NEPTUNE TOWNSHIP SCHOOL DISTRICT

Mathematics

Curriculum

Grade 6 Honors

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

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NEPTUNE TOWNSHIP SCHOOL DISTRICT

MATHEMATICS
CURRICULUM
GRADE 6 HONORS

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NEPTUNE TOWNSHIP SCHOOL DISTRICT

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Grade 6 Honors

Acknowledgements

The Neptune Township School District Mathematics Grade 6 Honors Curriculum guide was developed through the efforts of Louis J. Soto, teacher of Mathematics, with guidance of Dawn Reinhardt, Department Chairperson, Lori Dalelio, Supervisor of STEM, and Sally A. Millaway, Ed.D., Director for Curriculum, Instruction and Assessment.

Mr. Soto is to be commended for his dedication in creating this curriculum in the UbD format and their expertise in the area of high school mathematics. The Math Grade 6 Honors guide was written in alignment with the 2023 New Jersey Student Learning Standards for Mathematics.

NEPTUNE TOWNSHIP SCHOOL DISTRICT

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.

MATHEMATICS
GRADE 6 HONORS

COURSE DESCRIPTION

Mathematics Grade 6 Honors focuses on four critical areas: (1) connecting ratio and rate to whole number multiplication and division and using concepts of ratio and rate to solve problems; (2) completing understanding of division of fractions and extending the notion of number to the system of rational numbers, which includes negative numbers; (3) writing, interpreting, and using expressions and equations; and (4) developing understanding of statistical thinking.

Students are challenged to develop their mathematical mindset in topics of reasoning about relationships among shapes to determine area, surface area, and volume by decomposing these shapes, rearranging or removing pieces, and relating the shapes to rectangles. Using these methods, students discuss, develop, and justify formulas for areas of triangles and parallelograms. They work on STEM challenges and develop their problems solving skills through inquiry based problems. They prepare for work on scale drawings and constructions in Grade 7 by drawing polygons in the coordinate plane.

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
	Recognize the impact of one's feelings and thoughts on one's own behavior
X	Recognize one's personal traits, strengths and limitations
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
X	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
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
X	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
Responsible Decision Making	
X	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
	Evaluate personal, ethical, safety and civic impact of decisions
Relationship Skills	
X	Establish and maintain healthy relationships
X	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

Unit Plan Title	**Unit 1: Number Systems and Operations**
Suggested Time Frame	**50 days**

Overview / Rationale

In this introductory unit, students will apply and extend previous understandings of operations with fractions to add, subtract, multiply, and divide rational numbers.
Module 1: Students will compare and interpret rational numbers. Students will find and apply absolute value.Students will find and apply GCF and LCM.
Module 2: Students will divide fractions and mixed numbers
Module 3: Students will perform operations on multi-digit decimals
Module 4: Students will Add and Subtract rational numbers
Module 5: Students will compute sums of rational numbers with same or different signs

Stage 1 – Desired Results

New Jersey Student Learning Standards for Mathematics (2023)

Established Goals:

6.NS.A.1 Interpret and compute quotients of fractions, and solve word problems involving division of fractions by fractions, e.g., by using visual fraction models and equations to represent the problem. For example, create a story context for

$\left(\frac{2}{3}\right) \div \left(\frac{3}{4}\right)$ and use a visual fraction model to show the quotient; use the relationship between multiplication and division to explain that $\left(\frac{2}{3}\right) \div \left(\frac{3}{4}\right) = \frac{8}{9}$ because $\frac{3}{4}$ of $\frac{8}{9}$ is $\frac{2}{3}$. (In general, $(\frac{a}{b}) \div (\frac{c}{d}) = \frac{ad}{bc}$ How much chocolate will each person get if 3 people share ½ lb of chocolate equally? How many ¾-cup servings are in ⅔ of a cup of yogurt? How wide is a rectangular strip of land with length ¾ mi and area ½ square mi?

6.NS.B.2 With accuracy and efficiency, divide multi-digit numbers using the standard algorithm.

6.NS.B.3 With accuracy and efficiency, add, subtract, multiply, and divide multi-digit decimals using the standard algorithm for each operation.

6.NS.B.4 Find the greatest common factor of two whole numbers less than or equal to 100 and the least common multiple of two whole numbers less than or equal to 12. Use the distributive property to express a sum of two whole numbers 1–100 with a common factor as a multiple of a sum of two whole numbers with no common factor. For example, express 36 + 8 as $4\ (9 + 2)$.

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

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

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

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

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

6.NS.C.7 Understand ordering and absolute value of rational numbers.

1. Understand ordering and absolute value of rational numbers.

a. Interpret statements of inequality as statements about the relative position of two numbers on a number line diagram. For example, interpret −3 >−7 as a statement that −3 is located to the right of −7 on a number line oriented from left to right.

b. Write, interpret, and explain statements of order for rational numbers in real-world contexts. For example, write −3°C > −7°C to express the fact that−3°C is warmer than −7° C.

c. Understand the absolute value of a rational number as its distance from 0 on the number line; interpret absolute value as magnitude for a positive or negative quantity in a real-world situation. For example, for an account balance of −30 dollars, write |–30| = 30 to describe the size of the debt in dollars.

d. Distinguish comparisons of absolute value from statements about order. For example, recognize that an account balance less than −30 dollars represents a debt greater than 30 dollars.

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?

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:**
● How are division and multiplication of fractions similar? ● When is it important to apply LCM and GCF? ● What types of numbers are not rational? ● How can ordering rational numbers help us compare values? ● When is absolute value used in the real world? ● How can we solve real-world mathematical problems using operations on rational numbers? ● Why are inverse operations used? How do you determine which to use? ● Why do we use order of operations?	● Factors of a whole number are always less than or equal to that whole number. ● Multiples of a whole number are always more than or equal to that whole number. ● Positive and negative numbers are in opposite directions on the number line. ● Absolute value is the distance from zero on a number line. ● 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. ● Integers can be divided.
Knowledge: *Students will know…* ● Division of fractions involves multiplication.	**Skills:** *Students will be able to…* ● Using a number line, identify, interpret, compare and order:

● A multiple is found through multiplication. ● A factor is found through division. ● The sum of opposite numbers is zero. ● Inverse operations are used to cancel each other. ● Rational numbers can be changed into decimal through division. ● Distributive property involves multiplication.	● Integers. ● Rational numbers. ● Find and use absolute value in real-world applications. ● Divide fractions and mixed numbers. ● Use LCM and GCF to add, subtract, multiply, and divide fractions. ● Add, subtract, multiply and divide multi-digit decimals.

Interdisciplinary Connections
2023 New Jersey Student Learning Standards for English Language Arts **<u>Grade 6 Reading</u>** **RI.CR.6.1.** Cite 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.6.6.** Integrate information when presented in different media or formats (e.g., visually, quantitatively) to develop a coherent understanding of a topic or issue. **<u>Grade 6 Writing</u>** **W.IW.6.2**. 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.6.6.** Gather relevant information from multiple print and digital sources; assess the credibility of each source; and quote or paraphrase the data and conclusions of others while avoiding plagiarism and providing basic bibliographic information for sources. **<u>Grade 6 Speaking and Listening</u>** **SL.PE.6.1.** Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 6 topics, texts, and issues, building on others' ideas and expressing their own clearly.

SL.II.6.2. Interpret information presented in diverse media and formats (e.g., visually, quantitatively, orally) and explain how it contributes to 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.NI.4 Explain how new security measures have been created in response to key malware events.
8.1.8.IC.1 Compare the trade-offs associated with computing technologies that affect individual's everyday activities and career options.
8.1.8.IC.2 Describe issues of bias and accessibility in the design of existing technologies.

NJSLS 8.2 Design Thinking

8.2.8.ITH.2 Compare how technologies have influenced society over time.
8.2.8.ITH.5 Compare the impacts of a given technology on different societies, noting factors that may make a technology appropriate and sustainable in one society but not in another.

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

NJSLS 9.1 Personal Financial Literacy

9.1.8.EG.1 Explain how taxes affect disposable income and the difference between net and gross income.
9.1.8.PB.4 Construct a simple personal savings and spending plan based on various sources of income and different stages of life (e.g. teenager, young adult, family).

NJSLS 9.4 Life Literacies and Key Skills

9.4.8.DC.4 Explain how information shared digitally is public and can be searched, copied, and potentially seen by public audiences.

9.4.8.IML.2 Identify specific examples of distortion, exaggeration, or misrepresentation of information.

Student Resources
Texts: Houghton Mifflin Harcourt, **Into Math Advanced 1,** grade 6, 1st Edition, 2020 ISBN: 978-035-811582-3 **Resources: Into Math Advanced 1,** grade 6 ● More Practice / Homework

- Reteach and Interactive Reteach
- Challenge and Interactive Challenge
- Google Suite: Docs, Sheets, Slides, Forms
- Devices:
  - Chromebooks
  - Texas Instruments (TI-84) Calculators

Websites:
- http://www.hmhco.com Into Math
- http://khanacademy.org Tutorials on individual lessons

Teacher Resources

Be as specific as possible. Consider all teacher resources including:

Texts: Houghton Mifflin Harcourt, **Into Math Advanced 1,** grade 6, 1st Edition, 2020
ISBN:978-0-358-11609-7
Technology Into Math, grade 6
- Unit STEM Task Cards
- Online Data-Driven Interventions
- More Practice / Homework
- Illustrative Mathematics
- Reteach and Interactive Reteach
- Challenge and Interactive Challenge
- Mini-Lesson Tabletop Flipchart
- Google Suite: Docs, Sheets, Slides, Forms, Record
- Devices: SMART / Promethean Interactive Boards
- New Jersey Climate Education Hub

6th grade math vocabulary
https://www.sebring.k12.oh.us/userfiles/28/Classes/7665/6th%20Grade%20Common%20Core%20Vocabulary%20definitions-0.pdf

Websites:
- http://www.hmhco.com Into Math – Ed, Your Friend in Learning
- http://www.kutasoftware.com Test and worksheet generator for teachers
- http://khanacademy.org Tutorials on individual lessons

NJDOE Instructional Units for Mathematics / CAR Templates:
- Grade 6, Unit 1, Module A Unit 1 Sixth Grade Module A
- Grade 6, Unit 3, Module A Unit 3 Sixth Grade Module A
- Grade 6, Unit 4, Module A Unit 4 Sixth Grade Module A
- Grade 6, Unit 4, Module B Unit 4 Sixth Grade Module B

Stage 2 – Assessment Evidence

- **Unit STEM activity:** *Event Organizer*
- Illustrative Mathematics
- Interactive Reteach
- Interactive Challenge

Pre-Assessments:

- Gr 6 Math *LinkIt!* NJSLS Form A
- HMS Pre-Assessment
- *Are You Ready?*

Formative Assessments:

- Gr 6 Math *LinkIt!* NJSLS Form B
- Exit Slip
- Student *"I Can"* Self-Assessment
- Informal Observations

Summative Assessments:

- Lesson quizzes
- NJDOE Digital Item Library- Released NJSLA items
- Module Tests A and B
- HMH Midyear Assessment
- EOY Exams:
  - Gr 6 Math *LinkIt!* NJSLS Form C
  - HMH EOY Assessment

Stage 3 – Learning Plan

STEM Task: *Event Organizer*

Learning Mindset: *Perseverance*

Module Opener:

- **Module 1:** *Which Fraction Does Not Belong?*
- **Module 2:** *A Perplexing Pet Puzzle*
- **Module 3:** *What's the Best Route?*
- **Module 4:** *Can you Find the Mystery Number ?*

Diagnostic Assessment: *Are You Ready?*

Module 1: Rational Concept

- **Lesson 1.1:** Identify and Interpret Rational Numbers
- **Lesson 1.2:** Compare Rational Numbers Using Number Line

- **Lesson 1.3:** Find and Apply Absolute Value
- **Lesson 1.4:** Find and Apply LCM and GCF
- **Lesson 1.5:** Order Rational Numbers

Module 2: Fraction Division

- **Lesson 2.1:** Explore Division of Fractions with Like and Unlike Denominators
- **Lesson 2.2:** Explore Division of Mixed Numbers
- **Lesson 2.3:** Practice and Apply Division of Fractions and Mixed Numbers
- **Lesson 2.4:** Practice Fraction Operations

Module 3: Fluency with Multi-Digit Decimal Operations

- **Lesson 3.1:** Add and Subtract Multi-Digit Decimals
- **Lesson 3.2:** Multiply Multi-Digit Decimals
- **Lesson 3.3:** Divide Multi-Digit Whole Numbers
- **Lesson 3.4:** Divide Multi-Digit Decimals
- **Lesson 3.5:** Apply Operations with Multi-Digit Decimals

Module 4:Understand Addition and Subtraction of Rational Numbers

- **Lesson 4.1:** Add or Subtract a Positive Integer on a number line
- **Lesson 4.2:** Add or Subtract a Negative Integer on a number line
- **Lesson 4.3:** USe a Number LIne to Add and Subtract Rational Numbers

Module 5: Fluency with rational Number Operations

- **Lesson 5.1:** Compute Sums Of Rational Number
- **Lesson 5.2:** Compute Differences of Rational Number
- **Lesson 5.3:** Understand and Compute Products and Quotients of Rational Numbers
- **Lesson 5.4:** Write rational Numbers as Decimals
- **Lesson 5.5:** Multiply and Divide Rational Number in Context
- **Lesson 5.6:** Apply Properties to Multi-Step Problems with rational Numbers
- **Lesson 5.7:** Solve Multi-Step Problems with rational Numbers in Context

Unit Plan Title	Unit 2: Expressions, Equations and Inequalities
Suggested Time Frame	30 Days

Overview / Rationale

In this unit, students will use properties of operations to generate equivalent expressions. Students will solve real-life and mathematical problems using numerical and algebraic expressions and equations.

Module 6: Students will apply exponents. Students will write and evaluate numerical and algebraic expressions.

Module 7: Students will write equations to represent situations. Students will be able to solve one step equations. Students will write and graph inequalities.

Module 8: Students will write and represent equations from tables, graphs, and verbal descriptions.

Stage 1 – Desired Results

New Jersey Student Learning Standards for Mathematics (2023)

Established Goals:

6.EE.A.1 Write and evaluate numerical expressions involving whole-number exponents.
6.EE.A.2 Write, read, and evaluate expressions in which letters stand for numbers.

a. Write expressions that record operations with numbers and with letters standing for numbers. For example, express the calculation "Subtract y from 5" as $5 - y$.

b. Identify parts of an expression using mathematical terms (sum, term, product, factor, quotient, coefficient); view one or more parts of an expression as a single entity. For example, describe the expression 2(8+7) as a product of two factors; view (8 + 7) as both a single entity and a sum of two terms.

c. Evaluate expressions at specific values of their variables. Include expressions that arise from formulas used in real-world problems. Perform arithmetic operations, including those involving whole number exponents, in the conventional order when there are no parentheses to specify a particular order (Order of Operations). For example, use the formulas V=s3 and A=6s2 to find the volume and surface area of a cube with sides of length s = ½.

6.EE.A.3 Apply the properties of operations to generate equivalent expressions. For example, apply the distributive property to the expression 3(2+x) to produce the equivalent expression

6+3x; apply the distributive property to the expression 24x+18y to produce the equivalent expression 6(4x+3y); apply properties of operations to y+y+y to produce the equivalent expression 3y.

6.EE.A.4 Identify when two expressions are equivalent (i.e., when the two expressions name the same number regardless of which value is substituted into them). For example, the expressions y+y+y and 3y are equivalent because they name the same number regardless of which number *y* stands for

6.EE.B.5 Understand solving an equation or inequality as a process of answering a question: which values from a specified set, if any, make the equation or inequality true? Use substitution to determine whether a given number in a specified set makes an equation or inequality true.

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

6.EE.B.7 Solve real-world and mathematical problems by writing and solving equations of the form x+ p=q and px=q for cases in which *p*, *q* and *x* are all nonnegative rational numbers. **(Students may reason and solve one-variable equations and inequalities. Sample question, if the temperature at sea level is 20oC, what is the temperature at 100 m above sea level?) (Clarification Statements: As altitude increases, temperature decreases. With every 100 meters, the temperature drops by an average of 1oC.**

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

6.EE.C.9. Use variables to represent two quantities in a real-world problem that change in relationship to one another; write an equation to express one quantity, thought of as the dependent variable, in terms of the other quantity, thought of as the independent variable. Analyze the relationship between the dependent and independent variables using graphs and tables, and relate these to the equation. For example, in a problem involving motion at constant speed, list and graph ordered pairs of distances and times, and write the equation d =65t

to represent the relationship between distance and time. **(Students analyze climate change computational models and propose refinements. These models would require students analyze the relationship between the dependent and independent variables using graphs and tables and relate these to the equation.)**

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."

Standards for Mathematical Practice

Make sense of problems and persevere in solving them.
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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:**
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● Why are inverse operations used? How do you determine which to use? ● Why do we use order of operations?	● Order of operations follows the same order each time. ● Integers can be divided.

Knowledge:
Students will know…
● Division of fractions involves multiplication.
● A multiple is found through multiplication.
● A factor is found through division.
● The sum of opposite numbers is zero.
● Inverse operations are used to cancel each other.
● Rational numbers can be changed into decimal through division.
● Distributive property involves multiplication.
	Skills:
	Students will be able to…
	● Using a number line, identify, interpret, compare and order:
	  ● Integers.
	  ● Rational numbers.
	● Find and use absolute value in real-world applications.
	● Divide fractions and mixed numbers.
	● Use LCM and GCF to add, subtract, multiply, and divide fractions.
	● Add, subtract, multiply and divide multi-digit decimals.

Interdisciplinary Connections
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2020 New Jersey Student Learning Standards for Computer Science and Design Thinking

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

NJSLS 9.1 Personal Financial Literacy

9.1.8.EG.1 Explain how taxes affect disposable income and the difference between net and gross income.
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9.4.8.DC.4 Explain how information shared digitally is public and can be searched, copied, and potentially seen by public audiences.

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Student Resources

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Resources: Into Math Advanced 1, grade 6

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Websites:

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Teacher Resources

Be as specific as possible. Consider all teacher resources including:

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Technology Into Math, grade 6

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6th grade math vocabulary
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Stage 2 – Assessment Evidence

Performance Task(s):

- **Unit STEM activity:** *Walk-a-Thon 2*
- Illustrative Mathematics
- Interactive Reteach
- Interactive Challenge

Pre-Assessments:

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- *Are You Ready?*

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Stage 3 – Learning Plan

STEM Task: ***Visual Artist***

Learning Mindset: Resilience

Module Opener:

- **Module 6:** *Guess the Number*
- **Module 7:** *Expression Darts*

- **Module 8:** *Which Relationship Does Not Belong?*

Diagnostic Assessment: *Are You Ready?*

Module 6: Numerical and Algebraic Expressions

- **Lesson 6.1:** Understand and Apply Exponents
- **Lesson 6.2:** Write and Evaluate Numerical Expressions for Situations
- **Lesson 6.3:** Write Algebraic Expressions to Model Situations
- **Lesson 6.4:** Interpret and Evaluate Algebraic Expressions
- **Lesson 6.5:** Identify and Generate Equivalent Algebraic Expressions
- **Lesson 6.6:** Add, Subtract, FActor, and Expand Algebraic Expressions

Module 7: Solve Problems Using Equations and Inequalities

- **Lesson 7.1:** Write Equations to Represent Situations
- **Lesson 7.2:** Use Addition and Subtraction Equations to Solve Problems
- **Lesson 7.3:** Use Multiplication and Division Equations to Solve Problems
- **Lesson 7.4:** Use One-Step Equations to Solve a Variety of Problems
- **Lesson 7.5:** Write and Graph Inequalities
- **Lesson 7.6:** Solve One-Step Equations Involving Negative numbers.

Module 8: Real-World Relationships Between Variables

- **Lesson 8.1:** Represent Equations in Tables and Graphs
- **Lesson 8.2:** Write Equations from Verbal Descriptions
- **Lesson 8.3:** Write Equations from Tables and Graphs

Unit Plan Title	**Unit 3: Ratios and Proportional Reasoning**
Suggested Time Frame	**33 Days**

Overview / Rationale

In this unit students will analyze proportional relationships and use them to solve real-world and mathematical problems.
Module 9: Students represent and compare ratios and unit rates.
Module 10: Students will use ratio reasoning to convert within and between measurement systems
Module 11: Students will identify proportional relationship, find its constant proportionality and write an equation to represent it.
Module 12: Students will understand, express, and compare percent ratios. Students will be able to use percentages to solve real-world problems.
Module 13: Students will apply proportional reasoning with percentages.

Stage 1 – Desired Results

New Jersey Student Learning Standards for Mathematics (2023)

Established Goals:

6.RP.A.1. Understand the concept of a ratio and use ratio language to describe a ratio relationship between two quantities. For example, "The ratio of wings to beaks in the bird house at the zoo was 2:1, because for every 2 wings there was 1 beak." "For every vote candidate A received, candidate C received nearly three votes."

6.RP.A.2. Understand the concept of a unit rate a/b associated with a ratio $a:b$ with $b \neq 0$, and use rate language in the context of a ratio relationship. For example, "This recipe has a ratio of 3 cups of flour to 4 cups of sugar, so there is ¾up of flour for each cup of sugar." "We paid $75 for 15 hamburgers, which is a rate of $5 per hamburger." Clarification: Expectations for unit rates in this grade are limited to non-complex fractions.

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

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

b. Solve unit rate problems including those involving unit pricing and constant speed. For example, if it took 7 hours to mow 4 lawns, then at that rate, how many lawns could be mowed in 35 hours? At what rate were lawns being mowed?

c. Find a percent of a quantity as a rate per 100 (e.g., 30% of a quantity means 30100 times the quantity); solve problems involving finding the whole, given a part and the percent.

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

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 ½ mile in each ¼ hour, compute the unit rate as the complex fraction (½)/(¼) 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 t 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.”

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: ● In what types of situations should you use a circle graph? ● When could we use ratios to compare numbers? ● If you know the unit rate and one of the quantities, how can you find the unknown quantity? ● What is the connection between the dependent and independent variable values in a table with a proportional relationship? ● In a proportional relationship, what happens if you divide any output by its input? ● How do you use the unit rate to write an equation to represent a proportional relationship?	**Enduring Understandings:** ● Ratios can be used to convert measurement units. ● Percentages, fractions, rates, and unit rates are all types of ratios. ● 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. ● Percents can be represented by a ratio with 100 as a denominator.
Knowledge: *Students will know…* ● Unit rate is a rate for a quantity of 1. ● Percent means per 100. ● Ratios can be reduced into lowest terms. ● Percentages can represent more or less than a whole. ● Ratios are represented as a fraction. ● Constant of Proportionality is the unit rate. ● Graphs of proportional relationships begin at (0,0). ● When creating a scale drawing every coordinate changes by the same factor	**Skills:** *Students will be able to…* ● Use tables, graphs, and double number lines to understand, represent, and compare ratios and rates. ● Find and use unit rates to solve problems. ● Use equivalent ratios to solve real world problems and convert measurements between measurement systems. ● Apply ratio reasoning to make and interpret circle graphs. ● Use percentages to solve real world problems. ● 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.

Interdisciplinary Connections
2023 New Jersey Student Learning Standards for English Language Arts **<u>Grade 6 Reading</u>** **RI.CR.6.1.** Cite 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.6.6.** Integrate information when presented in different media or formats (e.g., visually, quantitatively) to develop a coherent understanding of a topic or issue. **<u>Grade 6 Writing</u>** **W.IW.6.2**. 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.6.6.** Gather relevant information from multiple print and digital sources; assess the credibility of each source; and quote or paraphrase the data and conclusions of others while avoiding plagiarism and providing basic bibliographic information for sources. **<u>Grade 6 Speaking and Listening</u>** **SL.PE.6.1.** Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 6 topics, texts, and issues, building on others' ideas and expressing their own clearly. **SL.II.6.2.** Interpret information presented in diverse media and formats (e.g., visually, quantitatively, orally) and explain how it contributes to 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.NI.4** Explain how new security measures have been created in response to key malware events. **8.1.8.IC.1** Compare the trade-offs associated with computing technologies that affect individual's everyday activities and career options. **8.1.8.IC.2** Describe issues of bias and accessibility in the design of existing technologies.

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8.2.8.ITH.2 Compare how technologies have influenced society over time.

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Stage 2 – Assessment Evidence
Performance Task(s): ● **Unit STEM activity:** *Astronomer* ● Illustrative Mathematics ● Interactive Reteach ● Interactive Challenge **Pre-Assessments:** ● Gr 6 Math *LinkIt!* NJSLS Form A ● HMS Pre-Assessment ● *Are You Ready?*

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Stage 3 – Learning Plan

STEM Task: *Astronomer*

Learning Mindset: *Perseverance: Apply Learning Strategies*

Module Opener:

- **Module 9:** *Use Paint Patterns*
- **Module 10:** *How Many Ways Can You Write Equivalent Ratios?*
- **Module 11:** *Which ratio does not belong?*
- **Module 12:** *Time to Clean Up*
- **Module 13:** *The Case of the Missing Diagram*

Diagnostic Assessment: *Are You Ready?*

Module 9: Ratios and Rates

- **Lesson 9.1:** Understand the Concept and Language of Ratios
- **Lesson 9.2:** Represent Ratios and Rates with Tables and Graphs
- **Lesson 9.3:** Compare Ratios and Rates
- **Lesson 9.4:** Find and Apply Unit Rates
- **Lesson 9.5:** Solve Ratio and Rate Problems Using Proportional Reasoning

Module 10: Apply Ratios and Rates to Measurement

- **Lesson 10.1:** Use Ratio Reasoning with Circle Graphs
- **Lesson 10.2:** Use Rate Reasoning to Convert Within Measurement Systems
- **Lesson 10.3:** Use Rate Reasoning to Convert Between Measurement Systems

Module 11: Identify and Represent Proportional Relationships

- **Lesson 11.1:** Explore Relationships
- **Lesson 11.2:** Recognize Proportional Relationships in Tables
- **Lesson 11.3:** Recognize Proportional Relationships in graphs
- **Lesson 11.4:** Use proportional Relationships to Solve Rate Problems

Module 12: Understand and Apply Percent

- **Lesson 12.1:** Understand, Express, and Compare Percent Ratios
- **Lesson 12.2:** Use Strategies to Find a Percent of a Quantity
- **Lesson 12.3:** Solve a Variety of Percent Problems

Module 13: Proportional Reasoning With Percents

- **Lesson 13.1:** Percent Change
- **Lesson 13.2:** Markups and Discount
- **Lesson 13.3:** Taxes and Gratuities
- **Lesson 13.4:** Commissions and Fees
- **Lesson 13.5:** Simple Interest

Unit Plan Title	Unit 4: Relationships in Geometry
Suggested Time Frame	20 Days

Overview / Rationale

In this unit, students will draw, construct and describe geometrical figures and describe the relationships between them. Students will solve real-life and mathematical problems involving angle measure, area, surface area, and volume. Students will also apply and extend previous understandings of operations with fractions to add, subtract, multiply, and divide rational numbers.

Module 14: Students will graph rational numbers and polygons on a coordinate plane. Students will be able to find distance, perimeter and area on a coordinate plane.

Module 15: Students will use the formula for the area of parallelograms, triangles, trapezoids. Students will be able to find the area of composite figures.

Module 16: Students will explore surface area and nets. Students will solve volume problems involving rectangular prisms.

Stage 1 – Desired Results

New Jersey Student Learning Standards for Mathematics (2023)

Established Goals:

6.G.A.1 Find the area of right triangles, other triangles, special quadrilaterals, and polygons by composing into rectangles or decomposing into triangles and other shapes; apply these techniques in the context of solving real-world and mathematical problems.

6.G.A.2 Find the volume of a right rectangular prism with fractional edge lengths by packing it with unit cubes of the appropriate unit fraction edge lengths, and show that the volume is the same as would be found by multiplying the edge lengths of the prism. Apply the formulas V=l w h and V = B h to find volumes of right rectangular prisms with fractional edge lengths in the context of solving real-world and mathematical problems.

6.G.A.3 Draw polygons in the coordinate plane given coordinates for the vertices; use coordinates to find the length of a side joining points with the same first coordinate or the same second coordinate. Apply these techniques in the context of solving real-world and mathematical problems.

6.G.A.4 Represent three-dimensional figures using nets made up of rectangles and triangles, and use the nets to find the surface area of these figures. Apply these techniques in the context of solving real-world and mathematical problems.

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

6.NS.C.8 Solve real-world and mathematical problems by graphing points in all four quadrants of the coordinate plane. Include use of coordinates and absolute value to find distances between points with the same first coordinate or the same second coordinate.

6.EE.A.2.c. Evaluate expressions at specific values of their variables. Include expressions that arise from formulas used in real-world problems. Perform arithmetic operations, including those involving whole number exponents, in the conventional order when there are no parentheses to specify a particular order (Order of Operations). For example, use the formulas V=s3 and A=6s2 to find the volume and surface area of a cube with sides of length s = ½

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Construct viable arguments and critique the reasoning of others.

Model with mathematics.

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Attend to precision.

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Look for and express regularity in repeated reasoning

Essential Questions:

- When do you use formulas to solve problems?
- What is the difference between perimeter, area, volume and surface area?
- What is the connection between a net and surface area?
- Why is volume in cubic units?
- How do you graph coordinates?

Enduring Understandings:

- Triangles and rectangles can be used to find the area of other polygons.
- A net can be used to find the surface area of a 3-dimensional figure.
- Volume and surface area are used to describe 3-dimensional figures.
- Perimeter and area are used to describe 2-dimensional figures.

Knowledge:

Students will know…

- Polygons can be broken down into triangles.
- Volume is represented with cubic units.
- Perimeter is the measure of the outside of a figure.

Skills:

Students will be able to…

- Locate rational ordered pairs on a coordinate plane.
- Solve problems by graphing and identifying polygons in a coordinate plane.

● Area is the measure of the inside of a figure.	● Use absolute value to find the distance between two points. ● Find the perimeter and area of polygons including parallelograms, triangles, trapezoids, and composite figures. ● Use nets to find surface area. ● Write equations to solve problems involving rectangular prisms.

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Stage 2 – Assessment Evidence

Performance Task(s):

Unit STEM activity: *Marketing Manager*

- Illustrative Mathematics
- Interactive Reteach
- Interactive Challenge

Pre-Assessments:

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Stage 3 – Learning Plan

STEM Task: *Marketing Manager*

Learning Mindset: *Strategic Help- Seeking*

Module Opener:
- **Module 14:** *Polygon Seek and Find*
- **Module 15:** *New at the Zoo*
- **Module 16:** *Pass the Popcorn*

Diagnostic Assessment: *Are You Ready?*

Module 14: Polygons on the Coordinate Plane
- **Lesson 14.1:** Graph and Find Distance Between Points on the Coordinate Plane
- **Lesson 14.2:** Graph Polygons on the Coordinate Plane
- **Lesson 14.3:** Find Perimeter and Area on the Coordinate Plane

Module 15: Area of Triangles and Special Quadrilaterals
- **Lesson 15.1:** Develop and Use the Formula for Area of Quadrilaterals
- **Lesson 15.2:** Develop and Use the Formula for Area of Triangles
- **Lesson 15.3:** Find Area of Composite Figures

Module 16: Surface Area and Volume
- **Lesson 16.1:** Explore Nets and Surface Area
- **Lesson 16.2:** Find Volume of Rectangular Prisms
- **Lesson 16.3:** Solve Volume Problems

Unit Plan Title	Unit 5: Data Collection and Analysis
Suggested Time Frame	18 Days

Overview / Rationale

Students will use random sampling to draw inferences about a population and draw informal comparative inferences about two populations. Students will investigate chance processes and develop, use, and evaluate probability models using numerical and algebraic expressions and equations.

Module 17: Students will explore statistical data collection. Students will display data in dot plots, histograms, and frequency tables Students will explore the mean as fair share. Students will choose and find measures of the center.

Module 18: Students will explore patterns of data. Students will display data in box plots and find mean absolute deviation. Students will describe distributions and summarize a set of data.

Stage 1 – Desired Results

New Jersey Student Learning Standards for Mathematics (2023)

Established Goals:

6.SP.A.1 Recognize a statistical question as one that anticipates variability in the data related to the question and accounts for it in the answers. For example, "How old am I?" is not a statistical question, but "How old are the students in my school?" is a statistical question because one anticipates variability in students' ages.

6.SP.A.2 Understand that a set of data collected to answer a statistical question has a distribution which can be described by its center, spread, and overall shape.

6.SP.A.3 Recognize that a measure of center for a numerical data set summarizes all of its values with a single number, while a measure of variation describes how its values vary with a single number.

6.SP.B.4 Display numerical data in plots on a number line, including dot plots, histograms, and box plots. (Students may develop and use a model to describe how unequal heating and rotation of the Earth cause patterns of atmospheric and oceanic circulation that determine regional climates students may display numerical data in plots on a number line, including dot plots, histograms, and box plots.)

6.SP.B.5 Summarize numerical data sets in relation to their context, such as by:

a. Reporting the number of observations.

b. Describing the nature of the attribute under investigation, including how it was measured and its units of measurement.

c. Giving quantitative measures of center (median and/or mean) and variability (interquartile range and/or mean absolute deviation), as well as describing any overall pattern and any striking deviations from the overall pattern with reference to the context in which the data were gathered.

d. Relating the choice of measures of center and variability to the shape of the data distribution and the context in which the data were gathered.

6.EE.C.9 Use variables to represent two quantities in a real-world problem that change in relationship to one another; write an equation to express one quantity, thought of as the dependent variable, in terms of the other quantity, thought of as the independent variable. Analyze the relationship between the dependent and independent variables using graphs and tables, and relate these to the equation. For example, in a problem involving motion at constant speed, list and graph ordered pairs of distances and times, and write the equation d =65t to represent the relationship between distance and time. **(Students analyze climate change computational models and propose refinements. These models would require students to analyze the relationship between the dependent and independent variables using graphs and tables and relate these to the equation.)**

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:**
● How do measures of center and variability help make sense of data? ● Why do we need multiple ways to represent data? ● How do you use statistical questions to answer real world problems?	● Numerical data can be displayed in many different ways. ● Patterns of numerical data can vary depending on circumstance. ● A set of data collected to answer a statistical question has a distribution which can be described by its center, spread, and overall shape. ● Not all data has a pattern

Knowledge: *Students will know…* ● The choice of measures of center and variability depend on the context of the situation. ● Statistical questions have variability in their answer. ● Variables can be used to represent quantities in real life. ● Measures of center and variability are used to help describe a set of data.	**Skills:** *Students will be able to…* ● Identify a statistical question and describe data. ● Use dot plots, box plots, histograms, and frequency tables to display data and describe patterns. ● Describe a set of data using mean, median, and mode. ● Summarize a set of data by using range, interquartile range, and mean absolute deviation. ● Describe the distribution of a set of data to answer a statistical question.

Interdisciplinary Connections

2023 New Jersey Student Learning Standards for English Language Arts

Grade 6 Reading

RI.CR.6.1. Cite 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.6.6. Integrate information when presented in different media or formats (e.g., visually, quantitatively) to develop a coherent understanding of a topic or issue.

Grade 6 Writing

W.IW.6.2. 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.6.6. Gather relevant information from multiple print and digital sources; assess the credibility of each source; and quote or paraphrase the data and conclusions of others while avoiding plagiarism and providing basic bibliographic information for sources.

Grade 6 Speaking and Listening

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

SL.II.6.2. Interpret information presented in diverse media and formats (e.g., visually, quantitatively, orally) and explain how it contributes to 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.NI.4 Explain how new security measures have been created in response to key malware events.
8.1.8.IC.1 Compare the trade-offs associated with computing technologies that affect individual's everyday activities and career options.
8.1.8.IC.2 Describe issues of bias and accessibility in the design of existing technologies.

NJSLS 8.2 Design Thinking

8.2.8.ITH.2 Compare how technologies have influenced society over time.
8.2.8.ITH.5 Compare the impacts of a given technology on different societies, noting factors that may make a technology appropriate and sustainable in one society but not in another.

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

NJSLS 9.1 Personal Financial Literacy

9.1.8.EG.1 Explain how taxes affect disposable income and the difference between net and gross income.
9.1.8.PB.4 Construct a simple personal savings and spending plan based on various sources of income and different stages of life (e.g. teenager, young adult, family).

NJSLS 9.4 Life Literacies and Key Skills

9.4.8.DC.4 Explain how information shared digitally is public and can be searched, copied, and potentially seen by public audiences.

9.4.8.IML.2 Identify specific examples of distortion, exaggeration, or misrepresentation of information.

Student Resources
Texts: Houghton Mifflin Harcourt, Into Math Advanced 1, grade 6, 1st Edition, 2020 ISBN: 978-035-811582-3 **Resources: Into Math Advanced 1,** grade 6 ● More Practice / Homework

- Reteach and Interactive Reteach
- Challenge and Interactive Challenge
- Google Suite: Docs, Sheets, Slides, Forms
- Devices:
  - Chromebooks
  - Texas Instruments (TI-84) Calculators

Websites:

- http://www.hmhco.com Into Math
- http://khanacademy.org Tutorials on individual lessons

Teacher Resources

Texts: Houghton Mifflin Harcourt, **Into Math Advanced 1,** grade 6, 1st Edition, 2020 ISBN:978-0-358-11609-7

Technology Into Math, grade 6

- Unit STEM Task Cards
- Online Data-Driven Interventions
- New Jersey Climate Education Hub
- More Practice / Homework
- Illustrative Mathematics
- Reteach and Interactive Reteach
- Challenge and Interactive Challenge
- Mini-Lesson Tabletop Flipchart
- Google Suite: Docs, Sheets, Slides, Forms, Record
- Devices: SMART / Promethean Interactive Boards
- 6th grade math vocabulary

https://www.sebring.k12.oh.us/userfiles/28/Classes/7665/6th%20Grade%20Common%20Core%20Vocabulary%20definitions-0.pdf

Websites:

- http://www.hmhco.com Into Math – Ed, Your Friend in Learning
- http://www.kutasoftware.com Test and worksheet generator for teachers
- http://khanacademy.org Tutorials on individual lessons

NJDOE Instructional Units for Mathematics / CAR Templates:

- Grade 6, Unit 1, Module A Unit 1 Sixth Grade Module A
- Grade 6, Unit 3, Module A Unit 3 Sixth Grade Module A
- Grade 6, Unit 4, Module A Unit 4 Sixth Grade Module A
- Grade 6, Unit 4, Module B Unit 4 Sixth Grade Module B
- Grade 7, Unit 1, Module A Unit 1 Seventh Grade Module A

Stage 2 – Assessment Evidence

Performance Task(s): *Sales Director*

- **Unit STEM activity:**
- Illustrative Mathematics

- Interactive Reteach
- Interactive Challenge

Pre-Assessments:
- Gr 6 Math *LinkIt!* NJSLS Form A
- HMS Pre-Assessment
- *Are You Ready?*

Formative Assessments:
- Gr 6 Math *LinkIt!* NJSLS Form B
- Exit Slip
- Student *"I Can"* Self-Assessment
- Informal Observations

Summative Assessments:
- Lesson quizzes
- Module Tests A and B
- NJDOE Digital Item Library- Released NJSLA items
- HMH Midyear Assessment
- EOY Exams:
  - Gr 6 Math *LinkIt!* NJSLS Form C
  - HMH EOY Assessment

Stage 3 – Learning Plan

STEM Task: *Sales Director*
Learning Mindset: *Resilience: Monitors knowledge and skill*
Module Opener:
- **Module 17:** *Going Fishing*
- **Module 18:** *Player Stats*

Diagnostic Assessment: *Are You Ready?*
Module 17: Data Collection and Displays
- **Lesson 17.1:** Explore Statistical Data Collection
- **Lesson 17.2:** Display Data in Dot Plots
- **Lesson 17.3:** Make Histograms and Frequency Tables
- **Lesson 17.4:** Find Measures of Center
- **Lesson 17.5:** Choose a Measure of Center

Module 18: Variability and Data Distribution
- **Lesson 18.1:** Explore Patterns of Data
- **Lesson 18.2:** Display Data in Box Plots
- **Lesson 18.3:** Find Mean Absolute Deviation
- **Lesson 18.4:** Explore Measures of Variability
- **Lesson 18.5:** Describe Distributions

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: http://visual.merriamwebster.com/.
- 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: http://cooperativelearningstrategies.pbworks.com/w/page/28234420/Corners.
- 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: http://www.teachhub.com/flexible-grouping-differentiated-instruction-strategy.
- 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: http://www.adlit.org/strategies/22371/.

PACING GUIDE

SEPTEMBER						
Day	LESSON	NJSLS		Day	LESSON	NJSLS
1	Course Introduction			13	Lesson 1.5: Order Rational Numbers	6.NS.B.4, 6.NS.C.6, 6.NS.C.7
1	Course Introduction			14	Test Review	
1	Pre-Assessment			15	Unit 1 Test	
4	Lesson 1.1: Identify and Interpret Rational Numbers	6.NS.B.3, 6.NS.C.5, 6.NS.C. 6, 6.NS.C.7		16	Lesson 2.1: Explore Division of Fractions with Like and Unlike Denominators	6.NS.A.1, 6.NS.C.7
5	Lesson 1.1: Identify and Interpret Rational Numbers	6.NS.B.3, 6.NS.C.5, 6.NS.C. 6, 6.NS.C.7		17	Lesson 2.2: Explore Division of Mixed Numbers	6.NS.A.1
6	Lesson 1.2: Compare Rational Numbers Using Number Line	6.NS.C.6, 6.NS.C.7, 8.EE.B. 6, 8.F.B.4		18	Lesson 2.3: Practice and Apply Division of Fractions and Mixed Numbers	6.NS.A.1, 6.NS.B.2, 6.NS.C.7
7	Lesson 1.2: Compare Rational Numbers Using Number Line	6.NS.C.6, 6.NS.C.7, 8.EE.B. 6, 8.F.B.4				
8	Lesson 1.3: Find and Apply Absolute Value	6.NS.C.6, 6.NS.C.7, 7.G.A.2, 7.RP.A.2, 7.SP.B.3				
9	Lesson 1.3: Find and Apply Absolute Value	6.NS.C.6, 6.NS.C.7, 7.G.A.2, 7.RP.A.2, 7.SP.B.3				
10	Lesson 1.4: Find and Apply LCM and GCF	6.NS.A.1, 6.NS.B.4, 6.NS.C.7				

11	Lesson 1.4: Find and Apply LCM and GCF	6.NS.A.1, 6.NS.B.4, 6.NS.C.7				
12	Lesson 1.5: Order Rational Numbers	6.NS.B.4, 6.NS.C.6, 6.NS.C. 7				
OCTOBER						
Day	**LESSON**	**NJSLS**		**Day**	**LESSON**	**NJSLS**
19	Lesson 2.4: Practice Fraction Operations	6.NS.A.1, 6.NS.B.3, 6.NS.B. 4, 6.NS.C.5		31	Lesson 4.2: Add or Subtract a Negative Integer on a number line	7.NS.A.1
20	Test Review			32	Lesson 4.3: USe a Number LIne to Add and Subtract Rational Numbers	7.G.A.1, 7.NS.A.1, 7.RP.A.3
21	Unit 2 Test			33	Test Review	
22	Lesson 3.1: Add and Subtract Multi-Digit Decimals	6.NS.A.1, 6.NS.B.3, 6.NS.C.7		34	Unit 4 Test	
23	Lesson 3.2: Multiply Multi-Digit Decimals	6.NS.A.1, 6.NS.B.3, 6.NS.C.7		35	Lesson 5.1: Compute Sums Of Rational Numbers	6.EE.B.7, 6.NS.A.1, 6.NS.B.3, 7.NS.A.1, 7.NS.A.3
24	Lesson 3.3: Divide Multi-Digit Whole Numbers	6.NS.B.2, 6.NS.B.3, 6.NS.C. 5, 6.NS.C.7		36	Lesson 5.1: Compute Sums Of Rational Numbers	6.EE.B.7, 6.NS.A.1, 6.NS.B.3, 7.NS.A.1, 7.NS.A.3
25	Lesson 3.4: Divide Multi-Digit Decimals	6.NS.B.2, 6.NS.B.3, 6.NS.C.7		37	Lesson 5.2: Compute Differences of Rational Number	6.EE.B.7, 6.NS.B.3, 6.NS.C.7, 7.NS.A.1, 7.NS.A.3
26	Lesson 3.5: Apply Operations with Multi-Digit Decimals	6.NS.B.2, 6.NS.B.3, 6.NS.C. 5, 6.NS.C.7		38	Lesson 5.2: Compute Differences of Rational Number	6.EE.B.7, 6.NS.B.3, 6.NS.C.7, 7.NS.A.1, 7.NS.A.3

27	Lesson 3.5: Apply Operations with Multi-Digit Decimals	6.NS.B.2, 6.NS.B.3, 6.NS.C. 5, 6.NS.C.7		39	Lesson 5.3: Understand and Compute Products and Quotients of Rational	6.EE.B.7, 7.EE.B.3, 7.NS.A.1, 7.NS.A.3
28	Test Review					
29	Unit 3 Test					
30	Lesson 4.1: Add or Subtract a Positive Integer on a number line	6.NS.B.3, 7.NS.A.1				
NOVEMBER						
Day	**LESSON**	**NJSLS**		**Day**	**LESSON**	**NJSLS**
40	Lesson 5.3: Understand and Compute Products and Quotients of Rational	6.EE.B.7, 7.EE.B.3, 7.NS.A.1, 7.NS.A.3		52	Lesson 6.2: Write and Evaluate Numerical Expressions for Situations	6.EE.A.1, 6.EE.A.2, 6.NS.C.7, 6.RP.A.3
41	Lesson 5.4: Write rational Numbers as Decimals	7.NS.A.1, 7.NS.A.2, 7.NS.A.3		53	Lesson 6.2: Write and Evaluate Numerical Expressions for Situations	6.EE.A.1, 6.EE.A.2, 6.NS.C.7, 6.RP.A.3
42	Lesson 5.4: Write rational Numbers as Decimals	7.NS.A.1, 7.NS.A.2, 7.NS.A.3		54	Lesson 6.3: Write Algebraic Expressions to Model Situations	6.EE.A.1, 6.EE.A.2, 6.EE.B.6
43	Lesson 5.5: Multiply and Divide Rational Number in Context	7.EE.B.3, 7.NS.A.1, 7.NS.A.2, 7.NS.A.3				
44	Lesson 5.5: Multiply and Divide Rational Number in Context	7.EE.B.3, 7.NS.A.1, 7.NS.A.2, 7.NS.A.3				
45	Lesson 5.6: Apply Properties to Multi-Step Problems with rational Numbers	6.NS.C.7, 7.EE.B.3, 7.NS.A.1, 7.NS.A.2, 7.NS.A.3				

46	Lesson 5.6: Apply Properties to Multi-Step Problems with rational Numbers	6.NS.C.7, 7.EE.B.3, 7.NS.A.1, 7.NS.A.2, 7.NS.A.3				
47	Lesson 5.7: Solve Multi-Step Problems with rational Numbers in Context	7.EE.B.3, 7.NS.A.1, 7.NS.A.2, 7.NS.A.3, 7.RP.A.2				
48	Lesson 5.7: Solve Multi-Step Problems with rational Numbers in Context	7.EE.B.3, 7.NS.A.1, 7.NS.A.2, 7.NS.A.3, 7.RP.A.2				
49	Test Review					

50	Unit 5 Test					
51	Lesson 6.1: Understand and Apply Exponents	6.EE.A.1, 6.NS.B.3				
DECEMBER						
Day	**LESSON**	**NJSLS**		**Day**	**LESSON**	**NJSLS**
55	Lesson 6.3: Write Algebraic Expressions to Model Situations	6.EE.A.1, 6.EE.A.2, 6.EE.B.6		67	Lesson 7.5: Write and Graph Inequalities	6.EE.B.5, 6.EE.B.8, 6.NS.B.3
56	Lesson 6.4: Interpret and Evaluate Algebraic Expressions	6.EE.A.1, 6.EE.A.2, 6.RP.A.3		68	Lesson 7.6: Solve One-Step Equations Involving Negative numbers.	6.EE.A.3, 6.EE.B.7, 6.NS.B.2, 7.NS.A.3
57	Lesson 6.5: Identify and Generate Equivalent Algebraic Expressions	6.EE.A.1, 6.EE.A.3, 6.EE.A.4, 6.NS.C.5		69	Test Review	
58	Lesson 6.6: Add, Subtract, FActor, and Expand Algebraic Expressions	6.EE.A.1, 6.EE.A.3, 7.EE.A.1, 7.EE.A.2, 7.EE.B.3, 8.EE.A.1		70	Unit 7 Test	

59	Test Review					
60	Unit 6 Test					
61	Lesson 7.1: Write Equations to Represent Situations	6.EE.B.5, 6.EE.B.6, 6.EE.B.7, 6.NS.A.1, 6.NS.B.4				
62	Lesson 7.1: Write Equations to Represent Situations	6.EE.B.5, 6.EE.B.6, 6.EE.B.7, 6.NS.A.1, 6.NS.B.4				
63	Lesson 7.2: Use Addition and Subtraction Equations to Solve Problems	6.EE.A.1, 6.EE.B.6				
64	Lesson 7.3: Use Multiplication and Division Equations to Solve Problems	6.EE.A.2, 6.EE.B.7, 6.NS.A.1, 6.NS.B.2				
65	Lesson 7.4: Use One-Step Equations to Solve a Variety of Problems	6.EE.B.7, 6.NS.A.1				
66	Lesson 7.5: Write and Graph Inequalities	6.EE.B.5, 6.EE.B.8, 6.NS.B.3				
JANUARY						
Day	**LESSON**	**NJSLS**		**Day**	**LESSON**	**NJSLS**
71	Lesson 8.1: Represent Equations in Tables and Graphs	6.EE.B.5, 6.EE.B.7, 6.EE.B.8, 6.EE.C.9, 6.NS.C.6		83	Lesson 9.1: Understand the Concept and Language of Ratios	6.NS.B.2, 6.NS.B.3, 6.NS.B.4, 6.RP.A.1
72	Lesson 8.1: Represent Equations in Tables and Graphs	6.EE.B.5, 6.EE.B.7, 6.EE.B.8, 6.EE.C.9, 6.NS.C.6		84	Lesson 9.1: Understand the Concept and Language of Ratios	6.NS.B.2, 6.NS.B.3, 6.NS.B.4, 6.RP.A.1

73	Lesson 8.2: Write Equations from Verbal Descriptions	6.EE.C.9, 6.G.A.3, 6.NS.B.3, 6.RP.A.2		85	Lesson 9.2: Represent Ratios and Rates with Tables and Graphs	6.NS.A.1, 6.NS.B.3, 6.RP.A.2, 6.RP.A.3
74	Lesson 8.2: Write Equations from Verbal Descriptions	6.EE.C.9, 6.G.A.3, 6.NS.B.3, 6.RP.A.2		86	Lesson 9.2: Represent Ratios and Rates with Tables and Graphs	6.NS.A.1, 6.NS.B.3, 6.RP.A.2, 6.RP.A.3
75	Lesson 8.3: Write Equations from Tables and Graphs	6.EE.A.2, 6.EE.A.3, 6.EE.C.9, 6.NS.C.5, 6.NS.C.8		87	Lesson 9.3: Compare Ratios and Rates	6.NS.A.1, 6.NS.B.3, 6.NS.C.7, 6.RP.A.3
76	Lesson 8.3: Write Equations from Tables and Graphs	6.EE.A.2, 6.EE.A.3, 6.EE.C.9, 6.NS.C.5, 6.NS.C.8		88	Lesson 9.3: Compare Ratios and Rates	6.NS.A.1, 6.NS.B.3, 6.NS.C.7, 6.RP.A.3
77	Test Review					
78	Unit 8 Test					
79	Midtern Review					
80	Midtern Review					
81	Midterm					
82	Midterm					
FEBRUARY						
Day	**LESSON**	**NJSLS**		**Day**	**LESSON**	**NJSLS**
89	Lesson 9.4: Find and Apply Unit Rates	6.NS.A.1, 6.NS.C.7, 6.RP.A.1, 6.RP.A.2		101	Test Review	
90	Lesson 9.4: Find and Apply Unit Rates	6.NS.A.1, 6.NS.C.7, 6.RP.A.1, 6.RP.A.2		102	Unit 10 Test	

91	Lesson 9.5: Solve Ratio and Rate Problems Using Proportional Reasoning	6.NS.B.3, 6.NS.B.4, 6.NS.C. 6, 6.RP.A.3		103	Lesson 11.1: Explore Relationships	6.NS.B.3, 6.NS.C.7, 6.RP.A.1, 7.RP.A.2, 7.RP.A.3
92	Lesson 9.5: Solve Ratio and Rate Problems Using Proportional Reasoning	6.NS.B.3, 6.NS.B.4, 6.NS.C. 6, 6.RP.A.3		104	Lesson 11.1: Explore Relationships	6.NS.B.3, 6.NS.C.7, 6.RP.A.1, 7.RP.A.2, 7.RP.A.3
93	Test Review			105	Lesson 11.2: Recognize Proportional Relationships in Tables	6.NS.A.1, 6.NS.B.2, 7.NS.A.2, 7.RP.A.1, 7.RP.A.2
94	Unit 9 Test			106	Lesson 11.2: Recognize Proportional Relationships in Tables	6.NS.A.1, 6.NS.B.2, 7.NS.A.2, 7.RP.A.1, 7.RP.A.2
95	Lesson 10.1: Use Ratio Reasoning with Circle Graphs	6.NS.A.1, 6.NS.B.3, 6.RP.A.3		107	Lesson 11.3: Recognize Proportional Relationships in graphs	6.NS.B.3, 6.RP.A.1, 7.RP.A.1, 7.RP.A.2

96	Lesson 10.1: Use Ratio Reasoning with Circle Graphs	6.NS.A.1, 6.NS.B.3, 6.RP.A.3			
97	Lesson 10.2: Use Rate Reasoning to Convert Within Measurement Systems	6.NS.B.3, 6.RP.A.1, 6.RP.A.3			
98	Lesson 10.2: Use Rate Reasoning to Convert Within Measurement Systems	6.NS.B.3, 6.RP.A.1, 6.RP.A.3			
99	Lesson 10.3: Use Rate Reasoning to Convert Between Measurement Systems	6.NS.A.1, 6.NS.B.3, 6.RP.A.3			

100	Lesson 10.3: Use Rate Reasoning to Convert Between Measurement Systems	6.NS.A.1, 6.NS.B.3, 6.RP.A.3				
MARCH						
Day	**LESSON**	**NJSLS**		**Day**	**LESSON**	**NJSLS**
108	Lesson 11.3: Recognize Proportional Relationships in graphs	6.NS.B.3, 6.RP.A.1, 7.RP.A.1, 7.RP.A.2		120	Unit 12 Test	
109	Lesson 11.4: Use proportional Relationships to Solve Rate Problems	7.RP.A.1, 7.RP.A.2, 7.RP.A.3		121	Lesson 13.1: Percent Change	7.RP.A.2, 7.RP.A.3
110	Lesson 11.4: Use proportional Relationships to Solve Rate Problems	7.RP.A.1, 7.RP.A.2, 7.RP.A.3		122	Lesson 13.1: Percent Change	7.RP.A.2, 7.RP.A.3
111	Test Review			123	Lesson 13.2: Markups and Discount	7.EE.A.2, 7.EE.B.3, 7.RP.A.2, 7.RP.A.3
112	Unit 11 Test			124	Lesson 13.2: Markups and Discount	7.EE.A.2, 7.EE.B.3, 7.RP.A.2, 7.RP.A.3
113	Lesson 12.1: Understand, Express, and Compare Percent Ratios	6.NS.B.3, 6.NS.C.5, 6.RP.A.1, 6.RP.A.3		125	Lesson 13.3: Taxes and Gratuities	7.RP.A.2, 7.RP.A.3
114	Lesson 12.1: Understand, Express, and Compare Percent Ratios	6.NS.B.3, 6.NS.C.5, 6.RP.A.1, 6.RP.A.3		126	Lesson 13.3: Taxes and Gratuities	7.RP.A.2, 7.RP.A.3
115	Lesson 12.2: Use Strategies to Find a Percent of a Quantity	6.NS.B.2, 6.NS.C.7, 6.RP.A.3		127	Lesson 13.4: Commissions and Fees	7.NS.A.2, 7.RP.A.3
116	Lesson 12.2: Use Strategies to Find a Percent of a Quantity	6.NS.B.2, 6.NS.C.7, 6.RP.A.3				
117	Lesson 12.3: Solve a Variety of Percent Problems	6.G.A.1, 6.G.A.2, 6.RP.A.3				

118	Lesson 12.3: Solve a Variety of Percent Problems	6.G.A.1, 6.G.A.2, 6.RP.A.3				
119	Test Review					
		APRIL				
Day	LESSON	NJSLS		Day	LESSON	NJSLS
128	Lesson 13.4: Commissions and Fees	7.NS.A.2, 7.RP.A.3		140	Unit 14 Test	
129	Lesson 13.5: Simple Interest	7.RP.A.3		141	Lesson 15.1: Develop and Use the Formula for Area of Quadrilaterals	7.G.A.1, 7.G.A.3
130	Lesson 13.5: Simple Interest	7.RP.A.3		142	Lesson 15.1: Develop and Use the Formula for Area of Quadrilaterals	7.G.A.1, 7.G.A.3
131	Test Review			143	Lesson 15.2: Develop and Use the Formula for Area of Triangles	7.G.A.2, 7.G.A.3
132	Unit 13 Test					
133	Lesson 14.1: Graph and Find Distance Between Points on the Coordinate Plane	7.G.A.2, 7.G.A.3				
134	Lesson 14.1: Graph and Find Distance Between Points on the Coordinate Plane	7.G.A.2, 7.G.A.3				
135	Lesson 14.2: Graph Polygons on the Coordinate Plane	7.G.A.3, 7.G.A.4				
136	Lesson 14.2: Graph Polygons on the Coordinate Plane	7.G.A.3, 7.G.A.4				

137	Lesson 14.3: Find Perimeter and Area on the Coordinate Plane	7.G.A.1, 7.G.A.3				
138	Lesson 14.3: Find Perimeter and Area on the Coordinate Plane	7.G.A.1, 7.G.A.3				
139	Test Review					
MAY						
Day	**LESSON**	**NJSLS**		**Day**	**LESSON**	**NJSLS**
144	Lesson 15.2: Develop and Use the Formula for Area of Triangles	7.G.A.2, 7.G.A.3		156	Unit 16 Test	
145	Lesson 15.3: Find Area of Composite Figures	7.G.A.1, 7.G.A.4		157	Lesson 17.1: Explore Statistical Data Collection	7.NS.A.2, 7.RP.A.3
146	Lesson 15.3: Find Area of Composite Figures	7.G.A.1, 7.G.A.4		158	Lesson 17.2: Display Data in Dot Plots	7.NS.B.3, 7.RP.C.4
147	Test Review			159	Lesson 17.3: Make Histograms and Frequency Tables	7.NS.B.3, 7.RP.C.4, 7.RP.C.5
148	Unit 15 Test			160	Lesson 17.3: Make Histograms and Frequency Tables	7.NS.B.3, 7.RP.C.4, 7.RP.C.5

149	Lesson 16.1: Explore Nets and Surface Area	7.G.A.2, 7.G.A.3		161	Lesson 17.4: Find Measures of Center	7.NS.B.3, 7.RP.C.7
150	Lesson 16.1: Explore Nets and Surface Area	7.G.A.2, 7.G.A.3		162	Lesson 17.4: Find Measures of Center	7.NS.B.3, 7.RP.C.7
151	Lesson 16.2: Find Volume of Rectangular Prisms	7.G.A.3, 7.G.A.4		163	Lesson 17.5: Choose a Measure of Center	7.NS.C.6, 7.RP.A.1
152	Lesson 16.2: Find Volume of Rectangular Prisms	7.G.A.3, 7.G.A.4		164	Lesson 17.5: Choose a Measure of Center	7.NS.C.6, 7.RP.A.1

153	Lesson 16.3: Solve Volume Problems	7.G.A.2, 7.G.A.3		165	Test Review	
154	Lesson 16.3: Solve Volume Problems	7.G.A.2, 7.G.A.3				
155	Test Review					
JUNE						
Day	**LESSON**	**NJSLS**		**Day**	**LESSON**	**NJSLS**
166	Unit 17 Test			178	Final Review	
167	Lesson 18.2: Display Data in Box Plots	7.NS.A.2, 7.RP.A.3		179	Final	
168	Lesson 18.2: Display Data in Box Plots	7.NS.B.3, 7.RP.C.4		180	Final	
169	Lesson 18.3: Find Mean Absolute Deviation	7.NS.B.3, 7.RP.C.4, 7.RP.C.5				
170	Lesson 18.3: Find Mean Absolute Deviation	7.NS.B.3, 7.RP.C.4, 7.RP.C.5				
171	Lesson 18.4: Explore Measures of Variability	7.NS.B.3, 7.RP.C.7				
172	Lesson 18.4: Explore Measures of Variability	7.NS.B.3, 7.RP.C.7				
173	Lesson 18.5: Describe Distributions	7.NS.C.6, 7.RP.A.1				
174	Lesson 18.5: Describe Distributions	7.NS.C.6, 7.RP.A.1				
175	Test Review					
176	Unit 18 Test					
177	Final Review					

NEPTUNE TOWNSHIP SCHOOL DISTRICT
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