

<b>Grade: 6</b>	<b>Content Area: Mathematics</b>
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**Introduction:**

Students in 6th grade will complete 5 critical areas.

Adopted on:	October 23, 2018
Revised on:	July 20, 2021
Revised by:	Katie Micek, Jessica Wiehr, Suzanne Henry
Proposed Revision Date	Summer 2024

<b>Beach Haven School District Mathematics Curriculum</b>	
Content Area: Math	
Course Title: Math	Grade Level: 6
Instructional Materials: "Big Ideas Math"	
<b>Chapter 1: Numerical Expressions and Factors</b> <i>Covers NJSLA Critical Areas 2 &amp; 3</i>  <b>Focus:</b> <ul style="list-style-type: none"> <li>● Whole Number Operations</li> <li>● Powers and Exponents</li> <li>● Order of Operations</li> <li>● Prime Factorization</li> <li>● Greatest Common Factor</li> <li>● Least Common Multiple</li> </ul>	<b>25 Days</b>
<b>Chapter 2: Fractions and Decimals</b> <i>Covers NJSLA Critical Area 2</i>  <b>Focus:</b> <ul style="list-style-type: none"> <li>● Multiplying Fractions</li> <li>● Dividing Fractions</li> <li>● Dividing Mixed Numbers</li> <li>● Adding and Subtracting Decimals</li> <li>● Multiplying Decimals</li> <li>● Dividing Decimals</li> </ul>	<b>20 Days</b>

<p><b>Chapter 3: Algebraic Expressions and Properties</b> Covers NJSLA Critical Area 3</p> <p style="text-align: center;"><b>Focus:</b></p> <ul style="list-style-type: none"> <li>● Algebraic Expressions</li> <li>● Writing Expressions</li> <li>● Properties of Addition and Multiplication</li> <li>● The Distributive Property</li> </ul>	<p><b>15 Days</b></p>
<p><b>Chapter 4: Areas of Polygon</b> Covers NJSLA Critical Area 4</p> <p style="text-align: center;"><b>Focus:</b></p> <ul style="list-style-type: none"> <li>● Areas of Parallelograms</li> <li>● Areas of Triangles</li> <li>● Areas of Trapezoids</li> <li>● Polygons in Coordinate Plane</li> </ul>	<p><b>15 Days</b></p>
<p><b>Chapter 5: Ratios and Rates</b> Covers NJSLA Critical Area 1</p> <p style="text-align: center;"><b>Focus:</b></p> <ul style="list-style-type: none"> <li>● Ratios</li> <li>● Ratio Tables</li> <li>● Rates</li> <li>● Comparing and Graphic Ratios</li> <li>● Percents</li> <li>● Solving Percent Problems</li> <li>● Converting Measures</li> </ul>	<p><b>25 Days</b></p>
<p><b>Chapter 6: Integers and the Coordinate Plane</b> Covers NJSLA Critical Area 2</p> <p style="text-align: center;"><b>Focus:</b></p> <ul style="list-style-type: none"> <li>● Integers</li> <li>● Comparing and Ordering Integers</li> <li>● Fractions and Decimals on the Number Line</li> <li>● Absolute Value</li> <li>● The Coordinate Plane</li> </ul>	<p><b>15 Days</b></p>
<p><b>Chapter 7: Equations and Inequalities</b> Covers NJSLA Critical Area 3</p> <p style="text-align: center;"><b>Focus:</b></p> <ul style="list-style-type: none"> <li>● Writing Equations in One Variable</li> <li>● Solving Equations Using Addition or Subtraction</li> <li>● Solving Equations Using Multiplication or Division</li> <li>● Writing Equations in Two Variables</li> <li>● Writing and Graphing Inequalities</li> <li>● Solving Inequalities Using Addition or Subtraction</li> <li>● Solving Inequalities Using Multiplication or Division</li> </ul>	<p><b>20 Days</b></p>

<p><b>Chapter 8: Surface Area and Volume</b> Covers NJSLA Critical Area 4</p> <p style="text-align: center;"><b>Focus:</b></p> <ul style="list-style-type: none"> <li>● 3D Figures</li> <li>● Surface Area of Prisms</li> <li>● Surface Areas of Pyramids</li> <li>● Volumes of Rectangular Prisms</li> </ul>	<p><b>15 Days</b></p>
<p><b>Chapter 9: Statistical Measures</b> Covers NJSLA Critical Area 5</p> <p style="text-align: center;"><b>Focus:</b></p> <ul style="list-style-type: none"> <li>● Introduction to Statistics</li> <li>● Mean</li> <li>● Measures of Center</li> <li>● Measures of Variations</li> <li>● Mean Absolute Deviation</li> </ul>	<p><b>15 Days</b></p>
<p><b>Chapter 10: Data Displays</b> Covers NJSLA Critical Area 5</p> <p style="text-align: center;"><b>Focus:</b></p> <ul style="list-style-type: none"> <li>● Stem-and-Leaf Plots</li> <li>● Histograms</li> <li>● Shapes of Distributions</li> <li>● Box-and-Whisker Plots</li> </ul>	<p><b>15 Days</b></p>

<p><b>Chapter 1: Numerical Expressions and Factors</b></p>	<p><b>Duration: 25 Days- ongoing</b></p>
<p><b>Standards/Learning Targets</b></p>	
<p><b>New Jersey Student Learning Standards:</b></p> <ul style="list-style-type: none"> <li>● 6.NS.2 Fluently divide multi-digit numbers using the standard algorithm</li> <li>● 6.NS.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.</li> <li>● 6.EE.1 Write and evaluate numerical expressions involving whole-number exponents.</li> <li>● 6.EE.2b Write, read, and evaluate expressions in which letters stand for numbers.</li> </ul> <p>b. Identify parts of an expression using mathematical terms (sum, term, product, factor, quotient, coefficient); view one or more parts of an expression as a single entity</p> <p><b>Standards for Mathematical Practice:</b></p> <ul style="list-style-type: none"> <li>● MP.1 Make sense of problems and persevere in solving them.</li> <li>● MP.2 Reason abstractly and quantitatively.</li> </ul>	

- MP.3 Construct viable arguments and critique the reasoning of others.
- MP.4 Model with mathematics.
- MP.5 Use appropriate tools strategically.
- MP.6 Attend to precision.
- MP.7 Look for and make use of structure
- MP.8 Look for and express regularity in repeated reasoning

**Interdisciplinary Connections:**

**ELA:**

- SL.6.3. Deconstruct a speaker's argument and specific claims, distinguishing claims that are supported by reasons and evidence from claims that are not.

**Career Ready Practices:**

- CRP1. Act as a responsible and contributing citizen and employee.
- CRP4. Communicate clearly and effectively and with reason.
- CRP12. Work productively in teams while using cultural global competence.

**21st Century Life and Career Standards:**

- 9.1.4.A.1- Explain the difference between a career and a job, and identify various jobs in the community and the related earnings.

**Technology:**

- 8.1.2.A.1 Identify the basic features of a digital device and explain its purpose.
- 8.1.2.A.4 Demonstrate developmentally appropriate navigation skills in virtual environments (i.e. games, museums).
- 8.2.2.C.1 Brainstorm ideas on how to solve a problem or build a product
- 8.1.2.E.1 Use digital tools and online resources to explore a problem or issue.
- 8.2.2.E.1 List and demonstrate the steps to an everyday task

## Modifications and Accommodations

### English Language Learners:

- Simplify written and verbal instructions
- Provide written directions with models and diagrams when possible
- Build in more group work to allow ELL students to interact and communicate with peers
- Provide vocabulary ahead of time
- Use sentence frames to give students practice with academic language
- Pre-teach as often as possible- share videos, articles, vocabulary etc. with ELL students prior to use in class
- Utilize visual charts/cues
- Highlight key words
- Provide manipulatives
- Frequently check for understanding

### Special Education/Students with Disabilities:

- Follow specific students accommodations and modifications as listed in individual student IEP
- Provide opportunities for movement
- Have manipulatives and other math resources available for student use
- Incorporate small group instruction
- Utilize visual charts/cues
- Facilitate successful experiences
- Provide tutoring if needed
- Provide positive praise to increase motivation
- Answers to be dictated
- Frequent rest breaks
- Additional time
- Oral testing
- Untimed tests
- Choice of test format (multiple-choice, essay, true-false)

### 504:

- Follow specific students accommodations and modifications as listed in individual student 504
- Provide opportunities for movement
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- Choice of test format (multiple-choice, essay, true-false)

### Students at Risk of Failure:

- Ensure child has access to all appropriate academic resources both in school and at home
- Provide structure and adhere to a consistent daily routine with clear and concise rules
- Facilitate successful experiences
- Provide tutoring if needed

- Allow students to complete assignments in school
- Do not penalize for late or missing assignments/materials
- Offer encouragement and understanding
- Allow students to have personal possessions and property in school
- Give choice to provide a sense of control

**Economically Disadvantaged:**

- Provide clear, achievable expectations, do not lower academic requirements for them.
- Build a safe and nurturing atmosphere
- Be flexible with assignments
- Offer several alternatives from which all students can choose.
- Allow students to finish assignments independently, or give them the opportunity to complete tasks at their own pace.
- Use real-world examples and create mental models for abstract idea
- Provide increased knowledge base and vocabulary use about real world experiences.
- Share the decision making in class.
- Maintain expectations while offering choice and soliciting input

**Culturally Diverse:**

- Involve families in student learning
- Provide social/emotional support
- Respect cultural traditions
- Build in more group work to encourage interaction with peers
- Show photos, videos, and definitions when possible for culturally unique vocabulary
- Teach study skills
- Provided students with necessary academic resources and materials
- Allow for alternative assignments
- Provide visuals
- Assign peer tutor
- Support verbal explanations with non verbal cues: Gestures/ facial expressions, props, realia, manipulatives, concrete materials, visuals, graphs, pictures, maps
- Provide positive praise to increase motivation
- Provide real world connections and emphasize the value of education
- Communicate high expectations for the success of all students
- Integrate the arts into learning activities

**Knowledge & Skills**

**Essential Questions/ Enduring Understandings:**

- How do you know which operation to choose when solving a real-life problem?
- How can you use repeated factors in real-life situations?
- What is the effect of inserting parentheses into a numerical expression?
- Without dividing, how can you tell if a number is divisible by another number?
- Without dividing, how can you tell if a number is divisible by another number?
- How can you find the greatest common factor of two or more numbers?
- How can you find the least common multiple of two or more numbers?

**Core Instructional & Supplemental Materials**

<p><b>Suggested Activities/Resources:</b></p> <ul style="list-style-type: none"> <li>● Self-reflection</li> <li>● Math Center Activities</li> <li>● Math Games</li> <li>● Draw and Show</li> <li>● Math Journals</li> <li>● Khan Academy</li> <li>● Prodigy</li> <li>● Edhelper</li> <li>● Education.com</li> <li>● Kahoot</li> <li>● ThatQuiz.org</li> </ul>	<p>Varied Levels of Text:</p> <ul style="list-style-type: none"> <li>- Life in Colonial America, McGraw-Hill</li> <li>-Nature's Delicate Balance, McGraw-Hill</li> <li>-Our Nation's 50 States, McGraw-Hill</li> <li>-Marilyn Burns Math Libraries Grade 4- 6</li> </ul> <p><a href="http://teacher.scholastic.com/reading/bestpractices/pdfs/mbmath_TitleList.pdf">http://teacher.scholastic.com/reading/bestpractices/pdfs/mbmath_TitleList.pdf</a></p>
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Evidence of Student Learning	
<p><b>Formative Tasks:</b></p> <ul style="list-style-type: none"> <li>● Solve and Share</li> <li>● Quick Check quizzes</li> <li>● Daily Review</li> <li>● Cooperative group learning</li> <li>● Exit slips</li> <li>● Analysis of student work</li> <li>● Teacher observations/anecdotal/checklists</li> <li>● Self-reflection</li> <li>● Math journals</li> </ul>	<p><b>Alternative Assessments:</b></p> <ul style="list-style-type: none"> <li>● Performance Tasks</li> <li>● Student created models</li> <li>● Written/verbal explanations</li> <li>● Peer assessment</li> <li>● Self-assessment</li> </ul>
<p><b>Summative Assessments:</b></p> <ul style="list-style-type: none"> <li>● Topic tests</li> <li>● Extension Projects</li> <li>● Topic Performance Assessment</li> </ul>	<p><b>Benchmark Assessments:</b></p> <ul style="list-style-type: none"> <li>● Beginning of the year, mid year, and end of the year</li> </ul>

<b>Chapter 2: Fractions and Decimals</b>	<b>Duration: 20 Days- ongoing</b>
<b>Standards/Learning Targets</b>	
<p><b>New Jersey Student Learning Standards:</b></p> <ul style="list-style-type: none"> <li>● 6.NS.1 Interpret and compute quotients of fractions, and solve word problems involving division of fractions by fractions.</li> <li>● 6.NS.3 Fluently add, subtract, multiply, and divide multi-digit decimals using the standard algorithm for each operation.</li> </ul> <p><b>Standards for Mathematical Practice:</b></p> <ul style="list-style-type: none"> <li>● MP.1 Make sense of problems and persevere in solving them.</li> <li>● MP.2 Reason abstractly and quantitatively.</li> <li>● MP.3 Construct viable arguments and critique the reasoning of others.</li> <li>● MP.4 Model with mathematics.</li> <li>● MP.5 Use appropriate tools strategically.</li> <li>● MP.6 Attend to precision.</li> <li>● MP.7 Look for and make use of structure</li> <li>● MP.8 Look for and express regularity in repeated reasoning</li> </ul>	

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**Knowledge & Skills**

**Enduring Understandings/ Essential Questions:**

- What does it mean to multiply fractions?
- How can you divide by a fraction?
- How can you divide by a mixed number?
- How can you add and subtract decimals?
- How can you multiply decimals?
- How can you divide decimals?

**Core Instructional & Supplemental Materials**

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## **Modifications and Accommodations**

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- Additional time
- Oral testing
- Untimed tests
- Choice of test format (multiple-choice, essay, true-false)

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**Knowledge & Skills**

**Enduring Understandings/ Essential Questions:**

- How can you write and evaluate an expression that models real-life?
- How can you write an expression that represents an unknown quantity?
- Does the order in which you perform an operation matter?
- How do you use mental math to multiply two numbers?

**Core Instructional & Supplemental Materials**

<p><b>Suggested Activities/Resources:</b></p> <ul style="list-style-type: none"> <li>● Self-reflection</li> <li>● Math Center Activities</li> <li>● Math Games</li> <li>● Draw and Show</li> <li>● Math Journals</li> <li>● Khan Academy</li> <li>● Prodigy</li> <li>● Edhelper</li> <li>● Education.com</li> <li>● Kahoot</li> <li>● ThatQuiz.org</li> </ul>	<p>Varied Levels of Text:  <i>Save, Spend, Share, Law &amp; Bailey</i>          -Marilyn Burns Math Libraries Grade 4- 6  <a href="http://teacher.scholastic.com/reading/bestpractices/pdfs/mbmath_TitleList.pdf">http://teacher.scholastic.com/reading/bestpractices/pdfs/mbmath_TitleList.p df</a></p>
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Evidence of Student Learning	
<p><b>Formative Tasks:</b></p> <ul style="list-style-type: none"> <li>● Solve and Share</li> <li>● Quick Check quizzes</li> <li>● Daily Review</li> <li>● Cooperative group learning</li> <li>● Exit slips</li> <li>● Analysis of student work</li> <li>● Teacher observations/anecdotal/checklists</li> <li>● Self-reflection</li> <li>● Math journals</li> </ul>	<p><b>Alternative Assessments:</b></p> <ul style="list-style-type: none"> <li>● Performance Tasks</li> <li>● Student created models</li> <li>● Written/verbal explanations</li> <li>● Peer assessment</li> <li>● Self-assessment</li> </ul>
<p><b>Summative Assessments:</b></p> <ul style="list-style-type: none"> <li>● Topic tests</li> <li>● Extension Projects</li> <li>● Topic Performance Assessment</li> </ul>	<p><b>Benchmark Assessments:</b></p> <ul style="list-style-type: none"> <li>● Beginning of the year, mid year, and end of the year</li> </ul>

<b>Chapter 4: Areas of Polygons</b>	<b>Duration: 15 Days- ongoing</b>
<b>Standards/Learning Targets</b>	
<p><b>New Jersey Student Learning Standards:</b></p> <ul style="list-style-type: none"> <li>● 6.G.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.</li> <li>● 6.G.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.</li> </ul> <p><b>Standards for Mathematical Practice:</b></p> <ul style="list-style-type: none"> <li>● MP.1 Make sense of problems and persevere in solving them.</li> <li>● MP.2 Reason abstractly and quantitatively.</li> <li>● MP.3 Construct viable arguments and critique the reasoning of others.</li> <li>● MP.4 Model with mathematics.</li> <li>● MP.5 Use appropriate tools strategically.</li> <li>● MP.6 Attend to precision.</li> <li>● MP.7 Look for and make use of structure</li> <li>● MP.8 Look for and express regularity in repeated reasoning</li> </ul>	

<p><b>Interdisciplinary Connections:</b></p> <p><b>ELA:</b></p> <ul style="list-style-type: none"> <li>● SL.6.3. Deconstruct a speaker’s argument and specific claims, distinguishing claims that are supported by reasons and evidence from claims that are not.</li> </ul> <p><b>Career Ready Practices:</b></p> <ul style="list-style-type: none"> <li>● CRP1. Act as a responsible and contributing citizen and employee.</li> <li>● CRP4. Communicate clearly and effectively and with reason.</li> <li>● CRP12. Work productively in teams while using cultural global competence.</li> </ul> <p><b>21st Century Life and Career Standards:</b></p> <ul style="list-style-type: none"> <li>● 9.1.4.A.1- Explain the difference between a career and a job, and identify various jobs in the community and the related earnings.</li> </ul> <p><b>Technology:</b></p> <ul style="list-style-type: none"> <li>● 8.1.2.A.1 Identify the basic features of a digital device and explain its purpose.</li> <li>● 8.1.2.A.4 Demonstrate developmentally appropriate navigation skills in virtual environments (i.e. games, museums).</li> <li>● 8.2.2.C.1 Brainstorm ideas on how to solve a problem or build a product</li> <li>● 8.1.2.E.1 Use digital tools and online resources to explore a problem or issue.</li> <li>● 8.2.2.E.1 List and demonstrate the steps to an everyday task</li> </ul>
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<b>Modifications and Accommodations</b>
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**English Language Learners:**

- Simplify written and verbal instructions
- Provide written directions with models and diagrams when possible
- Build in more group work to allow ELL students to interact and communicate with peers
- Provide vocabulary ahead of time
- Use sentence frames to give students practice with academic language
- Pre-teach as often as possible- share videos, articles, vocabulary etc. with ELL students prior to use in class
- Utilize visual charts/cues
- Highlight key words
- Provide manipulatives
- Frequently check for understanding

**Special Education/Students with Disabilities:**

- Follow specific students accommodations and modifications as listed in individual student IEP
- Provide opportunities for movement
- Have manipulatives and other math resources available for student use
- Incorporate small group instruction
- Utilize visual charts/cues
- Facilitate successful experiences
- Provide tutoring if needed
- Provide positive praise to increase motivation
- Answers to be dictated
- Frequent rest breaks
- Additional time
- Oral testing
- Untimed tests
- Choice of test format (multiple-choice, essay, true-false)

**504:**

- Follow specific students accommodations and modifications as listed in individual student 504
- Provide opportunities for movement
- Have manipulatives and other math resources available for student use
- Incorporate small group instruction
- Utilize visual charts/cues
- Facilitate successful experiences
- Provide tutoring if needed
- Provide positive praise to increase motivation
- Answers to be dictated
- Frequent rest breaks
- Additional time
- Oral testing
- Untimed tests
- Choice of test format (multiple-choice, essay, true-false)

**Students at Risk of Failure:**

- Ensure child has access to all appropriate academic resources both in school and at home
- Provide structure and adhere to a consistent daily routine with clear and concise rules
- Facilitate successful experiences
- Provide tutoring if needed
- Allow students to complete assignments in school
- Do not penalize for late or missing assignments/materials

- Offer encouragement and understanding
- Allow students to have personal possessions and property in school
- Give choice to provide a sense of control

**Economically Disadvantaged:**

- Provide clear, achievable expectations, do not lower academic requirements for them.
- Build a safe and nurturing atmosphere
- Be flexible with assignments
- Offer several alternatives from which all students can choose.
- Allow students to finish assignments independently, or give them the opportunity to complete tasks at their own pace.
- Use real-world examples and create mental models for abstract idea
- Provide increased knowledge base and vocabulary use about real world experiences.
- Share the decision making in class.
- Maintain expectations while offering choice and soliciting input

**Culturally Diverse:**

- Involve families in student learning
- Provide social/emotional support
- Respect cultural traditions
- Build in more group work to encourage interaction with peers
- Show photos, videos, and definitions when possible for culturally unique vocabulary
- Teach study skills
- Provided students with necessary academic resources and materials
- Allow for alternative assignments
- Provide visuals
- Assign peer tutor
- Support verbal explanations with non verbal cues: Gestures/ facial expressions, props, realia, manipulatives, concrete materials, visuals, graphs, pictures, maps
- Provide positive praise to increase motivation
- Provide real world connections and emphasize the value of education
- Communicate high expectations for the success of all students
- Integrate the arts into learning activities

**Knowledge & Skills**

**Enduring Understandings/ Essential Questions:**

- How can you derive a formula for the area of a parallelogram?
- How can you derive a formula for the area of a triangle?
- How can you derive a formula for the area of a trapezoid?
- How can you find the lengths of line segments in a coordinate plane?

**Core Instructional & Supplemental Materials**

<p><b>Suggested Activities/Resources:</b></p> <ul style="list-style-type: none"> <li>● Self-reflection</li> <li>● Math Center Activities</li> <li>● Math Games</li> <li>● Draw and Show</li> <li>● Math Journals</li> <li>● Khan Academy</li> <li>● Prodigy</li> <li>● Edhelper</li> <li>● Education.com</li> <li>● Kahoot</li> <li>● ThatQuiz.org</li> </ul>	<p>Varied Levels of Text:</p> <ul style="list-style-type: none"> <li>-Flags: Shaping History, McGraw-Hill</li> <li>-Marilyn Burns Math Libraries Grade 4- 6</li> <li><a href="http://teacher.scholastic.com/reading/bestpractices/pdfs/mbmath_TitleList.pdf">http://teacher.scholastic.com/reading/bestpractices/pdfs/mbmath_TitleList.p df</a></li> </ul>
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Evidence of Student Learning	
<p><b>Formative Tasks:</b></p> <ul style="list-style-type: none"> <li>● Solve and Share</li> <li>● Quick Check quizzes</li> <li>● Daily Review</li> <li>● Cooperative group learning</li> <li>● Exit slips</li> <li>● Analysis of student work</li> <li>● Teacher observations/anecdotal/checklists</li> <li>● Self-reflection</li> <li>● Math journals</li> </ul>	<p><b>Alternative Assessments:</b></p> <ul style="list-style-type: none"> <li>● Performance Tasks</li> <li>● Student created models</li> <li>● Written/verbal explanations</li> <li>● Peer assessment</li> <li>● Self-assessment</li> </ul>
<p><b>Summative Assessments:</b></p> <ul style="list-style-type: none"> <li>● Topic tests</li> <li>● Extension Projects</li> <li>● Topic Performance Assessment</li> </ul>	<p><b>Benchmark Assessments:</b></p> <ul style="list-style-type: none"> <li>● Beginning of the year, mid year, and end of the year</li> </ul>

<b>Chapter 5: Ratios and Rates</b>	<b>Duration: 25 Days- ongoing</b>
<b>Standards/Learning Targets</b>	
<p><b>New Jersey Student Learning Standards:</b></p> <ul style="list-style-type: none"> <li>● 6.RP.1 Understand the concept of a ratio and use ratio language to describe a ratio relationship between two quantities.</li> <li>● 6.RP.2 Understand the concept of a unit rate <math>a/b</math> associated with a ratio <math>a : b</math> with <math>b \neq 0</math>, and use rate language in the context of a ratio relationship.</li> <li>● 6.RP.3a,b,c,d Use ratio and rate reasoning to solve real-world and mathematical problems.</li> </ul> <p>a. 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.</p> <p>b. Solve unit rate problems including those involving unit pricing and constant speed.</p> <p>c. Find a percent of a quantity as a rate per 100; solve problems involving finding the whole, given a part and the percent.</p> <p>d. Use ratio reasoning to convert measurement units; manipulate and transform units appropriately when multiplying or dividing quantities.</p> <p><b>Standards for Mathematical Practice:</b></p> <ul style="list-style-type: none"> <li>● MP.1 Make sense of problems and persevere in solving them.</li> <li>● MP.2 Reason abstractly and quantitatively.</li> <li>● MP.3 Construct viable arguments and critique the reasoning of others.</li> <li>● MP.4 Model with mathematics.</li> <li>● MP.5 Use appropriate tools strategically.</li> <li>● MP.6 Attend to precision.</li> <li>● MP.7 Look for and make use of structure</li> <li>● MP.8 Look for and express regularity in repeated reasoning</li> </ul>	

<p><b>Interdisciplinary Connections:</b></p> <p><b>ELA:</b></p> <ul style="list-style-type: none"> <li>● SL.6.3. Deconstruct a speaker's argument and specific claims, distinguishing claims that are supported by reasons and evidence from claims that are not.</li> </ul> <p><b>Career Ready Practices:</b></p> <ul style="list-style-type: none"> <li>● CRP1. Act as a responsible and contributing citizen and employee.</li> <li>● CRP4. Communicate clearly and effectively and with reason.</li> <li>● CRP12. Work productively in teams while using cultural global competence.</li> </ul> <p><b>21st Century Life and Career Standards:</b></p> <ul style="list-style-type: none"> <li>● 9.1.4.A.1- Explain the difference between a career and a job, and identify various jobs in the community and the related earnings.</li> </ul> <p><b>Technology:</b></p> <ul style="list-style-type: none"> <li>● 8.1.2.A.1 Identify the basic features of a digital device and explain its purpose.</li> <li>● 8.1.2.A.4 Demonstrate developmentally appropriate navigation skills in virtual environments (i.e. games, museums).</li> <li>● 8.2.2.C.1 Brainstorm ideas on how to solve a problem or build a product</li> </ul>
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- 8.1.2.E.1 Use digital tools and online resources to explore a problem or issue.
- 8.2.2.E.1 List and demonstrate the steps to an everyday task

### **Modifications and Accommodations**

#### **English Language Learners:**

- Simplify written and verbal instructions
- Provide written directions with models and diagrams when possible
- Build in more group work to allow ELL students to interact and communicate with peers
- Provide vocabulary ahead of time
- Use sentence frames to give students practice with academic language
- Pre-teach as often as possible- share videos, articles, vocabulary etc. with ELL students prior to use in class
- Utilize visual charts/cues
- Highlight key words
- Provide manipulatives
- Frequently check for understanding

#### **Special Education/Students with Disabilities:**

- Follow specific students accommodations and modifications as listed in individual student IEP
- Provide opportunities for movement
- Have manipulatives and other math resources available for student use
- Incorporate small group instruction
- Utilize visual charts/cues
- Facilitate successful experiences
- Provide tutoring if needed
- Provide positive praise to increase motivation
- Answers to be dictated
- Frequent rest breaks
- Additional time
- Oral testing
- Untimed tests
- Choice of test format (multiple-choice, essay, true-false)

#### **504:**

- Follow specific students accommodations and modifications as listed in individual student 504
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- Provide positive praise to increase motivation
- Answers to be dictated
- Frequent rest breaks
- Additional time
- Oral testing
- Untimed tests
- Choice of test format (multiple-choice, essay, true-false)

#### **Students at Risk of Failure:**

- Ensure child has access to all appropriate academic resources both in school and at

home

- Provide structure and adhere to a consistent daily routine with clear and concise rules
- Facilitate successful experiences
- Provide tutoring if needed
- Allow students to complete assignments in school
- Do not penalize for late or missing assignments/materials
- Offer encouragement and understanding
- Allow students to have personal possessions and property in school
- Give choice to provide a sense of control

**Economically Disadvantaged:**

- Provide clear, achievable expectations, do not lower academic requirements for them.
- Build a safe and nurturing atmosphere
- Be flexible with assignments
- Offer several alternatives from which all students can choose.
- Allow students to finish assignments independently, or give them the opportunity to complete tasks at their own pace.
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- Maintain expectations while offering choice and soliciting input

**Culturally Diverse:**

- Involve families in student learning
- Provide social/emotional support
- Respect cultural traditions
- Build in more group work to encourage interaction with peers
- Show photos, videos, and definitions when possible for culturally unique vocabulary
- Teach study skills
- Provided students with necessary academic resources and materials
- Allow for alternative assignments
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- Assign peer tutor
- Support verbal explanations with non verbal cues: Gestures/ facial expressions, props, realia, manipulatives, concrete materials, visuals, graphs, pictures, maps
- Provide positive praise to increase motivation
- Provide real world connections and emphasize the value of education
- Communicate high expectations for the success of all students
- Integrate the arts into learning activities

**Knowledge & Skills**

**Enduring Understandings/ Essential Questions:**

- How can you represent a relationship between two quantities?
- How can you find two ratios that describe the same relationship?
- How can you use rates to describe changes in real-life problems?
- How can you compare two ratios?
- What is the connection between ratios, fractions, and percents?
- How can you use mental math to find the percent of a number?
- How can you compare lengths between the customary and metric systems?

**Core Instructional & Supplemental Materials**

<p><b>Suggested Activities/Resources:</b></p> <ul style="list-style-type: none"> <li>● Self-reflection</li> <li>● Math Center Activities</li> <li>● Math Games</li> <li>● Draw and Show</li> <li>● Math Journals</li> <li>● Khan Academy</li> <li>● Prodigy</li> <li>● Edhelper</li> <li>● Education.com</li> <li>● Kahoot</li> <li>● ThatQuiz.org</li> </ul>	<p>Varied Levels of Text:</p> <p>-<i>Percents And Ratios</i> Wingard-Nelson, Rebecca P.</p> <p>-<i>Pythagoras And The Ratios: A Math Adventure</i> Ellis, Julie</p> <p>-Marilyn Burns Math Libraries Grade 4- 6  <a href="http://teacher.scholastic.com/reading/bestpractices/pdfs/mbmath_TitleList.pdf">http://teacher.scholastic.com/reading/bestpractices/pdfs/mbmath_TitleList.p df</a></p>
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Evidence of Student Learning	
<p><b>Formative Tasks:</b></p> <ul style="list-style-type: none"> <li>● Solve and Share</li> <li>● Quick Check quizzes</li> <li>● Daily Review</li> <li>● Cooperative group learning</li> <li>● Exit slips</li> <li>● Analysis of student work</li> <li>● Teacher observations/anecdotal/checklists</li> <li>● Self-reflection</li> <li>● Math journals</li> </ul>	<p><b>Alternative Assessments:</b></p> <ul style="list-style-type: none"> <li>● Performance Tasks</li> <li>● Student created models</li> <li>● Written/verbal explanations</li> <li>● Peer assessment</li> <li>● Self-assessment</li> </ul>
<p><b>Summative Assessments:</b></p> <ul style="list-style-type: none"> <li>● Topic tests</li> <li>● Extension Projects</li> <li>● Topic Performance Assessment</li> </ul>	<p><b>Benchmark Assessments:</b></p> <ul style="list-style-type: none"> <li>● Beginning of the year, mid year, and end of the year</li> </ul>

Chapter 6: Integers and Coordinate Plane

Duration: 15 Days- ongoing

**Standards/Learning Targets**

**New Jersey Student Learning Standards:**

- 6.NS.5 Understand that positive and negative numbers are used together to describe quantities having opposite directions or values; use positive and negative numbers to represent quantities in real-world contexts, explaining the meaning of 0 in each situation.
- 6.NS.6a,b,c 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.
  - a. 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, and that 0 is its own opposite.
  - b. 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.
  - c. 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.
    - 6.NS.7 Understand ordering and absolute value of rational numbers.
      - a. Interpret statements of inequality as statements about the relative position of two numbers on a number line diagram
      - b. Write, interpret, and explain statements of order for rational numbers in real-world contexts.
      - c. Understand the absolute value of a rational number as its distance from 0 on the number line; interpret absolute value as magnitude for a positive or negative quantity in a real-world situation.
      - d. Distinguish comparisons of absolute value from statements about order.
        - 6.NS.8 Solve real-world and mathematical problems by graphing points in all four quadrants of the coordinate plane. Include use of coordinates and absolute value to find distance between points with the same first coordinate or the same second coordinate.

**Standards for Mathematical Practice:**

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

**Interdisciplinary Connections:**

**ELA:**

- SL.6.3. Deconstruct a speaker's argument and specific claims, distinguishing claims that are supported by reasons and evidence from claims that are not.



**Career Ready Practices:**

- CRP1. Act as a responsible and contributing citizen and employee.
- CRP4. Communicate clearly and effectively and with reason.
- CRP12. Work productively in teams while using cultural global competence.

**21st Century Life and Career Standards:**

- 9.1.4.A.1- Explain the difference between a career and a job, and identify various jobs in the community and the related earnings.

**Technology:**

- 8.1.2.A.1 Identify the basic features of a digital device and explain its purpose.
- 8.1.2.A.4 Demonstrate developmentally appropriate navigation skills in virtual environments (i.e. games, museums).
- 8.2.2.C.1 Brainstorm ideas on how to solve a problem or build a product
- 8.1.2.E.1 Use digital tools and online resources to explore a problem or issue.
- 8.2.2.E.1 List and demonstrate the steps to an everyday task

**Modifications and Accommodations**

**English Language Learners:**

- Simplify written and verbal instructions
- Provide written directions with models and diagrams when possible
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- Utilize visual charts/cues
- Facilitate successful experiences
- Provide tutoring if needed
- Provide positive praise to increase motivation
- Answers to be dictated
- Frequent rest breaks
- Additional time
- Oral testing
- Untimed tests
- Choice of test format (multiple-choice, essay, true-false)

**504:**

- Follow specific students accommodations and modifications as listed in individual student 504
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- Untimed tests
- Choice of test format (multiple-choice, essay, true-false)

**Students at Risk of Failure:**

- Ensure child has access to all appropriate academic resources both in school and at home
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- Allow students to complete assignments in school
- Do not penalize for late or missing assignments/materials

- Offer encouragement and understanding
- Allow students to have personal possessions and property in school
- Give choice to provide a sense of control

**Economically Disadvantaged:**

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- Allow students to finish assignments independently, or give them the opportunity to complete tasks at their own pace.
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- Provide increased knowledge base and vocabulary use about real world experiences.
- Share the decision making in class.
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**Culturally Diverse:**

- Involve families in student learning
- Provide social/emotional support
- Respect cultural traditions
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- Provide positive praise to increase motivation
- Provide real world connections and emphasize the value of education
- Communicate high expectations for the success of all students
- Integrate the arts into learning activities

**Knowledge & Skills**

**Enduring Understandings/ Essential Questions:**

- How can you represent numbers that are less than 0?
- How can you use a number line to order real-life events?
- How can you use a number line to compare positive and negative fractions and decimals?
- How can you describe how far an object is from 0?
- How can you graph and locate points that contain negative numbers in a coordinate plane?

**Core Instructional & Supplemental Materials**

<p><b>Suggested Activities/Resources:</b></p> <ul style="list-style-type: none"> <li>● Self-reflection</li> <li>● Math Center Activities</li> <li>● Math Games</li> <li>● Draw and Show</li> <li>● Math Journals</li> <li>● Khan Academy</li> <li>● Prodigy</li> <li>● Edhelper</li> <li>● Education.com</li> <li>● Kahoot</li> <li>● ThatQuiz.org</li> </ul>	<p>Varied Levels of Text:</p> <ul style="list-style-type: none"> <li>-<i>STEM Guides To Weather</i> Robertson,</li> <li>-<i>That's A Possibility! A Book About What Might Happen</i> Goldstone, Bruce AD</li> <li>-Marilyn Burns Math Libraries Grade 4- 6</li> <li><a href="http://teacher.scholastic.com/reading/bestpractices/pdfs/mbmath_TitleList.pdf">http://teacher.scholastic.com/reading/bestpractices/pdfs/mbmath_TitleList.p df</a></li> </ul>
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<b>Evidence of Student Learning</b>	
<p><b>Formative Tasks:</b></p> <ul style="list-style-type: none"> <li>● Solve and Share</li> <li>● Quick Check quizzes</li> <li>● Daily Review</li> <li>● Cooperative group learning</li> <li>● Exit slips</li> <li>● Analysis of student work</li> <li>● Teacher observations/anecdotal/checklists</li> <li>● Self-reflection</li> <li>● Math journals</li> </ul>	<p><b>Alternative Assessments:</b></p> <ul style="list-style-type: none"> <li>● Performance Tasks</li> <li>● Student created models</li> <li>● Written/verbal explanations</li> <li>● Peer assessment</li> <li>● Self-assessment</li> </ul>
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<b>Chapter 7: Equations and Inequalities</b>	<b>Duration: 20 Days- ongoing</b>
<b>Standards/Learning Targets</b>	
<p><b>New Jersey Student Learning Standards:</b></p> <ul style="list-style-type: none"> <li>● 6.EE.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.</li> <li>● 6.EE.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.</li> <li>● 6.EE.7 Solve real-world and mathematical problems by writing and solving equations of the form <math>x + p = q</math> and <math>px = q</math> for cases in which <math>p</math>, <math>q</math>, and <math>x</math> are all nonnegative rational numbers.</li> <li>● 6.EE.8 Write an inequality of the form <math>x &gt; c</math> or <math>x &lt; c</math> to represent a constraint or condition in a real-world or mathematical problem. Recognize that inequalities of the form <math>x &gt; c</math> or <math>x &lt; c</math> have infinitely many solutions; represent solutions of such inequalities on number line diagrams.</li> <li>● 6.EE.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.</li> </ul> <p><b>Standards for Mathematical Practice:</b></p> <ul style="list-style-type: none"> <li>● MP.1 Make sense of problems and persevere in solving them.</li> <li>● MP.2 Reason abstractly and quantitatively.</li> <li>● MP.3 Construct viable arguments and critique the reasoning of others.</li> <li>● MP.4 Model with mathematics.</li> <li>● MP.5 Use appropriate tools strategically.</li> <li>● MP.6 Attend to precision.</li> <li>● MP.7 Look for and make use of structure</li> <li>● MP.8 Look for and express regularity in repeated reasoning</li> </ul>	

<p><b>Interdisciplinary Connections:</b></p> <p><b>ELA:</b></p> <ul style="list-style-type: none"> <li>● SL.6.3. Deconstruct a speaker's argument and specific claims, distinguishing claims that are supported by reasons and evidence from claims that are not.</li> </ul> <p><b>Career Ready Practices:</b></p> <ul style="list-style-type: none"> <li>● CRP1. Act as a responsible and contributing citizen and employee.</li> <li>● CRP4. Communicate clearly and effectively and with reason.</li> <li>● CRP12. Work productively in teams while using cultural global competence.</li> </ul> <p><b>21st Century Life and Career Standards:</b></p> <ul style="list-style-type: none"> <li>● 9.1.4.A.1- Explain the difference between a career and a job, and identify various jobs in</li> </ul>
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the community and the related earnings.

**Technology:**

- 8.1.2.A.1 Identify the basic features of a digital device and explain its purpose.
- 8.1.2.A.4 Demonstrate developmentally appropriate navigation skills in virtual environments (i.e. games, museums).
- 8.2.2.C.1 Brainstorm ideas on how to solve a problem or build a product
- 8.1.2.E.1 Use digital tools and online resources to explore a problem or issue.
- 8.2.2.E.1 List and demonstrate the steps to an everyday task

**Modifications and Accommodations**

**English Language Learners:**

- Simplify written and verbal instructions
- Provide written directions with models and diagrams when possible
- Build in more group work to allow ELL students to interact and communicate with peers
- Provide vocabulary ahead of time
- Use sentence frames to give students practice with academic language
- Pre-teach as often as possible- share videos, articles, vocabulary etc. with ELL students prior to use in class
- Utilize visual charts/cues
- Highlight key words
- Provide manipulatives
- Frequently check for understanding

**Special Education/Students with Disabilities:**

- Follow specific students accommodations and modifications as listed in individual student IEP
- Provide opportunities for movement
- Have manipulatives and other math resources available for student use
- Incorporate small group instruction
- Utilize visual charts/cues
- Facilitate successful experiences
- Provide tutoring if needed
- Provide positive praise to increase motivation
- Answers to be dictated
- Frequent rest breaks
- Additional time
- Oral testing
- Untimed tests
- Choice of test format (multiple-choice, essay, true-false)

**504:**

- Follow specific students accommodations and modifications as listed in individual student 504
- Provide opportunities for movement
- Have manipulatives and other math resources available for student use
- Incorporate small group instruction
- Utilize visual charts/cues
- Facilitate successful experiences
- Provide tutoring if needed
- Provide positive praise to increase motivation
- Answers to be dictated
- Frequent rest breaks

- Additional time
- Oral testing
- Untimed tests
- Choice of test format (multiple-choice, essay, true-false)

**Students at Risk of Failure:**

- Ensure child has access to all appropriate academic resources both in school and at home
- Provide structure and adhere to a consistent daily routine with clear and concise rules
- Facilitate successful experiences
- Provide tutoring if needed
- Allow students to complete assignments in school
- Do not penalize for late or missing assignments/materials
- Offer encouragement and understanding
- Allow students to have personal possessions and property in school
- Give choice to provide a sense of control

**Economically Disadvantaged:**

- Provide clear, achievable expectations, do not lower academic requirements for them.
- Build a safe and nurturing atmosphere
- Be flexible with assignments
- Offer several alternatives from which all students can choose.
- Allow students to finish assignments independently, or give them the opportunity to complete tasks at their own pace.
- Use real-world examples and create mental models for abstract idea
- Provide increased knowledge base and vocabulary use about real world experiences.
- Share the decision making in class.
- Maintain expectations while offering choice and soliciting input

**Culturally Diverse:**

- Involve families in student learning
- Provide social/emotional support
- Respect cultural traditions
- Build in more group work to encourage interaction with peers
- Show photos, videos, and definitions when possible for culturally unique vocabulary
- Teach study skills
- Provided students with necessary academic resources and materials
- Allow for alternative assignments
- Provide visuals
- Assign peer tutor
- Support verbal explanations with non verbal cues: Gestures/ facial expressions, props, realia, manipulatives, concrete materials, visuals, graphs, pictures, maps
- Provide positive praise to increase motivation
- Provide real world connections and emphasize the value of education
- Communicate high expectations for the success of all students
- Integrate the arts into learning activities

**Knowledge & Skills**

**Enduring Understandings/ Essential Questions:**

- How does rewriting a word problem help you solve the word problem?
- How can you use addition or subtraction to solve an equation?
- How can you use multiplication or division to solve an equation?
- How can you write an equation in two variables?
- How can you use a number line to represent the solution of an inequality?
- How can you use addition or subtraction to solve an inequality?

- How can you use multiplication or division to solve an inequality?

### Core Instructional & Supplemental Materials

#### Suggested Activities/Resources:

- Self-reflection
- Math Center Activities
- Math Games
- Draw and Show
- Math Journals
- Khan Academy
- Prodigy
- Edhelper
- Education.com
- Kahoot
- ThatQuiz.org

#### Varied Levels of Text:

- Sea Creatures: Solving Equations And Inequalities* Barker, Lori T.
- Where Germs Lurk: Writing, Simplifying, And Evaluating Expressions* Barker, Lori T
- Marilyn Burns Math Libraries Grade 4- 6  
[http://teacher.scholastic.com/reading/bestpractices/pdfs/mbmath\\_TitleList.p df](http://teacher.scholastic.com/reading/bestpractices/pdfs/mbmath_TitleList.pdf)

### Evidence of Student Learning

#### Formative Tasks:

- Solve and Share
- Quick Check quizzes
- Daily Review
- Cooperative group learning
- Exit slips
- Analysis of student work
- Teacher observations/anecdotal/checklists
- Self-reflection
- Math journals

#### Alternative Assessments:

- Performance Tasks
- Student created models
- Written/verbal explanations
- Peer assessment
- Self-assessment



<p><b>Summative Assessments:</b></p> <ul style="list-style-type: none"> <li>• Topic tests</li> <li>• Extension Projects</li> <li>• Topic Performance Assessment</li> </ul>	<p><b>Benchmark Assessments:</b></p> <ul style="list-style-type: none"> <li>• Beginning of the year, mid year, and end of the year</li> </ul>
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<b>Chapter 8: Surface Area and Volume</b>	<b>Duration: 15 Days- ongoing</b>
<b>Standards/Learning Targets</b>	
<p><b>New Jersey Student Learning Standards:</b></p> <ul style="list-style-type: none"> <li>• 6.G.2 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 length of the prism. Apply the formulas <math>V = \ell wh</math> and <math>V = bh</math> to find volumes of right rectangular prisms with fractional edge lengths in the context of solving real-world and mathematical problems.</li> <li>• 6.G.4 Represent three-dimensional figures using nets made up of rectangles and triangles, and use the nets to find the surface area of these figures. Apply these techniques in the context of solving real-world and mathematical problems.</li> </ul> <p><b>Standards for Mathematical Practice:</b></p> <ul style="list-style-type: none"> <li>• MP.1 Make sense of problems and persevere in solving them.</li> <li>• MP.2 Reason abstractly and quantitatively.</li> <li>• MP.3 Construct viable arguments and critique the reasoning of others.</li> <li>• MP.4 Model with mathematics.</li> <li>• MP.5 Use appropriate tools strategically.</li> <li>• MP.6 Attend to precision.</li> <li>• MP.7 Look for and make use of structure</li> <li>• MP.8 Look for and express regularity in repeated reasoning</li> </ul>	

<p><b>Interdisciplinary Connections:</b></p> <p><b>ELA:</b></p> <ul style="list-style-type: none"> <li>• SL.6.3. Deconstruct a speaker's argument and specific claims, distinguishing claims that are supported by reasons and evidence from claims that are not.</li> </ul> <p><b>Career Ready Practices:</b></p> <ul style="list-style-type: none"> <li>• CRP1. Act as a responsible and contributing citizen and employee.</li> <li>• CRP4. Communicate clearly and effectively and with reason.</li> <li>• CRP12. Work productively in teams while using cultural global competence.</li> </ul> <p><b>21st Century Life and Career Standards:</b></p> <ul style="list-style-type: none"> <li>• 9.1.4.A.1- Explain the difference between a career and a job, and identify various jobs in the community and the related earnings.</li> </ul> <p><b>Technology:</b></p> <ul style="list-style-type: none"> <li>• 8.1.2.A.1 Identify the basic features of a digital device and explain its purpose.</li> </ul>
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- 8.1.2.A.4 Demonstrate developmentally appropriate navigation skills in virtual environments (i.e. games, museums).
- 8.2.2.C.1 Brainstorm ideas on how to solve a problem or build a product
- 8.1.2.E.1 Use digital tools and online resources to explore a problem or issue.
- 8.2.2.E.1 List and demonstrate the steps to an everyday task

### **Modifications and Accommodations**

#### **English Language Learners:**

- Simplify written and verbal instructions
- Provide written directions with models and diagrams when possible
- Build in more group work to allow ELL students to interact and communicate with peers
- Provide vocabulary ahead of time
- Use sentence frames to give students practice with academic language
- Pre-teach as often as possible- share videos, articles, vocabulary etc. with ELL students prior to use in class
- Utilize visual charts/cues
- Highlight key words
- Provide manipulatives
- Frequently check for understanding

#### **Special Education/Students with Disabilities:**

- Follow specific students accommodations and modifications as listed in individual student IEP
- Provide opportunities for movement
- Have manipulatives and other math resources available for student use
- Incorporate small group instruction
- Utilize visual charts/cues
- Facilitate successful experiences
- Provide tutoring if needed
- Provide positive praise to increase motivation
- Answers to be dictated
- Frequent rest breaks
- Additional time
- Oral testing
- Untimed tests
- Choice of test format (multiple-choice, essay, true-false)

#### **504:**

- Follow specific students accommodations and modifications as listed in individual student 504
- Provide opportunities for movement
- Have manipulatives and other math resources available for student use
- Incorporate small group instruction
- Utilize visual charts/cues
- Facilitate successful experiences
- Provide tutoring if needed
- Provide positive praise to increase motivation
- Answers to be dictated
- Frequent rest breaks
- Additional time
- Oral testing
- Untimed tests

- Choice of test format (multiple-choice, essay, true-false)

**Students at Risk of Failure:**

- Ensure child has access to all appropriate academic resources both in school and at home
- Provide structure and adhere to a consistent daily routine with clear and concise rules
- Facilitate successful experiences
- Provide tutoring if needed
- Allow students to complete assignments in school
- Do not penalize for late or missing assignments/materials
- Offer encouragement and understanding
- Allow students to have personal possessions and property in school
- Give choice to provide a sense of control

**Economically Disadvantaged:**

- Provide clear, achievable expectations, do not lower academic requirements for them.
- Build a safe and nurturing atmosphere
- Be flexible with assignments
- Offer several alternatives from which all students can choose.
- Allow students to finish assignments independently, or give them the opportunity to complete tasks at their own pace.
- Use real-world examples and create mental models for abstract idea
- Provide increased knowledge base and vocabulary use about real world experiences.
- Share the decision making in class.
- Maintain expectations while offering choice and soliciting input

**Culturally Diverse:**

- Involve families in student learning
- Provide social/emotional support
- Respect cultural traditions
- Build in more group work to encourage interaction with peers
- Show photos, videos, and definitions when possible for culturally unique vocabulary
- Teach study skills
- Provided students with necessary academic resources and materials
- Allow for alternative assignments
- Provide visuals
- Assign peer tutor
- Support verbal explanations with non verbal cues: Gestures/ facial expressions, props, realia, manipulatives, concrete materials, visuals, graphs, pictures, maps
- Provide positive praise to increase motivation
- Provide real world connections and emphasize the value of education
- Communicate high expectations for the success of all students
- Integrate the arts into learning activities

**Knowledge & Skills**

**Enduring Understandings/ Essential Questions:**

- How can you draw three-dimensional figures?
- How can you find the area of the entire surface of a prism?
- How can you use a net to find the surface area of a pyramid?
- How can you find the volume of a rectangular prism with fractions edge lengths?

### Core Instructional & Supplemental Materials

**Suggested Activities/Resources:**

- Self-reflection
- Math Center Activities
- Math Games
- Draw and Show
- Math Journals
- Khan Academy
- Prodigy
- Edhelper
- Education.com
- Kahoot
- ThatQuiz.org

**Varied Levels of Text:**

- Geometry* Wingard-Nelson, Rebecca
- Package Design: Surface Area And Volume* Lane, Chloe
- Marilyn Burns Math Libraries Grade 4- 6  
[http://teacher.scholastic.com/reading/bestpractices/pdfs/mbmath\\_TitleList.p df](http://teacher.scholastic.com/reading/bestpractices/pdfs/mbmath_TitleList.pdf)

### Evidence of Student Learning

**Formative Tasks:**

- Solve and Share
- Quick Check quizzes
- Daily Review
- Cooperative group learning
- Exit slips
- Analysis of student work
- Teacher observations/anecdotal/checklists
- Self-reflection
- Math journals

**Alternative Assessments:**

- Performance Tasks
- Student created models
- Written/verbal explanations
- Peer assessment
- Self-assessment

**Summative Assessments:**

- Topic tests
- Extension Projects
- Topic Performance Assessment

**Benchmark Assessments:**

- Beginning of the year, mid year, and end of the year

<b>Chapter 9: Statistical Measures</b>	<b>Duration: 15 Days- ongoing</b>
<b>Standards/Learning Targets</b>	
<p><b>New Jersey Student Learning Standards:</b></p> <ul style="list-style-type: none"> <li>● 6.SP.1 Recognize a statistical question as one that anticipates variability in the data related to the question and accounts for it in the answers.</li> <li>● 6.SP.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.</li> <li>● 6.SP.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.</li> <li>● 6.SP.4 Display numerical data in plots on a number line, including dot plots, histograms, and box plots.</li> <li>● 6.SP.5a,b,c Summarize numerical data sets in relation to their context, such as by: <ul style="list-style-type: none"> <li>a. Reporting the number of observations.</li> <li>b. Describing the nature of the attribute under investigation, including how it was measured and its units of measurement.</li> <li>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.</li> </ul> </li> </ul> <p><b>Standards for Mathematical Practice:</b></p> <ul style="list-style-type: none"> <li>● MP.1 Make sense of problems and persevere in solving them.</li> <li>● MP.2 Reason abstractly and quantitatively.</li> <li>● MP.3 Construct viable arguments and critique the reasoning of others.</li> <li>● MP.4 Model with mathematics.</li> <li>● MP.5 Use appropriate tools strategically.</li> <li>● MP.6 Attend to precision.</li> <li>● MP.7 Look for and make use of structure</li> <li>● MP.8 Look for and express regularity in repeated reasoning</li> </ul>	

<p><b>Interdisciplinary Connections:</b></p> <p><b>ELA:</b></p> <ul style="list-style-type: none"> <li>● SL.6.3. Deconstruct a speaker’s argument and specific claims, distinguishing claims that are supported by reasons and evidence from claims that are not.</li> </ul> <p><b>Career Ready Practices:</b></p> <ul style="list-style-type: none"> <li>● CRP1. Act as a responsible and contributing citizen and employee.</li> <li>● CRP4. Communicate clearly and effectively and with reason.</li> <li>● CRP12. Work productively in teams while using cultural global competence.</li> </ul> <p><b>21st Century Life and Career Standards:</b></p> <ul style="list-style-type: none"> <li>● 9.1.4.A.1- Explain the difference between a career and a job, and identify various jobs in the community and the related earnings.</li> </ul> <p><b>Technology:</b></p>
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- 8.1.2.A.1 Identify the basic features of a digital device and explain its purpose.
- 8.1.2.A.4 Demonstrate developmentally appropriate navigation skills in virtual environments (i.e. games, museums).
- 8.2.2.C.1 Brainstorm ideas on how to solve a problem or build a product
- 8.1.2.E.1 Use digital tools and online resources to explore a problem or issue.
- 8.2.2.E.1 List and demonstrate the steps to an everyday task

### **Modifications and Accommodations**

#### **English Language Learners:**

- Simplify written and verbal instructions
- Provide written directions with models and diagrams when possible
- Build in more group work to allow ELL students to interact and communicate with peers
- Provide vocabulary ahead of time
- Use sentence frames to give students practice with academic language
- Pre-teach as often as possible- share videos, articles, vocabulary etc. with ELL students prior to use in class
- Utilize visual charts/cues
- Highlight key words
- Provide manipulatives
- Frequently check for understanding

#### **Special Education/Students with Disabilities:**

- Follow specific students accommodations and modifications as listed in individual student IEP
- Provide opportunities for movement
- Have manipulatives and other math resources available for student use
- Incorporate small group instruction
- Utilize visual charts/cues
- Facilitate successful experiences
- Provide tutoring if needed
- Provide positive praise to increase motivation
- Answers to be dictated
- Frequent rest breaks
- Additional time
- Oral testing
- Untimed tests
- Choice of test format (multiple-choice, essay, true-false)

#### **504:**

- Follow specific students accommodations and modifications as listed in individual student 504
- Provide opportunities for movement
- Have manipulatives and other math resources available for student use
- Incorporate small group instruction
- Utilize visual charts/cues
- Facilitate successful experiences
- Provide tutoring if needed
- Provide positive praise to increase motivation
- Answers to be dictated
- Frequent rest breaks
- Additional time
- Oral testing

- Untimed tests
- Choice of test format (multiple-choice, essay, true-false)

**Students at Risk of Failure:**

- Ensure child has access to all appropriate academic resources both in school and at home
- Provide structure and adhere to a consistent daily routine with clear and concise rules
- Facilitate successful experiences
- Provide tutoring if needed
- Allow students to complete assignments in school
- Do not penalize for late or missing assignments/materials
- Offer encouragement and understanding
- Allow students to have personal possessions and property in school
- Give choice to provide a sense of control

**Economically Disadvantaged:**

- Provide clear, achievable expectations, do not lower academic requirements for them.
- Build a safe and nurturing atmosphere
- Be flexible with assignments
- Offer several alternatives from which all students can choose.
- Allow students to finish assignments independently, or give them the opportunity to complete tasks at their own pace.
- Use real-world examples and create mental models for abstract idea
- Provide increased knowledge base and vocabulary use about real world experiences.
- Share the decision making in class.
- Maintain expectations while offering choice and soliciting input

**Culturally Diverse:**

- Involve families in student learning
- Provide social/emotional support
- Respect cultural traditions
- Build in more group work to encourage interaction with peers
- Show photos, videos, and definitions when possible for culturally unique vocabulary
- Teach study skills
- Provided students with necessary academic resources and materials
- Allow for alternative assignments
- Provide visuals
- Assign peer tutor
- Support verbal explanations with non verbal cues: Gestures/ facial expressions, props, realia, manipulatives, concrete materials, visuals, graphs, pictures, maps
- Provide positive praise to increase motivation
- Provide real world connections and emphasize the value of education
- Communicate high expectations for the success of all students
- Integrate the arts into learning activities

**Knowledge & Skills**

**Enduring Understandings/ Essential Questions:**

- How can you tell whether a question is a statistical question?
- How can you find an average value of a data set?
- In what other ways can you describe an average of a data set?
- How can you describe the spread of a data set?
- How can you use the distances between each data value and the mean of a data set to measure the spread of a data set?

### Core Instructional & Supplemental Materials

**Suggested Activities/Resources:**

- Self-reflection
- Math Center Activities
- Math Games
- Draw and Show
- Math Journals
- Khan Academy
- Prodigy
- Edhelper
- Education.com
- Kahoot
- ThatQuiz.org

**Varied Levels of Text:**

- Probability Games and other activities, Moscovich, Ivan
- Taking to the Skies, McGraw-Hill
- Into Uncharted Territory, McGraw-Hill
- Marilyn Burns Math Libraries Grade 4- 6
- [http://teacher.scholastic.com/reading/bestpractices/pdfs/mbmath\\_TitleList.p df](http://teacher.scholastic.com/reading/bestpractices/pdfs/mbmath_TitleList.pdf)

### Evidence of Student Learning

**Formative Tasks:**

- Solve and Share
- Quick Check quizzes
- Daily Review
- Cooperative group learning
- Exit slips
- Analysis of student work
- Teacher observations/anecdotal/checklists
- Self-reflection
- Math journals

**Alternative Assessments:**

- Performance Tasks
- Student created models
- Written/verbal explanations
- Peer assessment
- Self-assessment

**Summative Assessments:**

- Topic tests
- Extension Projects
- Topic Performance Assessment

**Benchmark Assessments:**

- Beginning of the year, mid year, and end of the year



<b>Chapter 10: Data Displays</b>	<b>Duration: 15 Days- ongoing</b>
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**Standards/Learning Targets**

**New Jersey Student Learning Standards:**

- 6.SP.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.4 Display numerical data in plots on a number line, including dot plots, histograms, and box plots.
- 6.SP.5c,d Summarize numerical data sets in relation to their context, such as by:
  - 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.
  - 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.

**Standards for Mathematical Practice:**

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

**Interdisciplinary Connections:**

**ELA:**

- SL.6.3. Deconstruct a speaker’s argument and specific claims, distinguishing claims that are supported by reasons and evidence from claims that are not.

**Career Ready Practices:**

- CRP1. Act as a responsible and contributing citizen and employee.
- CRP4. Communicate clearly and effectively and with reason.
- CRP12. Work productively in teams while using cultural global competence.

**21st Century Life and Career Standards:**

- 9.1.4.A.1- Explain the difference between a career and a job, and identify various jobs in the community and the related earnings.

**Technology:**

- 8.1.2.A.1 Identify the basic features of a digital device and explain its purpose.
- 8.1.2.A.4 Demonstrate developmentally appropriate navigation skills in virtual environments (i.e. games, museums).
- 8.2.2.C.1 Brainstorm ideas on how to solve a problem or build a product
- 8.1.2.E.1 Use digital tools and online resources to explore a problem or issue.

- 8.2.2.E.1 List and demonstrate the steps to an everyday task

### **Modifications and Accommodations**

#### **English Language Learners:**

- Simplify written and verbal instructions
- Provide written directions with models and diagrams when possible
- Build in more group work to allow ELL students to interact and communicate with peers
- Provide vocabulary ahead of time
- Use sentence frames to give students practice with academic language
- Pre-teach as often as possible- share videos, articles, vocabulary etc. with ELL students prior to use in class
- Utilize visual charts/cues
- Highlight key words
- Provide manipulatives
- Frequently check for understanding

#### **Special Education/Students with Disabilities:**

- Follow specific students accommodations and modifications as listed in individual student IEP
- Provide opportunities for movement
- Have manipulatives and other math resources available for student use
- Incorporate small group instruction
- Utilize visual charts/cues
- Facilitate successful experiences
- Provide tutoring if needed
- Provide positive praise to increase motivation
- Answers to be dictated
- Frequent rest breaks
- Additional time
- Oral testing
- Untimed tests
- Choice of test format (multiple-choice, essay, true-false)

#### **504:**

- Follow specific students accommodations and modifications as listed in individual student 504
- Provide opportunities for movement
- Have manipulatives and other math resources available for student use
- Incorporate small group instruction
- Utilize visual charts/cues
- Facilitate successful experiences
- Provide tutoring if needed
- Provide positive praise to increase motivation
- Answers to be dictated
- Frequent rest breaks
- Additional time
- Oral testing
- Untimed tests
- Choice of test format (multiple-choice, essay, true-false)

#### **Students at Risk of Failure:**

- Ensure child has access to all appropriate academic resources both in school and at home

- Provide structure and adhere to a consistent daily routine with clear and concise rules
- Facilitate successful experiences
- Provide tutoring if needed
- Allow students to complete assignments in school
- Do not penalize for late or missing assignments/materials
- Offer encouragement and understanding
- Allow students to have personal possessions and property in school
- Give choice to provide a sense of control

**Economically Disadvantaged:**

- Provide clear, achievable expectations, do not lower academic requirements for them.
- Build a safe and nurturing atmosphere
- Be flexible with assignments
- Offer several alternatives from which all students can choose.
- Allow students to finish assignments independently, or give them the opportunity to complete tasks at their own pace.
- Use real-world examples and create mental models for abstract idea
- Provide increased knowledge base and vocabulary use about real world experiences.
- Share the decision making in class.
- Maintain expectations while offering choice and soliciting input

**Culturally Diverse:**

- Involve families in student learning
- Provide social/emotional support
- Respect cultural traditions
- Build in more group work to encourage interaction with peers
- Show photos, videos, and definitions when possible for culturally unique vocabulary
- Teach study skills
- Provided students with necessary academic resources and materials
- Allow for alternative assignments
- Provide visuals
- Assign peer tutor
- Support verbal explanations with non verbal cues: Gestures/ facial expressions, props, realia, manipulatives, concrete materials, visuals, graphs, pictures, maps
- Provide positive praise to increase motivation
- Provide real world connections and emphasize the value of education
- Communicate high expectations for the success of all students
- Integrate the arts into learning activities

**Knowledge & Skills**

**Enduring Understandings/ Essential Questions:**

- How can you use place values to represent data graphically?
- How can you use intervals, tables, and graphs to organize data?
- How can you describe the shape of the distribution of a data set?
- How can you use quartiles to represent data graphically?

**Core Instructional & Supplemental Materials**

<p><b>Suggested Activities/Resources:</b></p> <ul style="list-style-type: none"> <li>● Self-reflection</li> <li>● Math Center Activities</li> <li>● Math Games</li> <li>● Draw and Show</li> <li>● Math Journals</li> <li>● Khan Academy</li> <li>● Prodigy</li> <li>● Edhelper</li> <li>● Education.com</li> <li>● Kahoot</li> <li>● ThatQuiz.org</li> </ul>	<p>Varied Levels of Text:</p> <ul style="list-style-type: none"> <li>-Probability Games and other activities, Moscovich, Ivan</li> <li>-Into Uncharted Territory, McGraw-Hill</li> <li>-Marilyn Burns Math Libraries Grade 4- 6</li> </ul> <p><a href="http://teacher.scholastic.com/reading/bestpractices/pdfs/mbmath_TitleList.pdf">http://teacher.scholastic.com/reading/bestpractices/pdfs/mbmath_TitleList.p df</a></p>
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Evidence of Student Learning	
<p><b>Formative Tasks:</b></p> <ul style="list-style-type: none"> <li>● Solve and Share</li> <li>● Quick Check quizzes</li> <li>● Daily Review</li> <li>● Cooperative group learning</li> <li>● Exit slips</li> <li>● Analysis of student work</li> <li>● Teacher observations/anecdotal/checklists</li> <li>● Self-reflection</li> <li>● Math journals</li> </ul>	<p><b>Alternative Assessments:</b></p> <ul style="list-style-type: none"> <li>● Performance Tasks</li> <li>● Student created models</li> <li>● Written/verbal explanations</li> <li>● Peer assessment</li> <li>● Self-assessment</li> </ul>
<p><b>Summative Assessments:</b></p> <ul style="list-style-type: none"> <li>● Topic tests</li> <li>● Extension Projects</li> <li>● Topic Performance Assessment</li> </ul>	<p><b>Benchmark Assessments:</b></p> <ul style="list-style-type: none"> <li>● Beginning of the year, mid year, and end of the year</li> </ul>