expressions at specific values of their variables. Include expressions that arise from formulas used in real-world problems. Perform arithmetic operations, including those involving whole number exponents, in the conventional order when there are no parentheses to specify a particular order (Order of Operations)</p>		
<p>6.EE.B.7 Solve real-world and mathematical problems by writing and solving equations of the form $a + b = c$ and $ax = b$ for cases in which a, b, and c are all nonnegative rational numbers.</p> <p>21* Century Life and Careers:</p> <p>CRP2. Apply appropriate academic and technical skills</p> <p>CRP4. Communicate clearly and effectively and with reason.</p> <p>CRP6. Demonstrate creativity and innovation.</p> <p>CRP8. Utilize critical thinking to make sense of problems and persevere in solving them</p> <p>CRP11. Use technology to enhance productivity.</p> <p>CRP12. Work productively in teams while using cultural global competence.</p> <p>Technology Standards:</p> <p>8.1.5.A.1 Select and use the appropriate digital tools and resources to accomplish a variety of tasks including solving problems</p>	<p>Enduring Understanding</p> <p>Topics 6, 7 and 8 focus on the understanding of our number system through fluency in computations with whole numbers and decimals and finding common factors and multiples.</p>	<p>Resources</p> <p>EnVision 2.0 Common Core Grade 6 https://www.savvasrealize.com/community/home Manipulative Set</p>

8.1.5.A.4 Graph data using a spreadsheet, analyze and produce a report that explains the analysis of the data.

8.2.5.C.4 Collaborate and brainstorm with peers to solve a problem evaluating all solutions to provide the best results with supporting sketches or models.

8.2.5.D.3 Follow step by step directions to assemble a product or solve a problem

ELA Companion Standards in History, Social Studies, Science & Technical Subjects:

LA.RH.6-8.4 Determine the meaning of words and phrases as they are used in a text, including vocabulary specific to domains related to history/social studies.

LA.RH.6-8.5 Describe how a text presents information (e.g., sequentially, comparatively, causally)

LA.RH.6-8.7 Integrate visual information (e.g., in charts, graphs, photographs, videos, or maps) with other information in print and digital texts.

Anchor Standards:

LA.L.6.4.A Use context (e.g., the overall meaning of a sentence or paragraph; a word's position or function in a sentence) as a clue to the meaning of a word or phrase.

LA.L.6.6 Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases; gather vocabulary knowledge when considering a word or phrase important to comprehension or expression

LA.SL.6.1 Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 6

topics, texts, and issues, building on others' ideas and expressing their own clearly.

MODIFICATIONS:

Special Education:

Students Hands on activity, cooperative learning, peer tutoring, extended time, reteach in utilizing various methods. Utilize remediation resources which include assessment and intervention, in planning and instruction.

English Language Learners:

Provide hands-on activities and explanations.
Use reduced text, so that print is not so dense.
Assess comprehension through demonstration or other alternative means (gestures, drawings).
Give instructions/directions in writing and orally.
Use of translation dictionaries to locate words in the native language.

Use English Learners resources such as study guides, assessments and a visual glossary.

At-Risk Students:

Hands on activities cooperative learning, reteach using various methods. Make use of remediation lessons and quizzes when appropriate.

Gifted and Talented Students:

Utilize Pre-AP Resources such as the pacing, assignment and best practices guide.

QUARTER 2 -
Big Idea: Ratios and Proportional Relationships
Topic: Ration Concepts and Reasoning
Ratio Concepts-Rates
Ratio Concepts- Percent

Standards:

NJ Student Learning Standards:

6.RP.A.1 Understand the concept of a ratio and use ratio language to describe a ratio relationship between two quantities.

6.RP.A.3 Use ratio and rate reasoning to solve real-world and mathematical problems, e.g., by reasoning about tables of equivalent ratios, tape diagrams, double number line diagrams, or equations.

6.RP.A.3a Make tables of equivalent ratios relating quantities with whole number measurements, find missing values in the tables, and plot the pairs of values on the coordinate plane. Use tables to compare ratios.

6.RP.A.3b Solve unit rate problems including those involving unit pricing and constant speed.

6.RP.A.3c Find a percent of a quantity as a rate per 100 (e.g., 30% of a quantity means 30/100 times the quantity); solve problems involving finding the whole, given a part and the percent.

6.RP.A.3d Use ratio reasoning to convert measurement units; manipulate and transform units appropriately when multiplying or dividing quantities.

GOAL

SWBAT

- Use ratios and ratio language to describe the relationship between two quantities.
- Find equivalent ratios
- Compare ratios to solve problems.
- Use rates to solve problems.
- Use unit rates to make comparisons.
- Use unit rates to compare costs and constant speed.
- Use ration reasoning and conversion factors to convert between customary and metric units of measure.
- Represent and find the percent of a whole.
- Write equivalent values as fractions, decimals and precents.

Essential Questions

Assessments

What is a ratio?

How can you use ratios to describe quantities?

What is the meaning of percent?

How can percent be estimated and found?

- Topic Nine Assessment, print or online
- Topic Ten Assessment, print or online
- Topic Eleven Assessment, print or online

<p>6.RP.A.2 Understand the concept of a unit rate $\frac{a}{b}$ associated with a ratio $\frac{a}{b}$ with $b \neq 0$, and use rate language in the context of a ratio relationship.</p>		
<p>21st Century Life and Careers: CRP2. Apply appropriate academic and technical skills CRP4. Communicate clearly and effectively and with reason. CRP6. Demonstrate creativity and innovation. CRP8. Utilize critical thinking to make sense of problems and persevere in solving them CRP11. Use technology to enhance productivity. CRP12. Work productively in teams while using cultural global competence.</p> <p>Technology Standards: 8.1.5.A.1 Select and use the appropriate digital tools and resources to accomplish a variety of tasks including solving problems 8.1.5.A.4 Graph data using a spreadsheet, analyze and produce a report that explains the analysis of the data. 8.2.5.C.4 Collaborate and brainstorm with peers to solve a problem evaluating all solutions to provide the best results with supporting sketches or models. 8.2.5.D.3 Follow step by step directions to assemble a product or solve a problem</p>	<p>Enduring Understanding</p> <p>Topics 9, 10 and 11 focus on conceptual understanding of ratios, rates, and percents and on solving problems involving ratio reasoning.</p> <p>Ratios can be used to describe the relationship between two quantities when for every x units of one quantity, there are y units of another quantity. A rate is a special type of ratio that compares two quantities with different units of measure. A percent is a rate in which the first term is compared to 100. The percent is the number of hundredths that represents the part of the whole.</p>	<p>Resources</p> <p>EnVision 2.0 Common Core Grade 6 https://www.savvasrealize.com/community/home Manipulative Set</p>

ELA Companion Standards in History, Social Studies, Science & Technical Subjects:

LA.RH.6-8.4 Determine the meaning of words and phrases as they are used in a text, including vocabulary specific to domains related to history/social studies.

LA.RH.6-8.5 Describe how a text presents information (e.g., sequentially, comparatively, causally)

LA.RH.6-8.7 Integrate visual information (e.g., in charts, graphs, photographs, videos, or maps) with other information in print and digital texts.

Anchor Standards:

LA.L.6.4.A Use context (e.g., the overall meaning of a sentence or paragraph; a word's position or function in a sentence) as a clue to the meaning of a word or phrase.

LA.L.6.6 Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases; gather vocabulary knowledge when considering a word or phrase important to comprehension or expression

LA.SL.6.1 Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 6 topics, texts, and issues, building on others' ideas and expressing their own clearly.

MODIFICATIONS:

Special Education:

Students Hands on activity, cooperative learning, peer tutoring, extended time, reteach in utilizing

<p>various methods. Utilize remediation resources which include assessment and intervention, in planning and instruction.</p> <p>English Language Learners: Provide hands-on activities and explanations. Use reduced text, so that print is not so dense. Assess comprehension through demonstration or other alternative means (gestures, drawings). Give instructions/directions in writing and orally. Use of translation dictionaries to locate words in the native language. Use English Learners resources such as study guides, assessments and a visual glossary.</p> <p>At-Risk Students: Hands on activities cooperative learning, reteach using various methods. Make use of remediation lessons and quizzes when appropriate.</p> <p>Gifted and Talented Students: Utilize Pre-AP Resources such as the pacing, assignment and best practices guide.</p>		
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QUARTER 3-
Big Idea: The Number System
Topic: Divide Fractions by Fractions

<p>Standards: NJ Student Learning Standards: 6.NS.A.1 Interpret and compute quotients of fractions and solve word problems involving division of fractions by fractions, e.g., by using visual fraction models and equations to represent the problem.</p>	GOAL	
	<p>SWBAT</p> <ul style="list-style-type: none"> • Divide fractions by fractions 	
	Essential Questions	Assessments
	<p>What are standard procedures for estimating and finding quotients of fractions and mixed numbers?</p>	<ul style="list-style-type: none"> • Topic Twelve Assessment, print or online

<p>6.EE.A.2c Include expressions that arise from formulas used in real-world problems. Perform arithmetic operations, including those involving whole number exponents, in the conventional order when there are no parentheses to specify a particular order (Order of Operations).</p> <p>6.EE.B.7 Solve real-world and mathematical problems by writing and solving equations of the form $a + x = b$ and $ax = b$ for cases in which a, b and x are all nonnegative rational numbers.</p>		<ul style="list-style-type: none"> • Topic 1-12 Cumulative/Benchmark Assessment
<p>21st Century Life and Careers:</p> <p>CRP2. Apply appropriate academic and technical skills</p> <p>CRP4. Communicate clearly and effectively and with reason.</p> <p>CRP6. Demonstrate creativity and innovation.</p> <p>CRP8. Utilize critical thinking to make sense of problems and persevere in solving them</p> <p>CRP11. Use technology to enhance productivity.</p> <p>CRP12. Work productively in teams while using cultural global competence.</p> <p>Technology Standards:</p> <p>8.1.5.A.1 Select and use the appropriate digital tools and resources to accomplish a variety of tasks including solving problems</p> <p>8.1.5.A.4 Graph data using a spreadsheet, analyze and produce a report that explains the analysis of the data.</p> <p>8.2.5.C.4 Collaborate and brainstorm with peers to solve a problem evaluating all solutions</p>	<p>Enduring Understanding</p> <p>Topic 12 focus on applying and extending previous understandings of multiplication and division to divide by fractions.</p>	<p>Resources</p> <p>EnVision 2.0 Common Core Grade 6 https://www.savvasrealize.com/community/home Manipulative Set</p>

to provide the best results with supporting sketches or models.

8.2.5.D.3 Follow step by step directions to assemble a product or solve a problem

ELA Companion Standards in History, Social Studies, Science & Technical Subjects:

LA.RH.6-8.4 Determine the meaning of words and phrases as they are used in a text, including vocabulary specific to domains related to history/social studies.

LA.RH.6-8.5 Describe how a text presents information (e.g., sequentially, comparatively, causally)

LA.RH.6-8.7 Integrate visual information (e.g., in charts, graphs, photographs, videos, or maps) with other information in print and digital texts.

Anchor Standards:

LA.L.6.4.A Use context (e.g., the overall meaning of a sentence or paragraph; a word's position or function in a sentence) as a clue to the meaning of a word or phrase.

LA.L.6.6 Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases; gather vocabulary knowledge when considering a word or phrase important to comprehension or expression

LA.SL.6.1 Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 6 topics, texts, and issues, building on others' ideas and expressing their own clearly.

MODIFICATIONS:

Special Education:

Students Hands on activity, cooperative learning, peer tutoring, extended time, reteach in utilizing various methods. Utilize remediation resources which include assessment and intervention, in planning and instruction.

English Language Learners:

Provide hands-on activities and explanations.
Use reduced text, so that print is not so dense.
Assess comprehension through demonstration or other alternative means (gestures, drawings).
Give instructions/directions in writing and orally.
Use of translation dictionaries to locate words in the native language.
Use English Learners resources such as study guides, assessments and a visual glossary.

At-Risk Students:

Hands on activities cooperative learning, reteach using various methods. Make use of remediation lessons and quizzes when appropriate.

Gifted and Talented Students:

Utilize Pre-AP Resources such as the pacing, assignment and best practices guide.

**QUARTER 3 -
Big Idea: Geometry
Topic: Solve Area Problems
Solve Surface Area and Volume Problems**

**Standards:
NJ Student Learning Standards:**

GOAL

SWBAT

- Find the areas of parallelograms and rhombuses

<p>6.G.A.1 Find the area of right triangles, other triangles, special quadrilaterals, and polygons by composing into rectangles or decomposing into triangles and other shapes; apply these techniques in the context of solving real-world and mathematical problems.</p> <p>6.EE.A.2c Find the volume of a right rectangular prism with fractional edge lengths by packing it with unit cubes of the appropriate unit fraction edge lengths, and show that the volume is the same as would be found by multiplying the edge lengths of the prism. Apply the formulas $V = lwh$ and $V = bh$ to find volumes of right rectangular prisms with fractional edge lengths in the context of solving real-world and mathematical problems.</p> <p>6.G.A.3 Draw polygons in the coordinate plane given coordinates for the vertices; use coordinates to find the length of a side joining points with the same first coordinate or the same second coordinate. Apply these techniques in the context of solving real-world and mathematical problems.</p> <p>6.NS.C.6c Find and position integers and other rational numbers on a horizontal or vertical number line diagram; find and position pairs of integers and other rational numbers on a coordinate plane</p>	<ul style="list-style-type: none"> • Find the area of triangles • Find the area of special quadrilaterals • Find the area of polygons using a coordinate plane • Classify solid figures and represent them by their nets. • Find the surface areas of rectangular and triangular prisms. • Find the volume of a rectangular prism with fractional edge lengths. 		
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 50%; text-align: left;">Essential Questions</th> <th style="width: 50%; text-align: left;">Assessments</th> </tr> </table>		Essential Questions	Assessments
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<p>21st Century Life and Careers:</p> <p>CRP2. Apply appropriate academic and technical skills</p> <p>CRP4. Communicate clearly and effectively and with reason.</p>	<p>Topics 13 and 14 focus on a deep understanding of area of polygons, surface area of solids, and volume of right rectangular prisms with fractional side lengths.</p> <p>EnVision 2.0 Common Core Grade 6 https://www.savvasrealize.com/community/home Manipulative Set</p>		

CRP6. Demonstrate creativity and innovation.
CRP8. Utilize critical thinking to make sense of problems and persevere in solving them
CRP11. Use technology to enhance productivity.
CRP12. Work productively in teams while using cultural global competence.

Technology Standards:

8.1.5.A.1 Select and use the appropriate digital tools and resources to accomplish a variety of tasks including solving problems

8.1.5.A.4 Graph data using a spreadsheet, analyze and produce a report that explains the analysis of the data.

8.2.5.C.4 Collaborate and brainstorm with peers to solve a problem evaluating all solutions to provide the best results with supporting sketches or models.

8.2.5.D.3 Follow step by step directions to assemble a product or solve a problem

ELA Companion Standards in History, Social Studies, Science & Technical Subjects:

LA.RH.6-8.4 Determine the meaning of words and phrases as they are used in a text, including vocabulary specific to domains related to history/social studies.

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QUARTER 4 -
Big Idea: Statistics and Probability
Topic: Measures of Center and Variability
Display and Summarize Data

<p>Standards: NJ Student Learning Standards: 6.SP.A.1 Recognize a statistical question as one that anticipates variability in the data related to the question and accounts for it in the answers. 6.SP.A.2 Understand that a set of data collected to answer a statistical question has a distribution which can be described by its center, spread, and overall shape. 6.SP.A.3 Recognize that a measure of center for a numerical data set summarizes all of its values with a single number, while a measure of variation describes how its values vary with a single number.</p>	GOAL	
	<p>SWBAT:</p> <ul style="list-style-type: none"> • Identify and write statistical questions and then display the collected data. • Find the mean, median, mode, and range of a data set. • Make and analyze frequency tables, histograms, and box plots. • Summarize a numerical data set. 	
	Essential Questions	Assessments
	<p>How can you describe a data distribution?</p> <p>How can data be described by a single number?</p> <p>How can graphs be used to represent data and answer questions?</p>	<ul style="list-style-type: none"> • Topic Fifteen Assessment, print or online • Topic Sixteen Assessment, print or online • Topic 1-16 Cumulative/Benchmark Assessment

<p>6.SP.B.4 Display numerical data in plots on a number line, including dot plots, histograms, and box plots.</p> <p>6.SP.B.5.a Summarize numerical data sets in relation to their context, such as by: Reporting the number of observations.</p> <p>6.SP.B.5.b Summarize numerical data sets in relation to their context, such as by: Describing the nature of the attribute under investigation, including how it was measured and its units of measurement.</p>		
<p>6.SP.B.5.c Giving quantitative measures of center (median and/or mean) and variability (interquartile range and/or mean absolute deviation), as well as describing any overall pattern and any striking deviations from the overall pattern with reference to the context in which the data were gathered.</p> <p>6.SP.B.5.d Relating the choice of measures of center and variability to the shape of the data distribution and the context in which the data were gathered.</p> <p>21st Century Life and Careers: CRP2. Apply appropriate academic and technical skills CRP4. Communicate clearly and effectively and with reason. CRP6. Demonstrate creativity and innovation. CRP8. Utilize critical thinking to make sense of problems and persevere in solving them</p>	<p>Enduring Understanding</p> <p>Topic 15 focuses on developing understanding of variability and the concept of statistical measures. Students learn that a question is statistical if there is an expectation of a variety of answers. Data generated by a statistical question has variability. Students are introduced to measures of center and variability.</p> <p>Topic 16 focuses on conceptual understanding of how to describe data distributions.</p>	<p>Resources</p> <p>EnVision 2.0 Common Core Grade 6 https://www.savvasrealize.com/community/home Manipulative Set</p>

CRP11. Use technology to enhance productivity.
CRP12. Work productively in teams while using cultural global competence.

Technology Standards:

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8.1.5.A.4 Graph data using a spreadsheet, analyze and produce a report that explains the analysis of the data.

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QUARTER 4 - Big Idea: Topic:		
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