Accelerated Mathematics Curriculum

Grade 7



NEPTUNE TOWNSHIP SCHOOL DISTRICT Office of the Superintendent 60 Neptune Blvd. Neptune, NJ 07753-4836

April 24, 2024

Document C1#1

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ACCELERATED MATHEMATICS CURRICULUM GRADE 7

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Accelerated Mathematics Grade 7

Acknowledgements

The Accelerated Mathematics Grade 7 course was developed for seventh grade students who have demonstrated a strong math performance in sixth grade and will provide a pathway for the students to take Algebra I in eighth grade at Neptune Middle School. The curriculum guide was written through the efforts of Suzanne DeValue, teacher of mathematics, with guidance from Dawn Reinhardt, Department Chairperson, Lori Dalelio, Supervisor of STEM, and Sally A. Millaway, Ed.D., Director for Curriculum, Instruction and Assessment.

Ms. DeValue is to be commended for her dedication in creating this curriculum in the UbD format and her expertise in the area of middle school mathematics. The Accelerated Mathematics guide was written in alignment with the 2023 New Jersey Student Learning Standards for Mathematics and the interdisciplinary connections with the 2020 New Jersey Student Learning Standards in Computer Science and Design Thinking and Career Readiness, Life Literacies, and Key Skills. This curriculum guide focuses on developing students' conceptual understanding and growing students into procedurally fluent mathematicians. Students will practice productive perseverance and work collaboratively to solve problems. Units integrate growth mindset strategies, and social-emotional learning instruction to support creating a culture where students embrace the learning of mathematics.

DISTRICT MISSION STATEMENT

The primary mission of the Neptune Township School District is to prepare all of our students for a life-long learning process and to become confident, competent, socially-and culturally-conscious citizens in a complex and diverse world. It is with high expectations that our schools foster:

- A strong foundation in academic and modern technologies
- A positive, equitable, and varied approach to teaching and learning
- An emphasis on critical thinking skills and problem-solving techniques
- A respect for and an appreciation for our world, its resources, and its diverse people
- A sense of responsibility, good citizenship, and accountability
- An involvement by the parents and the community in the learning process

Neptune Township School District

Educational Outcome Goals

The students in the Neptune Township schools will become life-long learners and will:

- Become fluent readers, writers, speakers, listeners, and viewers with comprehension and critical thinking skills.
- Acquire the mathematical skills, understandings, and attitudes that are needed to be successful in their careers and everyday life.
- Understand fundamental scientific principles, develop critical thinking skills, and demonstrate safe practices, skepticism, and open-mindedness when collecting, analyzing, and interpreting information.
- Become technologically literate.
- Demonstrate proficiency in all New Jersey Student Learning Standards (NJSLS).
- Develop the ability to understand their world and to have an appreciation for the heritage of America with a high degree of literacy in civics, history, economics and geography.
- Develop a respect for different cultures and demonstrate trustworthiness, responsibility, fairness, caring, and citizenship.
- Become culturally literate by being aware of the historical, societal, and multicultural aspects and implications of the arts.
- Demonstrate skills in decision-making, goal setting, and effective communication, with a focus on character development.
- Understand and practice the skills of family living, health, wellness and safety for their physical, mental, emotional, and social development.
- Develop consumer, family, and life skills necessary to be a functioning member of society.
- Develop the ability to be creative, inventive decision-makers with skills in communicating ideas, thoughts and feelings.
- Develop career awareness and essential technical and workplace readiness skills, which are significant to many aspects of life and work.

ACCELERATED MATH GRADE 7

COURSE DESCRIPTION

This course is designed to address the seventh grade math standards, while also introducing the concepts of pre-algebra to prepare students to take Algebra I in eighth grade. The seventh grade Accelerated Mathematics course is an introduction to basic algebra concepts and a review of arithmetic algorithms. This course emphasizes the language of algebra and problem-solving. Topics covered in this course include: ratios and proportional reasoning; number systems and operations; equations and inequalities in one variable; transforming and constructing geometric figures; linear relationships; applications of real numbers and exponents; area and volume; data analysis and sampling; and probability. Students will solve real-world and mathematical problems utilizing multiple data points and various formulas.

INTEGRATED SOCIAL AND EMOTIONAL LEARNING COMPETENCIES The following social and emotional competencies are integrated in this curriculum document: **Self-Awareness** Recognize one's own feelings and thoughts X Recognize the impact of one's feelings and thoughts on one's own behavior X Recognize one's personal traits, strengths and limitations X X Recognize the importance of self-confidence in handling daily tasks and challenges Self Management Understand and practice strategies for managing one's own emotions, thoughts and behaviors Recognize the skills needed to establish and achieve personal and educational goals X Identify and apply ways to persevere or overcome barriers through alternative methods to achieve one's goals X **Social Awareness** Recognize and identify the thoughts, feelings, and perspectives of others Demonstrate an awareness of the differences among individuals, groups, and others' cultural backgrounds Demonstrate an understanding of the need for mutual respect when viewpoints differ X Demonstrate an awareness of the expectations for social interactions in a variety of setting X **Responsible Decision Making** Develop, implement and model effective problem solving and critical thinking skill X Identify the consequences associated with one's action in order to make constructive choices X Evaluate personal, ethical, safety and civic impact of decisions **Relationship Skills** X Establish and maintain healthy relationships Utilize positive communication and social skills to interact effectively with others X Identify ways to resist inappropriate social pressure X Demonstrate the ability to present and resolve interpersonal conflicts in constructive ways X Identify who, when, where, or how to seek help for oneself or others when needed X

Unit Plan Title	Unit 1: Ratios and Proportional Reasoning
Suggested Time Frame	20 Days

Overview / Rationale

In this introductory unit, students will represent and use proportional reasoning and relationships.

• Module 1: Students will identify and represent proportional relationships.

• Module 2: Students will use proportional reasoning using percentages.

Stage 1 – Desired Results

New Jersey Student Learning Standards for Mathematics (2023)

7.RP.A.1 Compute unit rates associated with ratios of fractions, including ratios of lengths, areas and other quantities measured in like or different units. For example, if a person walks $\frac{1}{2}$ mile in each $\frac{1}{4}$ hour, compute the unit rate as the complex fraction $(\frac{1}{2})(\frac{1}{4})$ miles per hour, equivalently 2 miles per hour.

7.RP.A.2 Recognize and represent proportional relationships between quantities.

a. Decide whether two quantities are in a proportional relationship, e.g., by testing for equivalent ratios in a table or graphing on a coordinate plane and observing whether the graph is a straight line through the origin.

b. Identify the constant of proportionality (unit rate) in tables, graphs, equations, diagrams, and verbal descriptions of proportional relationships.

c. Represent proportional relationships by equations. For example, if total cost is proportional to the number n of items purchased at a constant price p, the relationship between the total cost and the number of items can be expressed as t = pn.

d. 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.

7.RP.A.3 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.

7.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. For example,

a + 0.05a = 1.05a means that "increase by 5%" is the same as "multiply by 1.05."

7.G.A.1 Solve problems involving scale drawings of geometric figures, including computing actual lengths and areas from a scale drawing and reproducing a scale drawing at a different scale.

8.EE.B.5 Graph proportional relationships, interpreting the unit rate as the slope of the graph. Compare two different proportional relationships represented in different ways. For example, compare a distance-time graph to a distance-time equation to determine which of two moving objects has greater speed.

Standards for Mathematical Practice

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

Essential Questions:	Enduring Understandings:
	Students will understand
 How are patterns used to understand mathematics and model situations? How can you solve multi-step equations and inequalities? How can you check the reasonableness of your solution? How can I use and evaluate algebraic expressions and inequalities in relation to real world applications? How are multi-step inequality solutions graphed? 	 Unit rates are compared to analyze and describe relationships. Both tables and equations are used to determine proportional relationships. Rates are ratios where terms have different units. Percentages can be represented by a ratio with 100 as a denominator. The formula y=mx+b defines a linear equation.
Learning Targets: Knowledge	Learning Targets: Skills
Students will know	Students will be able to
 The difference between dependent and independent variables. How to represent a ratio with a denominator of 100. How to identify the characteristics of a proportional relationship when graphed. How to use a proportional relationship to solve multi-step problems. Slope intercept form has the slope and the <i>y</i> intercept identified. 	 Use patterns and unit rates to analyze and describe relationships. Determine if a relationship represented in a table is proportional, identify the constant of proportionality, and write an equation in the form of y = kx. Use unit rates involving fractions to solve real-world problems. Identify the characteristics of a proportional relationship when graphed. Use proportional reasoning to calculate percent increase or decrease

• Calculate markups, markdowns, retail
prices, and discount prices, and represent
them using equations of the form $y = kx$.
• Represent taxes, gratuities, and total cost
using equations in the form $y = kx$ by
applying proportional reasoning. Use the
equations to solve problems.
• Use proportional reasoning to find total
earnings for someone earning a base salary
plus a commission.
• Use proportional reasoning to find fees
(including fees as a percent and as a
constant).
• Use proportional reasoning to calculate
simple interest and the total value of an
account earning simple interest
 Assess reasonableness of answers

Key Academic Vocabulary	
Review:	New:
 Unit Rate Equation Ratio Reciprocal Dimension 	 Constant of Proportionality Proportional relationship Scale Scale Drawing Percent of change Percent decrease Percent increase Markdown Markup Retail price Gratuity Sales Tax Tip Commission Fee Principal Simple Interest

Interdisciplinary Connections

2023 New Jersey Student Learning Standards: English Language Arts

Grade 7 Reading

- **RI.CR.7.1.** Cite several pieces of textual evidence and make relevant connections to support analysis of what an informational text says explicitly as well as inferences drawn from the text.
- **RI.CR.7.1.** Cite several pieces of textual evidence and make relevant connections to support analysis of what an informational text says explicitly as well as inferences drawn from the text.
- **RI.MF.7.6**. Compare and contrast texts to analyze the unique qualities of different mediums, including the integration of information from multiple formats and sources to develop deeper understanding of the concept, topic or subject and resolve conflicting information.
- **RI.AA.7.7.** Trace and evaluate the argument and specific claims in a text, assessing whether the reasoning is sound and the evidence is relevant and sufficient to support the claims.

Grade 7 Writing

- W.IW.7.2. Write informative/explanatory texts (including the narration of historical events, scientific procedures/ experiments, or technical processes) to examine a topic and convey ideas, concepts, and information through the selection, organization, and analysis of relevant content.
- W.SE.7.6. Gather relevant information from multiple print and digital sources, using search terms effectively; assess the credibility and accuracy of each source; and quote or paraphrase the data and conclusions of others while avoiding plagiarism and following a standard format for citation.

Grade 7 Speaking and Listening

- **SL.PE.7.1.** Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 7 topics, texts, and issues, building on others' ideas and expressing their own clearly.
- **SL.II.7.2.** Analyze the main ideas and supporting details presented in diverse media and formats (e.g., visually, quantitatively, orally) and explain how the ideas clarify a topic, text, or issue under study.

2020 New Jersey Student Learning Standards for Computer Science and Design Thinking NJSLS 8.1 Computer Science

- **8.1.8.NI.1:** Model how information is broken down into smaller pieces, transmitted as addressed packets through multiple devices over networks and the Internet, and reassembled at the destination.
- **8.1.8.AP.6:** Refine a solution that meets users' needs by incorporating feedback from team members and users.

NJSLS 8.2 Design Thinking

- **8.2.8.ED.6:** Analyze how trade-offs can impact the design of a product.
- **8.2.8.ITH.2:** Compare how technologies have influenced society over time.
- **8.2.8.ED.3:** Develop a proposal for a solution to a real-world problem that includes a model.

2020 New Jersey Student Learning Standards - Career Readiness, Life Literacies, and Key Skills

NJSLS 9.1 Credit and Debt Management

- **9.1.8.CDM.1**: Compare and contrast the use of credit cards and debit cards for specific purchases and the advantages and disadvantages of using each.
- **9.1.8.CDM.2**: Demonstrate an understanding of the terminology associated with different types of credit (e.g., credit cards, installment loans, mortgages, lines of credit) and compare and calculate the interest rates associated with each.

NJSLS 9.2 Career Awareness, Exploration, Preparation and Training

- **9.2.8.CAP.15**: Present how the demand for certain skills, the job market, and credentials can determine an individual's earning power.
- **9.2.8.CAP.19**: Relate academic achievement, as represented by high school diplomas, college degrees, and industry credentials, to employability and to potential level.

NJSLS 9.4 Life Literacies and Key Skills

- **9.4.8.TL.2:** Gather data and digitally represent information to communicate a real-world problem.
- **9.4.8.TL.5:** Compare the process and effectiveness of synchronous collaboration and asynchronous collaboration.
- **9.4.8.TL.6**: Collaborate to develop and publish work that provides perspectives on a real-world problem.

Making Connections to Careers	
Construction	• Chef
Medical Imaging	Computer Software Developer
Urban Planner	Astronomer
Graphic Designer	Manufacturing
Architect	Food Service

- Surveyor
- Engineer
- Scientist
- **Computer Programmer**
- Cryptographer

- Fire fighter
- Meteorologist •
- Economist •
- Farmer, Agricultural

Student Resources

Text: Houghton Mifflin Harcourt Into Math Accelerated, Grade 7, 1st edition, 2020, ISBN: 978-0-358-11605-9.

Resources: Into Math, Grade 6 (review/reference) and Grades 7 and 8

- More Practice / Homework •
- **Reteach and Interactive Reteach** •
- Challenge and Interactive Challenge •

Websites:

- https://www.hmhco.com/ui/login Into Math •
- http://khanacademy.org Tutorials on individual lessons •
- https://edpuzzle.com/ Video learning •
- https://quizizz.com/?lng=en Assessment and practice •

Integrated Technology:

- Google Suite: Docs, Sheets, Slides, Forms
- Into Math online platform •
- Devices:
 - Chromebooks 0
 - Texas Instruments (TI-30X Calculators) 0

Teacher Resources

Texts: Houghton Mifflin Harcourt Into Math Accelerated, Grade 7, 2020, ISBN: 978-0-358-11616-5.

Resources:

- Into Math Resource Boxes, Grades 7 and 8 •
- Unit STEM Task Cards •
- **Online Data-Driven Interventions** •
- More Practice / Homework •
- Reteach and Interactive Reteach
- Challenge and Interactive Challenge •
- Ed Your Friend in Learning •
- Anchor Charts •
- Mini-Lesson Tabletop Flipchart •
- Math Vocabulary: •
 - 0 http://partnersforlearning.org/wp-content/uploads/2014/09/Common-Core-Acade mic-Vocabulary-Mathematics-K-12.pdf

Websites:

- https://www.hmhco.com/ui/login Into Math Interactive
- <u>http://khanacademy.org</u> Tutorials on individual lessons
- <u>http://www.kutasoftware.com</u> Test and worksheet generator for teachers
- <u>New Jersey Climate Education Hub</u>

Integrated Technology:

- Google Suite: Docs, Sheets, Slides, Forms
- Into Math online program
- Devices:
 - SMART/ Promethean Interactive Board
 - Chromebooks
 - Texas Instruments (TI-30X Calculators)

Stage 2 – Assessment Evidence

Performance Task(s):

- Unit STEM activity- To Infinity (Almost).. and Beyond!
- Illustrative Math
- Interactive Reteach
- Interactive Challenge
- NJSLA practice test problems: <u>https://nj.mypearsonsupport.com/practice-tests/math/</u>

Pre-Assessments:

- Math 7 BOY LinkIt!
- Are You Ready?

Formative Assessments:

- Check Understanding
- Lesson Test Prep
- Exit Slips
- Student "I Can" Self-Assessment
- Informal Observations

Summative Assessments

- Module Tests A and B
- Math 7 MOY Assessment *LinkIt*!
- <u>NJDOE Digital Item Library</u>- Released NJSLA items
- Math 7 EOY Assessment *LinkIt*!

Stage 3 – Learning Plan STEM Task: To Infinity(Almost)... and Beyond! Learning Mindset: Perseverance Module Opener: Module 1: Which ratio does not belong? **Diagnostic Assessment:** Are You Ready? Module 1: Identify and Represent Proportional Relationships **Example Lesson 1.1:** Explore Relationships • Warm up:Have students complete the table shown so that the ratio 0 of miles to gallons is constant. Spark Your Learning: Compare salsa recipes/Turn and Talk. Ο Learn Together: Look for patterns that describe the relationship between jars of 0 salsa and ounces of salsa. Compare prices and weights of a vegetable. Check Understanding: Problems 1-2. Ο Practice: On Your Own; Explore Relationship; Test Prep; Spiral Review Ο Learning Mindset: Have students identify some examples of ratios and rates in a 0 real-world context. Closure: Describe a unit rate. Explain how you can use a unit rate to 0 make a table.

- Lesson 1.2: Recognize Proportional Relationships in Tables
- Lesson 1.3: Compute Unit Rates Involving Fractions
- Lesson 1.4: Recognize Proportional Relationships in Graphs
- Lesson 1.5: Use Proportional Relationships to Solve Rate Problems
- Lesson 1.6: Practice Proportional Reasoning with Scale Drawings

Module 2: Proportional Reasoning with Percents

Module Opener: Module 2: The case of the missing diagram

- Lesson 2.1: Percent Change
- Lesson 2.2: Markups and Discounts
- Lesson 2.3: Taxes and Gratuities
- Lesson 2.4: Commissions and Fees
- Lesson 2.5: Simple Interest

Unit Plan Title	Unit 2: Number Systems and Operations
Suggested Time Frame	27 Days

Overview / Rationale

In this unit, students will apply and extend previous understandings of operations to compute rational numbers

- Module 3: Students will add and subtract rational numbers
- Module 4: Students will compute rational numbers using all operations
- Module 5: Students will solve multi-step problems involving rational numbers

Stage 1 – Desired Results

New Jersey Student Learning Standards for Mathematics (2023)

7.NS.A.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.

a. Describe situations in which opposite quantities combine to make 0. For example, in the first round of a game, Maria scored 20 points. In the second round of the same game, she lost 20 points. What is her score at the end of the second round?

b. 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.

c. Understand subtraction of rational numbers as adding the additive inverse,

p - q = p + (-q). 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.

d. Apply properties of operations as strategies to add and subtract rational numbers.7.NS.A.2 Apply and extend previous understandings of multiplication and division and of fractions to multiply and divide rational numbers.

a. 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.

b. 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. If *p* and *q* are integers, then $-\left(\frac{p}{q}\right) = \frac{(-p)}{q} = \frac{p}{(-q)}$. Interpret quotients of rational numbers by describing real-world contexts.

c. Apply properties of operations as strategies to multiply and divide rational numbers.

d. Convert a rational number to a decimal using long division; know that the decimal form of a rational number terminates in 0s or eventually repeats.

7.NS.A.3 Solve real-world and mathematical problems involving the four operations with rational numbers. (Clarification: Computations with rational numbers extend the rules for manipulating fractions to complex fractions.) (Students may solve mathematical problems based on quantitative data related to the five main contributors to climate change:

- Burning coal, oil and gas produces carbon dioxide and nitrous oxide
- Cutting down forests (deforestation)
- Increasing livestock farming
- Fertilizers containing nitrogen produce nitrous oxide emissions, and
- Fluorinated gases are emitted from equipment and products that use these gases.

7.EE.A.1 Apply properties of operations as strategies to add, subtract, factor, and expand linear expressions with rational coefficients.

7.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. For example,

a + 0.05a = 1.05a means that "increase by 5%" is the same as "multiply by 1.05."

7.EE.B.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 reasonableness of answers using mental computation and estimation strategies. For example: If a woman making \$25 an hour gets a 10% raise, she will make an additional \Box of her salary an hour, or \$2.50, for a new salary of \$27.50. If you want to place a towel bar 9 ³/₄ inches long in the center of a door that is 27 ¹/₂ inches wide, you will need to place the bar about 9 inches from each edge; this estimate can be used as a check on the exact computation. (Students may solve multi-step real-life and mathematical problems posed with positive and negative rational numbers in any form, based on quantitative data related to the five main contributors to climate change:

- Burning coal, oil and gas produces carbon dioxide and nitrous oxide
- Cutting down forests (deforestation)
- Increasing livestock farming

- Fertilizers containing nitrogen produce nitrous oxide emissions, and
- Fluorinated gases are emitted from equipment and products that use these gases.)

Standards for Mathematical Practice

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

Essential Questions:	Enduring Understandings:
	Students will understand
 How can we solve real world mathematical problems using operations on rational numbers? How do numbers relate and compare with each other? How does our number system function? Why are inverse operations used? How do you determine which to use? Why do we use order of operations? 	 The distance between two rational numbers is the absolute value of their difference. The sum of a number and its additive inverse is zero. Order of operations follows the same order each time. Multiplication is extended from fractions to rational numbers by requiring that operations continue to satisfy the properties of operations. Integers can be divided.
Learning Targets: Knowledge	Learning Targets: Skills
Students will know	Students will be able to
• Inverse operations are used to cancel each	• Use a number line to add and subtract
other.	positive integers.
• Two negative values when multiplied or	• Use a number line to add and subtract
divided become positive.	negative integers and assess the results for
• Rational numbers can be changed into	reasonableness.
decimal through division.	• Use a number line to add and subtract
 Distributive property involves 	rational numbers.
multiplication.	• Calculate the sum of rational numbers.
• Sum of opposites is zero.	• Calculate the difference of rational

• Develop rules to find products and
quotients of rational numbers.
• Express rational numbers as decimals.
• Use properties to solve multi-step
problems involving positive and negative
rational numbers.
• Solve multi-step problems involving a
combination of rational-number
operations.
• Add, subtract, factor, and expand linear
expressions with rational coefficients.

Key Academic Vocabulary	
Review:	New:
Absolute value	• Addition property of opposites
• Dividend	Additive inverse
Divisor	
• Inverse operations	
• Quotient	
• Equivalent fractions	
Rational number	
• Equilateral triangle	
Quadrilateral	

Interdisciplinary Connections

2023 New Jersey Student Learning Standards: English Language Arts

Grade 7 Reading

- **RI.CR.7.1.** Cite several pieces of textual evidence and make relevant connections to support analysis of what an informational text says explicitly as well as inferences drawn from the text.
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• **RI.AA.7.7.** Trace and evaluate the argument and specific claims in a text, assessing whether the reasoning is sound and the evidence is relevant and sufficient to support the claims.

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- W.IW.7.2. Write informative/explanatory texts (including the narration of historical events, scientific procedures/ experiments, or technical processes) to examine a topic and convey ideas, concepts, and information through the selection, organization, and analysis of relevant content.
- W.SE.7.6. Gather relevant information from multiple print and digital sources, using search terms effectively; assess the credibility and accuracy of each source; and quote or paraphrase the data and conclusions of others while avoiding plagiarism and following a standard format for citation.

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- **SL.PE.7.1.** Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 7 topics, texts, and issues, building on others' ideas and expressing their own clearly.
- **SL.II.7.2.** Analyze the main ideas and supporting details presented in diverse media and formats (e.g., visually, quantitatively, orally) and explain how the ideas clarify a topic, text, or issue under study.

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- **8.1.8.NI.1:** Model how information is broken down into smaller pieces, transmitted as addressed packets through multiple devices over networks and the Internet, and reassembled at the destination.
- **8.1.8.AP.6:** Refine a solution that meets users' needs by incorporating feedback from team members and users.

NJSLS 8.2 Design Thinking

- **8.2.8.ED.6:** Analyze how trade-offs can impact the design of a product.
- **8.2.8.ITH.2:** Compare how technologies have influenced society over time.
- **8.2.8.ED.3:** Develop a proposal for a solution to a real-world problem that includes a model.

2020 New Jersey Student Learning Standards - Career Readiness, Life Literacies, and Key Skills

NJSLS 9.1 Credit and Debt Management

- **9.1.8.CDM.1**: Compare and contrast the use of credit cards and debit cards for specific purchases and the advantages and disadvantages of using each.
- **9.1.8.CDM.2**: Demonstrate an understanding of the terminology associated with different types of credit (e.g., credit cards, installment loans, mortgages, lines of credit) and compare and calculate the interest rates associated with each.

NJSLS 9.2 Career Awareness, Exploration, Preparation and Training

- **9.2.8.CAP.15**: Present how the demand for certain skills, the job market, and credentials can determine an individual's earning power.
- **9.2.8.CAP.19**: Relate academic achievement, as represented by high school diplomas, college degrees, and industry credentials, to employability and to potential level.

NJSLS 9.4 Life Literacies and Key Skills

- **9.4.8.TL.2:** Gather data and digitally represent information to communicate a real-world problem.
- **9.4.8.TL.5:** Compare the process and effectiveness of synchronous collaboration and asynchronous collaboration.
- **9.4.8.TL.6**: Collaborate to develop and publish work that provides perspectives on a real-world problem.

Making Connections to Careers	
Construction	Real Estate
Medical Imaging	Computer Software Developer
• Urban Planner	• Astronomer
Graphic Designer	Manufacturing
Architect	Food Service
• Surveyor	• Fire fighter
• Engineer	Meteorologist
• Scientist	• Economist
Computer Programmer	• Farmer, Agricultural
Cryptographer	

Student Resources

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Resources: Into Math, Grade 6 (review/reference) and Grades 7 and 8

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- Challenge and Interactive Challenge

Websites:

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Integrated Technology:

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Stage 2 – Assessment Evidence

Performance Task(s):

- Unit STEM activity- It's Okay to Be Negative Illustrative Math
- Illustrative Math
- Interactive Reteach
- Interactive Challenge
- NJSLA practice test problems: <u>https://nj.mypearsonsupport.com/practice-tests/math/</u>

Pre-Assessments:

- Math 7 BOY *LinkIt*!
- Are You Ready?

Formative Assessments:

- Check Understanding
- Lesson Test Prep
- Exit Slips
- Student "I Can" Self-Assessment
- Informal Observations

Summative Assessments

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- <u>NJDOE Digital Item Library</u>- Released NJSLA items
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Stage 3 – Learning Plan

STEM Task: It's Okay to Be Negative

Learning Mindset: Strategic Help Seeking

Module Opener:

- Module 3: What's the Pattern?
- Module 4: Can you Find the Mystery Number?
- Module 5: Property Giveaways

Diagnostic Assessment: Are You Ready?

Module 3: Understand Addition and Subtraction of Rational Numbers

- Lesson 3.1: Add or Subtract a Positive Integer on a Number Line
- Lesson 3.2: Add or Subtract a Negative Integer on a Number Line
- Lesson 3.3: Use a Number Line to Add and Subtract Rational Numbers

Module 4: Fluency with Rational Number Operations

- Lesson 4.1: Compute Sums of Rational Numbers
- Lesson 4.2: Compute Differences of Rational Numbers
- Lesson 4.3: Understand and Compute Products and Quotients of Rational Numbers
- Lesson 4.4: Write Rational Numbers as Decimals
- Lesson 4.5: Multiply and Divide Rational Numbers in Context

Module 5: Applying Properties to Operations

- Lesson 5.1: Apply Properties to Multi-step Problems with Rational Numbers
- Lesson 5.2: Solve Multi-step Problems with Rational Numbers in Context
- Lesson 5.3: Add, Subtract, Factor, and Expand Algebraic Expressions

Unit Plan Title	Unit 3: Equations and Inequalities in One Variable
Suggested Time Frame	15 Days

Overview / Rationale

In this unit, students will solve equations and inequalities

• Module 6: Students will solve linear equations with one variable.

• Module 7: Students will solve problems involving inequalities.

Stage 1 – Desired Results

New Jersey Student Learning Standards for Mathematics (2023)

7.EE.B.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 reasonableness of answers using mental computation and estimation strategies. For example: If a woman making \$25 an hour gets a 10% raise, she will make an additional \Box of her salary an hour, or \$2.50, for a new salary of \$27.50. If you want to place a towel bar 9 ³/₄ inches long in the center of a door that is 27 ¹/₂ inches wide, you will need to place the bar about 9 inches from each edge; this estimate can be used as a check on the exact computation. (Students may solve multi-step real-life and mathematical problems posed with positive and negative rational numbers in any form, based on quantitative data related to the five main contributors to climate change:

- Burning coal, oil and gas produces carbon dioxide and nitrous oxide
- Cutting down forests (deforestation)
- Increasing livestock farming
- Fertilizers containing nitrogen produce nitrous oxide emissions, and
- Fluorinated gases are emitted from equipment and products that use these gases.)

7.EE.B.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. a. Solve word problems leading to equations of the form px + q = r and, where p, q, and r are specific rational numbers. Solve equations of these forms with accuracy and efficiency. Compare an algebraic solution to an arithmetic solution, identifying the sequence of the operations used in each approach. For example, the perimeter of a rectangle is 54 cm. Its length is 6 cm. What is its width?

b. Solve word problems leading to inequalities of the form px + q > r or, where p, q, and r are specific rational numbers. Graph the solution set of the inequality and interpret it in the context of the problem. For example: As a salesperson, you are paid \$50 per week plus \$3 per sale. This week you want your pay to be at least \$100. Write an inequality for the number of sales you need to make, and describe the solutions.

7.G.B.5 Use facts about supplementary, complementary, vertical, and adjacent angles in a multi-step problem to write and solve simple equations for an unknown angle in a figure.

8.EE.C.7 Solve linear equations in one variable.

a. Give examples of linear equations in one variable with one solution, infinitely many solutions, or no solutions. Show which of these possibilities is the case by successively transforming the given equation into simpler forms, until an equivalent equation of the form x = a, a = a, or a = b results (where *a* and *b* are different numbers).

b. Solve linear equations with rational number coefficients, including equations whose solutions require expanding expressions using the distributive property and collecting like terms.

Standards for Mathematical Practice

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

	-
Essential Questions:	Enduring Understandings:
	Students will understand
 How can you solve multi-step equations and inequalities? How can order of operations be used to help solve problems? How do algebraic representations compare to one another? How can you check the reasonableness 	 Like terms are those that appear similar. Addition is commutative, but subtraction is not. Expressions can be simplified using order of operations. Inverse operations are used to solve inequalities and equations
 How can you encer the reasonableness of your solution? How can I use and evaluate algebraic expressions and inequalities in relation to real world applications? 	 The solution to an equation or inequality is the value(s) of the variable which makes the equation true. The sum of the angles of a triangle is 180 degrees.

Learning Targets: Knowledge	Learning Targets: Skills
Students will know	Students will be able to
 A solution can replace a variable and will make the equation true. Distribution and combining like terms simplifies an expression or equation. Inverse operations are needed to solve equations and inequalities. Vertical angles are congruent. When solving inequalities, multiplying or dividing by a negative reverses the sign. 	 Represent a real-world situation with an equation. Solve real-world problems using an equation. Use algebraic properties to solve one-variable linear equations. Recognize and interpret linear equations that have no solution or infinitely many solutions. Apply properties to solve one-step inequalities. Write two-step inequalities to represent situations.

Key Academic Vocabulary		
Review:	New:	
Expression	• Infinitely many solutions	
• Like Terms	• No solution	
• Solution of an Equation	• Adjacent angles	
Coefficient	• Complementary angles	
Common Denominator	• Supplementary angles	
Distributive Property	Vertical Angles	
• Isolate the Variable	• Rate of Change	
• Multiple		
Substitute		
Inequality		
Number line		
Solution of an inequality		

Interdisciplinary Connections

2023 New Jersey Student Learning Standards: English Language Arts

Grade 7 Reading

- **RI.CR.7.1.** Cite several pieces of textual evidence and make relevant connections to support analysis of what an informational text says explicitly as well as inferences drawn from the text.
- **RI.CR.7.1.** Cite several pieces of textual evidence and make relevant connections to support analysis of what an informational text says explicitly as well as inferences drawn from the text.

- **RI.MF.7.6**. Compare and contrast texts to analyze the unique qualities of different mediums, including the integration of information from multiple formats and sources to develop deeper understanding of the concept, topic or subject and resolve conflicting information.
- **RI.AA.7.7.** Trace and evaluate the argument and specific claims in a text, assessing whether the reasoning is sound and the evidence is relevant and sufficient to support the claims.

Grade 7 Writing

- W.IW.7.2. Write informative/explanatory texts (including the narration of historical events, scientific procedures/ experiments, or technical processes) to examine a topic and convey ideas, concepts, and information through the selection, organization, and analysis of relevant content.
- W.SE.7.6. Gather relevant information from multiple print and digital sources, using search terms effectively; assess the credibility and accuracy of each source; and quote or paraphrase the data and conclusions of others while avoiding plagiarism and following a standard format for citation.

Grade 7 Speaking and Listening

- **SL.PE.7.1.** Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 7 topics, texts, and issues, building on others' ideas and expressing their own clearly.
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NJSLS 8.2 Design Thinking

- **8.2.8.ED.6:** Analyze how trade-offs can impact the design of a product.
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• **8.2.8.ED.3:** Develop a proposal for a solution to a real-world problem that includes a model.

2020 New Jersey Student Learning Standards - Career Readiness, Life Literacies, and Key Skills

NJSLS 9.1 Credit and Debt Management

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NJSLS 9.2 Career Awareness, Exploration, Preparation and Training

- **9.2.8.CAP.15**: Present how the demand for certain skills, the job market, and credentials can determine an individual's earning power.
- **9.2.8.CAP.19**: Relate academic achievement, as represented by high school diplomas, college degrees, and industry credentials, to employability and to potential level.

NJSLS 9.4 Life Literacies and Key Skills

- **9.4.8.TL.2:** Gather data and digitally represent information to communicate a real-world problem.
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Making Connections to Careers		
Construction	Real Estate	
Medical Imaging	Computer Software Developer	
Urban Planner	• Astronomer	
Graphic Designer	Manufacturing	
• Architect	Food Service	
• Surveyor	• Fire fighter	
• Engineer	Meteorologist	
• Scientist	• Economist	
Computer Programmer	• Farmer, Agricultural	
• Cryptographer		

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Stage 2 – Assessment Evidence

Performance Task(s):

- Unit STEM activity- The Rhind PapyrusIllustrative Math
- Illustrative Math
- Interactive Reteach
- Interactive Challenge
- NJSLA practice test problems: <u>https://nj.mypearsonsupport.com/practice-tests/math/</u>

Pre-Assessments:

- Math 7 BOY LinkIt!
- Are You Ready?

Formative Assessments:

- Check Understanding
- Lesson Test Prep
- Exit Slips
- Student "I Can" Self-Assessment
- Informal Observations

Summative Assessments

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- Math 7 MOY Assessment *LinkIt*!
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Stage 3 – Learning Plan

STEM Task: *The Rhind Papyrus*

Learning Mindset: Resilience

Module Opener:

- Module 6: Balance Mystery
- Module 7: The Suspect is Over There

Diagnostic Assessment: Are You Ready?

Module 6: Understand Addition and Subtraction of Rational Numbers

- Lesson 6.1: Write Two- Step Equations for Situations
- Lesson 6.2: Apply Two Step Equations to Solve Real World Problems
- Lesson 6.3: Solve Multi-Step Linear Equations
- Lesson 6.4: Examine Special Cases
- Lesson 6.5: Apply Linear Equations

Module 7: Solve Problems Using Inequalities

- Lesson 7.1: Understand and Apply Properties to Solve One Step Inequalities
- Lesson 7.2: Write Two Step Inequalities for Situations
- Lesson 7.3: Apply Two Step Inequalities to Solve Problems

Unit Plan Title	Unit 4: Transform and Construct Geometric Figures
Suggested Time Frame	27 Days

Overview / Rationale

In this unit, students will transform and construct geometric figures.

• Module 8: Students will use transformations and recognize congruent figures.

• Module 9: Students will draw and analyze 2-D figures given conditions for sides and angles.

Students will use proportional reasoning to create scale drawings.

• Module 10: Students will divide fractions and mixed numbers.

Stage 1 – Desired Results

New Jersey Student Learning Standards for Mathematics (2023)

8.G.A.1 Verify experimentally the properties of rotations, reflections, and translations:

a. Lines are transformed to lines, and line segments to line segments of the same length.

b. Angles are transformed to angles of the same measure.

c. Parallel lines are transformed to parallel lines.

8.G.A.2 Understand that a two-dimensional figure is congruent to another if the second can be obtained from the first by a sequence of rotations, reflections, and translations; given two congruent figures, describe a sequence that exhibits the congruence between them.

8.G.A.3 Describe the effect of dilations, translations, rotations, and reflections on two-dimensional figures using coordinates.

8.G.A.4 Understand that a two-dimensional figure is similar to another if the second can be obtained from the first by a sequence of rotations, reflections, translations, and dilations; given two similar two-dimensional figures, describe a sequence that exhibits the similarity between them.

Standards for Mathematical Practice

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

Essential Questions:	Enduring Understandings: Students will understand
 How can you show that two figures are either congruent or similar to one another? How does a sequence of translations, reflections and rotations result in congruent figures? What effects do dilations have on two-dimensional geometric figures? How can you use angle measures to determine whether two figures are similar? 	 It is possible to use more than one transformation to map a preimage onto its image. Each transformation can be drawn using figures on a coordinate plane and each follows algebraic rules. Transformations produce congruent figures. Dilations produce similar figures. The image that is a result of enlarging or reducing a preimage is not congruent to the preimage.
Learning Targets: Knowledge Students will know	Learning Targets: Skills Students will be able to
 A transformation is a change in size or position of a figure. Translation is a transformation that slides a figure right, left, up, or down. Reflection flips a figure across a line. Rotation turns a figure around a specific point. The difference between congruent and similar. Two figures are similar if one can be obtained from the other by a sequence of dilations and rotations, reflections, and/or translations. Two figures are congruent if one can be obtained from the other by a sequence of rotations, reflections, and/or translations. 	 Explore and observe the effects of rigid motions on a figure. Describe translations and their effects on a figure. Describe reflections and their effects on a figure. Recognize and perform rotations Describe rotations algebraically. Understand that rotating a figure produces an image that is congruent to its preimage. Draw and construct figures using technology and freehand with given coordinates. Determine how many triangles or quadrilaterals can be made given the angle measures. Perform enlargements and reductions.
• Understand that the result of enlarging	

or reducing an image is not congruent	
to the preimage.	
• Describe and apply the properties of	
dilations.	
• Understand and find a scale factor of	
dilation, both on and off the coordinate	
plane.	
• Recognize and use similar figures using	
transformations.	

Key Academic Vocabulary	
Review:	New:
• Trapezoid	Transformation
Coordinate plane	• Image
• Segment	• Preimage
• Vertex	Prime Notation
Corresponding Angles	• Translate
• Parallelogram	Reflection
Quadrant	• Line of Reflection
• X-axis	Center of Rotation
• Y-axis	Rotation
Corresponding sides	• Congruent
Proportional relationship	• Diameter
• Enlargement	Radius
• Similar	• Scale
• Analyze	• Scale Drawing
Compute	• Center of Dilation
Interpret	• Dilation
	Reduction
	Scale factor

Interdisciplinary Connections

2023 New Jersey Student Learning Standards: English Language Arts

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Medical Imaging	Computer Software Developer
Urban Planner	• Astronomer
Graphic Designer	Manufacturing
Architect	Food Service
Surveyor	• Fire fighter
• Engineer	Meteorologist
• Scientist	• Economist
Computer Programmer	• Farmer, Agricultural
• Cryptographer	

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Stage 2 – Assessment Evidence

Performance Task(s):

- Unit STEM activity- *Puzzle Designer*
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Stage 3 – Learning Plan

STEM Task: *Puzzle Designer* **Learning Mindset:** *Challenge Seeking*

Module Opener:

• Module 8: Treasure Hunt

- Module 9: Mousetrap on the Coordinate Plane!
- Module 10: Do you Haul Bones

Diagnostic Assessment: Are You Ready?

Module 8: Understand Addition and Subtraction of Rational Numbers

- Lesson 8.1: Investigate Transformations
- Lesson 8.2: Explore Transformations
- Lesson 8.3: Explore Reflections
- Lesson 8.4: Explore Rotations
- Lesson 8.5: Understand and Recognize Congruent Figures

Module 9: Draw and Analyze Two- Dimensional Figures

- Lesson 9.1: Draw Shapes with Given Conditions
- Lesson 9.2: Draw and Construct Triangles Given Side Lengths
- Lesson 9.3: Draw and Construct Triangles Given Angle Measurements
- Lesson 9.4: Draw and Analyze Shapes to Solve Problems
- Lesson 9.5: Practice Proportional Reasoning with Scale Drawings

Module 10: Transformations and Similarity

- Lesson 10.1: Investigate Reductions and Enlargements
- Lesson 10.2: Explore Dilations
- Lesson 10.3: Understand and Recognize Similar Figures

Unit Plan Title	Unit 5: Similarity, Slope and Linear Relationships
Suggested Time Frame	14 Days

Overview / Rationale

In this unit, students will apply their understanding of angle and proportional relationships. They will extend their knowledge of equations.

• Module 11: Students will investigate angle relationships in triangles and parallel lines cut by a transversal.

• Module 12: Students will explain slope and similar triangles. They will compare and interpret proportional relationships.

Stage 1 – Desired Results

New Jersey Student Learning Standards for Mathematics (2023)

8.EE.B.5 Graph proportional relationships, interpreting the unit rate as the slope of the graph. Compare two different proportional relationships represented in different ways. For example, compare a distance-time graph to a distance-time equation to determine which of two moving objects has greater speed.

8.EE.B.6 Use similar triangles to explain why the slope *m* is the same between any two distinct points on a non-vertical line in the coordinate plane; derive the equation y = mx for a line through the origin and the equation y = mx + b for a line intercepting the vertical axis at *b*.

8.F.B.5 Describe qualitatively the functional relationship between two quantities by analyzing a graph (e.g., where the function is increasing or decreasing, linear or nonlinear). Sketch a graph that exhibits the qualitative features of a function that has been described verbally.

8.G.A.5 Use informal arguments to establish facts about the angle sum and exterior angle of triangles, about the angles created when parallel lines are cut by a transversal, and the angle-angle criterion for similarity of triangles. For example, arrange three copies of the same triangle so that the sum of the three angles appears to form a line, and give an argument in terms of transversals why this is so.

Standards for Mathematical Practice

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

Essential Questions:	Enduring Understandings:
	Students will understand
 How do you use patterns to understand mathematics and model situations? How do algebraic representations relate and compare to one another? How can we communicate and generalize algebraic relationships? How are the horizontal and vertical axes related? How can you describe the relationships among the angles of a triangle? How can you use angles to tell whether triangles are similar? 	 A solution to a system of linear equations is an ordered pair that satisfies both equations. Graphed lines with one point of intersection will have one solution. Lines that are the same have infinitely many solutions. Parallel lines have no solution. The formula y=mx+b defines a linear equation. Similar triangles have the same angles.
Learning Targets: Knowledge Students will know	Learning Targets: Skills Students will be able to
• Lines with different slopes will intercept.	• Use angle relationships in triangles.
• Lines are the same if they have the same	• Identify whether two triangles are
slope and same y intercept.	similar given angle measures in the
• Straight lines can be represented by	triangle.
y=mx+b.	• Find unknown angle measures in
• Systems of equations are 2 or more	triangles known to be similar.
equations.	• Find unknown angle measures when
• Functions have one output for every input.	parallel lines are cut by a transversal.
• Slope intercept form has the slope and the	• Relate right triangles to the coordinates
y intercept identified.	of a line going through the origin.
• Similar triangles have corresponding	• Compare persistent features of the
angles that are congruent.	triangles to persistent features of the
• Straight angles add up to 180 degrees.	line.
• Sum of interior angles of a triangle is 180	• Write the equation of a proportional
degrees.	relationship.
	• Write the equation of a line
	• Sketch and analyze a graph that
	exhibits qualitative features.

Key Academic Vocabulary	
Review:	New:
Interior Angles	• Exterior Angle
• Unit Rate	• Exterior Angle Theorem
	• Remote Interior angle
	• Triangle Sum Theorem

Angle-Angle Similarity Postulate
• Alternate Exterior Angles
Alternate Interior Angles
Corresponding Angles
• Same Side Exterior Angles
• Same Side Interior Angles
• Transversal
• Hypotenuse
• Legs
• Rise
• Run
• Slope
Linear Equation
• y=mx+b
• Slope Intercept form
• y-intercept

Interdisciplinary Connections

2023 New Jersey Student Learning Standards: English Language Arts

Grade 7 Reading

- **RI.CR.7.1.** Cite several pieces of textual evidence and make relevant connections to support analysis of what an informational text says explicitly as well as inferences drawn from the text.
- **RI.CR.7.1.** Cite several pieces of textual evidence and make relevant connections to support analysis of what an informational text says explicitly as well as inferences drawn from the text.
- **RI.MF.7.6**. Compare and contrast texts to analyze the unique qualities of different mediums, including the integration of information from multiple formats and sources to develop deeper understanding of the concept, topic or subject and resolve conflicting information.
- **RI.AA.7.7.** Trace and evaluate the argument and specific claims in a text, assessing whether the reasoning is sound and the evidence is relevant and sufficient to support the claims.

Grade 7 Writing

• **W.IW.7.2**. Write informative/explanatory texts (including the narration of historical events, scientific procedures/ experiments, or technical processes) to examine a topic and

convey ideas, concepts, and information through the selection, organization, and analysis of relevant content.

• W.SE.7.6. Gather relevant information from multiple print and digital sources, using search terms effectively; assess the credibility and accuracy of each source; and quote or paraphrase the data and conclusions of others while avoiding plagiarism and following a standard format for citation.

Grade 7 Speaking and Listening

- **SL.PE.7.1.** Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 7 topics, texts, and issues, building on others' ideas and expressing their own clearly.
- **SL.II.7.2.** Analyze the main ideas and supporting details presented in diverse media and formats (e.g., visually, quantitatively, orally) and explain how the ideas clarify a topic, text, or issue under study.

2020 New Jersey Student Learning Standards for Computer Science and Design Thinking NJSLS 8.1 Computer Science

- **8.1.8.NI.1:** Model how information is broken down into smaller pieces, transmitted as addressed packets through multiple devices over networks and the Internet, and reassembled at the destination.
- **8.1.8.AP.6:** Refine a solution that meets users' needs by incorporating feedback from team members and users.

NJSLS 8.2 Design Thinking

- **8.2.8.ED.6:** Analyze how trade-offs can impact the design of a product.
- **8.2.8.ITH.2:** Compare how technologies have influenced society over time.
- **8.2.8.ED.3:** Develop a proposal for a solution to a real-world problem that includes a model.

2020 New Jersey Student Learning Standards - Career Readiness, Life Literacies, and Key Skills

NJSLS 9.1 Credit and Debt Management

- **9.1.8.CDM.1**: Compare and contrast the use of credit cards and debit cards for specific purchases and the advantages and disadvantages of using each.
- **9.1.8.CDM.2**: Demonstrate an understanding of the terminology associated with different types of credit (e.g., credit cards, installment loans, mortgages, lines of credit) and compare and calculate the interest rates associated with each.

NJSLS 9.2 Career Awareness, Exploration, Preparation and Training

• **9.2.8.CAP.15**: Present how the demand for certain skills, the job market, and credentials can determine an individual's earning power.

• **9.2.8.CAP.19**: Relate academic achievement, as represented by high school diplomas, college degrees, and industry credentials, to employability and to potential level.

NJSLS 9.4 Life Literacies and Key Skills

- **9.4.8.TL.2:** Gather data and digitally represent information to communicate a real-world problem.
- **9.4.8.TL.5:** Compare the process and effectiveness of synchronous collaboration and asynchronous collaboration.
- **9.4.8.TL.6**: Collaborate to develop and publish work that provides perspectives on a real-world problem.

Making Connections to Careers	
Construction	• Real Estate
Medical Imaging	Computer Software Developer
Urban Planner	• Astronomer
Graphic Designer	Manufacturing
• Architect	Food Service
• Surveyor	• Fire fighter
• Engineer	Meteorologist
Scientist	• Economist
Computer Programmer	• Farmer, Agricultural
Cryptographer	

Student Resources

Text: Houghton Mifflin Harcourt **Into Math Accelerated**, Grade 7, 1st edition, 2020, ISBN: 978-0-358-11605-9.

Resources: Into Math, Grade 6 (review/reference) and Grades 7 and 8

- More Practice / Homework
- Reteach and Interactive Reteach
- Challenge and Interactive Challenge

Websites:

- <u>https://www.hmhco.com/ui/login</u> Into Math
- <u>http://khanacademy.org</u> Tutorials on individual lessons
- <u>https://edpuzzle.com/</u> Video learning
- <u>https://quizizz.com/?lng=en</u> Assessment and practice

Integrated Technology:

- Google Suite: Docs, Sheets, Slides, Forms
- Into Math online platform
- Devices:

- Chromebooks
- Texas Instruments (TI-30X Calculators)

Teacher Resources

Texts: Houghton Mifflin Harcourt **Into Math Accelerated**, Grade 7, 2020, ISBN: 978-0-358-11616-5.

Resources:

- Into Math Resource Boxes, Grades 7 and 8
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- Online Data-Driven Interventions
- More Practice / Homework
- Reteach and Interactive Reteach
- Challenge and Interactive Challenge
- Ed Your Friend in Learning
- Anchor Charts
- Mini-Lesson Tabletop Flipchart
- Math Vocabulary:
 - <u>http://partnersforlearning.org/wp-content/uploads/2014/09/Common-Core-Acade</u> <u>mic-Vocabulary-Mathematics-K-12.pdf</u>

Websites:

- <u>https://www.hmhco.com/ui/login</u> Into Math Interactive
- <u>http://khanacademy.org</u> Tutorials on individual lessons
- <u>http://www.kutasoftware.com</u> Test and worksheet generator for teachers
- <u>New Jersey Climate Education Hub</u>

Integrated Technology:

- Google Suite: Docs, Sheets, Slides, Forms
- Into Math online program
- Devices:
 - SMART/ Promethean Interactive Board
 - Chromebooks
 - Texas Instruments (TI-30X Calculators)

Stage 2 – Assessment Evidence

Performance Task(s):

- Unit STEM activity- Which Car Costs Less?
- Illustrative Math
- Interactive Reteach
- Interactive Challenge
- NJSLA practice test problems: <u>https://nj.mypearsonsupport.com/practice-tests/math/</u>

Pre-Assessments:

- Math 7 BOY *LinkIt*!
- Are You Ready?

Formative Assessments:

- Check Understanding
- Lesson Test Prep
- Exit Slips
- Student "I Can" Self-Assessment
- Informal Observations

Summative Assessments

- Module Tests A and B
- Math 7 MOY Assessment *LinkIt*!
- <u>NJDOE Digital Item Library</u>- Released NJSLA items
- Math 7 EOY Assessment LinkIt!

Stage 3 – Learning Plan

STEM Task: *Which Car Costs Less?*

Learning Mindset: Challenge Seeking

Module Opener:

- Module 11: *A Fox From Any Angle*
- Module 12: Proportional Smoothies

Diagnostic Assessment: Are You Ready?

Module 11: Angle Relationships

- Lesson 11.1: Develop Angle Relationships for Triangles
- Lesson 11.2: Investigate Angle-Angle Similarity
- Lesson 11.3: Explore Parallel Lines Cut by a Transversal

Module 12: Linear Relationships

- Lesson 12.1: Explain Slope with Similar Triangles
- Lesson 12.2: Derive y=mx+b
- Lesson 12.3: Graph, Interpret, and Compare Proportional Relationships

Unit Plan Title	Unit 6: Applications of Real Number and Exponents
Suggested Time Frame	18 Days

Overview / Rationale

In this unit, students will apply rational and irrational numbers to solve problems involving pythagorean theorem, exponents, and scientific notation.

• Module 13: Students will identify and compare rational and irrational numbers.

• Module 14: Students will use Pythagorean theorem to solve problems involving right triangles and distance on a coordinate plane.

• Module 15: Students will apply properties of exponents and compute scientific notation.

Stage 1 – Desired Results

New Jersey Student Learning Standards for Mathematics (2023)

8.NS.A.1 Know that numbers that are not rational are called irrational. Understand informally that every number has a decimal expansion; for rational numbers show that the decimal expansion repeats eventually, and convert a decimal expansion which repeats eventually into a rational number.

8.NS.A.2 Use rational approximations of irrational numbers to compare the size of irrational numbers, locate them approximately on a number line diagram, and estimate the value of

expressions (e.g., π^2). For example, by truncating the decimal expansion of $\sqrt{2}$, show that $\sqrt{2}$ is between 1 and 2, then between 1.4 and 1.5, and explain how to continue on to get better approximations.

8.NS.A.3 Understand that the sum or product of two rational numbers is rational; that the sum of a rational number and an irrational number is irrational; and that the product of a nonzero rational number and an irrational number is irrational.

8.EE.A.1 Know and apply the properties of integer exponents to generate equivalent numerical

expressions. For example, $3^2 \times 3^{-5} = 3^{-3} = \frac{1}{3}^3 = \frac{1}{27}$.

8.EE.A.2 Use square root and cube root symbols to represent solutions to equations of the form $x^2 = p$ and $x^3 = p$ where p is a positive rational number.

a. Evaluate square roots of small perfect squares and cube roots of small perfect cubes. Know that $\sqrt{2}$ is irrational.

b. Simplify numerical radicals, limiting to square roots (i.e. non perfect squares). For example, simplify $\sqrt{8}$ to $2\sqrt{2}$.

8.EE.A.3 Use numbers expressed in the form of a single digit times an integer power of 10 to estimate very large or very small quantities, and to express how many times as much one is than

the other. For example, estimate the population of the United States as 3×10^{8} and the

population of the world as 7×10^9 , and determine that the world population is more than 20 times larger.

8.EE.A.4 Perform operations with numbers expressed in scientific notation, including problems where both decimal and scientific notation are used. Use scientific notation and choose units of appropriate size for measurements of very large or very small quantities (e.g., use millimeters per year for seafloor spreading). Interpret scientific notation that has been generated by technology.

8.G.B.6 Explain a proof of the Pythagorean Theorem and its converse.

8.G.B.7 Apply the Pythagorean Theorem to determine unknown side lengths in right triangles in real-world and mathematical problems in two and three dimensions.

8.G.B.8 Apply the Pythagorean Theorem to find the distance between two points in a coordinate system.

Standards for Mathematical Practice

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

Essential Questions:	Enduring Understandings:
	Students will understand
• What is a rational number?	• The difference between rational and
• How can Pythagorean Theorem be	irrational numbers.
used to solve problems?	• Non-perfect squares and cubes are
• How can you find the shortest distance	irrational.
between two points?	• The square root is the inverse of
• How do numbers relate and compare to	squaring a number.
one another?	• The sum of the squares of the legs of a
• How do you use patterns to understand	right triangle equal the square of the
mathematics and model situations?	hypotenuse.
• How can we communicate and	• Pythagorean Theorem can be used to
generalize algebraic relationships?	find the distance between two points on
	a coordinate plane by using the vertical
	and horizontal distances.
	• The exponent affects one base unless
	there is a parenthesis.

	• If an exponent for scientific notation
	increases by 1 the value increases by
	10.
Learning Targets: Knowledge	Learning Targets: Skills
Students will know	Students will be able to
• Rational numbers can be represented as a	• Determine if a number is rational.
fraction, or by repeating/terminating	• Evaluate square and cube roots.
decimals.	• Order a list of real numbers consisting
• Pythagorean theorem can be used to find	of both rational and irrational numbers.
an unknown side of a right triangle and the	• Prove and use the Pythagorean
distance between two points.	Theorem and its converse.
• Product of powers involves adding	• Use the Pythagorean Theorem to solve
exponents of the same base. Quotient of	real world problems involving right
powers involves subtracting exponents of	triangles.
the same base. Power of powers involves	• Use the Pythagorean Theorem to find
multiplying exponents.	the distance between any two points on
• Scientific notation consists of a number	a coordinate plane.
between 1 and 10 multiplied by a power of	• Develop and use the properties of
10. It can be written in standard form.	integer exponents.
	• Express numbers using scientific
	notation.
	• Compute with numbers written in
	scientific notation.

Key Academic Vocabulary	
Review:	New:
Rational number	Irrational Numbers
Repeating Decimal	• Cube Root
Terminating Decimal	• Perfect Cube and Perfect Square
• Cube	• Square Root and Principal Square Root
• Cone	Radical Symbol
• Base	• Real numbers
• Exponent	• Pythagorean Theorem
• Power	Pythagorean Triple
	• Properties of Exponents
	Scientific Notation
	• Standard Form of a Number

Interdisciplinary Connections

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Grade 7 Speaking and Listening

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- **9.4.8.TL.5:** Compare the process and effectiveness of synchronous collaboration and asynchronous collaboration.
- **9.4.8.TL.6**: Collaborate to develop and publish work that provides perspectives on a real-world problem.

Making Connections to Careers	
Construction	Real Estate
Medical Imaging	Computer Software Developer
Urban Planner	• Astronomer
Graphic Designer	Manufacturing
• Architect	Food Service
• Surveyor	• Fire fighter

- Engineer
- Scientist
- Computer Programmer
- Cryptographer

Student Resources

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Resources: Into Math, Grade 6 (review/reference) and Grades 7 and 8

- More Practice / Homework
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- Challenge and Interactive Challenge

Websites:

- <u>https://www.hmhco.com/ui/login</u> Into Math
- <u>http://khanacademy.org</u> Tutorials on individual lessons
- <u>https://edpuzzle.com/</u> Video learning
- <u>https://quizizz.com/?lng=en</u> Assessment and practice

Integrated Technology:

- Google Suite: Docs, Sheets, Slides, Forms
- Into Math online platform
- Devices:
 - Chromebooks
 - Texas Instruments (TI-30X Calculators)

Teacher Resources

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- Anchor Charts
- Mini-Lesson Tabletop Flipchart
- Math Vocabulary:
 - <u>http://partnersforlearning.org/wp-content/uploads/2014/09/Common-Core-Acade</u> <u>mic-Vocabulary-Mathematics-K-12.pdf</u>

- Meteorologist
- Economist
- Farmer, Agricultural

Websites:

- https://www.hmhco.com/ui/login Into Math Interactive
- <u>http://khanacademy.org</u> Tutorials on individual lessons
- <u>http://www.kutasoftware.com</u> Test and worksheet generator for teachers
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Integrated Technology:

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- Devices:
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 - Chromebooks
 - Texas Instruments (TI-30X Calculators)

Stage 2 – Assessment Evidence

Performance Task(s):

- Unit STEM activity- Wheel of Theodorus
- Illustrative Math
- Interactive Reteach
- Interactive Challenge
- NJSLA practice test problems: <u>https://nj.mypearsonsupport.com/practice-tests/math/</u>

Pre-Assessments:

- Math 7 BOY LinkIt!
- Are You Ready?

Formative Assessments:

- Check Understanding
- Lesson Test Prep
- Exit Slips
- Student "I Can" Self-Assessment
- Informal Observations

Summative Assessments

- Module Tests A and B
- Math 7 MOY Assessment LinkIt!
- NJDOE Digital Item Library- Released NJSLA items
- Math 7 EOY Assessment *LinkIt*!

Stage 3 – Learning Plan

STEM Task: *Wheel of Theodorus*

Learning Mindset: Resilience

Module Opener:

- Module 13: Track the Distance
- Module 14: Try Your Angle
- Module 15: A-Mazing Expressions

Diagnostic Assessment: Are You Ready?

Module 13: Real Numbers

- Lesson 13.1: Understand Rational and Irrational Numbers
- Lesson 13.2: Investigate Roots
- Lesson 13.3: Order Real Numbers

Module 14: The Pythagorean Theorem

- Lesson 14.1: Prove the Pythagorean Theorem and Its Converse
- Lesson 14.2: Apply Pythagorean Theorem
- Lesson 14.3: Apply Pythagorean Theorem in the Coordinate Plane

Module 15: Exponents and Scientific Notation

- Lesson 15.1: Know and Apply Properties of Exponents
- Lesson 15.2: Understand Scientific Notation
- Lesson 15.3: Compute with Scientific Notation

Unit Plan Title	Unit 7: Area and Volume
Suggested Time Frame	14 Days

Overview / Rationale

In this unit, students will analyze figures to find circumference, area, cross sections, surface area, and volume.

• Module 16: Students will find and use circumference and area to solve real-life problems.

• Module 17: Students will describe cross sections of figures and find volumes of spheres,

cones, and cylinders.

Stage 1 – Desired Results

New Jersey Student Learning Standards for Mathematics (2023)

7.EE.B.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 reasonableness of answers using mental computation and estimation strategies. For example: If a woman making \$25 an hour gets a 10% raise, she will make an additional \Box of her salary an hour, or \$2.50, for a new salary of \$27.50. If you want to place a towel bar 9 ³/₄ inches long in the center of a door that is 27 ¹/₂ inches wide, you will need to place the bar about 9 inches from each edge; this estimate can be used as a check on the exact computation. (Students may solve multi-step real-life and mathematical problems posed with positive and negative rational numbers in any form, based on quantitative data related to the five main contributors to climate change:

- Burning coal, oil and gas produces carbon dioxide and nitrous oxide
- Cutting down forests (deforestation)
- Increasing livestock farming
- Fertilizers containing nitrogen produce nitrous oxide emissions, and
- Fluorinated gases are emitted from equipment and products that use these gases.)

7.G.A.3 Describe the two-dimensional figures that result from slicing three-dimensional figures, as in plane sections of right rectangular prisms and right rectangular pyramids.

7.G.B.4 Know the formulas for the area and circumference of a circle and use them to solve problems; give an informal derivation of the relationship between the circumference and area of a circle.

7.G.B.6 Solve real-world and mathematical problems involving area, volume and surface area of two- and three-dimensional objects composed of triangles, quadrilaterals, polygons, cubes, and right prisms. (Students may solve multi-step real-life and mathematical problems involving angle measure, area, surface area, and volume quantitative data related to the five main contributors to climate change:

- Burning coal, oil and gas produces carbon dioxide and nitrous oxide
- Cutting down forests (deforestation)
- Increasing livestock farming
- Fertilizers containing nitrogen produce nitrous oxide emissions, and
- Fluorinated gases are emitted from equipment and products that use these gases.).

8.G.C.9 Know the formulas for the volumes of cones, cylinders, and spheres and use them to solve real-world and mathematical problems. (Students may solve real-world mathematical problems involving the physical properties of the principle gasses that cause climate change molecules.)

Standards for Mathematical Practice

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

Essential Questions:	Enduring Understandings:
	Students will understand
• How can you check the reasonableness	• Circumference and area can be found
of your solution?	for 2-D figures.
• How can I use and evaluate algebraic	• The relationships between the volume
expressions in relation to real world	of cylinders, cubes, and spheres.
applications?	• When a horizontal cross section is
• How can geometric ideas be	made it takes the shape of the base.
communicated?	• When a vertical cross section is made it
	takes the shape of the lateral face.

• How can geometry be used to solve problems about real-world situations and spatial relationships?	• The relationships between the volume of cylinders, cubes, and spheres.
Learning Targets: Knowledge	Learning Targets: Skills
 Circumference is used to find the distance around a circle. Volume represents the space inside of a 3d figure. Volume and surface area can be found in 3d figures. Perimeter and area are found in 2d figures. The formulas for the area and circumference of a circle. The formulas for volume and surface area of a right prism. Pi is used in formulas for circles. 	 Derive and apply formulas for circumference. Derive and apply formulas for the area of a circle. Use known formulas to calculate the areas of composite figures. Identify and describe the two-dimensional figures resulting from horizontal and vertical cross-sections of solids. Calculate the surface area of a right prism using the surface area formula. Calculate the volume of a right prism using the volume formula. Develop and use the formula for the volume of a cylinder. Develop and use the formulas for the volume of a cone and the volume of a sphere. Solve multi-step problems involving three-dimensional figures using formulas for surface area and volume.

Key Academic Vocabulary	
Review:	New:
Composite Figure	Circumference
• Pyramid	• Pi
Rectangular Prism	Cross Section
	• Cylinder
	Right Cone
	• Sphere

Interdisciplinary Connections

2023 New Jersey Student Learning Standards: English Language Arts

Grade 7 Reading

- **RI.CR.7.1.** Cite several pieces of textual evidence and make relevant connections to support analysis of what an informational text says explicitly as well as inferences drawn from the text.
- **RI.CR.7.1.** Cite several pieces of textual evidence and make relevant connections to support analysis of what an informational text says explicitly as well as inferences drawn from the text.
- **RI.MF.7.6**. Compare and contrast texts to analyze the unique qualities of different mediums, including the integration of information from multiple formats and sources to develop deeper understanding of the concept, topic or subject and resolve conflicting information.
- **RI.AA.7.7.** Trace and evaluate the argument and specific claims in a text, assessing whether the reasoning is sound and the evidence is relevant and sufficient to support the claims.

Grade 7 Writing

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2020 New Jersey Student Learning Standards for Computer Science and Design Thinking NJSLS 8.1 Computer Science

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2020 New Jersey Student Learning Standards - Career Readiness, Life Literacies, and Key Skills

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Making Connections to Careers	
Construction	Real Estate
Medical Imaging	Computer Software Developer
Urban Planner	• Astronomer
Graphic Designer	Manufacturing
Architect	Food Service

- Surveyor
- Engineer
- Scientist
- Computer Programmer
- Cryptographer

- Fire fighter
- Meteorologist •
- Economist •
- Farmer, Agricultural

Student Resources

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Stage 2 – Assessment Evidence

Performance Task(s):

- Unit STEM activity- *Buffon's Needle*
- Illustrative Math
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- NJSLA practice test problems: <u>https://nj.mypearsonsupport.com/practice-tests/math/</u>

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Summative Assessments

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Stage 3 – Learning Plan

STEM Task: *Buffon's Needle*

Learning Mindset: Perseverance

Module Opener:

- Module 16: What Comes Next in the Pattern?
- Module 17: The Prism Family

Diagnostic Assessment: Are You Ready?

Module 16: Analyze Figures to Find Circumference and Area

- Lesson 16.1: Derive and Apply Formulas for Circumference
- Lesson 16.2: Derive and Apply a Formula for the Area of a Circle
- Lesson 16.3: Areas of Composite Figures

Module 17: Cross Sections, Surface Area, and Volume

- Lesson 17.1: Describe and Analyze Cross Sections of Solids
- Lesson 17.2: Derive and Apply Formulas for Surface Area of Cubes and Right Prisms
- Lesson 17.3: Derive and Apply Formula for the Volume of a Right Prism
- Lesson 17.4: Find Volume of Cylinders
- Lesson 17.5: Find Volume of Cones and Spheres
- Lesson 17.6: Solve Multi-step Problems with Surface Area and Volume

Unit Plan Title	Unit 8: Data Analysis and Sampling
Suggested Time Frame	12 Days

Overview / Rationale

In this unit, students will use proportional reasoning to analyze samples. They will use statistics and graphs to compare data sets.

• **Module 18**: Students will analyze representative and random samples using proportional reasoning.

• Module 19: Students will use statistics and graphs to compare two sets of data.

Stage 1 – Desired Results

New Jersey Student Learning Standards for Mathematics (2023)

7.SP.A.1 Understand that statistics can be used to gain information about a population by examining a sample of the population; generalizations about a population from a sample are valid only if the sample is representative of that population. Understand that random sampling tends to produce representative samples and support valid inferences.

7.SP.A.2 Use data from a random sample to draw inferences about a population with an unknown characteristic of interest. Generate multiple samples (or simulated samples) of the same size to gauge the variation in estimates or predictions. For example, estimate the mean word length in a book by randomly sampling words from the book; predict the winner of a school election based on randomly sampled survey data. Gauge how far off the estimate or prediction might be.

7.SP.B.3 Informally assess the degree of visual overlap of two numerical data distributions with similar variabilities, measuring the difference between the centers by expressing it as a multiple of a measure of variability. For example, the mean height of players on the basketball team is 10 cm greater than the mean height of players on the soccer team, about twice the variability (mean absolute deviation) on either team; on a dot plot, the separation between the two distributions of heights is noticeable.

7.SP.B.4 Use measures of center and measures of variability for numerical data from random samples to draw informal comparative inferences about two populations. For example, decide whether the words in a chapter of a seventh-grade science book are generally longer than the words in a chapter of a fourth-grade science book.

Standards for Mathematical Practice

- Make sense of problems and persevere in solving them.
- Reason abstractly and quantitatively.
- Construct viable arguments and critique the reasoning of others.
- Model with mathematics.

- Use appropriate tools strategically.

- Attend to precision.
 Look for and make use of structure.
 Look for and express regularity in repeated reasoning.

Essential Questions:	Enduring Understandings: Students will understand
 How can we gather, organize and display data to communicate and justify results in the real world? How can we analyze data to make inferences and/or predictions, based on surveys, experiments, probability and observational studies? 	 Repeatedly sampling a population with the same size random sample will cause data to vary. Both tables and equations are used to determine proportional relationships. Samples are used to represent a larger population. Surveys need to be random to ensure fairness.
Learning Targets: Knowledge Students will know	Learning Targets: Skills Students will be able to
 A random sample is chosen from a larger population. A sample needs to be representative of a population to make inferences about that population. Mean average deviation is a set of average distances between each data point and the mean. 	 Understand populations, random samples, and how to select a representative sample. Use a random sample to make inferences about a population. Understand that repeatedly sampling a population with the same size random sample will cause the data to vary. Compare the center and spread of data displayed in dot plots. Compare data displayed in box plots, and use these comparisons to draw inferences about two populations. Use means and MADs to compare two populations.

Key Academic Vocabulary	
Review:	New:
• Mean	• Bias
• Median	Population
• Range	• Random sample
• Box Plot	• Representative sample
• Interquartile range	• Sample

- Lower Quartile
- Upper Quartile
- Mean Absolute deviation

Interdisciplinary Connections

2023 New Jersey Student Learning Standards: English Language Arts

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• Architect	Food Service
• Surveyor	• Fire fighter
• Engineer	Meteorologist
• Scientist	• Economist
Computer Programmer	• Farmer, Agricultural
• Cryptographer	

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Stage 3 – Learning Plan

STEM Task: A Birthday Puzzle

Learning Mindset: Resilience

Module Opener:

- Module 18: Which Fraction Does Not Belong?
- Module 19: And the Best Player Is...

Diagnostic Assessment: Are You Ready?

Module 18: Proportional Reasoning with Samples

- Lesson 18.1: Understand Representative Samples
- Lesson 18.2: Make Inferences from a Random Sample
- Lesson 18.3: Make Inferences from Repeated Random Samples

Module 19: Use Statistics and Graphs to Compare Data

- Lesson 19.1: Compare Center and Spread of Data Displayed in Dot Plots
- Lesson 19.2: Compare Center and Spread of Data Displayed in Box Plots
- Lesson 19.3: Compare Mean Using Mean Absolute Deviation and Repeated Sampling
| Unit Plan Title | Unit 9: Probability |
|----------------------|---------------------|
| Suggested Time Frame | 16 Days |

Overview / Rationale

In this unit, students will understand and apply experimental and theoretical probability.

• Module 20: Students will analyze and use experimental probability to make predictions.

• Module 21: Students will analyze and use theoretical probability to make predictions.

Stage 1 – Desired Results

New Jersey Student Learning Standards for Mathematics (2023)

7.EE.B.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 reasonableness of answers using mental computation and estimation strategies. For example: If a woman making \$25 an hour gets a 10% raise, she will make an additional \Box of her salary an hour, or \$2.50, for a new salary of \$27.50. If you want to place a towel bar 9 ³/₄ inches long in the center of a door that is 27 ¹/₂ inches wide, you will need to place the bar about 9 inches from each edge; this estimate can be used as a check on the exact computation. (Students may solve multi-step real-life and mathematical problems posed with positive and negative rational numbers in any form, based on quantitative data related to the five main contributors to climate change:

- Burning coal, oil and gas produces carbon dioxide and nitrous oxide
- Cutting down forests (deforestation)
- Increasing livestock farming
- Fertilizers containing nitrogen produce nitrous oxide emissions, and
- Fluorinated gases are emitted from equipment and products that use these gases.)

7.SP.C.5 Understand that the probability of a chance event is a number between 0 and 1 that expresses the likelihood of the event occurring. Larger numbers indicate greater likelihood. A probability near 0 indicates an unlikely event, a probability around 1/2 indicates an event that is neither unlikely nor likely, and a probability near 1 indicates a likely event.

7.SP.C.6 Approximate the probability of a chance event by collecting data on the chance process that produces it and observing its long-run relative frequency, and predict the approximate relative frequency given the probability. For example, when rolling a number cube

600 times, predict that a 3 or 6 would be rolled roughly 200 times, but probably not exactly 200 times.

7.SP.C.7 Develop a probability model and use it to find probabilities of events. Compare probabilities from a model to observed frequencies; if the agreement is not good, explain possible sources of the discrepancy.

a. Develop a uniform probability model by assigning equal probability to all outcomes and use the model to determine probabilities of events. For example, if a student is selected at random from a class, find the probability that Jane will be selected and the probability that a girl will be selected.

b. Develop a probability model (which may not be uniform) by observing frequencies in data generated from a chance process. For example, find the approximate probability that a spinning penny will land heads up or that a tossed paper cup will land open-end down. Do the outcomes for the spinning penny appear to be equally likely based on the observed frequencies?

7.SP.C.8 Find probabilities of compound events using organized lists, tables, tree diagrams, and simulation.

a. Understand that, just as with simple events, the probability of a compound event is the fraction of outcomes in the sample space for which the compound event occurs.
b. Represent sample spaces for compound events using methods such as organized lists, tables and tree diagrams. For an event described in everyday language (e.g., "rolling double sixes"), identify the outcomes in the sample space which compose the event.
c. Design and use a simulation to generate frequencies for compound events. For example, use random digits as a simulation tool to approximate the answer to the question: If 40% of donors have type A blood, what is the probability that it will take at least 4 donors to find one with type A blood?

Standards for Mathematical Practice

- Make sense of problems and persevere in solving them.
- Reason abstractly and quantitatively.
- Construct viable arguments and critique the reasoning of others.
- Model with mathematics.
- Use appropriate tools strategically.
- Attend to precision.
- Look for and make use of structure.
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Essential Questions:	Enduring Understandings:				
	Students will understand				
• What influences the probability that a	• Probabilities can be represented as				
given event will occur?	decimals, fractions, and percentages.				
• What determines whether an event is	• The probability of a compound event is				
dependent or independent?	the fraction of outcomes in the sample				

• How can we use modeling to form a prediction?	space for which the compound event
How can we analyze data to make	• The probability of a change event is a
• How can we analyze data to make	• The probability of a chance event is a
inferences about a population?	number between 0 and 1 that expresses
• When do you use theoretical	the likelihood of the event occurring.
probability instead of experimental	
probability?	
Learning Targets: Knowledge	Learning Targets: Skills
Students will know	Students will be able to
• Probability as represented as a number	• Describe the likelihood of an event in
between 0 and 1.	terms of a probability between 0 and 1.
• Probability of 0 means that an event is	• Find the experimental probability of an
impossible.	event and its complement.
• Theoretical probability is what is expected	• Determine the experimental probability
to happen.	of compound events.
• Experimental probability is what happens	• Use experimental probability and
when an experiment is performed.	proportional reasoning to make
	predictions about real-world scenarios.
	• Find the theoretical probability of
	simple events and compare theoretical
	probability to experimental probability.
	• Find and compare theoretical
	probabilities of compound events using
	a table, a tree diagram, and an
	organized list.
	• Use theoretical probability and
	proportional reasoning to make a
	qualitative prediction about a simple or
	compound event.
	• Design and perform a simulation to test
	the probability of a simple event or a
	compound event.

Key Academic Vocabulary						
Review: New:						
• Event	• Experiment					
	• Outcome					
	• Probability					
	• Probability of an Event					

Sample Space
• Trial
• Complement of an Event
• Experimental Probability
Simulation
Compound Event
• Theoretical Probability
• Tree Diagram

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Construction	• Real Estate					
Medical Imaging	Computer Software Developer					
Urban Planner	• Astronomer					
Graphic Designer	Manufacturing					
Architect	Food Service					
• Surveyor	• Fire fighter					
• Engineer	Meteorologist					
• Scientist	• Economist					
Computer Programmer	• Farmer, Agricultural					
• Cryptographer						

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 - Texas Instruments (TI-30X Calculators)

Stage 2 – Assessment Evidence

Performance Task(s):

- Unit STEM activity- Class Arcade
- Illustrative Math
- Interactive Reteach
- Interactive Challenge
- NJSLA practice test problems: <u>https://nj.mypearsonsupport.com/practice-tests/math/</u>

Pre-Assessments:

- Math 7 BOY *LinkIt*!
- Are You Ready?

Formative Assessments:

- Check Understanding
- Lesson Test Prep
- Exit Slips
- Student "I Can" Self-Assessment

• Informal Observations

Summative Assessments

- Module Tests A and B
- Math 7 MOY Assessment LinkIt!
- <u>NJDOE Digital Item Library</u>- Released NJSLA items
- Math 7 EOY Assessment *LinkIt*!

Stage 3 – Learning Plan

STEM Task: Class Arcade

Learning Mindset: Challenge-Seeking

Module Opener:

- Module 20: Go for the Gold
- Module 21: Analyzing Rock-Paper-Scissors

Diagnostic Assessment: Are You Ready?

Module 20: Understand and Apply Experimental Probability

- Lesson 20.1: Understand Probability of an Event
- Lesson 20.2: Find Experimental Probability of Simple Events
- Lesson 20.3: Find Experimental Probability of Compound Events
- Lesson 20.4: Use Experimental Probability and Proportional Reasoning to Make Predictions

Module 21: Understand and Apply Theoretical Probability

- Lesson 21.1: Find Theoretical Probability of Simple Events
- Lesson 21.2: Find Theoretical Probability of Compound Events
- Lesson 21.3: Use Theoretical Probability and Proportional Reasoning to Make Predictions
- Lesson 21.4: Conduct Simulations

Accommodations and Modifications

Below please find a list of suggestions for accommodations and modifications to meet the diverse needs of our students. Teachers should consider this a resource and understand that they are not limited to the recommendations included below.

An accommodation *changes* HOW *a student learns*; the change needed does not alter the grade-level standard. A modification *changes* WHAT *a student learns*; the change alters the grade-level expectation.

Special Education and 504 Plans

All modifications and accommodations must be specific to each individual child's IEP (Individualized Educational Plan) or 504 Plan.

- Pre-teach or preview vocabulary
- Repeat or reword directions
- Have students repeat directions
- Use of small group instruction
- Pair visual prompts with verbal presentations
- Ask students to restate information, directions, and assignments
- Repetition and time for additional practice
- Model skills/techniques to be mastered
- Extended time to complete task/assignment/work
- Provide a copy of class notes
- Strategic seating (with a purpose eg. less distraction)
- Flexible seating
- Repetition and additional practice
- Use of manipulatives
- Use of assistive technology (as appropriate)
- Assign a peer buddy
- Emphasize key words or critical information by highlighting
- Use of graphic organizers
- Scaffold with prompts for sentence starters
- Check for understanding with more frequency
- Provide oral reminders and check student work during independent practice
- Chunk the assignment broken up into smaller units, work submitted in phases
- Encourage student to proofread assignments and tests
- Provide regular home/school communication
- Teacher checks student planner
- Provide student with clear expectations in writing and grading criteria for assignments (rubrics)

Testing Accommodations:

Students should receive all testing accommodations for Benchmark assessments that they receive for State testing.

- Setting: Alternate setting for assessments, small groups, screens to block distractions
- Presentation: large print, test readers, use of audio, fewer questions on each page
- Response: answer verbally, use large block answer sheet, speech-to-text dictation, accept short answers
- Allow for retakes
- Provide study guides
- Use of reference aids such as glossary, multiplication tables, calculator
- Choice of test format (multiple-choice, essay, true-false)
- Alternate ways to evaluate (projects or oral presentations instead of written tests)
- Open-book or open-note tests

Multilingual Learners:

All modifications and accommodations should be specific to each individual child's LEP level as determined by the WIDA screening or ACCESS, utilizing the WIDA Can Do Descriptors.

- Pre-teach or preview vocabulary
- Repeat or reword directions
- Have students repeat directions
- Use of small group instruction
- Scaffold language based on their Can Do Descriptors
- Alter materials and requirements according to Can Do Descriptors
- Adjust number of paragraphs or length of writing according to their Can Do Descriptor
- TPR (Total Physical Response-Sheltered Instruction strategy) Demonstrate concepts through multi-sensory forms such as with body language, intonation
- Pair visual prompts with verbal presentations
- Repetition and additional practice
- Model skills and techniques to be mastered
- Native Language translation (peer, assistive technology, bilingual dictionary)
- Emphasize key words or critical information by highlighting
- Use of graphic organizers
- Scaffold with prompts for sentence starters
- Check for understanding with more frequency
- Use of self-assessment rubrics
- Increase one-on-one conferencing; frequent check ins
- Use study guide to organize materials
- Make vocabulary words available in a student created vocabulary notebook, vocabulary bank, Word Wall, or vocabulary ring
- Extended time
- Select text complexity and tiered vocabulary according to Can Do Descriptors
- Projects completed individually or with partners
- Use online dictionary that includes images for words: <u>http://visual.merriamwebster.com/</u>.
- Use online translator to assist students with pronunciation: http://www.reverso.net/text_translation.aspx?lang=EN.

Students at Risk of Failure:

- Use of self-assessment rubrics for check-in
- Pair visual prompts with verbal presentations
- Ask students to restate information and/or directions
- Opportunity for repetition and additional practice
- Model skills/techniques to be mastered
- Extended time
- Provide copy of class notes
- Strategic seating with a purpose
- Provide students opportunity to make corrections and/or explain their answers
- Support organizational skills
- Check daily planner
- Encourage student to proofread work
- Assign a peer buddy
- Build on students' strengths based on Multiple Intelligences: Linguistic (verbal); Logical (reasoning); Musical/Rhythmic; Intrapersonal Intelligence (understanding of self); Visual Spatial Intelligence; Interpersonal Intelligence (the ability to interact with others effectively); Kinesthetic (bodily); Naturalist Intelligence; and Learning Styles: Visual; Auditory; Tactile; Kinesthetic; Verbal

High Achieving:

Extension Activities

- Allow for student choice from a menu of differentiated outcomes; choices grouped by complexity of thinking skills; variety of options enable students to work in the mode that most interests them
- Allow students to pursue independent projects based on their individual interests
- Provide enrichment activities that include more complex material
- Allow opportunities for peer collaboration and team-teaching
- Set individual goals
- Conduct research and provide presentation of appropriate topics
- Provide students opportunity to design surveys to generate and analyze data to be used in discussion
- Allow students to move through the assignment at their own pace (as appropriate)

Strategies to Differentiate to Meet the Needs of a Diverse Learning Population

- Vocabulary Sorts-students engage with the vocabulary word by sorting into groups of similar/different rather than memorizing definitions
- Provide "Realia" (real life objects to relate to the five senses) and ask questions relating to the senses
- Role Play-students create or participate in role playing situations or Reader's Theater
- Moving Circle-an inside and outside circle partner and discuss, circles moves to new partner (Refer to Kagan Differentiated Strategies)

- Brainstorm Carousel-Large Post Its around the room, group moves in a carousel to music. Group discusses topic(s) and responses on paper. Groups rotate twice to see comments of others. (Refer to Kagan Differentiated Strategies)
- Gallery Walk-Objects, books, or student work is displayed. Students examine artifacts and rotate.
- Chunking-chunk reading, tests, questions, homework, etc to focus on particular elements.
- Think Pair Share Write
- Think Talk Write
- Think Pair Share
- Note-taking -can be done through words, pictures, phrases, and sentences depending on level
- KWL (Know, Want to Know, Learned)/KWHL(Know, What to Know, How Will I Learn, learned)/KWLS (Know, Want to Know, Learned, Still Want to Know) /KWLQ (Know, What to Know, Learned, Questions I Still Have) Charts
- Corners Cooperative Learning Strategy: <u>http://cooperativelearningstrategies.pbworks.com/w/page/28234420/Corners</u>.
- Circle Map strategy- place the main topic in a small circle and add student ideas in a bigger circle around the topic. Students may use their native language with peers to brainstorm.
- Flexible grouping -as a whole class, a small group, or with a partner, temporary groups are created: <u>http://www.teachhub.com/flexible-grouping-differentiated-instruction-strategy</u>.
- Jigsaw Activities -cooperative learning in a group, each group member is responsible for becoming an "expert" on one section of the assigned material and then "teaching" it to the other members of the team: <u>http://www.adlit.org/strategies/22371/</u>.

PACING GUIDE

			SEP	TEMBER				
Day	Unit	EDM LESSON	NJSLS		Day	Unit	EDM LESSON	NJSLS
		Introduction to Course			40		Module 1	7.RP.A.1, 7.RP.A.2, 7.RP.A.2a, 7.RP.A.2b,
1	1				13	1	Module 1	7.RP.A.2c, 8.EE.B.5, 7.RP.A.3, 7.G.A.1 7.RP.A.1, 7.RP.A.2, 7.RP.A.2a, 7.RP.A.2b,
2	1	Link-it! Pre-Assessment			14	1	Module 1	7.RP.A.2c, 8.EE.B.5, 7.RP.A.3, 7.G.A.1
3	1	Link-it! Pre-Assessment	7 PPA 1 7 PPA 2 7 PPA 20 7 PPA		15	1	AA - dula 1	7.RP.A.2c, 8.EE.B.5, 7.RP.A.3, 7.G.A.1
4	1		2b, 7.RP.A.2c, 8.EE.B.5, 7.RP.A.3, 7.G.A.		16	1		7.RP.A.1, 7.RP.A.2, 7.RP.A.2a, 7.RP.A.2b, 7.RP.A.2c, 8.EE.B.5, 7.RP.A.3, 7.G.A.1
5	1	Module 1	7.RP.A.1, 7.RP.A.2, 7.RP.A.2d, 7.RP.A. 2b, 7.RP.A.2c, 8.EE.B.5, 7.RP.A.3, 7.G.A. 1		17	1	Module 2	7.RP.A.3, 7.EE.A.2
6	1	Module 1	7.RP.A.1, 7.RP.A.2, 7.RP.A.2a, 7.RP.A. 2b, 7.RP.A.2c, 8.EE.B.5, 7.RP.A.3, 7.G.A. 1		18	1	Module 2	7.RP.A.3, 7.EE.A.2
7	1	Module 1	7.RP.A.1, 7.RP.A.2, 7.RP.A.2a, 7.RP.A. 2b, 7.RP.A.2c, 8.EE.B.5, 7.RP.A.3, 7.G.A.					
8	1	Module 1	7.RP.A.1, 7.RP.A.2, 7.RP.A.2a, 7.RP.A. 2b, 7.RP.A.2c, 8.EE.B.5, 7.RP.A.3, 7.G.A.					
9	1	Module 1	7.RP.A.1, 7.RP.A.2, 7.RP.A.2a, 7.RP.A. 2b, 7.RP.A.2c, 8.EE.B.5, 7.RP.A.3, 7.G.A.					
10		Module 1	1 7.RP.A.1, 7.RP.A.2, 7.RP.A.2a, 7.RP.A. 2b, 7.RP.A.2c, 8.EE.B.5, 7.RP.A.3, 7.G.A.					
10		Module 1	1 7.RP.A.1, 7.RP.A.2, 7.RP.A.2a, 7.RP.A. 2b, 7.RP.A.2c, 8.EE.B.5, 7.RP.A.3, 7.G.A.					
		Module 1	1 7.RP.A.1, 7.RP.A.2, 7.RP.A.2a, 7.RP.A. 2b, 7.RP.A.2c, 8.FE.B.5, 7.RP.A.3, 7.G.A.					
12	1		1					
Davi	Unit	EDMIERCON		TOBER	Devi	Unit	EDMIESSON	N ICI C
Day	Unit	EDM LESSON	NJSLS		Day	2	EDM LESSON	NJSLS
19	1		7.KF.A.3, 7.EE.A.2		31	-		7.NS.A.3, 7.NS.A.1c, 7.NS.A.1b, 7.NS.A.1, 7. NS.A.2c, 7.NS.A.2b, 7.NS.A.2a, 7.NS.A.2d
20	1	Module 2	7.RP.A.3, 7.EE.A.2		32	2	Module 4	7.NS.A.3, 7.NS.A.1 c, 7.NS.A.1 b, 7.NS.A.1, 7. NS.A.2c, 7.NS.A.2b, 7.NS.A.2a, 7.NS.A.2d
21	1	Module 2	7.RP.A.3, 7.EE.A.2		33	2	Module 4	7.NS.A.3, 7.NS.A.1c, 7.NS.A.1b, 7.NS.A.1, 7. NS.A.2c, 7.NS.A.2b, 7.NS.A.2a, 7.NS.A.2d
22	1	Module 2	7.RP.A.3, 7.EE.A.2		34	2	Module 4	7.NS.A.3, 7.NS.A.1c, 7.NS.A.1b, 7.NS.A.1, 7. NS.A.2c, 7.NS.A.2b, 7.NS.A.2a, 7.NS.A.2d
23	1	Module 2	7.RP.A.3, 7.EE.A.2		35	2	Module 4	7.NS.A.3, 7.NS.A.1c, 7.NS.A.1b, 7.NS.A.1, 7.
20	2	Module 3	7.NS.A.1, 7.NS.A.1b, 7.NS.A.1a, 7.		26	2	Module 4	7.NS.A.3, 7.NS.A.1c, 7.NS.A.1b, 7.NS.A.1, 7.
24	2	Module 3	7.NS.A.1, 7.NS.A.1b, 7.NS.A.1a, 7.			2	Module 4	NS.A.2c, / .NS.A.2b, / .NS.A.2d, / .NS.A.2d 7.NS.A.3, 7.NS.A.1c, 7.NS.A.1b, 7.NS.A.1, 7.
25	2	Module 3	7.NS.A.1, 7.NS.A.1b, 7.NS.A.1a, 7.		57	2	Module 4	NS.A.2c, 7.NS.A.2b, 7.NS.A.2a, 7.NS.A.2d 7.NS.A.3, 7.NS.A.1c, 7.NS.A.1b, 7.NS.A.1, 7.
26	2	Module 3	NS.A.3, 7.NS.A.1c, 7.NS.A.2c, 7.NS.A.1, 7.NS.A.1b, 7.NS.A.1a, 7.		38	2	Module 4	NS.A.2c, 7.NS.A.2b, 7.NS.A.2a, 7.NS.A.2d
27	2	Module 3	NS.A.3, 7.NS.A.1c, 7.NS.A.2c, 7.NS.A.1, 7.NS.A.1b, 7.NS.A.1a, 7.		39			NS.A.2c, 7.NS.A.2b, 7.NS.A.2a, 7.NS.A.2d
28	2	Module 3	NS.A.3, 7.NS.A.1c, 7.NS.A.2c, 7.NS.A.1, 7.NS.A.1b, 7.NS.A.1g, 7.					
29	2	Module 3	NS.A.3, 7.NS.A.1c, 7.NS.A.2c,					
30			NS.A.3, 7.NS.A.1c, 7.NS.A.2c,					
			NO	VEMBER				
Day	Unit 2	EDM LESSON Module 4	NJSLS		Day	Unit	EDM LESSON	NJSLS
40	2	Module 4	7.NS.A.3, 7.NS.A.1c, 7.NS.A.1b, 7.NS.A.1, 7. NS.A.2c, 7.NS.A.2b, 7.NS.A.2a, 7.NS.A.2d		52	3	Module 6	7.EE.D.4, 7.EE.D.40, 8.EE.C.7, 8.EE.C.7, 8.EE.C.7, 8.EE.C.7a, 8.EE.C.7, 8.G.B.5
41	-		7.NS.A.3, 7.NS.A.1c, 7.NS.A.1b, 7.NS.A.1, 7. NS.A.2c, 7.NS.A.2b, 7.NS.A.2a, 7.NS.A.2d		53	3	Module 6	7.EE.B.4, 7.EE.B.4a, 8.EE.C.7b, 8.EE.C.7, 8.EE.C.7a, 8.EE.C.7, 8.G.B.5
42	2	Module 4	7.NS.A.3, 7.NS.A.1c, 7.NS.A.1b, 7.NS.A.1, 7. NS.A.2c, 7.NS.A.2b, 7.NS.A.2a, 7.NS.A.2d		54	3	Module 6	7.EE.B.4, 7.EE.B.4a, 8.EE.C.7b, 8.EE.C.7, 8.EE.C.7a, 8.EE.C.7, 8.G.B.5
43	2	Module 5	7.NS.A.3, 7.NS.A.2c, 7.NS.A.1, 7.NS.A. 1d, 7.EE.B.3, 7.EE.A.1, 7.EE.A.2					
44	2	Module 5	7.NS.A.3, 7.NS.A.2c, 7.NS.A.1, 7.NS.A. 1d, 7.EE.B.3, 7.EE.A.1, 7.EE.A.2					
45	2	Module 5	7.NS.A.3, 7.NS.A.2c, 7.NS.A.1, 7.NS.A. 1d, 7.EE.B.3, 7.EE.A.1, 7.EE.A.2					
46	2	Module 5	7.NS.A.3, 7.NS.A.2c, 7.NS.A.1, 7.NS.A. 1d, 7.EE.B.3, 7.EE.A.1, 7.EE.A.2					
47	2	Module 5	7.NS.A.3, 7.NS.A.2c, 7.NS.A.1, 7.NS.A. 1d, 7.EE.B.3, 7.EE.A.1, 7.EE.A.2					
48	2	Module 5	7.NS.A.3, 7.NS.A.2c, 7.NS.A.1, 7.NS.A. 1d, 7.EE.B.3, 7.EE.A.1, 7.EE.A.2					
49	2	Module 5	7.NS.A.3, 7.NS.A.2c, 7.NS.A.1, 7.NS.A. 1d, 7.EE.B.3, 7.EE.A.1, 7.EE.A.2					
50	2	Module 5	7.NS.A.3, 7.NS.A.2c, 7.NS.A.1, 7.NS.A. 1d, 7.EE.B.3, 7.EE.A.1, 7.EE.A.2					
51	3	Module 6	7.EE.B.4, 7.EE.B.4a, 8.EE.C.7b, 8.EE.C.7, 8.EE.C.7a, 8.EE.C.7, 8.G.B.5					
			DE	CEMBER				
Day	Unit	EDM LESSON	NJSLS		Day	Unit	EDM LESSON	NJSLS
55	3	Module 6	7.EE.B.4, 7.EE.B.4a, 8.EE.C.7b, 8.EE.C.7, 8.EE.C.7a, 8.EE.C.7, 8.G.B.5		67	4		o.G.A.1b, ö.G.A.1a, 8.G.A.1c, 8. G.A.1, 8.G.A.3, 8.G.A.2
56	3	Module 6	7.EE.B.4, 7.EE.B.4α, 8.EE.C.7b, 8.EE.C.7, 8.EE.C.7α, 8.EE.C.7, 8.G.B.5		68	4	Module 8	8.G.A.1b, 8.G.A.1a, 8.G.A.1c, 8. G.A.1, 8.G.A.3, 8.G.A.2
57	3	Module 6	7.EE.B.4, 7.EE.B.4a, 8.EE.C.7b, 8.EE.C.7, 8.EE.C.7a, 8.EE.C.7. 8.G.B.5		69	4	Module 8	8.G.A.1b, 8.G.A.1a, 8.G.A.1c, 8. G.A.1, 8.G.A.3. 8.G.A.2
57	3	module o	8.EE.C.7a, 8.EE.C.7, 8.G.B.5		69	4		G.A.1, 8.G.A.3, 8.G.A.2

NJSLS
3, 8.G.A.4
3, 8.G.A.4
3, 8.G.A.4
3, 8.G.A.4
NJSLS
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6, 8.EE.B.5, 8.F.B.5
6. 8.EE.B.5. 8.F.B.5
6 8.FE.B.5 8.EB.5
57 012210107 0111010
NJSLS
NJSLS 6, 8.G.B.7
NJSLS 6, 8.G.B.7 6, 8.G.B.7
NJSLS 6, 8.G.B.7 6, 8.G.B.7 6, 8.G.B.7
NJSLS 6, 8.G.B.7 6, 8.G.B.7 6, 8.G.B.7 1, 8.EE.A.3, 8.EE.A.4
NJSLS 6, 8.G.B.7 6, 8.G.B.7 6, 8.G.B.7 1, 8.EE.A.3, 8.EE.A.4
5 5 5 5 6, 8.1 6, 8.1

114	6	Module 13	8.NS.A.1, 8.EE.A.2, 8.NS.A.2		126	6	Module 15	8.EE.A.1, 8.EE.A.3, 8.EE.A.4
115	6	Module 13	8.NS.A.1, 8.EE.A.2, 8.NS.A.2		127	6	Module 15	8.EE.A.1, 8.EE.A.3, 8.EE.A.4
116	6	Module 13	8.NS.A.1, 8.EE.A.2, 8.NS.A.2					
117	6	Module 14	8.G.B.6. 8.G.B.7					
440	,							
118	0	Module 14	8.G.B.0, 8.G.B./					
119	6	Module 14	8.G.B.6, 8.G.B.7					
Day	Unit	EDM LESSON	NJSLS		Day	Unit	EDM LESSON	NJSLS
128	6	Module 15	8 FF & 1 8 FF & 3 8 FF & 4		140	7	Module 17	80097668370437084
400	-					-		0.0.0.0
129			7.LL.D.3, 7.O.D.4, 7.O.D.0		141	/		8.G.C.Y, /.EE.B.3, /.G.A.3, /.G.B.0
130		NJSLA Administration			142	7	Module 17	8.G.C.9, 7.EE.B.3, 7.G.A.3, 7.G.B.6
131		NJSLA Administration			143	7	Module 17	8.G.C.9, 7.EE.B.3, 7.G.A.3, 7.G.B.6
132		NJSLA Administration						
133		NJSLA Administration						
134		NJSLA Administration						
135	7	Module 16	7.EE.B.3, 7.G.B.4, 7.G.B.6					
136	7	Module 16	7.EE.B.3. 7.G.B.4. 7.G.B.6					
127	7	Madula 16	7 FE B 3 7 G B 4 7 G B 6					
137	_		7.55.0.7.0.0.4.7.0.0.4					
138	7	Module 16	/.EE.B.3, /.G.B.4, /.G.B.6					
139	7	Module 17	8.G.C.9, 7.EE.B.3, 7.G.A.3, 7.G.B.6	MAY				
Day	Unit	EDM LESSON	NJSLS		Day	Unit	EDM LESSON	NJSLS
144	7	Module 17	8.G.C.9, 7.EE.B.3, 7.G.A.3, 7.G.B.6		156	8	Module 19	7.SP.B.3, 7.SP.B.4
145	7	Module 17	8.G.C.9. 7.EE.B.3. 7.G.A.3. 7.G.B.6		157	8	Module 19	7.SP.B.3, 7.SP.B.4
145	7	Module 17	8.G.C.9, 7.EE.B.3, 7.G.A.3, 7.G.B.6		157	8	Module 19 Module 19	7.SP.B.3, 7.SP.B.4
145 146 147	7 7 7	Module 17 Module 17 Module 17	8.G.C.9, 7.EE.B.3, 7.G.A.3, 7.G.B.6 8.G.C.9, 7.EE.B.3, 7.G.A.3, 7.G.B.6 8.G.C.9, 7.EE.B.3, 7.G.A.3, 7.G.B.6		157 158 159	8	Module 19 Module 19 Module 19	7.SP.B.3, 7.SP.B.4 7.SP.B.3, 7.SP.B.4 7.SP.B.3, 7.SP.B.4
145 146 147	7 7 7	Module 17 Module 17 Module 17	8.G.C.9, 7.EE.B.3, 7.G.A.3, 7.G.B.6 8.G.C.9, 7.EE.B.3, 7.G.A.3, 7.G.B.6 8.G.C.9, 7.EE.B.3, 7.G.A.3, 7.G.B.6		157 158 159	8 8 8	Module 19 Module 19 Module 19	7.SP.B.3, 7.SP.B.4 7.SP.B.3, 7.SP.B.4 7.SP.B.3, 7.SP.B.4 7.SP.C5, 7.SP.C6, 7.SP.C7b, 7.SP.C8b,
145 146 147 148	7 7 7 8	Module 17 Module 17 Module 17 Module 17	8.G.C.9, 7.EE.B.3, 7.G.A.3, 7.G.B.6 8.G.C.9, 7.EE.B.3, 7.G.A.3, 7.G.B.6 8.G.C.9, 7.EE.B.3, 7.G.A.3, 7.G.B.6 7.SP.A.1, 7.SP.A.2		157 158 159 160	8 8 8 9	Module 19 Module 19 Module 19 Module 20	7.SP.B.3, 7.SP.B.4 7.SP.B.3, 7.SP.B.4 7.SP.B.3, 7.SP.B.4 7.SP.C.5, 7.SP.C.6, 7.SP.C.8b, 7.SP.C.5, 7.SP.C.6o, 7.EB.3 7.SP.C.5, 7.SP.C.6, 7.SP.C.7b, 7.SP.C.8b,
145 146 147 148 149	7 7 7 8 8	Module 17 Module 17 Module 17 Module 18 Module 18	8.GC9, 7.EE8.3, 7.GA.3, 7.G866 8.GC9, 7.EE8.3, 7.GA.3, 7.G866 8.GC9, 7.EE8.3, 7.GA.3, 7.G866 7.SPA.1, 7.SPA.2 7.SPA.1, 7.SPA.2		157 158 159 160 161	8 8 8 9 9	Module 19 Module 19 Module 19 Module 20 Module 20	7.SP.B.3, 7.SP.B.4 7.SP.B.3, 7.SP.B.4 7.SP.B.3, 7.SP.B.4 7.SP.C.6, 7.SP.C.6, 7.SP.C.8b, 7.SP.C.6, 7.SP.C.6, 7.EB.3 7.SP.C.6, 7.SP.C.6, 7.SP.C.8b, 7.SP.C.6, 7.SP.C.6, 7.SP.C.8b, 7.SP.C.6, 7.SP.C.6, 7.SP.C.8b,
145 146 147 148 149 150	7 7 7 8 8 8 8	Module 17 Module 17 Module 17 Module 17 Module 18 Module 18 Module 18	8.G.C.9, 7.EE.B.3, 7.G.A.3, 7.G.B.6 8.G.C.9, 7.EE.B.3, 7.G.A.3, 7.G.B.6 8.G.C.9, 7.EE.B.3, 7.G.A.3, 7.G.B.6 7.SP.A.1, 7.SP.A.2 7.SP.A.1, 7.SP.A.2 7.SP.A.1, 7.SP.A.2		157 158 159 160 161 162	8 8 9 9 9	Module 19 Module 19 Module 19 Module 20 Module 20 Module 20	7.SP.B.3, 7.SP.B.4 7.SP.B.3, 7.SP.B.4 7.SP.B.3, 7.SP.B.4 7.SP.C.5, 7.SP.C.6, 7.SP.C.7b, 7.SP.C.8b, 7.SP.C.8c, 7.SP.C.8c, 7.EE.8.3 7.SP.C.6, 7.SP.C.6c, 7.EE.8.3 7.SP.C.6, 7.SP.C.6c, 7.SP.C.8b, 7.SP.C.8c, 7.SP.C.6c, 7.SP.C.8b, 7.SP.C.8c, 7.SP.C.6c, 7.SP.C.8b, 7.SP.C.8c, 7.SP.C.8c, 7.EE.8.3
145 146 147 148 149 150 151	7 7 7 8 8 8 8 8 8	Module 17 Module 17 Module 17 Module 18 Module 18 Module 18 Module 18	B.G.C.9, 7.EEB.3, 7.G.A.3, 7.G.B.6 B.G.C.9, 7.EEB.3, 7.G.A.3, 7.G.B.6 B.G.C.9, 7.EEB.3, 7.G.A.3, 7.G.B.6 7.SP.A.1, 7.SP.A.2 7.SP.A.1, 7.SP.A.2 7.SP.A.1, 7.SP.A.2 7.SP.A.1, 7.SP.A.2		157 158 159 160 161 162 163	8 8 9 9 9 9 9 9	Module 19 Module 19 Module 19 Module 20 Module 20 Module 20 Module 20	7.SP.B.3, 7.SP.B.4 7.SP.B.3, 7.SP.B.4 7.SP.B.3, 7.SP.B.4 7.SP.C5, 7.SP.C6, 7.SP.C7b, 7.SP.C8b, 7.SP.C6, 7.SP.C6, 7.SP.C7b, 7.SP.C8b, 7.SP.C6, 7.SP.C6, 7.EE.8.3 7.SP.C5, 7.SP.C6, 7.SP.C7b, 7.SP.C8b, 7.SP.C6, 7.SP.C6, 7.SP.C7b, 7.SP.C8b, 7.SP.C6, 7.SP.C6, 7.SP.C7b, 7.SP.C8b, 7.SP.C6, 7.SP.C6, 7.SP.C7b, 7.SP.C8b, 7.SP.C6, 7.SP.C6, 7.SP.C7b, 7.SP.C8b, 7.SP.C8, 7.SP.C6, 7.SP.C7b, 7.SP.C8b,
145 146 147 148 149 150 151 152	7 7 7 8 8 8 8 8 8 8 8	Module 17 Module 17 Module 17 Module 18 Module 18 Module 18 Module 18 Module 18 Module 18	B.G.C.9, 7.EE.B.3, 7.G.A.3, 7.G.B.6 B.G.C.9, 7.EE.B.3, 7.G.A.3, 7.G.B.6 B.G.C.9, 7.EE.B.3, 7.G.A.3, 7.G.B.6 7.SP.A.1, 7.SP.A.2 7.SP.A.1, 7.SP.A.2 7.SP.A.1, 7.SP.A.2 7.SP.A.1, 7.SP.A.2 7.SP.A.1, 7.SP.A.2 7.SP.A.1, 7.SP.A.2		157 158 159 160 161 162 163 164	8 8 9 9 9 9 9 9 9 9 9	Module 19 Module 19 Module 19 Module 20 Module 20 Module 20 Module 20 Module 20	7.SP.B.3, 7.SP.B.4 7.SP.B.3, 7.SP.B.4 7.SP.B.3, 7.SP.B.4 7.SP.B.3, 7.SP.B.4 7.SP.C.6, 7.SP.C.7b, 7.SP.C.8b, 7.SP.C.6c, 7.SP.C.6b, 7.SP.C.8b, 7.SP.C.6c, 7.SP.C.6c, 7.SP.C.8b, 7.SP.C.6c, 7.SP.C.7b, 7.SP.C.8b, 7.SP.C.6c, 7.SP.C.7b, 7.SP.C.8b, 7.SP.C.6, 7.SP.C.7b, 7.SP.C.8b,
145 146 147 148 149 150 151 152 153	7 7 8 8 8 8 8 8 8 8 8 8	Module 17 Module 17 Module 17 Module 18 Module 18 Module 18 Module 18 Module 18 Module 18 Module 18 Module 18	B.G.C.9, 7.EEB.3, 7.G.A.3, 7.G.B.6 B.G.C.9, 7.EEB.3, 7.G.A.3, 7.G.B.6 B.G.C.9, 7.EEB.3, 7.G.A.3, 7.G.B.6 7.SP.A.1, 7.SP.A.2 7.SP.A.1, 7.SP.A.2 7.SP.A.1, 7.SP.A.2 7.SP.A.1, 7.SP.A.2 7.SP.A.1, 7.SP.A.2 7.SP.A.1, 7.SP.A.2 7.SP.A.1, 7.SP.A.2		157 158 159 160 161 162 163 164 165	8 8 9 9 9 9 9 9 9 9 9 9	Module 19 Module 19 Module 19 Module 20 Module 20 Module 20 Module 20 Module 20 Module 20 Module 20 Module 20	7.SP.B.3, 7.SP.B.4 7.SP.B.3, 7.SP.B.4 7.SP.B.3, 7.SP.B.4 7.SP.C.5, 7.SP.C.6, 7.SP.C.7b, 7.SP.C.8b, 7.SP.C.6, 7.SP.C.7b, 7.SP.C.8b, 7.SP.C.6, 7.SP.C.6b, 7.EE.8.3 7.SP.C.5, 7.SP.C.6, 7.SP.C.7b, 7.SP.C.8b, 7.SP.C.6, 7.SP.C.6b, 7.EE.8.3 7.SP.C.5, 7.SP.C.6b, 7.EE.8.3 7.SP.C.5, 7.SP.C.6b, 7.SP.C.8b, 7.SP.C.8c, 7.SP.C.8b, 7.EE.8.3
145 146 147 148 149 150 151 152 153 154	7 7 8 8 8 8 8 8 8 8 8 8 8 8 8	Module 17 Module 17 Module 17 Module 18 Module 18 Module 18 Module 18 Module 18 Module 18 Module 18 Module 18 Module 18 Module 18	B.G.C.9, 7.EE.B.3, 7.G.A.3, 7.G.B.6 B.G.C.9, 7.EE.B.3, 7.G.A.3, 7.G.B.6 B.G.C.9, 7.EE.B.3, 7.G.A.3, 7.G.B.6 7.SP.A.1, 7.SP.A.2 7.SP.A.1, 7.SP.A.2 7.SP.A.1, 7.SP.A.2 7.SP.A.1, 7.SP.A.2 7.SP.A.1, 7.SP.A.2 7.SP.A.1, 7.SP.A.2 7.SP.A.1, 7.SP.A.2 7.SP.B.3, 7.SP.B.4		157 158 159 160 161 162 163 164 165	8 8 9 9 9 9 9 9 9 9 9	Module 19 Module 19 Module 19 Module 20 Module 20 Module 20 Module 20 Module 20 Module 20 Module 20	7.SP.B.3, 7.SP.B.4 7.SP.B.3, 7.SP.B.4 7.SP.B.3, 7.SP.B.4 7.SP.C.5, 7.SP.C.6, 7.SP.C.7b, 7.SP.C.8b, 7.SP.C.6, 7.SP.C.6b, 7.EE.3 7.SP.C.6, 7.SP.C.6b, 7.EE.3
145 146 147 148 149 150 151 152 153 154 155	7 7 8 8 8 8 8 8 8 8 8 8 8 8 8 8	Module 17 Module 17 Module 17 Module 18 Module 18 Module 18 Module 18 Module 18 Module 18 Module 18 Module 18 Module 19 Module 19	B.G.C.9, 7.EE.B.3, 7.G.A.3, 7.G.B.6 B.G.C.9, 7.EE.B.3, 7.G.A.3, 7.G.B.6 B.G.C.9, 7.EE.B.3, 7.G.A.3, 7.G.B.6 7.SP.A.1, 7.SP.A.2 7.SP.A.1, 7.SP.A.2 7.SP.A.1, 7.SP.A.2 7.SP.A.1, 7.SP.A.2 7.SP.A.1, 7.SP.A.2 7.SP.A.1, 7.SP.A.2 7.SP.A.1, 7.SP.A.2 7.SP.A.1, 7.SP.A.2 7.SP.B.3, 7.SP.B.4 7.SP.B.3, 7.SP.B.4		157 158 159 160 161 162 163 164 165	8 8 9 9 9 9 9 9 9 9 9	Module 19 Module 19 Module 19 Module 20 Module 20 Module 20 Module 20 Module 20 Module 20 Module 20	7.SP.B.3, 7.SP.B.4 7.SP.B.3, 7.SP.B.4 7.SP.B.3, 7.SP.B.4 7.SP.B.3, 7.SP.B.4 7.SP.C.5, 7.SP.C.6, 7.SP.C.7b, 7.SP.C.8b, 7.SP.C.6, 7.SP.C.6b, 7.SP.C.8b, 7.SP.C.6c, 7.SP.C.6b, 7.SP.C.8b, 7.SP.C.6c, 7.SP.C.6b, 7.SP.C.8b, 7.SP.C.6c, 7.SP.C.6b, 7.SP.C.8b, 7.SP.C.6c, 7.SP.C.6b, 7.SP.C.8b, 7.SP.C.6c, 7.SP.C.7b, 7.SP.C.8b, 7.SP.C.6c, 7.SP.C.6b, 7.EE.8.3
145 146 147 148 149 150 151 152 153 154 155	7 7 8 8 8 8 8 8 8 8 8 8 8 8 8 8	Module 17 Module 17 Module 17 Module 18 Module 18 Module 18 Module 18 Module 18 Module 18 Module 18 Module 18 Module 19 Module 19	B.G.C.9, 7.EEB.3, 7.G.A.3, 7.G.B.6 B.G.C.9, 7.EEB.3, 7.G.A.3, 7.G.B.6 B.G.C.9, 7.EEB.3, 7.G.A.3, 7.G.B.6 7.SPA.1, 7.SPA.2 7.SPA.1, 7.SPA.2 7.SPA.1, 7.SPA.2 7.SPA.1, 7.SPA.2 7.SPA.1, 7.SPA.2 7.SPA.1, 7.SPA.2 7.SPA.1, 7.SPA.2 7.SPA.1, 7.SPA.2 7.SP.B.3, 7.SPB.4 7.SPB.3, 7.SPB.4		157 158 159 160 161 162 163 164 165	8 8 9 9 9 9 9 9 9 9 9 9	Module 19 Module 19 Module 19 Module 20 Module 20 Module 20 Module 20 Module 20 Module 20 Module 20	7.SP.B.3, 7.SP.B.4 7.SP.B.3, 7.SP.B.4 7.SP.B.3, 7.SP.B.4 7.SP.C5, 7.SP.C6, 7.SP.C7b, 7.SP.C8b, 7.SP.C8, 7.SP.C6a, 7.EE.8.3 7.SP.C5, 7.SP.C6, 7.SP.C7b, 7.SP.C8b, 7.SP.C8, 7.SP.C6a, 7.EE.8.3 7.SP.C5, 7.SP.C6a, 7.EE.8.3 7.SP.C5, 7.SP.C6a, 7.SP.C7b, 7.SP.C8b, 7.SP.C8c, 7.SP.C7b, 7.SP.C8b, 7.SP.C8c, 7.SP.C7b, 7.SP.C8b, 7.SP.C8c, 7.SP.C7b, 7.SP.C8b, 7.SP.C8c, 7.SP.C7b, 7.SP.C8b, 7.SP.C8c, 7.SP.C6a, 7.EE.8.3 7.SP.C5, 7.SP.C6, 7.SP.C7b, 7.SP.C8b, 7.SP.C8c, 7.SP.C8a, 7.EE.8.3 7.SP.C5, 7.SP.C6, 7.SP.C7b, 7.SP.C8b, 7.SP.C8c, 7.SP.C8a, 7.EE.8.3
145 146 147 148 149 150 151 152 153 154 155 Day	7 7 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	Module 17 Module 17 Module 17 Module 18 Module 18 Module 18 Module 18 Module 18 Module 18 Module 18 Module 18 Module 19 Module 19 Module 19	B.G.C.9, 7.EE.B.3, 7.G.A.3, 7.G.B.6 B.G.C.9, 7.EE.B.3, 7.G.A.3, 7.G.B.6 B.G.C.9, 7.EE.B.3, 7.G.A.3, 7.G.B.6 7.SP.A.1, 7.SP.A.2 7.SP.A.1, 7.SP.A.2 7.SP.A.1, 7.SP.A.2 7.SP.A.1, 7.SP.A.2 7.SP.A.1, 7.SP.A.2 7.SP.A.1, 7.SP.A.2 7.SP.B.3, 7.SP.B.4 7.SP.B.3, 7.SP.B.4 J NJSLS	UNE	157 158 159 160 161 162 163 164 165 Day	8 8 9 9 9 9 9 9 9 9 9 9	Module 19 Module 19 Module 19 Module 20 Module 20 Module 20 Module 20 Module 20 Module 20 Module 20 Module 20	7.SP.B.3, 7.SP.B.4 7.SP.B.3, 7.SP.B.4 7.SP.B.3, 7.SP.B.4 7.SP.C5, 7.SP.C6, 7.SP.C7b, 7.SP.C8b, 7.SP.C6, 7.SP.C6, 7.SP.C7b, 7.SP.C8b, 7.SP.C8, 7.SP.C6, 7.SP.C7b, 7.SP.C8b, 7.SP.C8, 7.SP.C6, 7.SP.C7b, 7.SP.C8b, 7.SP.C8, 7.SP.C6, 7.SP.C7b, 7.SP.C8b, 7.SP.C8, 7.SP.C6b, 7.SP.C7b, 7.SP.C8b, 7.SP.C8b, 7.SP.C8b, 7.SP.C7b, 7.SP.C8b, 7.SP.C8b
145 146 147 148 149 150 151 152 153 154 155 Day 166	7 77 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 9	Module 17 Module 17 Module 17 Module 18 Module 18 Module 18 Module 18 Module 18 Module 18 Module 18 Module 18 Module 19 Module 19 Module 20	B.G.C.9, 7.EE.B.3, 7.G.A.3, 7.G.B.6 B.G.C.9, 7.EE.B.3, 7.G.A.3, 7.G.B.6 B.G.C.9, 7.EE.B.3, 7.G.A.3, 7.G.B.6 7.SPA.1, 7.SPA.2 7.SPA.1, 7.SPA.2 7.SPA.1, 7.SPA.2 7.SPA.1, 7.SPA.2 7.SPA.1, 7.SPA.2 7.SPA.1, 7.SPA.2 7.SPA.1, 7.SPA.2 7.SPA.3, 7.SPB.4 7.SPB.3, 7.SPB.4 7.SPB.3, 7.SPB.4 7.SPC.8, 7.SPC.6, 7.SPC.75, 7.SPC. Bb, 7.SPC.66, 7.SPC.76, 7.SPC.	UNE	157 158 159 160 161 162 163 164 165	8 8 9 9 9 9 9 9 9 9 9	Module 19 Module 19 Module 19 Module 20 Module 20 Module 20 Module 20 Module 20 Module 20 Module 20 Module 20 EDM LESSON End of Year Exam Review	7.SP.B.3, 7.SP.B.4 7.SP.B.3, 7.SP.B.4 7.SP.B.3, 7.SP.B.4 7.SP.B.3, 7.SP.B.4 7.SP.C.5, 7.SP.C.6, 7.SP.C.7b, 7.SP.C.8b, 7.SP.C.8, 7.SP.C.80, 7.EE.8.3 7.SP.C.5, 7.SP.C.6, 7.SP.C.7b, 7.SP.C.8b, 7.SP.C.8, 7.SP.C.80, 7.EE.8.3 7.SP.C.5, 7.SP.C.6, 7.SP.C.7b, 7.SP.C.8b, 7.SP.C.8c, 7.SP.C.80, 7.EE.8.3 7.SP.C.5, 7.SP.C.6, 7.SP.C.7b, 7.SP.C.8b, 7.SP.C.8c, 7.SP.C.80, 7.EE.8.3 7.SP.C.5, 7.SP.C.6, 7.SP.C.7b, 7.SP.C.8b, 7.SP.C.8c, 7.SP.C.6c, 7.SP.C.7b, 7.SP.C.8b, 7.SP.C.8c, 7.SP.C.80, 7.EE.8.3 7.SP.C.5, 7.SP.C.60, 7.SP.C.7b, 7.SP.C.8b, 7.SP.C.8c, 7.SP.C.80, 7.EE.8.3 NJSLS
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145 146 147 148 149 150 151 152 153 154 155 Day 166 167 168	7 7 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	Module 17 Module 17 Module 17 Module 18 Module 18 Module 18 Module 18 Module 18 Module 18 Module 18 Module 18 Module 19 Module 19 Module 20 Module 20 Module 21	B.G.C.9, 7.EE.B.3, 7.G.A.3, 7.G.B.6 B.G.C.9, 7.EE.B.3, 7.G.A.3, 7.G.B.6 B.G.C.9, 7.EE.B.3, 7.G.A.3, 7.G.B.6 7.SPA.1, 7.SPA.2 7.SPA.1, 7.SPA.2 7.SPA.1, 7.SPA.2 7.SPA.1, 7.SPA.2 7.SPA.1, 7.SPA.2 7.SPA.1, 7.SPA.2 7.SPA.1, 7.SPA.2 7.SPA.1, 7.SPA.2 7.SPA.1, 7.SPA.2 7.SPA.3, 7.SPA.4 7.SPB.3, 7.SPB.4 7.SPB.3, 7.SPB.4 7.SPE.5, 7.SPC.6, 7.SPC.7 B, 7.SPC.6, 7.SPC.7, 7.SPC. Bb, 7.SPC.6, 7.SPC.7, 7.SPC. Bb, 7.SPC.6, 7.SPC.6, 7.SPC.2 Bb, 7.SPC.6, 7.SPC.6, 7.SPC.2 Bb, 7.SPC.6, 7.SPC.6, 7.SPC.2 Bb, 7.SPC.8, 7.SPC.8 Bb, 7.SPC.		157 158 159 160 161 162 163 164 165	8 8 9 9 9 9 9 9 9 9 9 9 9 9 9	Module 19 Module 19 Module 19 Module 20 Module 20	7.SP.B.3, 7.SP.B.4 7.SP.B.3, 7.SP.B.4 7.SP.B.3, 7.SP.B.4 7.SP.C.6, 7.SP.C.6, 7.SP.C.B.5, 7.SP.C.6, 7.SP.C.6, 7.SP.C.B.5, 7.SP.C.6, 7.SP.C.6, 7.SP.C.B.5, 7.SP.C.6, 7.SP.C.6, 7.SP.C.75, 7.SP.C.B.5, 7.SP.C.8, 7.SP.C.8, 7.SP.
145 146 147 148 149 150 151 152 153 154 155 Day 166 167 168 169	7 7 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	Module 17 Module 17 Module 17 Module 18 Module 19 Module 19 Module 20 Module 21	B.G.C.9, 7.EE.B.3, 7.G.A.3, 7.G.B.6 B.G.C.9, 7.EE.B.3, 7.G.A.3, 7.G.B.6 B.G.C.9, 7.EE.B.3, 7.G.A.3, 7.G.B.6 7.SP.A.1, 7.SP.A.2 7.SP.A.1, 7.SP.A.2 7.SP.A.1, 7.SP.A.2 7.SP.A.1, 7.SP.A.2 7.SP.A.1, 7.SP.A.2 7.SP.A.1, 7.SP.A.2 7.SP.A.1, 7.SP.A.2 7.SP.B.3, 7.SP.B.4 7.SP.B.3, 7.SP.B.4 7.SP.B.3, 7.SP.B.4 7.SP.B.3, 7.SP.B.4 7.SP.C.5, 7.SP.C.6, 7.SP.C. Bb, 7.SP.C.6, 7.SP.C.7b, 7.SP.C. Bb, 7.SP.C.6, 7.SP.C.7b, 7.SP.C. Bb, 7.SP.C.8, 7.SP.C.8, 7.SP.C.8 Bb, 7.SP.C.8, 7.SP.C.8, 7.SP.C.8 7.SP.C.8, 7.SP.C.8, 7.SP.C.8 7.SP.C.8, 7.SP.C.8, 7.SP.C.8 7.SP.C.8, 7.SP.C.8, 7.SP.C.8 7.SP.C.8, 7.SP.C.8, 7.SP.C.8		157 158 159 160 161 162 163 164 165 164 165 109 178 178 179 180	8 8 9 9 9 9 9 9 9 9 9 0 0 0 0 0 0 0 0 0	Module 19 Module 19 Module 19 Module 20 Module 20 Module 20 Module 20 Module 20 Module 20 Module 20 Module 20 Module 20 EDM LESSON End of Year Exam End of Year Exam	7.SP.B.3, 7.SP.B.4 7.SP.B.3, 7.SP.B.4 7.SP.B.3, 7.SP.B.4 7.SP.C.8, 7.SP.C.6, 7.SP.C.7b, 7.SP.C.8b, 7.SP.C.8, 7.SP.C.6o, 7.EE.3 7.SP.C.5, 7.SP.C.6, 7.SP.C.7b, 7.SP.C.8b, 7.SP.C.8, 7.SP.C.6o, 7.EE.8.3 7.SP.C.5, 7.SP.C.6, 7.SP.C.7b, 7.SP.C.8b, 7.SP.C.8, 7.SP.C.8o, 7.EE.8.3 7.SP.C.5, 7.SP.C.6o, 7.SP.C.7b, 7.SP.C.8b, 7.SP.C.8, 7.SP.C.8o, 7.EE.8.3 7.SP.C.5, 7.SP.C.6o, 7.SP.C.7b, 7.SP.C.8b, 7.SP.C.8, 7.SP.C.8o, 7.EE.8.3 NJSLS
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145 146 147 148 149 150 151 152 153 154 155 Day 166 167 168 169 170 171 172	7 7 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	Module 17 Module 17 Module 17 Module 18 Module 19 Module 19 Module 20 Module 21 Module 21 Module 21 Module 21 Module 21 Module 21 Module 21	B.G.C.9, 7.EE.B.3, 7.G.A.3, 7.G.B.6 B.G.C.9, 7.EE.B.3, 7.G.A.3, 7.G.B.6 B.G.C.9, 7.EE.B.3, 7.G.A.3, 7.G.B.6 R.G.C.9, 7.EE.B.3, 7.G.A.3, 7.G.B.6 7.SP.A.1, 7.SP.A.2 7.SP.A.1, 7.SP.A.2 7.SP.A.1, 7.SP.A.2 7.SP.A.1, 7.SP.A.2 7.SP.A.1, 7.SP.A.2 7.SP.A.1, 7.SP.A.2 7.SP.B.3, 7.SP.B.4 7.SP.B.3, 7.SP.B.4 7.SP.B.3, 7.SP.B.4 7.SP.B.3, 7.SP.B.4 7.SP.C.8, 7.SP.C.8, 7.SP.C. B, 7.SP.C.8, 7.SP.C.7, 7.SP.C. B, 7.SP.C.8, 7.EE.3, 7.SP.C.8c 7.SP.C.7, 7.SP.C.4, 7.SP.C.7, 7.SP.C. B, 7.SP.C.80, 7.EE.3, 7.SP.C.8c 7.SP.C.7, 7.SP.C.4, 7.SP.C.70, 7.SP.C. B, 7.SP.C.80, 7.EE.3, 7.SP.C.8c 7.SP.C.7, 7.SP.C.6, 7.SP.C.70, 7.SP.C. B, 7.SP.C.70, 7.SP.C.6, 7.SP.C.70, 7.SP.C. B, 7.SP.C.80, 7.EE.3, 7.SP.C.8c 7.SP.C.7, 7.SP.C.6, 7.SP.C.70, 7.SP.C. B, 7.SP.C.7, 7.SP.C.6, 7.SP.C.70,		157 158 159 160 161 162 163 164 165 164 165 179 180	8 8 9 9 9 9 9 9 9 0 0 0 0 0 0 0 0 0 0 0	Module 19 Module 19 Module 20 Module 20 Module 20 Module 20 Module 20 Module 20 Module 20 Module 20 Module 20 EDM LESSON End of Year Exam Review End of Year Exam End of Year Exam	7.SP.B.3, 7.SP.B.4 7.SP.B.3, 7.SP.B.4 7.SP.B.3, 7.SP.B.4 7.SP.C8, 7.SP.C6, 7.SP.C7b, 7.SP.C8b, 7.SPC.6b, 7.SP.C6, 7.SP.C8b, 7.SP.C8b, 7.SP.C8c, 7.SP.C6, 7.SP.C6, 7.SP.C7b, 7.SP.C8b, 7.SP.C8c, 7.SP.C6c, 7.SP.C7b, 7.SP.C8b, 7.SP.C8c,
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175	9	Module 21	7.SP.C.7, 7.SP.C.6, 7.SP.C.7a, 7.SP.C. 8b, 7.SP.C.8a, 7.EE.B.3, 7.SP.C.8c			
176		End of Year Exam Review				
177		End of Year Exam Review				

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