

2018-2019 Scope and Sequence; Teacher : Mr. Owusu

Algebra I, Grades 9 ,10

2018

SEPTEMBER

Essential Questions:

How can we solve an equation that has variables on both sides? How can we use an inequality to describe a real life statement? What caused the function graph to be different at certain intervals? How do you think this concept helped us in our everyday life? How can you compare the rate of change with rise over run?

Focus/Unit:

**Relationships between Quantities and Reasoning with Equations and their Graphs (M)
.Piecewise function graphs / writing Graphing stories . Number system**

Contents:

- Translating situations into a linear model and determining if a given situation fits into linear model
- Solving Linear Equations /Inequalities using the Properties of Algebra(Distributive, Inverse & Commutative) algebraically
- Solving Fractional linear equations & Inequalities
- Determine whether a given table is Linear function or Non-Linear
- Transforming linear equations/inequalities from standard form into Slope- Intercept Form

	<ul style="list-style-type: none"> • Modeling Linear Equations/Inequalities • Graphing linear equations/inequalities • Distance- Time Graph /Travel Graph
Common Core Standards Standard	Number and Quantity (2.8%) N.Q.1 Use units as a way to understand problems and to guide the solution of multi-step problem ; choose units ; NQ.2 Define appropriate quantities for the purpose of descriptive modeling; ACED.2 Create equations that describe numbers or relationships.
Ongoing Formative Assessment:	Tests , Quizzes, Exit slips , Short questions, Group work .Students, individually or in groups will demonstrate their understanding of a topic taught during the week before class
Summative Assessments	End of unit Test State test Mock Regents , Quizzes, Projects and presentation such as rolling a golf ball down a ramp to calculate the slope
Skills Necessary for Performance Tasks	ACED.2 creating equations; Solving Linear Equations/ Inequalities and System of equations using Elimination and Substitution methods .Solving system of equations/ inequalities graphically . Modeling system of equations/inequalities
What specific literacy strategies will be used?	Reading , annotation 7 habits of a good reader Vocabulary words definition Using specific vocabulary words in sentences to show and demonstrate knowledge understanding of concepts

What examples of Arts will be used?	Constructions of graphs for visual, experiment in class (such as rolling a golf ball to determine its path)
What type of Technology will be used	Graphing calculator , Smart board , Overhead projector
2018	OCTOBER
Essential Questions:	What is a Linear Model? How can a student rewrite an expression simpler without changing the value or meaning of it? How can you solve a system of linear equations? How can you use substitution to solve system of equations? How can you use elimination to solve system of equation?
Focus/Unit:	Analyzing different functions; such as Linear models, and structure of an algebraic expression how its built with laws such as commutative , associative .Solving linear equations/ inequalities. Literal Equations and change of formulas . Linear modeling (with money)
Contents:	<ul style="list-style-type: none"> ● Calculate Slope/rate of change/speed ● Analysis of linearity/non-linearity by rate of change using table ● Graphing Inequalities / Equations in two variables ● Solving System of Equations/ Inequalities algebraically by the Elimination and Substitution methods ● Graphing Absolute value equations & Square Root equations ● Modeling system of linear equation/inequality ● Literal Equations & Change of Formulas

	<ul style="list-style-type: none"> • Piece-wise functions and their related graphs
Common Core Standards/Skills:	N.Q.1 Use units as a way to understand problems and to guide the solution of multi-step problem ; N.Q.3 choose a level of accuracy appropriate to limitations on measurement when reporting quantities ; NY STATE A.G.4 Graph Functions ; Absolute value , Piece-Wise Functions and Travel-Graph/Distance-Time Graphs.
Ongoing Formative Assessment:	Tests , Quizzes, Exit slips , Short questions, Group work . Students, individually or in groups will demonstrate their understanding of a topic taught during the week before class
Summative Assessments	End of unit Test State test Mock Regents , Quizzes, Projects and presentation , experiment such as throwing an object in the air then calculate the time it takes to reach the ground as well as timing it
Skills Necessary for Performance Tasks	SSE.1/2/3. Structure of an expression; functions; G.GPE. 5 Write equation given two points and slope
What specific literacy strategies will be used?	Reading , annotation 7 habits of a good reader Vocabulary words definition Using specific vocabulary words in sentences to show and demonstrate knowledge understanding and concepts
What examples of Arts will be used?	Constructions of graphs for visual, experiment in class (such as rolling a golf ball to determine its path

What type of Technology will be used	Graphing calculator , Smart board , Overhead projector
2018	NOVEMBER
Essential Questions:	What are polynomials? How do we multiply polynomials? How do we divide polynomials? How are equations and inequalities alike and how are they different? What is the meaning of absolute value? Explain everyday activities that model Quadratics. How can you factor a polynomial completely? How do write one variable quadratic equation?
Focus/Unit:	Solving quadratic equations, and their related graphs. How do we add, subtract, multiply, and divide polynomials? Factoring quadratic Expressions, Factoring by the greatest common factor, Factoring Binomial and Trinomial expressions. Transformation and Graphs
Contents:	<ul style="list-style-type: none"> ● Evaluating Quadratic Functions graphically and algebraically ● Factoring Quadratic Expressions <ul style="list-style-type: none"> (i) Factoring by the Greatest Common Factor (ii) Factoring Binomial Expressions (iii) Factoring Trinomial Expressions ● Zeros of quadratic Functions ● Graphing Quadratics and finding the zeros/ x-intercepts/roots as apply to equations

	<ul style="list-style-type: none"> • Factoring Method using the Zero product property • Completing the square method and the Vertex form of quadratics) • Completing the square to solve quadratic equation (the process of adding $(b/2)^2$ to $x^2 + bx$ to form a perfect square trinomial • Minimum/Maximum and the vertex form of quadratics • Range and Domain on quadratic graphs • Quadratic formula and solving quadratic equation by taking square roots • Interpreting the Discriminant formula $(b^2 - 4ac)$ • Vertex Form of Quadratic and Transformations & Quadratics (shift ---Right, Left , Up, Down) or Vertical and Horizontal shifts
<p>Common Core Standards/Skills:</p>	<p>A.REI.10 Understand that the graph of an equation in 2 variables is the set of all its solutions plotted in the coordinate plane, often forming a curve (which could be a line)</p> <p>A.APR.1 Arithmetic with polynomials ; S.ID.6 Find the equation for the line of best fit</p>
<p>Ongoing Formative Assessment:</p>	<p>Tests , Quizzes, Exit slips , Short questions, Group work . Students, individually or in groups will demonstrate their understanding of a topic taught during the week before class</p>

<p style="text-align: center;">Summative Assessments</p>	<p>End of unit Test State test Mock Regents , Quizzes, Projects and presentation ,</p>
<p>Skills Necessary for Performance Tasks</p>	<p>APR.1/3 Addition and subtraction of polynomials; Division and multiplication of polynomials; ACED.3</p> <p>4) <u>Function</u> (Types :Linear, Quadratic, Absolute Value, Exponential Piece-Wise Function)</p> <p style="padding-left: 40px;">Representation of Functions :(Coordinate Form/ set, Table Form & Graphs)</p> <p style="padding-left: 40px;">(1). Function Notation $f(x),g(x)$ / Evaluating functions (2) Domain & Range</p> <p style="padding-left: 40px;">Evaluating a function with a given domain graphically and algebraically .Examples , $f(0)$ etc</p> <ul style="list-style-type: none"> • Rate of change (slope) with given intervals • $SLOPE = \frac{y_2 - y_1}{x_2 - x_1}$ or Rise/ Run • Writing a function that describes a relationship between two quantities • Nature of function • Graphs of functions and the Vertical line test as a visual tool to determine whether a 4) <p><u>Function</u> (Types :Linear, Quadratic, Absolute Value, Exponential Piece-Wise Function)</p> <p style="padding-left: 40px;">Representation of Functions :(Coordinate Form/ set, Table Form & Graphs)</p> <p style="padding-left: 40px;">(1). Function Notation $f(x),g(x)$ / Evaluating functions (2) Domain & Range</p> <p style="padding-left: 40px;">Evaluating a function with a given domain graphically and algebraically .Examples , $f(0)$ etc</p> <ul style="list-style-type: none"> • Rate of change (slope) with given intervals

	<ul style="list-style-type: none"> • SLOPE = $y_2 - y_1 / X_2 - X_1$ or Rise/ Run • Writing a function that describes a relationship between two quantities • Nature of function • Graphs of functions and the Vertical line test as a visual tool to determine whether a graph is a function or not • Creating function in table or coordinate forms (one to one mapping or correspondence) • Relation and Function • The Square Root and Cube Root Functions. • Analyzing Functions Graphically • Translations of Functions • Interpreting Graph of Functions • graph is a function or not • Creating function in table or coordinate forms (one to one mapping or correspondence) • Relation and Function • The Square Root and Cube Root Functions. • Analyzing Functions Graphically • Translations of Functions • Interpreting Graph of Functions <p>Solving system of equations; ACED.1 Linear inequalities / Equations one variable; ACED.3 Linear inequalities two variables , LE1/2 Linear and Quadratic ; F.IF.8 Evaluate absolute value functions</p>
<p>What specific literacy strategies will be used?</p>	<p>Reading , annotation 7 habits of a good reader Vocabulary words definition Using specific vocabulary words in sentences to show and demonstrate knowledge understanding of concepts</p>

What examples of Arts will be used?

Constructions of graphs for visual, experiment in class (such as calculate the time of a falling object thrown in the air, role a golf ball and determine its path and the slope or rate of change of it⁴)

Function (Types :Linear, Quadratic, Absolute Value, Exponential Piece-Wise Function)

Representation of Functions :(Coordinate Form/ set, Table Form & Graphs)

(1). Function Notation $f(x),g(x)$ / Evaluating functions (2) Domain & Range

Evaluating a function with a given domain graphically and algebraically .Examples , $f(0)$ etc

- Rate of change (slope) with given intervals
- $SLOPE = \frac{y_2 - y_1}{x_2 - x_1}$ or Rise/ Run
- Writing a function that describes a relationship between two quantities
- Nature of function
- Graphs of functions and the Vertical line test as a visual tool to determine whether a graph is a function or not
- Creating function in table or coordinate forms (one to one mapping or correspondence)
- Relation and Function
- The Square Root and Cube Root Functions.
- Analyzing Functions Graphically
- Translations of Functions
- Interpreting Graph of Functions

<p>What type of Technology will be used</p>	<p>Graphing calculator , Smart board , Overhead projector</p>
<p>2018</p>	<p>DECEMBER</p>
<p>Essential Question:</p>	<p>What does zero exponent means? What are the rules for multiplying exponents? What are the properties of dividing with negative exponents?</p>
<p>Focus/Unit:</p>	<p>Exponential Model Properties of Exponents; Zero and Negative Exponents; algebraic problems that include dividing and multiplying with Zero and Negative exponents</p>
<p>Content</p>	<ul style="list-style-type: none"> ● Axis of symmetry And Vertex/ Turning Point ● Using the equation of the Axis of symmetry: $x = -b/ 2a$ to find the maximum or minimum y- values and subsequently forming the Vertex graphically and algebraically ● Analyze Quadratic function over a given interval (finding the rate of change with the limits of a given interval) ● Graphing a Linear- Quadratic system (Graphing Calculator) ● Solving a linear- quadratic system algebraically by the substitution method ● Modeling Quadratic Function (translating a given situation into a quadratic equation)

	<ul style="list-style-type: none"> • Graphing Square Root Function and determining the domain • Polynomials/ Cubic Function • Writing polynomials in standard form • Adding and Subtracting polynomials in standard form • Determining the x- intercepts /zeros of a cubic function algebraically and graphically • Relationship between Zeros and Factors of polynomials • Using the zeros to write quadratic equations in standard form and the equation of Axis of symmetry
<p>Common Core Standards/Skills:</p>	<p>A.APR.6 Properties of Exponents, Zero and Negative Exponents, Simple monomials with exponents</p>
<p>Ongoing Formative Assessment:</p>	<p>Tests , Quizzes, Exit slips , Short questions, Group work Math Friday Students, individually or in groups will demonstrate their understanding of a topic taught during the week before class</p>

<p>Summative Assessments</p>	<p>www.ixl.com for on line assessment on the concept taught in the unit. End of unit Test State test Mock Regents , Quizzes, Projects and presentation , Computation of a tax return, calculation of w'2s to demonstrate understanding of proportion and ratio application; Graph an exponential function graph and analyze and present findings during class project.</p>
<p>Skills Necessary for Performance Tasks</p>	<p>A.CED.1 PR.6 Zero and negative exponents; properties of exponents</p>
<p>What specific literacy strategies will be used?</p>	<p>Reading , annotation 7 habits of a good reader Vocabulary words definition Using specific vocabulary words in sentences to show and demonstrate knowledge understanding of concepts</p> <div data-bbox="558 776 1633 1049" style="border: 1px solid black; padding: 5px; margin-bottom: 5px;"> <p>Constructions of graphs for visual, experiment in class (such as rolling a golf ball to determine its path)</p> </div> <div data-bbox="558 1049 1633 1321" style="border: 1px solid black; padding: 5px;"> <p>Graphing calculator , Smart board , Overhead projector</p> </div> <div data-bbox="558 1321 1633 1399" style="background-color: black; height: 48px;"></div>

	<p>JANUARY</p> <p>How does Algebra help someone understand investment portfolios? How does the knowledge of percent help students in real life? How do we interpret the formula $y/x=k$; How do we use the formula $c(1+r)^x$ to solve real life situations? Proportion a ratio of two fractions What are special products?</p>	
<p>What examples of Arts will be used?</p>		
<p>What type of Technology will be used</p>		
<p>2019</p>		

Essential Question:	
Focus/Unit:	Exponential functions, Application of the exponential formula; Exponential Growth $a(1+r)^x$, Exponential Decay $a \cdot b^x$; LE.1/5, Linear and Exponentials models. Factoring Polynomials, Solving problems with Rational numbers.
Content	<p>3) <u>Exponential model</u></p> <ul style="list-style-type: none"> • Graphing Exponential Functions, • Exponential Decay (decreasing) Function ,Rate Factor less than 1 • Exponential Growth (increasing) Function, Rate Factor more than 1 • Identifying and Evaluating Exponential Function • Simplifying Exponential Expressions including Exponential laws or rules
Common Core Standards/Skills:	F.IF.7a Factoring Polynomials A.A.14 Graph linear and quadratic functions and show intercepts, maxima, and minima. F.IF.7c Graph polynomial functions, Factoring trinomials

Ongoing Formative Assessment:	Tests , Quizzes, Exit slips , Short questions, Group work ; www.ixl.com for on line assessment individually or in groups will demonstrate their understanding of a topic taught during the week before class
Summative Assessments	End of unit Test State test Mock Regents , reparation of income tax with the application of exponential function formula, Use of the formula to calculate portfolio investment through class group project
Skills Necessary for Performance Tasks	F.IF.8.b exponential functions; A.CED.1 Exponential Growth and Decay problems; AA.14 Graph linear and quadratic function; A.PR1/2 Arithmetic with polynomials and rational numbers
What specific literacy strategies will be used?	Reading , annotation 7 habits of a good reader Vocabulary words definition Using specific vocabulary words in sentences to show and demonstrate knowledge understanding and concepts

What examples of Arts will be used?	Constructions of graphs for visual, presentation of class tax project that demonstrate the application of exponential function formulas
What type of Technology will be used	Graphing calculator , Smart board , Overhead projector
2019	FEBRUARY
Essential Question:	What are the possible solutions to a quadratic equation? How can you determine the number of solutions from the graph? How roots, zeros, and x-intercepts are different from each other?
Focus/Unit:	Function and Relation :Quadratic Equations And Functions . Other types of functions, graphs of functions and the vertical line test, Creating function in table or coordinate form, Evaluating given functions, Rate of change with a given interval

<p>Content</p>	<ul style="list-style-type: none"> • Translating situations into Exponential Functions using keywords(doubling ,tripling, quadrupling as well as percentage rate of change) • Interpreting the terms in Exponential Equation $y= ab^x$, where $b= 1+r$ or $b =1-r$ • Attributes of Exponential Function (Initial value, Constant Ratio/ Rate Factor, Duration) • Linear model and Exponential model(Tables and Rate of Change) as well as situations involving linear or Exponential models • Finding the y-intercept/ initial value of an exponential function, the rate factor of the exponential function • Modeling Exponential Functions(translating word problems into exponential equation) • Compound Interest & Rate Factor($1+r$) & ($1-r$),Compound Interest equation : $y= a(b+r)^x$ or $y= a(b-r)^x$ <p>Solving Exponential Equations with the same Base</p> <p>Key words : Compounded ,appreciate ,growth, gain/increase, decay, depreciate and lose/lost ,doubling, Tripling, etc</p>
<p>Common Core Standards/Skills:</p>	<p>A.REI.4b Solve quadratic equations by inspection, taking square roots, completing the square, the quadratic formula and factoring, as appropriate to the initial form of the equation. A.REI.7 Solve a simple system consisting of a linear equation and a quadratic equation in two variables algebraically and graphically. F.IF.1 Interpreting functions</p>

<p>Ongoing Formative Assessment:</p>	<p>Tests , Quizzes, Exit slips , Short questions, Group work ; On line assessment using www.ixl.com to check students understanding of concepts taught Math Friday Students, individually or in groups will demonstrate their understanding of a topic taught during the week before class</p>
<p>Summative Assessments</p>	<p>End of unit Test State test Mock Regents, Quizzes, Projects and presentation, Been able to visually identify Solutions to quadratics of graph. Students will demonstrate their knowledge of quadratic by calculating the roots of a quadratic function algebraically then visually proving their answer right or wrong with the presentation of visuals (graph). Experiment that involve rolling balls down ramp and measuring distance from top of ramp etc.</p>
<p>Skills Necessary for Performance Tasks</p>	<p>A.CED.1 Quadratics using square roots. A.RE1.4b Solving quadratics using multiplication property of Zero; A.APR.2 Making connections between roots and factors of quadratics.</p>
<p>What specific literacy strategies will be used?</p>	<p>Reading , annotation 7 habits of a good reader Vocabulary words definition Using specific vocabulary words in sentences to show and demonstrate knowledge understanding of concepts</p>

What examples of Arts will be used?	Constructions of graphs for visual, presentation of class tax project that demonstrate the application of exponential function formulas
What type of Technology will be used	Graphing calculator , Smart board , Overhead projector
2019	MARCH
Essential Question:	What are we referring to when we say radical expression? How are radical equations solved and simplified? What does conjugate mean, and what is its role in solving radical expressions? What are extraneous solutions of a rational function? How to we apply the basic operations in solving rational expressions?
Focus/Unit:	Rational and Radical Expressions and Equations, Evaluating Radical expressions

<p>Content</p>	<p>4) <u>Function</u> (Types :Linear, Quadratic, Absolute Value, Exponential piece-wise function)</p> <p>Representation of Functions :(Coordinate Form/ set, Table Form & Graphs)</p> <p>(1). Function Notation $f(x),g(x)$ / Evaluating functions (2) Domain & Range</p> <p>Evaluating a function with a given domain graphically and algebraically .Examples , $f(0)$ etc</p> <ul style="list-style-type: none"> • Rate of change (slope) with given intervals • SLOPE = $y_2 - y_1 / X_2 - X_1$ or Rise/ Run • Writing a function that describes a relationship between two quantities • Nature of function • Graphs of functions and the Vertical line test as a visual tool to determine whether a graph is a function or not • Creating function in table or coordinate forms (one to one mapping or correspondence) • Relation and Function • The Square Root and Cube Root Functions. • Analyzing Functions Graphically • Translations of Functions • Interpreting Graph of Functions
<p>Common Core Standards/Skills:</p>	<p>A.REI.2 Solve simple rational and radical equations in one variable, and give examples showing how extraneous solutions may arise; A.APR.6 Rewrite simple rational expressions in different forms; write $a(x)/b(x)$ in the form $q(x) + r(x)/b(x)$, where $a(x)$, $b(x)$, $q(x)$, and $r(x)$ are polynomials with the degree of $r(x)$ less than the degree of $b(x)$, using inspection, long division, or, for the more complicated examples, a computer algebra system.</p>

<p>Ongoing Formative Assessment:</p>	<p>Tests , Quizzes, Exit slips , Short questions, Group work ; Use www.ixl.com to assess students understanding on line. Students, individually or in groups will demonstrate their understanding of a topic taught during the week before class</p>
<p>Summative Assessments</p>	<p>End of unit Test State test Mock Regents, Quizzes, Projects and presentation, Been able to visually identify Solutions to quadratics of graph. Students will demonstrate their knowledge of quadratic by calculating the roots of a quadratic function algebraically then visually proving their answer right or wrong with the presentation of visuals (graph).</p>
<p>Skills Necessary for Performance Tasks</p>	<p>A.CED.1 Quadratics using square roots. A.RE1.4b Solving quadratics using multiplication property of Zero; A.APR.2 Making connections between roots and factors of quadratics.</p>
<p>What specific literacy strategies will be used?</p>	<p>Reading , annotation 7 habits of a good reader Vocabulary words definition Using specific vocabulary words in sentences to show and demonstrate knowledge understanding of concepts</p>

What examples of Arts will be used?	Constructions of symmetric object to assist in verifying dimensions calculated algebraically
What type of Technology will be used	Graphing calculator , Smart board , Overhead projector
2019	APRIL
Essential Question:	What is a Sequence of Events ? Why are they important?
Focus/Unit:	Sequence and the number system, Types of sequence (Arithmetic, Geometric and Recursive), Rational and irrational numbers
Content	<p>5) <u>Sequence And The Number System</u></p> <ul style="list-style-type: none"> ● Number Pattern & Structure ● Identify Arithmetic and Geometric sequence by examining the pattern and write an equation to describe the pattern ● Write an Explicit and Recursive Formulas with Arithmetic & Geometric Sequences

NOTE: In an Explicit, the output for any term depends on the term number but in a Recursive the output is used as the next input .Recursive in general means to repeat a process over and over again.

TWO MAIN TYPES OF SEQUENCES (Arithmetic and Geometric Sequences)

- Terms of Arithmetic Sequence and their Common Difference
- Terms of Geometric Sequence and their Common Ratio
- Arithmetic (Common Difference) and their terms(Explicit)
- Geometric (Common Ratio) and their terms (Explicit)
- Recursive and their terms for both Geometric and Arithmetic sequences
- Identifying Geometric and Arithmetic Sequences
- Writing the terms and rule for a given sequence (Arithmetic or Geometric)
- Write a Recursive Formula for a sequence with visuals
- Formulas associated with Arithmetic, Geometric sequences in Explicit and Recursive forms
- Evaluate the Explicit Arithmetic Sequence Formula: $a_n = a_1 + (n-1)d$ and the Explicit Geometric sequence Formula : $a_n = a_1(r)^{n-1}$ with a given n-value
- Real Numbers And Non- Real Numbers
- Real Number System (Rational & Irrational numbers)
- Operations with Rational and Irrational (Radicals) numbers

<p>Common Core Standards/Skills:</p>	<p>F.IF.A.3: Describe the events / diagrams as related to sequence. Finding the common difference of an Arithmetic sequence. Finding the nth term of an Arithmetic sequence</p>
<p>Ongoing Formative Assessment:</p>	<p>Tests , Quizzes, Exit slips , Short questions, Group work ; Math Friday Students, individually or in groups will demonstrate their understanding of a topic taught during the week before class</p>
<p>Summative Assessments</p>	<p>End of unit Test State test Mock Regents , Quizzes, Projects and presentation , Project to investigate how gaming machine are programmed with the application of sequence. Presentation of visual in the form of graphs for better understanding . Use www.ixl.com as tool for on line assessment for better understanding of the topic.</p>
<p>Skills Necessary for Performance Tasks</p>	<p>F.LE.A.2: Calculate word problems associated with sequence. Evaluating formulas related to sequence</p>
<p>What examples of Arts will be used?</p>	<p>Constructions of graphs or visuals that explain sequence</p>

What type of Technology will be used	Graphing calculator , Smart board , Overhead projector
School Goals (Literacy, Technology, Numeracy & the Arts)	graphing calculator and SMART board
2019	MAY
Essential Question:	How are data summarized and interpreted? How do we understand the measures of central tendency? What are other things involved in describing a set of data aside from the measures of central tendency?
Focus/Unit:	Statistics: SDI.1 Construct histograms and box and whisker plots; SDI.2 Representing data graphically ; SCP.4 Understanding components of box and whisker plots
Content	<ul style="list-style-type: none"> • Measures of Central Tendency (Mean, Median, Mode) • Measures of Variability/Spread/dispersion (range, Interquartile range. standard deviation), • Interquartile range & outliers(extreme values) • Analyzing data using the standard deviations and the interquartile range(IQR)

	<ul style="list-style-type: none"> • Scatterplot and regression analysis, Interpreting scatter Plot (draw Trend Line, Interpolate and Extrapolate to predict an unknown variable) • Quantitatively measure the strength of linear relationship by computing and interpreting the correlation coefficient. • Represent Bivariate data on a Scatter Plot and describing the types of correlation
Common Core Standards/Skills:	S.ID.1 Represent data with plots on the real number line (dot plots, histograms, and box plots). S.ID.3 Interpret differences in shape, center, and spread in the context of the data sets, accounting for possible effects of extreme data points (outliers).
Ongoing Formative Assessment:	Tests , Quizzes, Exit slips , Short questions, Group work ; Use of theTI:84 calculator to construct box and whisker plots ; histograms :Five number summary as well as the quartiles. Students, individually or in groups will demonstrate their understanding of a topic taught during the week before class
Summative Assessments	End of unit Test State test Mock Regents , Quizzes, Projects and presentation , Project to investigate and organize data. Presentation of visual in the form of graphs for better understanding
Skills Necessary for Performance Tasks	Analyzing data using the standard deviation and the Interquartile Range. Regression analysis using Correlation coefficient, equation of regression

What examples of Arts will be used?	Constructions of graphs for visual, Construction of a box and whiskers plots; histograms from construction paper for analyzing
What type of Technology will be used	Graphing calculator , Smart board , Overhead projector
School Goals (Literacy, Technology, Numeracy & the Arts)	graphing calculator, SMART board, 7 Habits
2019	JUNE
Essential Question:	Why are data so important? What data collection method is better? Discuss
Focus/Unit:	Analyzing Bivariate data : using the Graphing calculator to determine the equation of line of regression and the correlation coefficient. Data collections and types

<p>Content</p>	<ul style="list-style-type: none"> ● Analyzing Lines of Fit (Finding a Line of Best Fit Using Technology) ● Correlation / Relationship /Association/Trend line/ Line of best fit ● Analyzing Bivariate Data: Using the Graphing Calculator to determine the equation and the correlation coefficient (r). Regression Equation ($y = mx + b$) & Correlation Coefficient (positive, negative and No correlation and their graphs) ● Interpreting the statistical symbols, r^2 as the coefficient of determination, the letter r as correlation coefficient and the Number Line showing the various degrees of correlation levels(strong ,moderate and weak) to draw a valid conclusion for a data set ● Causal & Non-Causal Situations ● Distinguish between correlation and causation
<p>Common Core Standards/Skills:</p>	<p>Drawing and interpreting statistical graphs</p>
<p>Ongoing Formative Assessment:</p>	<p>Tests , Quizzes, Exit slips , Short questions, Group work ; Use of theTI:84 calculator to calculate the five number summary and draw and interpret the Box and Whisker plot: Students, individually or in groups will demonstrate their understanding of a topic taught during the week before class .In addition to that use www.ixl.com to check students understanding.</p>
<p>Summative Assessments</p>	<p>End of unit Test State test Mock Regents , Quizzes, Projects and presentation ; Presentation of visual in the form of graphs for better understanding . NY State Regents and Review</p>