Moonachie School District Mathematics Curriculum: Grade Five

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The following maps outline the New Jersey Student Learning Standards for grade five mathematics determined by the State Standards Initiative. Below is a list of assessment tools that are recommended for tracking student progress in these areas. In addition, resources that can be used in conjunction with instruction of these standards are provided but not limited to the list below.

Assessment:

Formative Assessment
Open-Ended Problems
Self-Assessment
Teacher Observation
Benchmark Assessment
Homework Review
Summative Assessment
Class-Work Review
Project-Based Assessment
Timed Drills
End of Year Assessment
Math Software (ex. Study Island)
Group & Cooperative Work

Resources:

Counters (variety)
Flashcards
Math Word Wall
Connecting Cubes
Number Line
Work Mats
Computer Software
Interactive White Board
Flannel Board
Center Games
Concrete Objects
Mini White Boards
Manipulatives
Tangrams
Ten Frame
Blocks
Calendar
100 Chart
Math Songs/Poems
Calculators
Money/Coins
Measurement Tools
Rulers
Bar Models
Base Ten Blocks
Math Journals
Protractors
Geometric Shapes
Geo-Board
Textbooks
Attribute Blocks
Craft Sticks
Wiki-Sticks
Pattern Blocks
Three Dimensional Shapes
Fraction Tiles
Math/Pocket Charts

Websites:

www.ixl.com
www.aplusmath.com
www.brainpop.com
www.brainpopjr.com
www.funbrain.com
www.Envision 2020.com
www.tenmarks.com
www.commoncoresheets.com
www.fun4thebrain.com
www.math-play.com
www.xtramath.com
www.superteacherworksheets.com
www.mrnussbaum.com
www.learnzillion.com
www.k6.thinkcentral.com

www.mathplayground.com www.smartexchange.com www. interactivesites.weebly.com/math.html
www.sheppardssoftware.com http://www.k-5mathteachingresources.com www.songsforteaching.com

References:

http://www.state.nj.us/education/aps/cccs/math/
NJ Technology Standards**:** http://www.state.nj.us/education/cccs/2014/tech/8.pdf
NJ Career Ready Practices: http://www.state.nj.us/education/aps/cccs/career/

Standards for Mathematical Practice
MP. 1 - Make Sense of problems and persevere in solving them.
MP. 2 - Reason Abstractly and Quantitatively
Mp. 3 - Construct Viable Arguments and Critique the Reasoning of Others
MP. 4 - Model with Mathematics
MP. 5 - Use Appropriate Tools Strategically
MP. 6 - Attend to Precision
MP. 7 - Look for and make use of Structure
MP. 8 - Look for and Express Regularity in Repeated Reasoning

MATHEMATICS: GRADE 5
DOMAIN: OPERATIONS AND ALGEBRAIC THINKING

Topic and Length of Time: Topics 13 - 15 - 18 days

Cluster Heading
5.OA.A: Write and interpret numerical expressions.

Performance Indicators

5.OA.A.1 Use parentheses, brackets, or braces in numerical expressions, and evaluate expressions with these symbols.
5.OA.A.2 Write simple expressions that record calculations with numbers, and interpret numerical expressions without evaluating them. For example,
express the calculation "add 8 and 7, then multiply by 2" as 2 x (8+7). Recognize that 3 x (18932 + 921) is three times as large as 18932 + 921
without having to calculate the indicated sum or product.

Student Learning Objectives	Key Vocabulary	Suggested Tasks/Activities
Students will be able to: - Evaluate numerical expressions with parentheses, brackets, and braces, including expressions containing fractions and decimals. - Use parentheses, brackets, or braces to group parts of a numerical expression. - Write simple numerical expressions from a description that record calculations with numbers. - Interpret numerical expressions to compare their values without evaluating them.	Numerical Expression Parentheses Brackets Braces Order of Operations Evaluate Expression Operation Variable	- Introduction to symbols - Symbol Recognition - Grouping Practice - Order of Operations - Expression Evaluation - Real-World Scenarios - Peer Teaching - Interactive Games - Math Centers - Problem-Solving Challenges - Technology Integrations - Guided practice - Class discussion - Independent practice

Cluster Heading **5.OA.B: Analyze patterns and relationships.**
Performance Indicators
5.OA.B.3 Generate two numerical patterns using two given rules. Identify apparent relationships between corresponding terms. Form ordered pairs consisting of corresponding terms from the two patterns, and graph the ordered pairs on a coordinate plane. For example, given the rule "Add 3" and the starting number 0, and given the rule "Add 6" and the starting number 0, generate terms in the resulting sequences, and observe that the terms in one sequence are twice the corresponding terms in the other sequence. Explain informally why this is so.

Student Learning Objectives	Key Vocabulary	Suggested Tasks/Activities
Students will be able to: - Generate two numerical patterns using two given rules and identify relationships between corresponding terms in the pattern. - Form ordered pairs consisting of corresponding terms from the two patterns, and graph the ordered pairs on a coordinate plane.	Pattern Corresponding term Relationship Rule Number Sequence Term Variable Function Input Output Equation	- Pattern Recognition - Pattern Extension - Pattern Creation - Pattern Analysis - Function Tables - Rule Identification - Graphing Relationships - Predicting Outcomes - Real-World Applications Comparing Patterns - Error Analysis - Technology Integration Group Projects - Reflection and Discussion - Guided practice - Class discussion - Independent practice

MATHEMATICS: GRADE 5
DOMAIN: NUMBER AND OPERATION IN BASE TEN

Topic and Length of Time: Topics 1 - 6 - 76 days

Cluster Heading
5.NBT.A : Understand the place value system.

Performance Indicators

5.NBT.A.1 Recognize that in a multi-digit number, a digit in one place represents 10 times as much as it represents in the place to its right and 1/10 of what it represents in the place to its left.

5.NBT.A.2 Explain patterns in the number of zeros of the product when multiplying a number by powers of 10, and explain patterns in the placement of the decimal point when a decimal is multiplied or divided by a power of 10. Use whole-number exponents to denote powers of 10.

5.NBT.A.3 Read, write, and compare decimals to thousandths.

5.NBT.A.3.a Read and write decimals to thousandths using base-ten numerals, number names, and expanded form, e.g., . 347.392 = 3 x 100 + 4 x 10 + 7 x 1 + 3 x (1/10) + 9 x (1/100) = 2 x (1/1000)

5.NBT.A.3.b Compare two decimals to thousandths based on meanings of the digits in each place, using >, =, and < symbols to record the results of comparisons.

5.NBT.A.4 Use place value understanding to round decimals to any place.

Student Learning Objectives	Key Vocabulary	Suggested Tasks/Activities
Students will be able to: - Recognize in a multi-digit number that a digit is 10 times the value of the digit to its right. - Recognize in a multi-digit number that a digit is 1/10 the value of the digit to its left.	Place Value Power Exponent Base Decimal Whole Number Digit	- Show examples of place values in multi-digit numbers and decimals. - Model how to compare decimals based on place value. Note taking - Guided practice - Class discussion

- Explain patterns in the number of zeros of the product when multiplying by powers of ten. - Explain patterns in the placement of the decimal point when a decimal is multiplied or divided by a power of ten. - Denote powers of ten by using whole number exponents. - Read decimals to thousandths using base ten numerals, number names, and expanded form. - Write decimals to thousandths using base ten numerals, number names, and expanded form. - Compare two decimals to thousandths based on place value understanding. - Record comparisons of two decimals to thousandths using >, <, or =. - Round decimals to any place using place value understanding.	Value Ones Tens Hundreds Thousands Ten Thousands Hundred Thousands Millions Decimal Point Tenths Hundredths Thousandths Comparing Ordering Rounding Expanded Form Standard Form Word Form Numeral Greater Than Equal To Place Value Chart PlaceHolder Zero Place Value Relationship	- Independent practice - Real word application with word problems - Centers/Task Cards

Cluster Heading **5.NBT.B : Perform operations with multi-digit whole numbers & with decimals to hundredths**
Performance Indicators
5.NBT.B.5 With accuracy and efficiency, multiply multi-digit whole numbers using the standard algorithm. 5.NBT.B.6 Find whole-number quotients of whole numbers with up to four-digit dividends and two-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Illustrate and explain the calculation by using equations,

rectangular arrays, and/or area models.

5.NBT.B.7 Add, subtract, multiply, and divide decimals to hundredths, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used.

Student Learning Objectives	Key Vocabulary	Suggested Tasks/Activities
Students will be able to: - Multiply multi-digit whole numbers using the standard algorithm working towards accuracy and efficiency. - Find whole number quotients with up to four- digit dividends and two-digit divisors using strategies based on place value. - Find whole number quotients with up to four-digit dividends and two-digit divisors using strategies based on properties of operations or the relationship between multiplication and division. - Illustrate and explain the division calculation by using equations, rectangular arrays, and/or area models. - Divide decimals to hundredths using models or drawings. - Divide decimals to hundredths using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.	Operations Compatible numbers Associative Property of Addition Commutative Property of Addition Multi-digit whole numbers Decimals Hundredths Addition Subtraction Multiplication Division Regrouping Place Value Decimal Point Carrying Borrowing Partial Products Long Division Estimation Rounding Algorithm Product Quotient Sum Difference Factor	- Concrete manipulatives - Use of base-10 blocks - Modeling with Decimal Grids: Use decimal grids or models - Word problems - Estimation activities - Interactive Whiteboard activities - Math Games - Error Analysis - Collaborative Problem-Solving - Real-Life Applications - Differentiated Practice - Math Journals - Peer Teaching

- Relate strategies to the concrete model model or drawing, and explain the reasoning used. - Multiply decimals to hundredths using models or drawings. - Multiply decimals to hundredths using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.	Dividend Divisor Remainder Decimal Place Value Zero Placeholder	

MATHEMATICS: GRADE 5
DOMAIN: NUMBER AND OPERATIONS - FRACTIONS

Topic and Length of Time: Topics 7 - 9 - 47 days

Cluster Heading
5.NF.A: Use equivalent fractions as a strategy to add and subtract fractions.

Performance Indicators

5.NF.A.1 Add and subtract fractions with unlike denominators (including mixed numbers) by replacing given fractions with equivalent fractions in such a way as to produce an equivalent sum or difference of fractions with like denominators. For example, 2/3 + 5/4 = 8/12 + 15/12 = 23/12. In general, a/b + c/d = (ad + bc) / bd.

5.NF.A.2 Solve word problems involving addition and subtraction of fractions referring to the same whole, including cases of unlike denominators, e.g., by using visual fraction models or equations to represent the problem. Use benchmark fractions and number sense of fractions to estimate mentally and assess the reasonableness of answers. For example, recognize an incorrect result 2/5 + 1/2 = 3/7 , by observing that 3/7 < 1/2.

Student Learning Objectives	Key Vocabulary	Suggested Tasks/Activities
Students will be able to:	Equivalent Fractions	- Fraction Strips

- Replace given fractions with an equivalent fraction to produce an equivalent sum when adding or subtracting fractions - Add and subtract fractions with unlike denominators, including mixed numbers, by replacing given fractions with equivalent fractions. - Solve word problems involving addition and subtraction of fractions including those with unlike denominators referring to the same whole.	Numerator Denominator Common Denominator Least Common Denominator (LCD) Addend Sum Difference Fractional Parts Like/Unlike Fractions Mixed Number Improper Fraction Proper Fraction Whole Number Decompose Regroup Simplify Common Multiple Common Factor Fraction Addition/Subtraction Numerical Expression Equivalent Expressions Fraction Bar Number Line Representation	- Fraction Circles - Fractions Practice - Fraction Number Lines - Fraction Games - Fraction Tiles - Error Analysis - Interactive whiteboard activities - Peer Teaching - Real-Life Applications

Cluster Heading **5.NF.B: Apply and extend previous understandings of multiplication and division to multiply and divide fractions.**
Performance Indicators
5.NF.B.3 Interpret a fraction as division of the numerator by the denominator (i.e., a/b = a ÷ b). Solve word problems involving division of whole numbers leading to answers in the form of fractions or mixed numbers, e.g., by using visual fraction models or equations to represent the problem. For example, interpret 3/4 as the result of dividing 3 by 4, noting that 3/4 multiplied by 4 equals 3, and that when 3 wholes are shared equally among

4 people each person has a share of size 3/4. If 9 people want to share a 50-pound sack of rice equally by weight, how many pounds of rice should each person get? Between what two whole numbers does your answer lie?

5.NF.B.4 Apply and extend previous understandings of multiplication to multiply a fraction or whole number by a fraction.

- 5.NF.B.4.a: Interpret the product (a/b) x q as a parts of a partition of q into b equal parts; equivalently, as the result of a sequence of operations a x q/b .For example, use a visual fraction model to show (2/3) x 4 = 8/3, and create a story context for this equation. Do the same with (2/3) x (4x5) = 8/15. In general, (a/b) x (c/d)= (ac/bd).
- 5.NF.B.4.b: Find the area of a rectangle with fractional side lengths by tiling it with unit squares of the appropriate unit fraction side lengths, and show that the area is the same as would be found by multiplying the side lengths. Multiply fractional side lengths to find areas of rectangles, and represent fraction products as rectangular areas.

5.NF.B.5 Interpret multiplication as scaling (resizing), by:

- 5.NF.B.5.a: Comparing the size of a product to the size of one factor on the basis of the size of the other factor, without performing the indicated multiplication.
- 5.NF.B.5.b: Explaining why multiplying a given number by a fraction greater than 1 results in a product greater than the given number (recognizing multiplication by whole numbers greater than 1 as a familiar case); explaining why multiplying a given number by a fraction less than 1 results in a product smaller than the given number; and relating the principle of fraction equivalence a/b = n x a/ n x b to the effect of multiplying a/b by 1.

5.NF.B.6 Solve real world problems involving multiplication of fractions and mixed numbers, e.g., by using visual fraction models or equations to represent the problem.

5.NF.B.7 Apply and extend previous understandings of division to divide unit fractions by whole numbers and whole numbers by unit fractions.

- 5.NF.B.7.a: Interpret division of a unit fraction by a non-zero whole number, and compute such quotients. For example, create a story context for (1/3) ÷ 4, and use a visual fraction model to show the quotient. Use the relationship between multiplication and division to explain that (1/3) ÷ 4 = 1/12 because 1/12 x 4 = 1/3.
- 5.NF.B.7.b: Interpret division of a whole number by a unit fraction, and compute such quotients. For example, create a story context for 4 ÷ (1/5), and use a visual fraction model to show the quotient. Use the relationship between multiplication and division to explain that 4 ÷ (1/5) = 20 because 20 x (1/5) = 4.
- 5.NF.B.7.c: Solve real world problems involving division of unit fractions by non-zero whole numbers and division of whole numbers by unit fractions, e.g., by using visual fraction models and equations to represent the problem. For example, how much chocolate will each person get if 3 people share 1/2 lb. of chocolate equally? How many 1/3 cup servings are in 2 cups of raisins?

Student Learning Objectives	Key Vocabulary	Suggested Tasks/Activities
Students will be able to: - Interpret a fraction as division of the numerator by the denominator using visual fraction models or equations. - Solve word problems involving division of whole numbers resulting in a fraction or mixed number quotient. - Multiply a fraction or whole number by a fraction. - Describe how multiplication can be interpreted as scaling (resizing). - Use visual fraction models or equations to represent the multiplication of fractions and mixed numbers. - Divide unit fractions by whole numbers and whole numbers by unit fractions.	Fraction Numerator Denominator Whole Number Mixed Number Improper Fraction Proper Fraction Multiplication Division Product Quotient Factors Dividend Divisor Equivalent Fractions Common Denominator Least Common Multiple (LCM) Fractional Parts Unit Fractions Reciprocal Inverse Operations Simplify Common Factor Prime Factorization Distributive Property Numerical Expression Fractional Expression Fraction Bar Algorithm	- Fraction Models - Area Models - Number Lines - Note taking - Guided practice - Class discussion - Independent practice - Real word application with word problems - Centers/Task Cards - Interactive whiteboard activities - Error Analysis - Peer Teaching

MATHEMATICS: GRADE 5
DOMAIN: MEASUREMENT

Topic and Length of Time: Topics 11 - 12 - 24 days

Cluster Heading

5.M.A: Convert like measurement units within a given measurement system.

Performance Indicators

5.M.A.1 Convert among different-sized standard measurement units within a given measurement system (e.g., convert 5 cm to 0.05 m), and use these conversions in solving multi-step, real world problems.

Student Learning Objectives	Key Vocabulary	Suggested Tasks/Activities
Students will be able to: - Convert different-sized standard measurement units within a given measurement system. - Use conversions in solving multi-step, real world problems.	Customary units - Capacity (fluid ounce, cup, pint, quart, gallon, - Weight (ounce, pound, ton) - Length (inch, foot, yard, mile - Time (second, minute, hour) Metric units - Capacity (milliliter, liter) - Mass (milligram, gram, kilogram) - Length (millimeter, centimeter, meter, kilometer	- Provide examples of converting standard units of measurement. - Present and model solving word problems that include conversions. - Note taking - Guided practice - Class discussion - Independent practice - Real word application with word problems - Centers/Task Cards

Cluster Heading

5.M.B: Geometric measurement: understand concepts of volume and relate volume to multiplication and to addition.
Performance Indicators
5.M.B.2 Recognize volume as an attribute of solid figures and understand concepts of volume measurement. - 5.M.B.2.a: A cube with side length 1 unit, called a "unit cube," is said to have "one cubic unit" of volume, and can be used to measure volume. - 5.M.B.2.b: A solid figure which can be packed without gaps or overlaps using n unit cubes is said to have a volume of n cubic units. 5.M.B.3 Measure volumes by counting unit cubes, using cubic cm, cubic in, cubic ft, and non-standard units. 5.M.B.4 Relate volume to the operations of multiplication and addition and solve real world and mathematical problems involving volume. - 5.M.B.4.a: Find the volume of a right rectangular prism with whole-number side lengths by packing it with unit cubes, and show that the volume is the same as would be found by multiplying the edge lengths, equivalently by multiplying the height by the area of the base. Represent threefold whole-number products as volumes, e.g., to represent the associative property of multiplication. - 5.M.B.4.b: Apply the formulas V= l x w x h and V= B x h for rectangular prisms to find volumes of right rectangular prisms with whole number edge lengths in the context of solving real world and mathematical problems. - 5.M.B.4.c: Recognize volume as additive. Find volumes of solid figures composed of two non-overlapping right rectangular prisms by adding the volumes of the non-overlapping parts, applying this technique to solve real world problems.

Student Learning Objectives	Key Vocabulary	Suggested Tasks/Activities
Students will be able to: - Understand the concept of volume and how it is used to measure solid figures. - Measure volume by counting unit cubes, using cubic cm, cubic in., cubic ft., and non-standard units. - Solve real world problems involving volume and relating volume to the operations of multiplication and addition.	Volume Cubic unit Cube Rectangular prism Unit cube Formula	- Model ways to determine volume. - Use unit cubes to determine value. - Present and model solving word problems relating to volume. - Note taking - Guided practice - Class discussion - Independent practice - Real word application with word problems - Centers/Task Cards

MATHEMATICS: GRADE 5
DOMAIN: DATA LITERACY

Topic and Length of Time: Topics 10 & 14 - 15 days

Cluster Heading
5.DL.A: Understand and analyze data visualizations.

Performance Indicators

5.DL.A.1 Understand how different visualizations can highlight different aspects of data. Ask questions and interpret data visualizations to describe and analyze patterns.

5.DL.A.2 Develop strategies to collect, organize and represent data of various types and from various sources. Communicate results digitally through a data visual (e.g. chart, storyboard, video presentation).

5.DL.A.3 Collect and clean data to be analyzable (e.g., make sure each entry is formatted correctly, deal with missing or incomplete data).

5.DL.A.4 Using appropriate visualizations (i.e. double line plot, double bar graph), analyze data across samples.

Student Learning Objectives	Key Vocabulary	Suggested Tasks/Activities
Students will be able to: - Identify statistical questions. - Write statistical questions and display the collected data. - Use data sets to develop, generate, and refine questions. - Develop data collection strategies and organize data digitally. - Recognize that data can be selected and analyzed for a purpose.	Data Survey Visualization Graph Chart Diagram Table Axis and Axes Title Labels	- Provide examples of different visual data sets (charts/graphs) and model how to solve statistical questions using these visuals. - Note taking - Guided practice - Class discussion - Independent practice - Real word application with word problems

- Analyze visual data sets and draw conclusions.	Legend Key Frequency Data Set Scale Interval Category Comparison Interpret Analyze Represent Data Range Mean Median Mode Range Frequency Distribution	- Centers/Task Cards

Cluster Heading **5.DL.B: Represent and interpret data**
Performance Indicators
5.DL.B.5 Make a line plot to display a data set of measurements in fractions of a unit (½, ¼, ⅛). Use operations on fractions for this grade to solve problems involving information presented in line plots. For example, given different measurements of liquid in identical beakers, find the amount of liquid each beaker would contain if the total amount in all the beakers were redistributed equally.

Student Learning Objectives	Key Vocabulary	Suggested Tasks/Activities
Students will be able to: - Display a data set of measurements in fractions by making a line plot.	- Data - Line Plot	- Model how measurements can be displayed using a graphical display (line plot).

- Solve problems involving information presented in line plots by using operations on fractions.		- Practice solving problems using data presented on a line plot. - Note taking - Guided practice - Class discussion - Independent practice - Real word application with word problems - Centers/Task Cards

MATHEMATICS: GRADE 5
DOMAIN: GEOMETRY

Topic and Length of Time: Topic 16 - 8 days

Cluster Heading
5.G.A: Graph points on the coordinate plane to solve real-world and mathematical problems.

Performance Indicators

5.G.A.1 Use a pair of perpendicular number lines, called axes, to define a coordinate system, with the intersection of the lines (the origin) arranged to coincide with the 0 on each line and a given point in the plane located by using an ordered pair of numbers, called its coordinates. Understand that the first number indicates how far to travel from the origin in the direction of one axis, and the second number indicates how far to travel in the direction of the second axis, with the convention that the names of the two axes and the coordinates correspond (e.g., x-axis and x-coordinate, y-axis and y-coordinate).

5.G.A.2 Represent real world and mathematical problems by graphing points in the first quadrant of the coordinate plane, and interpret coordinate values of points in the context of the situation.

Student Learning Objectives	Key Vocabulary	Suggested Tasks/Activities

Students will be able to: - Understand the concepts of a coordinate system including axes and coordinates. - Demonstrate understanding of how to plot coordinates on both the X and Y-Axis. - Graph points on a coordinate plane to solve real-world and mathematical problems. - Interpret coordinate values of points on a coordinate plane.	Coordinate system Coordinate Plane Perpendicular lines Axes Origin Ordered Pair Coordinates X-Axis Y-Axis X-Axis Coordinate Y-Axis Coordinate	- Introduce the coordinate system/plane - Define the x-axis and y-axis - Introduce ordered pairs and how the numbers relate to the axes on a coordinate plane. - Model plotting coordinates on a plane. - Note taking - Guided practice - Class discussion - Independent practice - Real word application with word problems - Centers/Task Cards

Cluster Heading **5.G.B: Classify two-dimensional figures into categories based on their properties.**
Performance Indicators
5.G.B.3 Understand that attributes belonging to a category of two-dimensional figures also belong to all subcategories of that category. For example, all rectangles have four right angles and squares are rectangles, so all squares have four right angles.
5.G.B.4 Classify two-dimensional figures in a hierarchy based on properties.

Student Learning Objectives	Key Vocabulary	Suggested Tasks/Activities
Students will be able to: - Explain how attributes belonging to a category of two-dimensional figures also belong to all subcategories.	Attributes Category Subcategory Two-Dimensional Figures Properties	Note taking Guided practice Class discussion Independent practice Real word application with word problems

- User properties of two-dimensional figures to classify then in a hierarchy.	Hierarchy	Centers/Task Cards

INTERDISCIPLINARY CONNECTIONS	
Other Core Content Areas	**English Language Arts** - L.KL.5.1.A: Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases. - RI.MF.5.6: Interpret information presented visually, orally, or quantitatively (e.g., in charts, graphs, diagrams, timelines, animations, or interactive elements on web pages) and explain how the information contributes to an understanding of the text in which it appears. - RI.5.7: Draw on information from multiple print or digital sources, demonstrating the ability to locate an answer to a question quickly or to solve a problem efficiently. - SL.5.1: Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 5 topics and texts, building on others' ideas and expressing their own clearly. **Science** - 3-5-ETS1-1 Define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost. - 3-5-ETS1-2 Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem. **Social Studies** - 6.1.5.GeoSV.1: Identify the maps or types of maps most appropriate for specific purposes, (e.g., to locate physical and/or human features in a community, to determine the shortest route from one town to another town, to compare the number of people living at two or more locations). - 6.1.5.GeoSV.2: Use maps to explain the impact of location and place on the relationships between places in New Jersey, the United States and other countries. - 6.1.5.GeoSV.3: Demonstrate how to use digital geographic tools, maps and globes to measure distances and determine time zones, and locations using latitude and longitude. - 6.1.5.GeoSV.3: Demonstrate how to use digital geographic tools, maps and globes to

	measure distances and determine time zones, and locations using latitude and longitude. - 6.1.5.EconET.2: Use quantitative data to engage in cost benefit analyses of decisions that impact the individual and/or community. - 6.3.5.CivicsPD.3: Propose a solution to a local issue after considering evidence and the perspectives of different groups, including community members and local officials. - 6.3.5.GeoGI.1: Use technology to collaborate with others who have different perspectives to examine global issues, including climate change and propose possible solutions.
Career Readiness, Life Literacies and Key Skills	- 9.4.5.CT.1: Identify and gather relevant data that will aid in the problem-solving process. - 9.4.5.CT.4: Apply critical thinking and problem-solving strategies to different types of problems such as personal, academic, community and global. - 9.4.5.IML.3: Represent the same data in multiple visual formats in order to tell a story about the data. - 9.4.5.TL.2: Sort and filter data in a spreadsheet to analyze findings.
Computer Science and Design Thinking	- 8.1.5.DA.1: Collect, organize, and display data in order to highlight relationships or support a claim. - 8.1.5.DA.3: Organize and present collected data visually to communicate insights gained from different views of the data. - 8.1.5.AP.1: Compare and refine multiple algorithms for the same task and determine which is the most appropriate.

MODIFICATIONS				
English Language Learners	**Special Education**	**At-Risk**	**Gifted and Talented**	**504**
Scaffolding Word walls Sentence/paragraph frames Bilingual dictionaries/translation Think Alouds	Word walls Visual aides Graphic organizers Multimedia Leveled-readers Assistive technology Notes/summaries	Teacher tutoring Peer tutoring Study guides Graphic organizers Extended time Parent communication	Curriculum compacting Challenge assignments Enrichment activities Tiered activities Independent research/inquiry Collaborative	Word walls Visual aides Graphic organizers Multimedia Leveled readers Assistive technology Notes/summaries

Read Alouds Highlight key vocabulary Annotation guides Think-pair-share Visual aides Modeling Cognates	Extended time Answer masking Answer eliminator Highlighter Color Contrast	Modified assignments Counseling	teamwork Higher level questioning Critical/Analytical thinking tasks Self-directed activities	Extended time Answer masking Answer eliminator Highlighter Color contrast Parent communication Modified assignments Counseling