MATHEMATICS
Grade 6

CURRICULUM GUIDE
Approved

August 22, 2017

Mr. David C. Mango, Superintendent
Ms. Debra Grigoletti, Director of Curriculum & Instruction

Developed by:
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This curriculum may be modified through varying techniques,
strategies and materials, as per an individual student's
Individualized Education Plan (IEP).

Approved by the Great Meadows Regional District Board of Education
At the regular meeting held on August 22, 2017

And
Aligned with the New Jersey Student Learning Standards

Table of Contents

Philosophy and Rationale

A coherent mathematics curriculum is achieved through standards aligned with mathematics instruction, high expectations, accommodations for differences, and support for all students. The curriculum is well articulated within and across grades. Students learn mathematics with understanding by building new knowledge from experiences and prior knowledge. Technology use supports visualization, organizing and analyzing data as well as solving complex computations. The mathematics standards present knowledge and skills that prepare students for solving problems in college, career, and life. - NJ Student Learning Standards for Mathematics.

Scope and Sequence

The Number System – Chapters 1, 2, 3, 6 (65 days)
- Numerical Expressions and Factors
- Fractions and Decimals
- Algebraic Expressions and Properties
- Integers and Coordinate Plane

Geometry – Chapters 4,8   (25 days)
- Areas of Polygons
- Surface Area and Volume

Ratios and Proportional Relationships – Chapters 5,7 (36 days)
- Ratios and Rates
- Equations and Inequalities

Expressions and Equations – Chapters 1,3,7 (48 days)

- Numerical Expressions and Factors
- Algebraic Expressions and Properties
- Equations and Inequalities

Statistics and Probability – Chapters 9,10 (27 days)
- Statistical Measure
- Data Display

Mission Statement

The Great Meadows Regional School District will provide quality educational opportunities that ensure the individual success of all students within a safe and supportive environment and to build lifelong learners who will meet society's challenges into and beyond the 21st century. To that end, it is anticipated that all students will achieve the New Jersey Student Learning Standards at all grade levels.

Stage 1: Desired Results

Unit: Ratios and Proportional Relationships
Topic: Ratios, Proportions, Unit Rates, and Percents
Content Standards:
6.RPA. Understand ratio concepts and use ratio reasoning to solve problems.

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."

2. Understand the concept of a unit rate a/b associated with a ratio a:b with b ≠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]

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 30/100 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.

Essential Questions: How are ratios and proportions used to represent and solve problems in everyday life?
Enduring Understandings
> •Ratios describe the relationship between two quantities.
> •Unit rate is a ratio describing 1 item.
> •Ratios and unit rates can be used to solve real-world problems.
> •A percent represents a rate per 100.
> •Ratios can be used to convert measurement units.

Knowledge and Skills (SWBAT embedded course proficiencies)
Students will be able to:
> •Identify and calculate equivalent ratios.
> •Use cross products to solve ratio problems.
> •Determine unit rate for a given situation.
> •Use ratios and unit rates to solve problems.
> •Find percent as a ratio over 100.
> •Convert measurements using ratio reasoning.

Stage 2: Evidence of Understanding, Learning Objectives and Expectations
Benchmarks (embedded student proficiencies):
Students will be able to:
> •Identify and calculate equivalent ratios.
> •Use cross-product to solve proportions
> •Determine unit rate for a given situation.
> •Use ratios and unit rates to solve problems.
> •Find percent as a ratio over 100.
> •Convert measurements using ratio reasoning.

Assessment Methods (formative, summative, other evidence and/or student self- assessment): Assessment Methods:

Formative: (On-going)
> •Teacher observation
> •Daily exit tickets
> •Daily homework
> •Chapter quizzes

Summative: (Culminating)
> •Teacher made projects

•Chapter tests
•Cumulative chapter tests
•District benchmarks

Other Evidence and Student Self-Assessment: (Project Based Learning)
•Chapter Performance Assessments
•Student math binders/folders

Stage 3: Learning Plan

A. Engage Students
•Smart board activities
•Manipulatives
•Projects
•Hands-on Standards activities
•Drawings and models
B. Show evidence of understanding by completing the following assessments
•Teacher made projects
•Chapter tests and quizzes
•Cumulative Chapter tests
•District benchmarks and SGO's
C. Provide differentiated instruction through any and all of the following strategies:
•Readiness/ability
•Adjusting questions
•Compacting Curriculum
•Tiered Assignments
•Acceleration/Deceleration
•Peer teaching
D. Students will reflect, rethink, revise, and refine by:
•Reconsidering key assumptions
•Reflection logs
•Peer Critiquing

Resources:
Student Materials:
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Technology:
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•calculators
Teaching Materials:
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Teaching Resources:
    •Mathematics manipulatives
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Time Allotment: (36days)
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• Civic Literacy
• Health Literacy
• Environmental Literacy

Learning and Innovation Skills
• Creativity and Innovation
• Critical Thinking and Problem Solving
• Communication and Collaboration

Information, Media and Technology Skills

• Information Literacy
• Media Literacy
• ICT (Information, Communications and Technology) Literacy

Life and Career Skills
• Flexibility and Adaptability
• Initiative and Self-Direction
• Social and Cross-Cultural Skills

• Productivity and Accountability
• Leadership and Responsibility
Integration of Digital Tools
        •Classroom computers/laptops
        •Technology Lab
        •FM system
        •Other software programs

Stage 1: Desired Results

Unit: The Number System
Topic: Fractions, Decimals, Factors and Multiples
Content Standards:
6.NS.A – Apply and extend previous understandings of multiplication and division to divide fractions by fractions.
1. Interpret and compute quotients of fractions, and solve word problems involving division of fractions by fractions, e.g., by using visual fraction models and equations to represent the problem. For example, create a story context for $(2/3) \div (3/4)$ and use a visual fraction model to show the quotient; use the relationship between multiplication and division to explain that $(2/3) \div (3/4) = 8/9$ because 3/4 of 8/9 is 2/3. (In general, $(a/b) \div (c/d) = ad/bc$.) 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?
B. Compute fluently with multi-digit numbers and find common factors and multiples.
2. Fluently divide multi-digit numbers using the standard algorithm.
3. Fluently add, subtract, multiply, and divide multi-digit decimals using the standard algorithm for each operation.
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 $4 (9 + 2)$.
C. Apply and extend previous understandings of numbers to the system of rational numbers..
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. 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.

7. 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 oC > –7 oC to express the fact that –3 oC is warmer than –7 oC.

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.

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.

Essential Questions:
How do we use fractions and rational numbers to represent quantities and solve problems in real world contexts?

Enduring Understandings:
        •Multiplication and division are inverse operations that can be used to solve fraction problems.

        •Greatest common factor and least common multiple can be used to find equivalent fractions and reduce fractions.

        •Negative and positive numbers can be used to represent quantities that have opposite directions and values.

        •Rational numbers represent points on a number line.

        •Absolute value represents the distance from zero.

        •Rational numbers used as ordered pairs can be graphed on a coordinate plane.

Knowledge and Skills (SWBAT embedded course proficiencies)

Students will be able to:
        •Divide fractions by fractions.

        •Add, subtract, multiply and divide multi-digit numbers and decimals using standard algorithm.

•Find greatest common factor and least common multiple of two or more numbers.

•Assign positive and negative integers to represent quantities such as temperature, elevation, credit and debit.

•Graph integers on a number line.

•Graph ordered pairs on a coordinate plane using all four quadrants.

•Compare and order rational numbers.

•Write, interpret and explain statements of order for rational numbers

Stage 2: Evidence of Understanding, Learning Objectives and Expectations

Benchmarks (embedded student proficiencies):

Students will be able to:

•Divide fractions by fractions.

•Add, subtract, multiply and divide multi-digit numbers and decimals using standard algorithm.

•Find greatest common factor and least common multiple of two or more numbers.

•Assign positive and negative integers to represent quantities such as temperature, elevation, credit and debit.

•Graph integers on a number line.

•Graph ordered pairs on a coordinate plane using all four quadrants.

•Compare and order rational numbers.

•Write, interpret and explain statements of order for rational numbers

Assessment Methods (formative, summative, other evidence and/or student self- assessment):

Formative: (On-going)

•Teacher observation

•Daily exit tickets

•Daily homework

•Chapter quizzes

Summative: (Culminating)

•Teacher made projects

•Chapter tests

•Cumulative chapter tests

•District benchmarks

Other Evidence and Student Self-Assessment: (Project Based Learning)

•Chapter Performance Assessments

•Student math binders/folders

Stage 3: Learning Plan

A Engage Students

- •Smart board activities
- •Manipulatives
- •Projects
- •Hands-on Standards activities
- •Drawings and models

B Show evidence of understanding by completing the following assessments
- •Teacher made projects
- •Chapter tests and quizzes
- •Cumulative Chapter tests
    - •District benchmarks and SGO's

C Provide differentiated instruction through any and all of the following strategies:
- •Readiness/ability
- •Adjusting questions
- •Compacting Curriculum
- •Tiered Assignments
- •Acceleration/Deceleration
- •Peer teaching

D Students will reflect, rethink, revise, and refine by:
- •Reconsidering key assumptions
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Teaching Materials:
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Teaching Resources:
- •Mathematics manipulatives
- •IXL.com website
- •SRA Folders
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Time Allotment
: (65 days)

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        •Classroom computers/laptops
        •Technology Lab
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        •Other software programs

Stage 1: Desired Results

Unit: Expressions and Equations

Topic: Evaluate expressions, write and solve equations, identify parts of an expression, identify properties of operations, and write and solve inequalities

Content Standards:

6.EE.A. – Apply and extend Previous understandings of arithmetic to algebraic expressions.

1. Write and evaluate numerical expressions involving whole-number exponents.

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 $A = 6 s2$ to find the volume and surface area of a cube with sides of length $s = 1/2$.

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 $3y$.

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.

B. Reason about and solve one-variable equations and inequalities.

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. 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.

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.

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.

C.   Represent and analyze quantitative relationships between dependent and independent variables

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.

Essential Questions:
How do we use algebraic expressions to represent and solve real-world problems where a quantity is unknown or quantities change in relationship to each other?

Enduring Understandings:
•Algebraic expressions contain letters that stand for numbers.
•Algebraic expressions have identifiable parts that can be labeled using mathematical terms.
•Algebraic expressions cann be solved using order of operations.
•The distributive property ca be represent applied to simplify algebraic expressions.
•Variables can be used to unknown quantities.
•Algebraic expressions can be used to represent situations where a quantity is unknown or where quantities change in relationship to each other.

Knowledge and Skills (SWBAT embedded course proficiencies)
Students will be able to:
•Write and evaluate expressions using whole-number exponents.
•Write, read, and evaluate algebraic expressions involving one variable.
•Express word problems as numerical expressions.
•Identify and label parts of an algebraic expression.
•Evaluate algebraic expressions for specific values of a variable.
•Using the substitution method, determine if a given value represents a solution to an algebraic equation.
•Use the distributive property to simplify an algebraic expression.
•Determine if two algebraic expressions are equivalent.
•Write, read, and evaluate inequalities to represent a constraint or condition.
•Use variables to represent two quantities that change in relationship to each other

Stage 2: Evidence of Understanding, Learning Objectives and Expectations
Benchmarks (embedded student proficiencies):
Students will be able to:
•Write and evaluate expressions using whole-number exponents.
•Write, read, and evaluate algebraic expressions involving one variable.
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<u>Assessment Methods</u> (formative, summative, other evidence and/or student self- assessment):

Formative: (On-going)
- •Teacher observation
- •Daily exit tickets
- •Daily homework
- •Chapter quizzes

Summative: (Culminating)
- •Teacher made projects
- •Chapter tests
- •Cumulative chapter tests
- •District benchmarks

Other Evidence and Student Self-Assessment: (Project Based Learning)
- •Chapter Performance Assessments
- •Student math binders/folders

Stage 3: Learning Plan

A.   Engage Students
- •Smart board activities
- •Manipulatives
- •Projects
- •Hands-on Standards activities
- •Drawings and models

B.   Show evidence of understanding by completing the following assessments
- •Teacher made projects
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C.   Provide differentiated instruction through any and all of the following strategies:
- •Readiness/ability
- •Adjusting questions
- •Compacting Curriculum
- •Tiered Assignments

      •Acceleration/Deceleration
      •Peer teaching
D.   Students will reflect, rethink, revise, and refine by:
      •Reconsidering key assumptions
      •Reflection logs
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Resources:
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Time Allotment: (48 days)

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21st Century Interdisciplinary Themes (into core subjects)
• Global Awareness
• Financial, Economic, Business and Entrepreneurial Literacy
• Civic Literacy
• Health Literacy
• Environmental Literacy

Learning and Innovation Skills

• Creativity and Innovation
• Critical Thinking and Problem Solving
• Communication and Collaboration

Information, Media and Technology Skills

• Information Literacy
• Media Literacy
• ICT (Information, Communications and Technology) Literacy

Life and Career Skills
• Flexibility and Adaptability
• Initiative and Self-Direction
• Social and Cross-Cultural Skills
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Integration of Digital Tools
          •Classroom computers/laptops
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          •Other software programs

Stage 1: Desired Results

Unit: Geometry
Topic: Area of polygons, volume, and surface area
Content Standards:
6.G.A. – Solve real world and mathematical problems involving area, surface area, and volume.
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.
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.
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.
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.
Essential Questions:

How are geometric formulas used to solve real-world problems involving area, surface area, and volume?

<u>Enduring Understandings</u>:

  •The area of complex shapes can be determined by composing or decomposing the shape into simpler shapes.
  •Volume is the amount of material that fits inside a container.
  •The formula V=lwh can be used to find volume.
  •Polygons with known coordinates can be plotted on a coordinate plane to determine the lengths of the sides.
  •Three dimensional shapes can be represented by nets that allow us to determine surface area of the shape.

<u>Knowledge and Skills</u> (SWBAT embedded course proficiencies):

  •Find the area of triangles, quadrilaterals, and other polygons.
  •Find the area of complex shapes by composing and decomposing into simpler shapes.
  •Find the volume of a rectangular prism using unit cubes and formulas.
  •Draw polygons on a coordinate plane and find side lengths using coordinates.
  •Represent three-dimensional figures using nets.
  •Use nets to determine surface area of three-dimensional shapes.

<u>Stage 2: Evidence of Understanding, Learning Objectives and Expectations</u>

<u>Benchmarks</u> (embedded student proficiencies):
  •Find the area of triangles, quadrilaterals, and other polygons.
  •Find the area of complex shapes by composing and decomposing into simpler shapes.
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<u>Stage 1: Desired Results</u>

<u>Unit</u>: Statistics and Probability
<u>Topic</u>: Statistical Questions, Distribution of Data, Measure of Cener, Measure of Variation, Dot Plots, Histograms, Box Plots, Quantitative Measures
<u>Content Standards</u>:
6.SP.A – Develop Understanding of Statistical Variability
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.
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.
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.

B. Summarize and describe distributions.
4. Display numerical data in plots on a number line, including dot plots, histograms, and box plots.
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.

<u>Essential Questions</u>:
How do we write statistical questions and use statistical measures to describe data in real-world situations?
In what ways can we display statistical data to represent real-world data sets?

<u>Enduring Understandings:</u>
> •Statistical questions involve variability.
> •Data sets can be described by statistical measures such as center, spread, and variability.
> •Measures of center summarize the values in a data set.
> •Measures of variability describe how the data values vary.
> •Data can be displayed in a variety of ways such as scatterplot, histograms, and box-and-whisker plots.

<u>Knowledge and Skills (SWBAT embedded course proficiencies)</u>:

Students will be able to:
  •Write, read and interpret statistical questions.
  •Describe data using measures of center, spread and variability.
  •Display numerical data as scatterplots, histograms, and box-and whisker plots.
  •Determine the number of observations made, units of measurements and how data was measured by looking at data set

Stage 2: Evidence of Understanding, Learning Objectives and Expectations
Benchmarks **(embedded student proficiencies)**
Students will be able to:
  •Write, read and interpret statistical questions.
  •Describe data using measures of center, spread and variability.
  •Display numerical data as scatterplots, histograms, and box-and whisker plots.
  •Determine the number of observations made, units of measurements and how data was measured
Assessment Methods (formative, summative, other evidence and/or student self-assessment):

Assessment Methods:

Formative: (On-going)
  •Teacher observation
  •daily exit tickets
  •daily homework
  •chapter quizzes

Summative: (Culminating)
  •Teacher made projects
  •Chapter tests
  •Cumulative chapter tests
  •District benchmarks

Other Evidence and Student Self-Assessment: (Project Based Learning)
  •Chapter Performance Assessments
  •Student math journals

Stage 3: Learning Plan:

A. Engage Students
  •Smart board activities
  •Manipulatives
  •Projects
  •Hands-on Standards activities
  •Drawings and models
B. Show evidence of understanding by completing the following assessments

•Teacher made projects
•Chapter tests and quizzes
•Cumulative Chapter tests
•District benchmarks and SGO's
C. Provide differentiated instruction through any and all of the following strategies:
•Readiness/ability
•Adjusting questions
•Compacting Curriculum
•Tiered Assignments
•Acceleration/Deceleration
•Peer teaching
D. Students will reflect, rethink, revise, and refine by:
•Reconsidering key assumptions
•Reflection logs
•Peer Critiquing
Resources:
Student Materials:
•Big Ideas Math Course 1 Text Green Book
•Big Ideas Math Course 1 Differentiated Worksheets
•Manipulatives
Technology:
•Smart Board interactive lessons
•calculators
Teaching Materials:
•Big ideas Math Course 1 Teacher Edition
•Hands-On Standards Book
•Smart board interactive lessons
Teaching Resources:
•Mathematics manipulatives
•IXL.com website
•SRA Folders
•Kahoot.com website

Time Allotment: (27 days)

<u>Resources</u>:

New Jersey Core Curriculum and Student Learning Standards

http://www.state.nj.us/education/cccs/
http://www.state.nj.us/education/cccs/2016/math/

Integration of 21st Century Theme(s)
The following websites are sources for the following 21st Century Themes and Skills:

http://www.nj.gov/education/code/current/title6a/chap8.pdf
http://www.p21.org/about-us/p21-framework .
http://www.state.nj.us/education/cccs/standards/9/index.html

21st Century Interdisciplinary Themes (into core subjects)
• Global Awareness
• Financial, Economic, Business and Entrepreneurial Literacy
• Civic Literacy
• Health Literacy
• Environmental Literacy

Learning and Innovation Skills
• Creativity and Innovation
• Critical Thinking and Problem Solving
• Communication and Collaboration

Information, Media and Technology Skills
• Information Literacy
• Media Literacy
• ICT (Information, Communications and Technology) Literacy

Life and Career Skills
• Flexibility and Adaptability
• Initiative and Self-Direction
• Social and Cross-Cultural Skills
• Productivity and Accountability
• Leadership and Responsibility
Integration of Digital Tools
        •Classroom computers/laptops
        •Technology Lab
        •FM system

•Other software programs