

Original Adoption:	School Year 2017-2018
Revised On:	July / August 2019
Board Approved:	August 21, 2019

6th grade Pinnacle/Advanced Mathematics Curriculum Documents

TIME PERIOD	UNIT	STANDARDS & STUDENT LEARNING OBJECTIVES	
September through November (Days 1-26)	1- Number Operations	<ul style="list-style-type: none"> ● 6.NS.2 ● 6.NS.1 ● 6.NS.3 ● 6.NS.4 	<p>NS.A. The Number System: Apply and extend previous understandings of multiplication and division to divide fractions.</p> <p>NS.B. The Number System: Compute fluently with multi-digit numbers and find common factors and multiples.</p>
End of November (Days 27-35)	2 - Number Systems	<ul style="list-style-type: none"> ● 6.NS.5 ● 6.NS.6a ● 6.NS.6c ● 6.NS.7a ● 6.NS.7b ● 6.NS.7c ● 6.NS.7d ● 6.NS.8 ● 6.NS.6b 	<p>NS.C The Number System Apply and extend previous understandings of numbers to the system of rational numbers.</p>
Beginning of December (Days 36-44)	Number Systems (Integers and Rational Numbers)	<ul style="list-style-type: none"> ● 7.NS.1a ● 7.NS.1b ● 7.NS.1c ● 7.NS.1d ● 7.NS.2a ● 7.NS.2b ● 7.NS.2c ● 7.NS.2d ● 7.NS.3 	<p>NS.A. The Number System: Apply and extend previous understandings of operations with fractions to add, subtract, multiply, and divide rational numbers.</p>
End of	3- Ratio and Rates	<ul style="list-style-type: none"> ● 6.RP.1 	<p>RP.A Ratios and Proportional Relationships</p>

December/ Beginning of January (Days 45- 53)		<ul style="list-style-type: none"> ● 6.RP.3 ● 6.RP.3a ● 6.RP.2 ● 6.RP.3b ● 6.RP.3c ● 6.RP.3d 	Understand ratio concepts and use ratio reasoning to solve problems.
January (Days 54- 62)	Ratio and Proportions	<ul style="list-style-type: none"> ● 7.RP.1 ● 7.RP.2a ● 7.RP.2b ● 7.RP.2c ● 7.RP.2d ● 7.RP.3 	<p>RP.A. Ratios and Proportional Relationships: Analyze proportional relationships and use them to solve real-world and mathematical problems.</p>
End of January (Days 63- 68)	Percents	<ul style="list-style-type: none"> ● 7.EE.3 ● 7.RP.3 	<p>EE.B Expressions and Equations: Solve real-life and mathematical problems using numerical and algebraic expressions and equations.</p> <p>RP.A Ratios and Proportional Relationships: Analyze proportional relationships and use them to solve real-world and mathematical problems.</p>
Beginning of February (Days 69- 75)	3 - Expressions	<ul style="list-style-type: none"> ● 6.EE.1 ● 6.EE.2a ● 6.EE.2b ● 6.EE.2c ● 6.EE.3 ● 6.EE.4 	<p>EE Expressions and Equations: 6.EE.A Apply and extend previous understandings of arithmetic to algebraic expressions.</p>
February (Days 76- 86)	4- Equations and Inequalities	<ul style="list-style-type: none"> ● 6.EE.6 ● 6.EE.7 ● 6.EE.8 ● 6.EE.5 ● 6.EE.9 	<p>EE Expressions and Equations: 6.EE.B Reason about and solve one-variable equations and inequalities.</p>
March (Days 87- 100)	Expressions and Equations	<ul style="list-style-type: none"> ● 7.EE.1 ● 7.EE.2 ● 7.EE.4a 	<p>EE.A Expressions and Equations: Use properties of operations to generate equivalent expressions.</p> <p>EE.B Expressions and Equations: Solve real-life and mathematical problems using numerical and algebraic expressions and equations.</p>

April (Days 101-119)	6- Geometry	<ul style="list-style-type: none"> ● 6.G.1 ● 6.G.3 ● 6.G.2 ● 6.G.4 	G Geometry 6.G.A Solve real-world and mathematical problems involving area, surface area, and volume.
May and June (Days 120-181)	7 - Statistics and Data Displays	<ul style="list-style-type: none"> ● 6.SP.1 ● 6.SP.4 ● 6.SP.5b ● 6.SP.2 ● 6.SP.3 ● 6.SP.5a ● 6.SP.5c ● 6.SP.5d 	SP Statistics and Probability 6.SP.A Develop understanding of statistical variability. 6.SP.B summarize and describe distributions.

Unit 1: THE NUMBER SYSTEM: Number Operations

Grade Level: 6 (AT)

Timeframe: 30 days

Unit Essential Questions:

- What is represented by the division of a fraction by a fraction?
- What type of visual models can be used to represent the division of fractions?
- How are division and multiplication of a fraction by a fraction related?

Unit Enduring Understandings:

Students will understand that...

- Understand that the size of a divisor affects the size of the quotient.
- Division of a fraction by a proper fraction creates a larger answer.

Primary Interdisciplinary Connections:

Infused within the unit are connections to the content standards for English Language Arts and Technology, specifically:

NJSLS:

- **RI.6.1.** Cite textual evidence and make relevant connections to support analysis of what the text says explicitly as well as inferences drawn from the text
- **RI.6.7.** Integrate information presented in different media or formats (e.g., visually, quantitatively) as well as in words to develop a coherent understanding of a topic or issue.
- **RI.6.8.** Trace and evaluate the argument and specific claims in a text,

21st Century Career Ready Practices:

Through well-planned, student-based instruction models, students will develop the attributes that will prepare them for life as citizens and workers in the 21st century:

- [CRP2](#) - Apply appropriate academic and technical skills.
- [CRP4](#) - Communicate clearly and effectively and with reason.
- [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.
- **9.1.8.E.5** Analyze interest rates and fees associated with financial

<p>distinguishing claims that are supported by reasons and evidence from claims that are not.</p> <ul style="list-style-type: none"> ● 8.1.8.D.1 ● 8.1.8.D.4 ● 8.1.8.E.1 	<p>services, credit cards, debit cards, and gift cards.</p> <ul style="list-style-type: none"> ● 9.1.8.D.4 Distinguish between income and investment growth. ● 9.1.8.C.5 Calculate the cost of borrowing various amounts of money using different types of credit (e.g., credit cards, installment loans, mortgages).
<p>Standards for Mathematical Practices: The following Standards for Mathematical Practice will be covered throughout the unit:</p> <ul style="list-style-type: none"> ● MP.1 - Make sense of problems and persevere in solving them. ● MP.2 - Reason abstractly and quantitatively. ● MP.3 - Construct viable arguments and critique the reasoning of others. ● MP.4 - Model with Mathematics. ● MP.5 - Use appropriate tools strategically. ● MP.6 - Attend to precision. ● MP.7 - Look for and make use of structure. ● MP.8 - Look for and express regularity in repeated reasoning. 	<p><u>ISTE Standards:</u></p> <p>1. Empowered Learner Students leverage technology to take an active role in choosing, achieving and demonstrating competency in their learning goals, informed by the learning sciences. Students:</p> <p>2. Digital Citizen Students recognize the rights, responsibilities and opportunities of living, learning and working in an interconnected digital world, and they act and model in ways that are safe, legal and ethical.</p> <p>5. Computational Thinker Students develop and employ strategies for understanding and solving problems in ways that leverage the power of technological methods to develop and test solutions.</p>

Learning Targets		
Content Standard	Student Learning Objectives <i>The students will be learning to...</i>	Activities & Resources
<p>NJSLS 6.NS.A Apply and extend previous understandings of multiplication and division to divide fractions by fractions. 1. Interpret and compute quotients of fractions, and solve word problems involving division of fractions by fractions</p>	<ul style="list-style-type: none"> ● Compute quotients of fractions. ● Interpret quotients of fractions. ● Solve word problems involving division of fractions. 	<ul style="list-style-type: none"> ● Big Ideas Chapter 1 Sections 1, 5, and 6. ● Big Ideas Chapter 2 ● Big Ideas Chapter 3 Section 4 and extension ● Activities on the Team Drive: -The Laundry Problem ● i-Ready ● ResourcesResourcesTeacher made resources including Tpt created resources.

<p>NJSLS 6.NS.B. Compute fluently with multi-digit numbers and find common factors and multiples. 2. Fluently divide multi-digit numbers using the standard algorithm.</p>	<ul style="list-style-type: none"> ● Fluently divide using the standard algorithm. 	<p>\</p>
<p>3. Fluently add, subtract, multiply, and divide multi-digit decimals using the standard algorithm for each operation.</p>	<ul style="list-style-type: none"> ● Fluently add multi-digit decimals using the standard algorithm. ● Fluently add multi-digit decimals using the standard algorithm. ● Fluently add multi-digit decimals using the standard algorithm. ● Fluently add multi-digit decimals using the standard algorithm. 	
<p>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>	<ul style="list-style-type: none"> ● Find the greatest common factor of two whole numbers less than or equal to 100. ● Find 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 the sum of two whole numbers with no common factor. Ex. $36 + 8$ as $4(9+2)$ 	

Evidence of Learning

Assessment

Formative Assessments may include:

Benchmark Assessments may include:

Summative Assessments may include:

Alternative Assessments may include:

<ul style="list-style-type: none"> ● Observation ● Homework ● Class participation ● Whiteboards/communicators ● Do-Now ● Notebook ● Exit passes 	<ul style="list-style-type: none"> ● Beginning of Year i-Ready Diagnostic ● Quarterly Portfolio ● NJSLA 	<ul style="list-style-type: none"> ● Chapter/Unit Test ● Quizzes ● Presentations ● i-Ready quizzes ● NJSLA 	<ul style="list-style-type: none"> ● Authentic Performance Tasks ● Unit Projects
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Modifications & Reflections

Suggested Options for Differentiation

English Language Learners

- Peer tutoring
- Manipulatives
- Use of Home Language
- Limiting Concepts or Vocabulary
- Providing Visuals

Students at Risk of Failure

- Extended Time
- Flexible Grouping
- Small Group Instruction
- Peer Buddies
- Graphic Organizers
- Chunking Information
- Scaffolded Questioning
- Tiered Activities
- Centers in Academic Activity

Special Education

- Extension activities
- Opportunities for Critical Thinking
- Problem Solving/Design Challenges
- Technology Integration
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- Student Driven Activities
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Unit 2: THE NUMBER SYSTEM~Rational Numbers

Grade Level: 6 (AT)

Timeframe: 14 days

Unit Essential Questions:

- What are some rational numbers around us?
- What are some non-rational numbers around us?
- How can the ordering of rational numbers help to make sense of the world around us?
- When is the absolute value of a rational number used in real life?
- What does it mean to multiply, divide, add or subtract rational numbers?
- How are operations of positive numbers related to operations of negative numbers?

Unit Enduring Understandings:

Students will understand that...

- Positive and negative numbers are used together to describe quantities having opposite directions or values.
- A rational number is a point on a number line.
- Rational numbers on the right (+) are oriented from left to right.
- Rational numbers on the left (-) are oriented from right to left.
- The absolute value of a rational number is its distance from 0 on the number line.
- The distance from a point on the coordinate plane to the origin (0,0) is related to the absolute value of its x and y coordinates.

Primary Interdisciplinary Connections:

Infused within the unit are connections to the content standards for English

21st Century Career Ready Practices:

Through well-planned, student-based instruction models, students will develop

<p>Language Arts and Technology, specifically: NJSLS:</p> <ul style="list-style-type: none"> ● RI.6.1. Cite textual evidence and make relevant connections to support analysis of what the text says explicitly as well as inferences drawn from the text ● RI.6.7. Integrate information presented in different media or formats (e.g., visually, quantitatively) as well as in words to develop a coherent understanding of a topic or issue. ● RI.6.8. Trace and evaluate the argument and specific claims in a text, distinguishing claims that are supported by reasons and evidence from claims that are not. ● 8.1.8.D.1 ● 8.1.8.D.4 ● 8.1.8.E.1 	<p>the attributes that will prepare them for life as citizens and workers in the 21st century:</p> <ul style="list-style-type: none"> ● CRP2 - Apply appropriate academic and technical skills. ● CRP4 - Communicate clearly and effectively and with reason. ● 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. ● 9.1.8.D.3 Differentiate among various investment options ● 9.1.8.D.4 Distinguish between income and investment growth. ● 9.1.8.B.2 Construct a simple personal savings and spending plan based on various sources of income.
<p>Standards for Mathematical Practices: The following Standards for Mathematical Practice will be covered throughout the unit:</p> <ul style="list-style-type: none"> ● MP.1 - Make sense of problems and persevere in solving them. ● MP.2 - Reason abstractly and quantitatively. ● MP.3 - Construct viable arguments and critique the reasoning of others. ● MP.4 - Model with Mathematics. ● MP.5 - Use appropriate tools strategically. ● MP.6 - Attend to precision. ● MP.7 - Look for and make use of structure. ● MP.8 - Look for and express regularity in repeated reasoning. 	<p>ISTE Standards:</p> <p>1. Empowered Learner Students leverage technology to take an active role in choosing, achieving and demonstrating competency in their learning goals, informed by the learning sciences. Students:</p> <p>2. Digital Citizen Students recognize the rights, responsibilities and opportunities of living, learning and working in an interconnected digital world, and they act and model in ways that are safe, legal and ethical.</p> <p>5. Computational Thinker Students develop and employ strategies for understanding and solving problems in ways that leverage the power of technological methods to develop and test solutions.</p>

Learning Targets		
Content Standard	Student Learning Objectives <i>The students will be learning to...</i>	Activities & Resources
NJSLS.6.NS.C. Apply and extend previous understandings	<ul style="list-style-type: none"> ● Use positive and negative numbers to represent quantities in real-world contexts. 	<ul style="list-style-type: none"> ● Big Ideas Chapter 6 ● Supporting

<p>of numbers to the system of rational numbers.</p> <p>5. Understand that positive and negative numbers are used together to describe quantities having opposite directions or values</p> <p>NJSLS.7.1. Apply and extend previous understandings of addition and subtraction to add and subtract rational numbers; represent addition and subtraction on a horizontal or vertical number line diagram.</p> <p>a. Describe situations in which opposite quantities combine to make 0.</p>	<ul style="list-style-type: none"> ● Explain the meaning of 0 in situations using positive and negative numbers. 	<p>Understanding Positive vs. Negative Numbers station activity- Team Drive</p> <ul style="list-style-type: none"> ● i-Ready Resources ● Resources-Teacher made resources including Tpt created resources.
<p>NJSLS.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.</p>	<ul style="list-style-type: none"> ● Extend number-line diagrams and coordinate axes to represent points on the line and in the plane with negative number coordinates. ● 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>7. Understand ordering and absolute value of rational numbers.</p>	<ul style="list-style-type: none"> ● Interpret statements of inequality as statements about the relative position of two numbers on a number line diagram. ● Write, interpret, and explain statements of order for rational numbers in real-world contexts. ● Interpret absolute value as magnitude for a positive or negative quantity in a real-world situation. ● Distinguish comparisons of absolute value from statements about order. ● Solve real-world and mathematical problems by graphing points in all four quadrants of the coordinate plane. ● Find distances between points with the same first 	

	coordinate or the same second coordinate.	
<p>NJSLS.7.1. Apply and extend previous understandings of addition and subtraction to add and subtract rational numbers; represent addition and subtraction on a horizontal or vertical number line diagram.</p>	<ul style="list-style-type: none"> ● Use positive and negative numbers to add and subtract rational numbers ● Represent addition and subtraction of rational numbers on a horizontal and vertical number line. ● Describe situations in which opposite quantities combine to make 0. ● Understand $p + q$ as the number located a distance q from p, in the positive or negative direction depending on whether q is positive or negative. ● Show that a number and its opposite have a sum of 0 (are additive inverses). ● Interpret sums of rational numbers by describing real-world contexts. ● Understand subtraction of rational numbers as adding the additive inverse. ● Show that the distance between two rational numbers on the number line is the absolute value of their difference, and apply this principle in real-world contexts. ● Apply properties of operations as strategies to add and subtract rational numbers. 	E
<p>NJSLS.7.2. Apply and extend previous understandings of multiplication and division and of fractions to multiply and divide rational numbers. Apply properties of operations as strategies to multiply and divide rational numbers.</p>	<ul style="list-style-type: none"> ● Understand that multiplication is extended from fractions to rational numbers by requiring that operations continue to satisfy the properties of operations, particularly the distributive property, leading to products such as $(-1)(-1) = 1$ and the rules for multiplying signed numbers. ● Interpret products of rational numbers by describing real-world contexts. ● Understand that integers can be divided, provided that the divisor is not zero, and every quotient of integers (with non-zero divisor) is a rational number. ● Interpret quotients of rational numbers by describing real-world contexts. ● Convert a rational number to a decimal using long division. ● Know that the decimal form of a rational number 	

	<ul style="list-style-type: none"> terminates in 0s or eventually repeats. Solve real-world and mathematical problems involving the four operations with rational numbers. 	
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Evidence of Learning

Assessment

<p>Formative Assessments may include:</p> <ul style="list-style-type: none"> • Observation • Homework • Class participation • Whiteboards/communicators • Do-Now • Notebook • Exit passes 	<p>Benchmark Assessments may include:</p> <ul style="list-style-type: none"> • Quarterly Portfolio • NJSLA 	<p>Summative Assessments may include:</p> <ul style="list-style-type: none"> • Chapter/Unit Test • Quizzes • Presentations • i-Ready quizzes • NJSLA 	<p>Alternative Assessments may include:</p> <ul style="list-style-type: none"> • Authentic Performance Tasks • Unit Projects
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Modifications & Reflections

Suggested Options for Differentiation

English Language Learners

- Peer tutoring
- Manipulatives
- Use of Home Language
- Limiting Concepts or Vocabulary
- Providing Visuals

Students at Risk of Failure

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Unit 3: RATIOS and PROPORTIONS

Grade Level: 6

Timeframe: 15 days

Unit Essential Questions:

- When is it useful to relate one quantity to another?
- What is the best way to compare two quantities?
- How are ratio and rate similar and different?

Unit Enduring Understandings:

Students will understand that...

- A ratio expresses the comparison between two quantities. Special types of ratios are rates, unit rates, and percent.

<ul style="list-style-type: none"> • What is the connection between a ratio and a fraction? • How can using complex fractions help us to solve real world problems? 	<ul style="list-style-type: none"> • A rate is a type of ratio that represents one measure, quantity, or frequency measured against another type of measure, quantity, or frequency. • Ratio and rate reasoning can be applied to many different types of mathematical and real-life problems. • Many types of measurement require the use of complex fractions to solve unit rate problems.
<p>Primary Interdisciplinary Connections: Infused within the unit are connections to the content standards for English Language Arts and Technology, specifically:</p> <p>NJSLS:</p> <ul style="list-style-type: none"> • RI.6.1. Cite textual evidence and make relevant connections to support analysis of what the text says explicitly as well as inferences drawn from the text • RI.6.7. Integrate information presented in different media or formats (e.g., visually, quantitatively) as well as in words to develop a coherent understanding of a topic or issue. • RI.6.8. Trace and evaluate the argument and specific claims in a text, distinguishing claims that are supported by reasons and evidence from claims that are not. • 8.1.8.D.1 • 8.1.8.D.4 • 8.1.8.E.1 	<p>21st Century Career Ready Practices: Through well-planned, student-based instruction models, students will develop the attributes that will prepare them for life as citizens and workers in the 21st century:</p> <ul style="list-style-type: none"> • CRP2 - Apply appropriate academic and technical skills. • CRP4 - Communicate clearly and effectively and with reason. • 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. • 9.1.8.E.6 Compare the value of goods or services from different sellers when purchasing large quantities and small quantities. • 9.1.8.E.5 Analyze interest rates and fees associated with financial services, credit cards, debit cards, and gift cards. • 9.1.8.B.2 Construct a simple personal savings and spending plan based on various sources of income.
<p>Standards for Mathematical Practices: The following Standards for Mathematical Practice will be covered throughout the unit:</p> <ul style="list-style-type: none"> • MP.1 - Make sense of problems and persevere in solving them. • MP.2 - Reason abstractly and quantitatively. • MP.3 - Construct viable arguments and critique the reasoning of others. • MP.4 - Model with Mathematics. • MP.5 - Use appropriate tools strategically. • MP.6 - Attend to precision. • MP.7 - Look for and make use of structure. • MP.8 - Look for and express regularity in repeated reasoning. 	<p>ISTE Standards:</p> <p>1. Empowered Learner Students leverage technology to take an active role in choosing, achieving and demonstrating competency in their learning goals, informed by the learning sciences. Students:</p> <p>2. Digital Citizen Students recognize the rights, responsibilities and opportunities of living, learning and working in an interconnected digital world, and they act and model in ways that are safe, legal and ethical.</p> <p>5. Computational Thinker Students develop and employ strategies for understanding and solving problems in ways that leverage the power of technological methods to develop and test solutions.</p>

Learning Targets		
Content Standard	Student Learning Objectives <i>The students will be learning to...</i>	Activities & Resources
NJSLS6.RP.1 Understand the concept of a ratio and use ratio language to describe a ratio relationship between two quantities.	<ul style="list-style-type: none"> ● Use ratio and rate reasoning to solve real-world and mathematical problems. ● Make tables of equivalent ratios, tape diagrams, double number lines. ● Represent ratios using manipulatives and/or pictures. 	<ul style="list-style-type: none"> ● Big Ideas Grade 6 Chapter 5 ● i-Ready Resources ● Resources-Teacher made resources including Tpt created resources.
NJSLS6.RP.2 Understand the concept of a unit rate a/b associated with a ratio $a:b$ with $b \neq 0$, and use rate language in the context of a ratio relationship. NJSLS.7.RP.1 Compute unit rates associated with ratios of fractions, including ratios of lengths, areas and other quantities measured in like or different units.	<ul style="list-style-type: none"> ● Represent unit rate associated with ratios using visuals, charts, or graphs. ● Make and interpret tables of equivalent ratios. ● Create equivalent ratios using models, manipulatives, and numbers ● Create unit rates and understand when using unit rates is reasonable strategy. ● Understand how to determine unit rates involving complex fractions. 	
NJSLS6.RP.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.	<ul style="list-style-type: none"> ● Use multiple representations to solve ratio problems. ● Make tables of equivalent ratios relating quantities with whole number measurements. ● Find missing values in the tables. ● Plot pairs of values on the coordinate plane. Use tables to compare ratios. ● Solve unit rate problems including those involving unit pricing and constant speed. ● Find a percent of a quantity as a rate per 100 (e.g., 30% of a quantity means 30/100 times the quantity); 	

	<p>solve problems involving finding the whole, given a part and the percent.</p> <ul style="list-style-type: none"> ● Use ratio reasoning to convert measurement units; manipulate and transform units appropriately when multiplying or dividing quantities. 	
<p>NJSLS.7.RP.2 Recognize and represent proportional relationships between quantities.</p>	<ul style="list-style-type: none"> ● Decide whether two quantities are in a proportional relationship. ● Test for equivalent ratios in a table or graphing on a coordinate plane and observing whether the graph is a straight line through the origin. ● Identify the constant of proportionality (unit rate) in tables, graphs, equations, diagrams, and verbal descriptions of proportional relationships. ● Represent proportional relationships by equations. ● Explain what a point (x, y) on the graph of a proportional relationship means in terms of the situation, with special attention to the points $(0, 0)$ and $(1, r)$ where r is the unit rate. ● Use proportional relationships to solve multistep ratio and percent problems. Examples: simple interest, tax, markups and markdowns, gratuities and commissions, fees, percent increase and decrease, percent error. 	
<p>NJSLS.7.EE.3. Solve multi-step real-life and mathematical problems posed with positive and negative rational numbers in any form (whole numbers, fractions, and decimals), using tools strategically. Apply properties of operations to calculate with numbers in any form; convert between forms as appropriate; and assess the</p>		

reasonableness of answers using mental computation and estimation strategies.		
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Evidence of Learning

Assessment

PERFORMANCE TASK(S):

- Students will group objects based on similarities and differences and find a way to communicate their reasoning and evidence.
- Illustrate and show representations of ratios explaining the steps that they took to arrive at their model.
- Students will represent ratios in a variety of ways.
- Students will demonstrate knowledge of equivalent fractions/ratios by creating proportional ratio relationships.
- Students will evaluate their own learning.

Formative Assessments may include:

- Observation
- Homework
- Class participation
- Whiteboards/communicators
- Do-Now
- Notebook
- Exit passes

Benchmark Assessments may include:

- Quarterly Portfolio
- NJSLA

Summative Assessments may include:

- Chapter/Unit Test
- Quizzes
- Presentations
- i-Ready quizzes
- NJSLA

Alternative Assessments may include:

- Authentic Performance Tasks
- Unit Projects

Modifications & Reflections

Suggested Options for Differentiation

English Language Learners

- Peer tutoring
- Manipulatives
- Use of Home Language
- Limiting Concepts or Vocabulary
- Providing Visuals

Students at Risk of Failure

- Extended Time

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- Problem Solving/Design Challenges
- Technology Integration
- Student Choice Activities
- Student Driven Activities
- Group Projects
- Tiered Activities

Gifted & Talented

- Extension activities
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Unit 4: EXPRESSIONS

Grade Level: 6

Timeframe : 15 days

Unit Essential Questions:

- How are mathematical expressions in which letters stand for numbers useful in real life?
- What is the purpose of identifying equivalent expressions?
- What is the difference between algebraic expressions and arithmetic expressions?

Unit Enduring Understandings:

Students will understand that...

- Algebraic expressions have letters that stand for numbers and arithmetic expressions have only numbers and no letters.
- Numbers can be substituted in place of letters in algebraic expressions.
- Algebraic expressions can be equivalent to each other
- Area, perimeter, or volume formulas are algebraic expressions.
- Verbal sentences or expressions can be written as algebraic expressions.

Primary Interdisciplinary Connections:

Infused within the unit are connections to the content standards for English Language Arts and Technology, specifically:

NJSLS:

- **RI.6.1.** Cite textual evidence and make relevant connections to support analysis of what the text says explicitly as well as inferences drawn from the text
- **RI.6.7.** Integrate information presented in different media or formats (e.g., visually, quantitatively) as well as in words to develop a coherent understanding of a topic or issue.
- **RI.6.8.** Trace and evaluate the argument and specific claims in a text, distinguishing claims that are supported by reasons and evidence from claims that are not.
- [8.1.8.D.1](#)
- [8.1.8.D.4](#)
- [8.1.8.E.1](#)

21st Century Career Ready Practices:

Through well-planned, student-based instruction models, students will develop the attributes that will prepare them for life as citizens and workers in the 21st century:

- [CRP2](#) - Apply appropriate academic and technical skills.
- [CRP4](#) - Communicate clearly and effectively and with reason.
- [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.
- **9.1.8.B.2** Construct a simple personal savings and spending plan based on various sources of income.
- **9.1.8.D.4** Distinguish between income and investment growth.
- **9.1.8.D.3** Differentiate among various investment options

Standards for Mathematical Practices:

The following [Standards for Mathematical Practice](#) will be covered throughout the unit:

- 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

ISTE Standards:

1. Empowered Learner

Students leverage technology to take an active role in choosing, achieving and demonstrating competency in their learning goals, informed by the learning sciences. Students:

2. Digital Citizen

<p>others.</p> <ul style="list-style-type: none"> ● 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. 	<p>Students recognize the rights, responsibilities and opportunities of living, learning and working in an interconnected digital world, and they act and model in ways that are safe, legal and ethical.</p> <p>5. Computational Thinker</p> <p>Students develop and employ strategies for understanding and solving problems in ways that leverage the power of technological methods to develop and test solutions.</p>
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<p align="center">Learning Targets</p> <p>Domain: Expressions and Equations</p> <p>Cluster: Apply and extend previous understandings of arithmetic to algebraic expressions</p>		
<p align="center">Content Standard</p>	<p align="center">Student Learning Objectives <i>The students will be learning to...</i></p>	<p align="center">Activities & Resources</p>
<p>NJSLS6.EE.A.1 Write and evaluate numerical expressions involving whole-number exponents.</p>	<ul style="list-style-type: none"> ● Write numerical expressions involving whole-number exponents. 	<ul style="list-style-type: none"> ● Big Ideas Chapter 3 section 1-3 ● Stations Supporting Commutative and Associative Properties + Substitution (Team Drive)
<p>NJSLS6.EE.A.2 (a-c) Write, read, and evaluate expressions in which letters stand for numbers.</p>	<ul style="list-style-type: none"> ● Write numerical expressions in which letters stand for numbers. ● Read expressions in which letters stand for numbers. ● Evaluate expressions in which letters stand for numbers. ● Write expressions that record operations with numbers and with letters standing for numbers. ● 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. 	<ul style="list-style-type: none"> ● Resources-Teacher made resources including Tpt created resources. ● i-Ready Resources
<p>NJSLS6.EE.A.3 Apply the properties of operations to generate equivalent expressions.</p>	<ul style="list-style-type: none"> ● 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. 	

	<ul style="list-style-type: none"> Apply the properties of operations to generate equivalent expressions and identify when two expressions are equivalent. 	
<p>NJSLAS7.EE.A Use properties of operations to generate equivalent expressions. 1. Apply properties of operations as strategies to add, subtract, factor, and expand linear expressions with rational coefficients.</p>	<ul style="list-style-type: none"> Evaluate expressions using substitution. Follow the correct order of operations to simplify expressions. Solve complicated problems using properties of operations that include more than one operation. Combine like terms to simplify expressions, including positive and negative numbers. Understand the difference of equations that are linear and those that are not linear. 	<ul style="list-style-type: none"> Big Ideas Chapter 13 section 1-2 Stations Supporting Commutative and Associative Properties + Substitution (Team Drive) Resources-Teacher made resources including Tpt created resources. i-Ready Resources Algebra Tiles
<p>NJSLAS7.EE.A.2 Understand that rewriting an expression in different forms in a problem context can shed light on the problem and how the quantities in it are related.</p>	<ul style="list-style-type: none"> Use the distributive and commutative properties to rewrite algebraic expressions. Use horizontal and vertical formats to add and subtract linear expressions. Understand factoring expressions and make the connection between distributing a factor and factoring out a variable. 	

Evidence of Learning			
Assessment			
<p>Formative Assessments may include:</p> <ul style="list-style-type: none"> Observation Homework Class participation Whiteboards/communicators Do-Now Notebook Exit passes 	<p>Benchmark Assessments may include:</p> <ul style="list-style-type: none"> Quarterly Portfolio NJSLA 	<p>Summative Assessments may include:</p> <ul style="list-style-type: none"> Chapter/Unit Test Quizzes Presentations i-Ready quizzes NJSLA 	<p>Alternative Assessments may include:</p> <ul style="list-style-type: none"> Authentic Performance Tasks Unit Projects

Modifications & Reflections		
<p>Suggested Options for Differentiation</p> <p><i>English Language Learners</i></p> <ul style="list-style-type: none"> ● Peer tutoring ● Manipulatives ● Use of Home Language ● Limiting Concepts or Vocabulary ● Providing Visuals <p><i>Students at Risk of Failure</i></p> <ul style="list-style-type: none"> ● Extended Time ● Flexible Grouping ● Small Group Instruction ● Peer Buddies ● Graphic Organizers ● Chunking Information ● Scaffolded Questioning ● Tiered Activities ● Centers in Academic Activity <p><i>Special Education</i></p> <ul style="list-style-type: none"> ● Extension activities ● Opportunities for Critical Thinking ● Problem Solving/Design Challenges ● Technology Integration ● Student Choice Activities ● Student Driven Activities ● Group Projects ● Tiered Activities <p><i>504</i></p> <ul style="list-style-type: none"> ● Extension activities ● Opportunities for Critical Thinking ● Problem Solving/Design Challenges ● Technology Integration ● Student Choice Activities ● Student Driven Activities ● Group Projects ● Tiered Activities <p><i>Gifted & Talented</i></p> <ul style="list-style-type: none"> ● Extension activities ● Opportunities for Critical Thinking ● Problem Solving/Design Challenges 		

<ul style="list-style-type: none"> ● Technology Integration ● Student Choice Activities ● Student Driven Activities ● Group Projects ● Tiered Activities 		
<p>Teacher Reflections:</p>		

Unit 5: EQUATIONS and INEQUALITIES

Grade Level: 6

Timeframe: 20 days

<p>Unit Essential Questions:</p> <ul style="list-style-type: none"> ● What is the difference between an equation and an inequality? ● What does it mean when a number does not satisfy an equation or inequality? ● How are mathematical relationships represented in tables, graphs, and equations? ● How can you tell if there is a relationship between two quantities? ● Why is it useful to write an equation to express one quantity in terms of another quantity? 	<p>Unit Enduring Understandings: <i>Students will understand that...</i></p> <ul style="list-style-type: none"> ● Solving an equation or inequality will find the value(s) that will make the statement true. ● A variable can represent an unknown number. ● A variable can represent any number in a specified set. ● Quantities can change in relation to one another and the relationship can be expressed as an equation relating the two. ● Two quantities may or may not be related.
<p>Primary Interdisciplinary Connections: Infused within the unit are connections to the content standards for English Language Arts and Technology, specifically:</p> <p>NJSLS:</p> <ul style="list-style-type: none"> ● RI.6.1. Cite textual evidence and make relevant connections to support 	<p>21st Century Career Ready Practices: Through well-planned, student-based instruction models, students will develop the attributes that will prepare them for life as citizens and workers in the 21st century:</p> <ul style="list-style-type: none"> ● CRP2 - Apply appropriate academic and technical skills. ● CRP4 - Communicate clearly and effectively and with reason.

<p>analysis of what the text says explicitly as well as inferences drawn from the text</p> <ul style="list-style-type: none"> ● RI.6.7. Integrate information presented in different media or formats (e.g., visually, quantitatively) as well as in words to develop a coherent understanding of a topic or issue. ● RI.6.8. Trace and evaluate the argument and specific claims in a text, distinguishing claims that are supported by reasons and evidence from claims that are not. ● 8.1.8.D.1 ● 8.1.8.D.4 ● 8.1.8.E.1 	<ul style="list-style-type: none"> ● 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. ● 9.1.8.D.3 Differentiate among various investment options ● 9.1.8.B.2 - Construct a simple personal savings and spending plan based on various sources of income ● 9.2.8.B.2 Develop a Personalized Student Learning Plan with the assistance of an adult mentor that includes information about career areas of interest, goals and an educational plan.
<p>Standards for Mathematical Practices: The following Standards for Mathematical Practice will be covered throughout the unit:</p> <ul style="list-style-type: none"> ● MP.1 - Make sense of problems and persevere in solving them. ● MP.2 - Reason abstractly and quantitatively. ● MP.3 - Construct viable arguments and critique the reasoning of others. ● MP.4 - Model with Mathematics. ● MP.5 - Use appropriate tools strategically. ● MP.6 - Attend to precision. ● MP.7 - Look for and make use of structure. ● MP.8 - Look for and express regularity in repeated reasoning. 	<p>ISTE Standards:</p> <p>1. Empowered Learner Students leverage technology to take an active role in choosing, achieving and demonstrating competency in their learning goals, informed by the learning sciences. Students:</p> <p>2. Digital Citizen Students recognize the rights, responsibilities and opportunities of living, learning and working in an interconnected digital world, and they act and model in ways that are safe, legal and ethical.</p> <p>5. Computational Thinker Students develop and employ strategies for understanding and solving problems in ways that leverage the power of technological methods to develop and test solutions.</p>

<p style="text-align: center;">Learning Targets</p> <p>Domain: Expressions and Equations Cluster: Reason about and solve one-variable equations and inequalities</p>		
<p style="text-align: center;">Content Standard</p>	<p style="text-align: center;">Student Learning Objectives <i>The students will be learning to...</i></p>	<p style="text-align: center;">Activities & Resources</p>
<p>NJSLS6.EE.B.5 & 6 Understand solving an equation or inequality as a process of answering a question: which values from a specified set, if</p>	<ul style="list-style-type: none"> ● Use substitution to determine whether a given number in a specified set makes an equation or inequality true. ● Understand that a random number may not make an equation or inequality statement true. 	<ul style="list-style-type: none"> ● Big Ideas Chapter 7 ● Stations Supporting Representing and Solving 1-Variable Equations (Team Drive)

<p>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. Use variables to represent numbers and write expressions when solving a real-world or mathematical problem</p>		<ul style="list-style-type: none"> ● i-Ready ● Teacher made resources including Tpt created resources.
<p>NJSLS6.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.</p>	<ul style="list-style-type: none"> ● Solve real-world and mathematical problems by writing and solving equations of the form $x + p = q$ for cases in which p, q, and x are all nonnegative rational numbers. ● Solve real-world and mathematical problems by writing and solving equations in the form of $px = q$ for cases in which p, q, and x are all nonnegative rational numbers. 	
<p>NJSLS6.EE.B.8 Write an inequality of the form $x > c$ or $x < c$ to represent a constraint or condition in a real world or mathematical problem. Recognize that inequalities of the form $x > c$ or $x < c$ have infinitely many solutions; represent solutions of such inequalities on number line diagrams.</p>	<ul style="list-style-type: none"> ● Understand that inequalities in the form of $x > c$ or $x < c$ have infinitely many solutions. ● Understand that solutions of inequalities in the form of $x > c$ or $x < c$ can be represented as intervals on the number line. 	
<p>NJSLS6.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</p>	<ul style="list-style-type: none"> ● 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. ● Use the equation of a relationship between two dependent and independent variables to predict 	

independent variables using graphs and tables, and relate these to the equation.	ordered pairs that are not displaced in a given graph or table.	
<p>NJSLS7.EE.B Solve real-life and mathematical problems using numerical and algebraic expressions and equations</p> <p>4. Use variables to represent quantities in a real-world or mathematical problem, and construct simple equations and inequalities to solve problems by reasoning about the quantities.</p>	<ul style="list-style-type: none"> Solve word problems leading to equations of the form $px + q = r$ and $p(x + q) = r$, where p, q, and r are specific rational numbers. Solve equations of these forms fluently. Compare an algebraic solution to an arithmetic solution, identifying the sequence of the operations used in each approach. 	<ul style="list-style-type: none"> Big Ideas Chapter 13 Sections 3-5 Stations Supporting Representing and Solving 1-Variable Equations (Team Drive) i-Ready Algebra Tiles Teacher made resources including Tpt created resources.

Evidence of Learning			
Assessment			
<p>Formative Assessments may include:</p> <ul style="list-style-type: none"> Observation Homework Class participation Whiteboards/communicators Do-Now Notebook Exit passes 	<p>Benchmark Assessments may include:</p> <ul style="list-style-type: none"> Quarterly Portfolio NJSLA 	<p>Summative Assessments may include:</p> <ul style="list-style-type: none"> Chapter/Unit Test Quizzes Presentations i-Ready quizzes NJSLA 	<p>Alternative Assessments may include:</p> <ul style="list-style-type: none"> Authentic Performance Tasks Unit Projects
Modifications & Reflections			
<p>Suggested Options for Differentiation <i>English Language Learners</i></p> <ul style="list-style-type: none"> Peer tutoring 			

- Manipulatives
- Use of Home Language
- Limiting Concepts or Vocabulary
- Providing Visuals

Students at Risk of Failure

- Extended Time
- Flexible Grouping
- Small Group Instruction
- Peer Buddies
- Graphic Organizers
- Chunking Information
- Scaffolded Questioning
- Tiered Activities
- Centers in Academic Activity

Special Education

- Extension activities
- Opportunities for Critical Thinking
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Teacher Reflections:		
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Unit 6: GEOMETRY

Grade Level: 6

Timeframe: 20 days

Unit Essential Questions:

- What are perimeter and area, and circumference and how are they related?
- How are perimeter and circumference related?
- How is geometry used in our world?
- What strategies could you use to recognize the existence of, and visualize components of three-dimensional shapes that are not visible from a given viewpoint?

Unit Enduring Understandings:

Students will understand that...

- By measuring the attributes of shapes, you can apply area formulas to solve surface area problems.
- You can plan the construction of complex three-dimensional compositions through the creation of two dimensional nets.
- properties of two-dimensional shapes can be represented on coordinate systems.

Primary Interdisciplinary Connections:

Infused within the unit are connections to the content standards for English Language Arts and Technology, specifically:

NJSLS:

- **RI.6.1.** Cite textual evidence and make relevant connections to support analysis of what the text says explicitly as well as inferences drawn from the text
- **RI.6.7.** Integrate information presented in different media or formats (e.g., visually, quantitatively) as well as in words to develop a coherent

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Through well-planned, student-based instruction models, students will develop the attributes that will prepare them for life as citizens and workers in the 21st century:

- [CRP2](#) - Apply appropriate academic and technical skills.
- [CRP4](#) - Communicate clearly and effectively and with reason.
- [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

<p>understanding of a topic or issue.</p> <ul style="list-style-type: none"> ● RI.6.8. Trace and evaluate the argument and specific claims in a text, distinguishing claims that are supported by reasons and evidence from claims that are not. ● 8.1.8.D.1 ● 8.1.8.D.4 ● 8.1.8.E.1 	<p>competence.</p> <ul style="list-style-type: none"> ● 9.2.8.B.2 Develop a Personalized Student Learning Plan with the assistance of an adult mentor that includes information about career areas of interest, goals and an educational plan.
<p>Standards for Mathematical Practices: The following Standards for Mathematical Practice will be covered throughout the unit:</p> <ul style="list-style-type: none"> ● MP.1 - Make sense of problems and persevere in solving them. ● MP.2 - Reason abstractly and quantitatively. ● MP.3 - Construct viable arguments and critique the reasoning of others. ● MP.4 - Model with Mathematics. ● MP.5 - Use appropriate tools strategically. ● MP.6 - Attend to precision. ● MP.7 - Look for and make use of structure. ● MP.8 - Look for and express regularity in repeated reasoning. 	<p>ISTE Standards:</p> <p>1. Empowered Learner Students leverage technology to take an active role in choosing, achieving and demonstrating competency in their learning goals, informed by the learning sciences. Students:</p> <p>2. Digital Citizen Students recognize the rights, responsibilities and opportunities of living, learning and working in an interconnected digital world, and they act and model in ways that are safe, legal and ethical.</p> <p>5. Computational Thinker Students develop and employ strategies for understanding and solving problems in ways that leverage the power of technological methods to develop and test solutions.</p>

Learning Targets		
Content Standard	Student Learning Objectives <i>The students will be learning to...</i>	Activities & Resources
6.G.1	<ul style="list-style-type: none"> ● Find the area of right triangles and other triangles. ● Find the area of 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 	<ul style="list-style-type: none"> ● Big Ideas Chapter 4 & 8 <ul style="list-style-type: none"> ○ Sections 4.1, 4.2, 4.3, 4.4, 8.1, 8.2, 8.3, 8.4 ● Illustrative Mathematics <ul style="list-style-type: none"> ○ Nets for Pyramids and Prisms ○ Volume with Fractional Edge Lengths
6.G.3	<ul style="list-style-type: none"> ● Draw polygons in the coordinate plane given coordinates 	

	<ul style="list-style-type: none"> for the vertices. Use coordinates to find the length of 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. 	<ul style="list-style-type: none"> Polygons in the Coordinate Plane Activities on the Team Drive: <ul style="list-style-type: none"> Stations Supporting Understanding 3D Figures PARCC Released Items <ul style="list-style-type: none"> 2015 PBA: 2015 EOY: 2016: 2017: 2018: i-Ready Resources-ResourcesTeacher made resources including Tpt created resources.
6.G.2	<ul style="list-style-type: none"> Find the volume of right rectangular prisms 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. Solve real-world and mathematical problems using the formula $V=LWH$ 	
6.G.4	<ul style="list-style-type: none"> Represent three-dimensional figures using nets made up of rectangles and triangles. Use nets to find the surface area of these figures. Apply these techniques in the context of solving real-world and mathematical problems. 	

Evidence of Learning

Assessment

Formative Assessments may include:

- Observation
- Homework
- Class participation
- Whiteboards/communicators
- Do-Now
- Notebook
- Exit passes

Benchmark Assessments may include:

- Quarterly Portfolio
- NJSLA

Summative Assessments may include:

- Chapter/Unit Test
- Quizzes
- Presentations
- i-Ready quizzes
- NJSLA

Alternative Assessments may include:

- Authentic Performance Tasks
- Unit Projects

Modifications & Reflections

Suggested Options for Differentiation

English Language Learners

- Peer tutoring
- Manipulatives
- Use of Home Language
- Limiting Concepts or Vocabulary
- Providing Visuals

Students at Risk of Failure

- Extended Time
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Unit 7: STATISTICS and PROBABILITY

Grade Level: 6

Timeframe: 15 days

Unit Essential Questions:

- How do measures of center and variability help us to make sense of the world around us?
- In what contexts are the measures of center and variability preferred descriptions of the data?
- Why do we need multiple ways of describing numerical data?

Unit Enduring Understandings:

Students will understand that...

- Numerical data can be displayed in multiple ways.
- Summaries of numerical data vary based on their contexts.
- Overall patterns of numerical data can vary.

Primary Interdisciplinary Connections:

Infused within the unit are connections to the content standards for English Language Arts and Technology, specifically:

NJSLS:

- **RI.6.1.** Cite textual evidence and make relevant connections to support analysis of what the text says explicitly as well as inferences drawn from the text
- **RI.6.7.** Integrate information presented in different media or formats (e.g., visually, quantitatively) as well as in words to develop a coherent understanding of a topic or issue.
- **RI.6.8.** Trace and evaluate the argument and specific claims in a text, distinguishing claims that are supported by reasons and evidence from claims that are not.
- [8.1.8.D.1](#)
- [8.1.8.D.4](#)
- [8.1.8.E.1](#)

21st Century Career Ready Practices:

Through well-planned, student-based instruction models, students will develop the attributes that will prepare them for life as citizens and workers in the 21st century:

- [CRP2](#) - Apply appropriate academic and technical skills.
- [CRP4](#) - Communicate clearly and effectively and with reason.
- [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.
- **9.2.8.B.2** Develop a Personalized Student Learning Plan with the assistance of an adult mentor that includes information about career areas of interest, goals and an educational plan.

Standards for Mathematical Practices:

ISTE Standards:

<p>The following Standards for Mathematical Practice will be covered throughout the unit:</p> <ul style="list-style-type: none"> ● MP.1 - Make sense of problems and persevere in solving them. ● MP.2 - Reason abstractly and quantitatively. ● MP.3 - Construct viable arguments and critique the reasoning of others. ● MP.4 - Model with Mathematics. ● MP.5 - Use appropriate tools strategically. ● MP.6 - Attend to precision. ● MP.7 - Look for and make use of structure. ● MP.8 - Look for and express regularity in repeated reasoning. 	<p>1. Empowered Learner Students leverage technology to take an active role in choosing, achieving and demonstrating competency in their learning goals, informed by the learning sciences. Students:</p> <p>2. Digital Citizen Students recognize the rights, responsibilities and opportunities of living, learning and working in an interconnected digital world, and they act and model in ways that are safe, legal and ethical.</p> <p>5. Computational Thinker Students develop and employ strategies for understanding and solving problems in ways that leverage the power of technological methods to develop and test solutions.</p>
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Assessment			
<p>Formative Assessments may include:</p> <ul style="list-style-type: none"> ● Observation ● Homework ● Class participation ● Whiteboards/communicators ● Do-Now ● Notebook ● Exit passes 	<p>Benchmark Assessments may include:</p> <ul style="list-style-type: none"> ● Quarterly Portfolio ● NJSLA 	<p>Summative Assessments may include:</p> <ul style="list-style-type: none"> ● Chapter/Unit Test ● Quizzes ● Presentations ● i-Ready quizzes ● NJSLA 	<p>Alternative Assessments may include:</p> <ul style="list-style-type: none"> ● Authentic Performance Tasks ● Unit Projects
Modifications & Reflections			
<p>Suggested Options for Differentiation</p> <p><i>English Language Learners</i></p> <ul style="list-style-type: none"> ● Peer tutoring ● Manipulatives ● Use of Home Language ● Limiting Concepts or Vocabulary ● Providing Visuals <p><i>Students at Risk of Failure</i></p> <ul style="list-style-type: none"> ● Extended Time 			

<ul style="list-style-type: none"> ● Flexible Grouping ● Small Group Instruction ● Peer Buddies ● Graphic Organizers ● Chunking Information ● Scaffolded Questioning ● Tiered Activities ● Centers in Academic Activity <p><i>Special Education</i></p> <ul style="list-style-type: none"> ● Extension activities ● Opportunities for Critical Thinking ● Problem Solving/Design Challenges ● Technology Integration ● Student Choice Activities ● Student Driven Activities ● Group Projects ● Tiered Activities <p>504</p> <ul style="list-style-type: none"> ● Extension activities ● Opportunities for Critical Thinking ● Problem Solving/Design Challenges ● Technology Integration ● Student Choice Activities ● Student Driven Activities ● Group Projects ● Tiered Activities <p><i>Gifted & Talented</i></p> <ul style="list-style-type: none"> ● Extension activities ● Opportunities for Critical Thinking ● Problem Solving/Design Challenges ● Technology Integration ● Student Choice Activities ● Student Driven Activities ● Group Projects ● Tiered Activities 		
<p>Teacher Reflections:</p>		

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