Mendham Township School District

Mathematics Curriculum – 2023

Grade 6 General & Advanced

Aligned 2019 Big Ideas Math Modeling Real Life

In Grade 6, instructional time should focus 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.

1. Students use reasoning about multiplication and division to solve ratio and rate problems about quantities. By viewing equivalent ratios and rates as deriving from, and extending, pairs of rows (or columns) in the multiplication table, and by analyzing simple drawings that indicate the relative size of quantities, students connect their understanding of multiplication and division with ratios and rates. Thus students expand the scope of problems for which they can use multiplication and division to solve problems, and they connect ratios and fractions. Students solve a wide variety of problems involving ratios and rates.

2. Students use the meaning of fractions, the meanings of multiplication and division, and the relationship between multiplication and division to understand and explain why the procedures for dividing fractions make sense. Students use these operations to solve problems. Students extend their previous understandings of number and the ordering of numbers to the full system of rational numbers, which includes negative rational numbers, and in particular negative integers. They reason about the order and absolute value of rational numbers and about the location of points in all four quadrants of the coordinate plane.

3. Students understand the use of variables in mathematical expressions. They write expressions and equations that correspond to given situations, evaluate expressions, and use expressions and formulas to solve problems. Students understand that expressions in different forms can be equivalent, and they use the properties of operations to rewrite expressions in equivalent forms. Students know that the solutions of an equation are the values of the variables that make the equation true. Students use properties of operations and the idea of maintaining the equality of both sides of an equation to solve simple one-step equations. Students construct and analyze tables, such as tables of quantities that are in equivalent ratios, and they use equations (such as $3x = y$) to describe relationships between quantities.

4. Building on and reinforcing their understanding of number, students begin to develop their ability to think statistically. Students recognize that a data distribution may not have a definite center and that different ways to measure center yield different values. The median measures center in the sense that it is roughly the middle value. The mean measures center in the sense that it is the value that each data point would take on if the total of the data values were redistributed equally, and also in the sense that it is a balance point. Students recognize that a measure of variability (interquartile range or mean absolute deviation) can also be useful for summarizing data because two very different sets of data can have the same mean and median yet be distinguished by their variability.

Students learn to describe and summarize numerical data sets, identifying clusters, peaks, gaps, and symmetry, considering the context in which

the data were collected. Students in Grade 6 also build on their work with area in elementary school by reasoning about relationships among shapes to determine area, surface area, and volume. They find areas of right triangles, other triangles, and special quadrilaterals 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. Students find areas of polygons and surface areas of prisms and pyramids by decomposing them into pieces whose area they can determine. They reason about right rectangular prisms with fractional side lengths to extend formulas for the volume of a right rectangular prism to fractional side lengths. They prepare for work on scale drawings and constructions in Grade 7 by drawing polygons in the coordinate plane.

Grade 6 Overview (Mad Minute – multiplication / division / Measurement / fractions – decimal- %)

- **Ratios and Proportional Relationships**
  - Understand ratio concepts and use ratio reasoning to solve problems.

- **The Number System**
  - Apply and extend previous understandings of multiplication and division to divide fractions by fractions.
  - Multiply and divide multi-digit numbers and find common factors and multiples.
  - Apply and extend previous understandings of numbers to the system of rational numbers.

- **Expressions and Equations**
  - Apply and extend previous understandings of arithmetic to algebraic expressions.
  - Reason about and solve one-variable equations and inequalities.
  - Represent and analyze quantitative relationships between dependent and independent variables.

- **Geometry**
  - Solve real-world and mathematical problems involving area, surface area, and volume.

- **Statistics and Probability**
  - Develop understanding of statistical variability.
  - Summarize and describe distributions.

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

The following chart details the 6th grade curricular focus and is broken out into areas of content, skills, and concepts:

NJ	NJ#	Comp & Content	Skills	Concepts
Ratios and Proportional Relationships 6RP				
Understand ratio concepts and use ratio reasoning to solve problems.				
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."	6RP1 C-3 T1 #15	-Different forms of ratios (a to b, a:b, etc)		-Construct meaning for a ratio -Understand that ratio is part to part, fraction is part to whole
Understand the concept of a unit rate a/b associated with a ratio a:b with b no equal to 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 3/4 cup of flour for each cup of sugar." "We paid $75 for 15 hamburgers, which is a rate of $5 per hamburger."1	6RP2 C-3 T1 #19	-rate is a ratio comparison to one. -representing a situation as a unit rate		-comparison to one
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.	6RP3 C-3 T1 #16, 20		-write equivalent ratios -simplify ratios -reading tables, line diagram, etc.	-apply knowledge of ratio and rate to real world problems
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.	6RP3A C-3 T1 #17, 18, 24	-translate graphs or diagrams into appropriate rates, ratios etc	-solve proportions -graphing on the coordinate plane -comparing ration	
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?	6RP3B C-3 T1 #20	Applying information and solving unit rate problems		
Find a percent of a quantity as a rate per 100 (e.g., 30% of a quantity means 30/100 times the quantity); solve problems involving finding the whole, given a part and the percent.	6RP3C C-4 T1 #1, 2, 22, 23		-solving problems involving finding the percent of a number using proportions.	-understanding that percent is a rate out of 100
Use ratio reasoning to convert measurement units; manipulate and transform units appropriately when multiplying or dividing quantities.	6RP3D C-3 T1 #21	Metric and customary conversions		

The Number System 6NS				
Apply and extend previous understandings of multiplication and division to divide fractions by fractions.				
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 (2/3) □ (3/4) and use a visual fraction model to show the quotient; use the relationship between multiplication and division to explain that (2/3) □ (3/4) = 8/9 because 3/4 of 8/9 is 2/3. (In general, (a/b) □ (c/d) = ad/bc.) How much chocolate will each person get if 3 people share 1/2 lb of chocolate equally? How many 3/4-cup servings are in 2/3 of a cup of yogurt? How wide is a rectangular strip of land with length 3/4 mi and area 1/2 square mi?	6NS1 C-2 T1 #4, 5, 25	-Apply division of fractions to word problems	-Divide fraction by fraction	-construct meaning for division of fractions by using models, drawing pictures, manipulative, etc -Develop the division algorithm
Compute fluently with multi-digit numbers and find common factors and multiples.				
With accuracy and efficiency, divide multi-digit numbers using the standard algorithm.	6.NS.B.2 C-2 T1 #7, 8		Divide multi-digit numbers	
With accuracy and efficiency, add, subtract, multiply, and divide multi-digit decimals using the standard algorithm for each operation.	6.NS.B.3 C-1 T1 #6, 13, 14		Add, subtract, multiply and divide decimals	
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).*	6NS4 C-8 T1 #11, 12 T2 #18, 20	-knowledge of the distributive property	-find the GCF by listing -find the LCM by listing -Using the distributive property	
Apply and extend previous understandings of numbers to the system of rational numbers.				
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.	6NS5 C-8 T3 #1, 4			-Construct meaning for positive and negative numbers by making connections to real world content.
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.	6NS6 C-8 T3 #2		-graphing in the coordinate plane. -plotting points on a number line	-understanding a rational number represents a specific number on a number line and a point on a coordinate plane.

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.	6NS6A C-8 T3 #5	-recognize the difference between opposites and negatives.		-understand that opposites represent numbers that are the same distance from zero but in the opposite direction
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.	6NS6B C-8 T3 #7	-definition of reflection -quadrants and parts of the plane	-graph on a coordinate plane	-understand the effect on coordinates after reflection across one or both axes.
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.	6NS6C C-8 T3 #4		-identify location given coordinates -identify coordinates given a graph	
Understand ordering and absolute value of rational numbers.	6NS7 C-8 T3 #5			
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	6NS7A C-8 T3 #2	-knowing the inequality symbols	-using a number line to compare numbers	
Write, interpret, and explain statements of order for rational numbers in real-world contexts. For example, write –3 oC > –7 oC to express the fact that –3 oC is warmer than –7 oC.	6NS7B C-8 T3 #4			-given a real world situation, be able to construct meaning for and create inequalities.
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.	6NS7C C-8 T3 #2, 5	-distance from zero		-construct meaning for absolute value by interpreting absolute value as magnitude for a positive or negative quantity in a real-world situation
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.	6NS7D C-8 T3 #4		-Compare and order absolute value	-given a situation, apply to real world concepts

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.	6NS8 C-8 T3 #7		-graph in a coordinate plane -find vertical and horizontal distances between points on a coordinate plan	-apply to real world concepts
Expressions and Equations 6.EE				
Apply and extend previous understandings of arithmetic to algebraic expressions.				
Write and evaluate numerical expressions involving whole-number exponents.	6EE1 C-1 T1 #3, 9, 10	-translate words into symbols	-simplifying and using numerical expressions	
Write, read, and evaluate expressions in which letters stand for numbers.	6EE2 C-5 T2 #2, 3	-translating words into symbols. -defining variables.	- evaluating expressions with variables	
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.	6EE2A C-5 T2 #3	-translating words into symbols. -defining variables.		
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.	6EE2B C-5 T2 #1, 19	-Understanding vocabulary for sum, term, product, factor, quotient, coefficient etc.	-use distributive property to write equivalent expressions.	
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 wholenumber 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 = 6 s2 to find the volume and surface area of a cube with sides of length s = 1/2.	6EE2C C-5 T2 #2, 25		-evaluate formulas using the order of operations.	
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.	6EE3 C-5 T2 #4, 5, 19, 20	-Understanding f the properties (i.e.: distributive)	-Use the distributive property to simplify expressions and combine like terms	
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.	6EE4 C-5 T2 #4, 5			Identify equivalent expressions

Reason about and solve one-variable equations and inequalities.				
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.	6EE5 C-6 C-8 T2 #6, 22		-Using a replacement set to find a solution to an equation or inequality	-Construct meaning for what a solution is to an equation or inequality.
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.	6EE6 C-5 C-6 T2 #16, 23			-Define variables and expressions/equations in order to solve word problems
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.	6EE7 C-6 T2 #7, 21		-Solve word problems by writing and solving involving addition and multiplication of non-negative and rational numbers.	
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.	6EE8 C-8 T3 #3, 8			-Write an inequality to represent a real world problem -Understand that the solution is a infinite number and can be graphed on a number line
Represent and analyze quantitative relationships between dependent and independent variables.				
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.	6EE9 C-6 T2 #8, 9, 10, 23		-write an equation to model a graph - interpreting graphs	-understand the relationship of two quantities as being independent or dependent on the other using graphs, tables and equations.

Geometry 6.G

Solve real-world and mathematical problems involving area, surface area, and volume.

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.	6G1 C-7 T2 #11, 12, 17, 25	-Area formula for a triangle and special quadrilaterals.	-Calculate area of complex areas and composite areas	-understand that a figure can be broken into smaller figures
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.	6G2 C-7 T2 #15	-identify a rectangular prism	-represent fractional length using unit cubes -multiplication of fraction	- understand the concept of volume as the product of base times height by using unit cubes.
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.	6G3 C-8 T3 #6	-naming polygons	-plotting points in a coordinate plane -calculating length of horizontal and vertical sides of a polygon graphed in the coordinate plane.	-apply to problem solving
Represent three-dimensional figures (e.g., pyramid, triangular prism, rectangular prism) 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.G.A.4 C-7 T2 #13, 14, 24	-definition of a net	- represent a 3-D figure as a net -use nets to calculate surface area	-apply to problem solving
Statistics and Probability 6.SP				
Develop understanding of statistical variability.				
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.	6SP1 C-9 T3 #17			-understand that a statistical question is one in which data collected can be used to make comparisons.
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	6SP2 C-9 T3 #16, 18, 20, 22, 23, 25	-understand measures of central tendency and range		-Data can be analyzed according to its center, spread, and overall shape.

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.	6SP3 C-9 T3 #16			-recognize differences between values of range vs. values of measures of central tendencies.
Summarize and describe distributions.				
Display numerical data in plots on a number line, including dot plots, histograms, and box plots.	6SP4 C-10 T3 #9, 18, 19, 21, 23		-calculate median and range -displaying data in line plots, histograms, and box-and-whisker plots.	
Summarize numerical data sets in relation to their context, such as by:				
Reporting the number of observations.	6SP5A C-10 T3 #15		-identify the size of a population from a graph.	
Describing the nature of the attribute under investigation, including how it was measured and its units of measurement.	6SP5B C-8 T3 #15, 18		-identifying data represented in a graph -reading the labels on the axes.	
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.	6SP5C C-9 C-10 T3 #10, 11, 12, 13, 14, 15, 16, 23		-analyze a box-and-whisker plot. -identify the effect an outlier has on mean	
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.	6SP5D C-9 T3 #24			-understand the appropriateness of a measure of central tendency to represent a graph

Pacing Guide & Materials

Unit 1: September – November – Benchmark Test by 11/30
NJLSL Standards

6RP1	6RP2	6RP3	6RP3A	6RP3B
6RP3C	6RP3D	6NS1	6.NS.B.2	6.NS.B.3
6NS4	6EE1			

Unit 2: November – March – Benchmark Test by 3/31
NJLSL Standards

6NS4	6EE2	6EE2A	6EE2B	6EE2C
6EE3	6EE4	6EE5	6EE6	6EE7
6EE9	6G1	6G2	6.G.A.4	

Unit 3: March – May – Benchmark Test by 5/31
NJLSL Standards

6NS5	6NS6	6NS6A	6NS6B	6NS6C
6NS7	6NS7A	6NS7B	6NS7C	6NS7D
6NS8	6EE8	6G3	6SP1	6SP2
6SP3	6SP4	6SP5A	6SP5B	6SP5C
6SP5D				

Grade Level	Title	Primary / Supplemental
Sixth	Big Ideas Math Modeling Real Life 2019	Primary
Fifth through Eighth	Measuring Up: People's Publishing	Supplemental
Fifth through Eighth	Com Core Performance Coach 2015	Supplemental
Fifth through Eighth	IXLMath.Com	Supplemental Software

Based upon 2023 NJSLS (2023 update)

Differentiation Strategies

- The unit includes presentation of material through multiple modalities such as visual, auditory, and kinesthetic to address the unique learning styles of all students.
- Assign, assess and modify if necessary, to address needs of at-risk learners.
- Provide student with open ended questions that stimulate higher order thinking
- Allow student to consider and express personal opinions
- Tiered Assignments
- Afford student with opportunities for independent projects based on the area of study and the student's interests
- Have student share and express their thought process, conclusions and the reasoning that led to their conclusion
- Allow for extended time on homework and assessments as described in the student's plan
- Allow use of calculator
- Check for comprehension and understanding
- Highlight or underline key words
- Permit ample time for student to respond to questions
- Clearly define limits and expectations
- Encourage student to ask for needed assistance
- Preferential seating
- Repeating, clarifying or rewording directions
- Allow for alternate responses
- Provide student with advanced notes
- Allow for extended time on homework and assessments
- Teacher modeling of what is expected and necessary steps to complete task
- Provide simplified written and verbal instructions
- Permit ample time for student to respond to questions
- Repeating, clarifying or rewording directions
- Allow use of eDictionary/technology to look up unknown words

Math 6

Interdisciplinary Connections

1. Use of formulas in density and graphing lessons **# ESS2.C**
2. Working with decimals and rounding when collecting data during investigations #**MS-ESS2-5**
3. Making predictions of outcomes before performing an investigation
4. Making measurements with rulers such as the size of granite pieces during weathering investigation
5. Distributions such as the distribution of fresh and salt water on the Earth
6. Collection and interpretation of data in most investigations such as the heating of various Earth materials
7. Use of variables such as time, distance, and mass when discussing erosion or gravity
8. Finding percentages when making circle graphs
9. Finding the volume of liquids and solids when finding density of materials
10. Use of positive and negative integers when discussing temperature
11. Use of fractions during graphing unit
12. Use of calculators to find density of liquids as well as the average granite size during weathering investigation
13. Finding elapsed time from sunrise and sunset times during seasons unit
14. Using proportions when comparing the size of celestial bodies
15. The idea of balancing when learning about air pressure, equilibrium, and wind formation
16. Making models of wind formation and habitable homes on other planets
17. Making designs/creating a plan when determining if air has mass

9.2 Career Readiness

9.2.8.CAP.2: Develop a plan that includes information about career areas of interest.
9.2.8.CAP.3: Explain how career choices, educational choices, skills, economic conditions, and personal behavior affect income.
9.2.8.CAP.6: Compare the costs of postsecondary education with the potential increase in income from a career of choice.
9.2.8.CAP.7: Devise a strategy to minimize costs of postsecondary education.
9.2.8.CAP.9: Analyze how a variety of activities related to career preparation
9.2.8.CAP.11: Analyze potential career opportunities by considering different types of resources, including occupation databases, and state and national labor market statistics.
9.2.8.CAP.12: Assess personal strengths, talents, values, and interests to appropriate jobs and careers to maximize career potential.
9.2.8.CAP.14: Evaluate sources of income and alternative resources to accurately compare employment options.
9.2.8.CAP.18: Explain how personal behavior, appearance, attitudes, and other choices may impact the job application process.
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

9.4 Life Literacies & Technology

9.4.8.GCA.2: Demonstrate openness to diverse ideas and perspectives through active discussions to achieve a group goal.
9.4.8.IML.3: Create a digital visualization that effectively communicates a data set using formatting techniques such as form, position, size, color, movement, and spatial grouping
9.4.8.IML.4: Ask insightful questions to organize different types of data and create meaningful visualizations.
9.4.8.IML.5: Analyze and interpret local or public data sets to summarize and effectively communicate the data.
9.4.8.IML.7: Use information from a variety of sources, contexts, disciplines, and cultures for a specific purpose
9.4.8.TL.1: Construct a spreadsheet in order to analyze multiple data sets, identify relationships, and facilitate data-based decision-making.
9.4.8.TL.2: Gather data and digitally represent information to communicate a real-world problem
9.4.8.TL.3: Select appropriate tools to organize and present information digitally.

9.1 Financial Literacy

9.1.8.CR.2: Compare various ways to give back through strengths, passions, goals, and other personal factors
9.1.8.CR.4: Examine the implications of legal and ethical behaviors when making financial decisions.

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
9.1.8.CDM.3: Compare and contrast loan management strategies, including interest charges and total principal repayment costs.
9.1.8.CDM.4: Evaluate the application process for different types of loans
9.1.8.CP.1: Compare prices for the same goods or services.
9.1.8.CP.2: Analyze how spending habits affect one's ability to save.
9.1.8.CP.5: Compare the financial products and services available to borrowers relative to their credit worthiness
9.1.8.EG.1: Explain how taxes affect disposable income and the difference between net and gross income
9.1.8.EG.5: Interpret how changing economic and societal needs influence employment trends and future education.
9.1.8.FI.3: Evaluate the most appropriate financial institutions to assist with meeting various personal financial needs and goals.
9.1.8.FI.4: Analyze the interest rates and fees associated with financial products.
9.1.8.FP.1: Describe the impact of personal values on various financial scenarios.
9.1.8.FP.2: Evaluate the role of emotions, attitudes, and behavior (rational and irrational) in making financial decisions.
9.1.8.FP.3: Explain how self-regulation is important to managing money (e.g., delayed gratification, impulse buying, peer pressure
9.1.8.FP.4: Analyze how familial and cultural values influence savings rates, spending, and other financial decisions.
9.1.8.PB.1: Predict future expenses or opportunities that should be included in the budget planning process.
9.1.8.PB.2: Explain how different circumstances can affect one's personal budget.
9.1.8.PB.4: Construct a simple personal savings and spending plan based on various sources of income and different stages of life
9.1.8.PB.5: Identify factors that affect one's goals, including peers, culture, location, and past experiences.
9.1.8.PB.7: Brainstorm techniques that will help decrease expenses including comparison shopping, negotiating, and day-to-day expense management