



Township of Ocean Schools

Assistant Superintendent
Office of Teaching and Learning

SPARTAN MISSION:

Meeting the needs of all students with a proud tradition of academic excellence.

DEPARTMENT Mathematics

COURSE Foundations of Algebra II

Curriculum Development Timeline

School: Ocean Township High School

Course: Foundations of Algebra II

Department: Mathematics

Board Approval	Supervisor	Notes
August 2022	Gerard Marrone	Born Date
August 2025	Greg Colon	Alignment to Standards

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COURSE Foundations of Algebra II

Township of Ocean Pacing Guide			
Week	Marking Period 1	Week	Marking Period 3
1	Linear Equations & Functions	21	Quadratic Equations & Functions
2	Linear Equations & Functions	22	Quadratic Equations & Functions
3	Linear Equations & Functions	23	Quadratic Equations & Functions
4	Linear Equations & Functions	24	Quadratic Equations & Functions
5	Linear Equations & Functions	25	Quadratic Equations & Functions
6	Linear Equations & Functions	26	Quadratic Equations & Functions
7	Linear Equations & Functions	27	Quadratic Equations & Functions
8	Linear Equations & Functions	28	Quadratic Equations & Functions
9	Linear Equations & Functions	29	Quadratic Equations & Functions
10	Linear Equations & Functions	30	Quadratic Equations & Functions
Week	Marking Period 2	Week	Marking Period 4
11	Polynomials & Factoring	31	Data Analysis & Statistics
12	Polynomials & Factoring	32	Data Analysis & Statistics
13	Polynomials & Factoring	33	Data Analysis & Statistics
14	Polynomials & Factoring	34	Data Analysis & Statistics
15	Polynomials & Factoring	35	Data Analysis & Statistics
16	Polynomials & Factoring	36	Data Analysis & Statistics
17	Polynomials & Factoring	37	Data Analysis & Statistics
18	Polynomials & Factoring	38	Data Analysis & Statistics
19	Polynomials & Factoring	39	Data Analysis & Statistics
20	Polynomials & Factoring	40	Data Analysis & Statistics

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COURSE Foundations of Algebra II

Core Instructional & Supplemental Materials including various levels of Texts

Core Instruction: Big Ideas Algebra 1 & Algebra 2 ©2022

Supplemental: PARCC Released Questions, Desmos, and IXL

Special Education Supplemental: IXL Math, Prodigy and Video Tutor-bigideasmath.com

Time Frame	10 cycles ~ 30 (56 minute) days
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Topic

Linear Equations & Functions

Alignment to Standards

A-SSE.A.1 **Interpret the structure of expressions**

Interpret expressions that represent a quantity in terms of its context.

A-SSE.A.2 **Interpret the structure of expressions**

Use the structure of an expression to identify ways to rewrite it

A-SSE.B.3 **Write expressions in equivalent forms to solve problems**

Choose and produce an equivalent form of an expression to reveal and explain properties of the quantity represented by the expression

A-CED.A.1 **Create equations that describe numbers or relationships**

Create equations and inequalities in one variable and use them to solve problems.

A-CED.A.2 **Create equations that describe numbers or relationships**

Create equations in two or more variables to represent relationships between quantities; graph equations on coordinate axes with labels and scales.

A-CED.A.3 **Create equations that describe numbers or relationships**

Represent constraints by equations or inequalities, and by systems of equations and/or inequalities, and interpret solutions as viable or nonviable options in a modeling context.

A-CED.A.4 **Create equations that describe numbers or relationships**

Rearrange formulas to highlight a quantity of interest, using the same reasoning as in solving equations

A-REI.A.1 **Understand solving equations as a process of reasoning and explain the reasoning**

Explain each step in solving a simple equation as following from the equality of numbers asserted at the previous step, starting from the assumption that the original equation has a solution. Construct a viable argument to justify a solution method.

A-REI.A.2 **Understand solving equations as a process of reasoning and explain the reasoning**

Solve simple rational and radical equations in one variable, and give examples showing how extraneous solutions may arise

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A-REI.B.3 Solve equations and inequalities in one variables

Solve linear equations and inequalities in one variable, including equations with coefficients represented by letters.

A-REI.B.4 Solve equations and inequalities in one variables

Solve quadratic equations in one variable

A-REI.C.5 Solve systems of equations

Prove that, given a system of two equations in two variables, replacing one equation by the sum of that equation and a multiple of the other produces a system with the same solutions.

A-REI.C.6 Solve systems of equations

Solve systems of linear equations exactly and approximately (e.g., with graphs), focusing on pairs of linear equations in two variables

A-REI.C.7 Solve systems of equations

Solve a simple system consisting of a linear equation and a quadratic equation in two variables algebraically and graphically.

A-REI.D.10 Represent and solve equations and inequalities graphically

Understand that the graph of an equation in two variables is the set of all its solutions plotted in the coordinate plane, often forming a curve (which could be a line).

A-REI.D.11 Represent and solve equations and inequalities graphically

Explain why the x-coordinates of the points where the graphs of the equations $y = f(x)$ and $y = g(x)$ intersect are the solutions of the equation $f(x) = g(x)$; find the solutions approximately, e.g., using technology to graph the functions, make tables of values, or find successive approximations. Include cases where $f(x)$ and/or $g(x)$ are linear, polynomial, rational, absolute value, exponential, and logarithmic functions.

A-REI.D.12 Represent and solve equations and inequalities graphically

Graph the solutions to a linear inequality in two variables as a half plane (excluding the boundary in the case of a strict inequality), and graph the solution set to a system of linear inequalities in two variables as the intersection of the corresponding half-planes

F-IF.A.1 Understand the concept of a function and use function notation

Understand that a function from one set (called the domain) to another set (called the range) assigns to each element of the domain exactly one element of the range. If f is a function and x is an element of its domain, then $f(x)$ denotes the output of f corresponding to the input x . The graph of f is the graph of the equation $y = f(x)$

F-IF.A.2 Understand the concept of a function and use function notation

Use function notation, evaluate functions for inputs in their domains, and interpret statements that use function notation in terms of a context

F-IF.A.3 Understand the concept of a function and use function notation

Recognize that sequences are functions, sometimes defined recursively, whose domain is a subset of the integers.

F-IF.B.4 Interpret functions that arise in application in terms of the context

For a function that models a relationship between two quantities, interpret key features of graphs and tables in terms of the quantities, and sketch graphs showing key features given a verbal description of the relationship

F-IF.B.5 Interpret functions that arise in application in terms of the context

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COURSE Foundations of Algebra II

Relate the domain of a function to its graph and, where applicable, to the quantitative relationship it describes.

F-IF.B.6 Interpret functions that arise in application in terms of the context

Calculate and interpret the average rate of change of a function (presented symbolically or as a table) over a specified interval. Estimate the rate of change from a graph

F-IF.C.7 Analyze functions using difference representations

Graph functions expressed symbolically and show key features of the graph, by hand in simple cases and using technology for more complicated cases

F-IF.C.8 Analyze functions using difference representations

Write a function defined by an expression in different but equivalent forms to reveal and explain different properties of the function

F-IF.C.9 Analyze functions using difference representations

Compare properties of two functions each represented in a different way (algebraically, graphically, numerically in tables, or by verbal descriptions)

F-LE.A.1 Construct and compare linear and exponential models and solve problems

Distinguish between situations that can be modeled with linear functions and with exponential functions.

F-LE.A.2 Construct and compare linear and exponential models and solve problems

Construct linear and exponential functions, including arithmetic and geometric sequences, given a graph, a description of a relationship, or two input-output pairs (include reading these from a table)

F-LE.A.3 Construct and compare linear and exponential models and solve problems

Observe using graphs and tables that a quantity increasing exponentially eventually exceeds a quantity increasing linearly, quadratically, or (more generally) as a polynomial function.

F-LE.B.5 Interpret expressions for functions in terms of the situation they model

Interpret the parameters in a linear or exponential function in terms of a context

Learning Objectives and Activities

Students will be able to:

- Identify and discuss parts of an expression
- Create and evaluate algebraic expressions
- Manipulate expressions to highlight key features and equivalent forms
- Solve real-world problems using their knowledge of expressions
- Solve equations and explain the reasoning behind their process
- Create equations for real-world problems
- Determine if a relation is a function
- Understand the rules of functions
- Analyze the change in x-value and how it changes the y-value
- Evaluate functions
- Utilize function notation
- Identify linear functions
- Interpret unit rate as slope

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COURSE Foundations of Algebra II

- Find slope from two points, a graph, an application and an equation
- Graph in slope intercept form
- Graph in point-slope form
- Graph in standard form
- Interpreting graphs of functions
- The student will be able to solve a system of linear equations by graphing, and the algebraic methods of substitution and elimination (including multiplying a row), and recognize when one method is superior to another.
- Some systems have no solution, some infinite solutions.
- To be able to solve a real world problem by writing the system in algebraic form, then finding the solution by various methods.

Activities:

- If pants are on sale for \$65.75 each and t-shirts for \$30 each. Given I buy 4 pairs of pants and 6 t-shirts. How much would I spend?
- My mom is twice my age. Five years ago, she was 5 more than twice my age. How old am I? The result will be the same on both sides, meaning that I could be any age for this problem.
- If pants are on sale for \$65.75 each and t-shirts for \$30 each. You buy 3 t-shirts and "x" amount of pants and spend \$353 in total. How many pairs of pants did you purchase?
- Using algebra tiles and a scale to show that what you do to one side of an equation you must do to the other sides.
- Use communicators.
- Variables and patterns activities
- Graphing equations using a graphing calculator
- Calculator activities
- Popcorn Graphs
- Slope Investigation with Graphing Calculator and/or Desmos
- TI 83 – tables, graphs p380
- Worksheets
- Partner lab activity – pilot rescue mission
- Modeling real world problems
- 3 Act Math

Assessments

Formative:

- Daily Practice Problems
- IXL Practice
- Math Scavenger Hunt/Trail
- Entrance/Exit Cards
- Teacher Observation
- Class Discussion on Mathematical Methods

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COURSE Foundations of Algebra II

- Graphing Organizers
- Big Ideas: Performance Tasks Alg 1

Summative:

- Celebration of Knowledge and Mid-unit Quizzes
- Topic Tests

Alternative:

- Individual or group productive struggle assessment during introductory lessons

Interdisciplinary Connections

Science: MS-PS3-1: In comparing and interpreting graphs of functions students will construct and interpret graphical displays of data to describe the relationships of kinetic energy to the mass of an object and to the speed of an object.

Career Readiness, Life Literacies, and Key Skills

9.1.8.C.1: When applying linear functions to variable rates and constant rates students will compare and contrast credit cards and debit cards and the advantages and disadvantages of using each.

Key Skills:

- Understand mathematical language such identifying coefficients, variables, constants, like terms, collecting/combining like terms, distribution, and more
- Equivalent expressions
- Translate verbal sentences into algebraic expressions/equations
- Distinguish the difference between an expression and an equation
- Solve equations with various and multifaceted steps
- Identify errors in solve equations and explain reasoning behind mistakes
- Verify solutions to equations
- Identify functions
- Represent real life problems using functions
- Analyze functions and relate to real world applications
- Graph in slope intercept form
- Graph in point slope form
- Graph in standard form
- Graph systems of linear equations
- Understand the solution to a system in context of problems

Technology Integration

Students will use graphing calculators to use math tools strategically and attend to precision and will use Desmos in order to discover new concepts involving graphing and functions.

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COURSE Foundations of Algebra II

- 9.4.8.IML.3: Create a digital visualization that effectively communicates a data set using formatting techniques such as form, position, size, color, movement, and spatial grouping
- 9.4.5.CT.3: Describe how digital tools and technology may be used to solve problems.

Supplemental instruction and math games will be presented using IXL Math and Video Tutor-bigideasmath.com.

- 9.4.12.TL.1: Assess digital tools based on features such as accessibility options, capacities, and utility for accomplishing a specified task

Students will use Google Classroom to collaborate, work towards solving authentic problems, or participate in an online classroom discussion utilizing pre-learned etiquette about blended learning platforms.

- 9.4.12.TL.4: Collaborate in online learning communities or social networks or virtual worlds to analyze and propose a resolution to a real-world problem.

Career Education

CRP2: Apply appropriate academic and technical skills.

CRP11: Use technology to enhance productivity.

Time Frame	10 cycles ~ 30 (56 minute) days
Topic	
Polynomials & Factoring	
Alignment to Standards	
A-SSE.A.1 Interpret the structure of expressions Interpret expressions that represent a quantity in terms of its context. A-SSE.A.2 Interpret the structure of expressions Interpret complicated expressions by viewing one or more of their parts as a single entity A-APR.A.1 Perform arithmetic operations on polynomials Understand that polynomials form a system analogous to the integers, namely, they are closed under the operations of addition, subtraction, and multiplication; add, subtract, and multiply polynomials A-APR-B.2 Understand the relationship between zeros and factors of polynomials Know and apply the Remainder Theorem: For a polynomial $p(x)$ and a number a, the remainder on division by $x - a$ is $p(a)$, so $p(a) = 0$ if and only if $(x - a)$ is a factor of $p(x)$ A-APR-B.3 Understand the relationship between zeros and factors of polynomials Identify zeros of polynomials when suitable factorizations are available, and use the zeros to construct a rough graph of the function defined by the polynomial.	

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COURSE Foundations of Algebra II

A-APR-C.4 Use polynomial identities to solve problem

Prove polynomial identities and use them to describe numerical relationships.

A-REI.A 1 Understand solving equations as a process of reasoning and explain the reasoning

Explain each step in solving a simple equation as following from the equality of numbers asserted at the previous step, starting from the assumption that the original equation has a solution. Construct a viable argument to justify a solution method.

A-REI.A 2 Understand solving equations as a process of reasoning and explain the reasoning

Solve simple rational and radical equations in one variable, and give examples showing how extraneous solutions may arise

A-REI.B.4 Solve equations and inequalities in one variable

Solve quadratic equations in one variable

F-IF.B.4 Interpret functions that arise in application in terms of the context

For a function that models a relationship between two quantities, interpret key features of graphs and tables in terms of the quantities, and sketch graphs showing key features given a verbal description of the relationship

F-IF.C.7 Analyze functions using difference representations

Graph functions expressed symbolically and show key features of the graph, by hand in simple cases and using technology for more complicated cases

F-IF.B.4 Interpret functions that arise in application in terms of the context

For a function that models a relationship between two quantities, interpret key features of graphs and tables in terms of the quantities, and sketch graphs showing key features given a verbal description of the relationship

N-CN-A.1 Perform arithmetic operations with complex numbers

Know there is a complex number i such that $i^2 = -1$, and every complex number has the form $a + bi$ with a and b real.

N-CN-A.2 Perform arithmetic operations with complex numbers

Use the relation $i^2 = -1$ and the commutative, associative, and distributive properties to add, subtract, and multiply complex numbers.

N-CN-A.3 Perform arithmetic operations with complex numbers

(+) Find the conjugate of a complex number; use conjugates to find moduli and quotients of complex numbers.

N-CN-B.4 Represent complex numbers and their operations on the complex plane

Represent complex numbers on the complex plane in rectangular and polar form (including real and imaginary numbers), and explain why the rectangular and polar forms of a given complex number represent the same number

N-CN-C.7 Use complex numbers in polynomial identities and equation

Solve quadratic equations with real coefficients that have complex solution

N-CN-C.8 Use complex numbers in polynomial identities and equations

(+) Extend polynomial identities to the complex numbers

Learning Objectives and Activities

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COURSE Foundations of Algebra II

Objectives:

Students will be able to:

- Simplify expression containing exponents
- Add, subtract, multiply and divide polynomials
- Use long division and synthetic division to divide polynomials
- Make the connection that factoring and distribution are inverses
- Decide what is the best method in order to factor
- Factor polynomials by various methods
- Identify zeros when factoring completely and from graphs
- Simplify expressions containing complex numbers
- Graph polynomial functions
- Describe the end behaviors of a function
- Use the factor theorem
- Find all the zeroes of a polynomial function

Activities:

- Factoring Relay Game
- Spreadsheet Activity- Prentice Hall Algebra 1 textbook p. 494
- www.hippocampus.org
- Algebra Tiles Activity p. 504
- Using Models to Factor
- Small group practice
- Derive 5
- Communicators

Assessments

Formative:

- Daily Practice Problems
- IXL Practice
- Math Scavenger Hunt/Trail
- Entrance/Exit Cards
- Teacher Observation
- Class Discussion on Mathematical Methods
- Graphing Organizers
- Big Ideas: Performance Tasks Alg 1

Summative:

- Celebration of Knowledge and Mid-unit Quizzes
- Topic Tests

Alternative:

- Individual or group productive struggle assessment during introductory lessons

Interdisciplinary Connections

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COURSE Foundations of Algebra II

ELA: W.9-10.1: When students are justifying their reasoning on short answer and extended constructed response questions they write arguments to support claims in an analysis of substantive topics or texts, using valid reasoning and relevant and sufficient evidence.

Career Readiness, Life Literacies, and Key Skills

Technology Integration

Career Education

CRP6: Demonstrate creativity and innovation.

CRP8: Utilize critical thinking to make sense of problems and persevere in solving them

Time Frame	10 cycles ~ 30 (56 minute) days
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Topic

Quadratic Equations & Functions

Alignment to Standards

A-CED.A.1 Create equations that describe numbers or relationships

Create equations and inequalities in one variable and use them to solve problems.

A-CED.A.2 Create equations that describe numbers or relationships

Create equations in two or more variables to represent relationships between quantities; graph equations on coordinate axes with labels and scales.

A-CED.A.4 Create equations that describe numbers or relationships

Rearrange formulas to highlight a quantity of interest, using the same reasoning as in solving equations

A-REI.B.4 Solve equations and inequalities in one variables

Solve quadratic equations in one variable

A-REI.C.6 Solve systems of equations

Solve systems of linear equations exactly and approximately (e.g., with graphs), focusing on pairs of linear equations in two variables

A-REI.C.7 Solve systems of equations

Solve a simple system consisting of a linear equation and a quadratic equation in two

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variables algebraically and graphically.

A-REI.D.11 Represent and solve equations and inequalities graphically

Explain why the x-coordinates of the points where the graphs of the equations $y = f(x)$ and $y = g(x)$ intersect are the solutions of the equation $f(x) = g(x)$; find the solutions approximately, e.g., using technology to graph the functions, make tables of values, or find successive approximations. Include cases where $f(x)$ and/or $g(x)$ are linear, polynomial, rational, absolute value, exponential, and logarithmic functions.

A-REI.D.12 Represent and solve equations and inequalities graphically

Graph the solutions to a linear inequality in two variables as a half plane (excluding the boundary in the case of a strict inequality), and graph the solution set to a system of linear inequalities in two variables as the intersection of the corresponding half-planes

F-BF-A.1 Build a function that models a relationship in two quantities

Write a function that describes a relationship between two quantities

F-LEB.B.5 Interpret expressions for functions in terms of the situation they model

Interpret the parameters in a linear or exponential function in terms of a context

F-IF.C.7 Analyze functions using difference representations

Graph functions expressed symbolically and show key features of the graph, by hand in simple cases and using technology for more complicated cases

F-IF.C.8 Analyze functions using difference representations

Write a function defined by an expression in different but equivalent forms to reveal and explain different properties of the function

N-RN.A.1 Extend the properties of exponents to rational exponents

Explain how the definition of the meaning of rational exponents follows from extending the properties of integer exponents to those values, allowing for a notation for radicals in terms of rational exponents.

N-RN.A.12 Extend the properties of exponents to rational exponents

Rewrite expressions involving radicals and rational exponents using the properties of exponents

N-CN.C.7 Use complex numbers in polynomial identities and equations

Solve quadratic equations with real coefficients that have complex solutions

Learning Objectives and Activities

Objectives:

Students will be able to:

- Graph quadratic functions in standard form
- Graph quadratic functions in vertex form
- Graph quadratic functions in factored form (intercept form)
- Solve by factoring
- Solve by graphing
- Solve by square roots
- Solve by quadratic formula
- Solve by completing the square

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- Use the discriminant to determine the number of solutions
- Solve systems of quadratic and linear equations
- Understand what it means to have an imaginary solution

Assessments

Formative:

- Daily Practice Problems
- IXL Practice
- Math Scavenger Hunt/Trail
- Entrance/Exit Cards
- Teacher Observation
- Class Discussion on Mathematical Methods
- Graphing Organizers
- Big Ideas: Performance Tasks Alg 1

Summative:

- Celebration of Knowledge and Mid-unit Quizzes
- Topic Tests

Alternative:

- Individual or group productive struggle assessment during introductory lessons

Interdisciplinary Connections

Career Readiness, Life Literacies, and Key Skills

Technology Integration

Career Education

Time Frame

10 cycles ~ 30 (56 minute) days

Topic

Data Analysis & Statistics

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Alignment to Standards

S-ID.A 1. Summarize, represent, and interpret data on a single count or measurement variable

Represent data with plots on the real number line (dot plots, histograms, and box plots).

S-ID.A 2. Summarize, represent, and interpret data on a single count or measurement variable

Use statistics appropriate to the shape of the data distribution to compare center (median, mean) and spread (interquartile range, standard deviation) of two or more different data sets

S-ID.A 3. Summarize, represent, and interpret data on a single count or measurement variable

Interpret differences in shape, center, and spread in the context of the data sets, accounting for possible effects of extreme data points (outliers).

S-ID.A 4. Summarize, represent, and interpret data on a single count or measurement variable

Use the mean and standard deviation of a data set to fit it to a normal distribution and to estimate population percentages. Recognize that there are data sets for which such a procedure is not appropriate. Use calculators, spreadsheets, and tables to estimate areas under the normal curve

S-ID.B.5 Summarize, represent and interpret data on two categorical and quantitative variables

Summarize categorical data for two categories in two-way frequency tables. Interpret relative frequencies in the context of the data (including joint, marginal, and conditional relative frequencies). Recognize possible associations and trends in the data.

S-ID.B.6 Summarize, represent and interpret data on two categorical and quantitative variables

Represent data on two quantitative variables on a scatter plot, and describe how the variables are related.

S-ID.C.7 Interpret linear models

Interpret the slope (rate of change) and the intercept (constant term) of a linear model in the context of the data.

S-ID.C.8 Interpret linear models

Compute (using technology) and interpret the correlation coefficient of a linear fit.

S-ID.C.9 Interpret linear models

Distinguish between correlation and causation.

S-IC-A.1 Understand and evaluate random processes underlying statistical experiments

Understand statistics as a process for making inferences about population parameters based on a random sample from that population

S-IC-A.2 Understand and evaluate random processes underlying statistical experiments

Decide if a specified model is consistent with results from a given data-generating process, e.g., using simulation. For example, a model says a spinning coin falls heads up with

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probability 0.5. Would a result of 5 tails in a row cause you to question the model
S-IC.B.3 Make inferences and justify conclusions from sample surveys, experiments, and observational studies

Recognize the purposes of and differences among sample surveys, experiments, and observational studies; explain how randomization relates to each.

S-IC.B.4 Make inferences and justify conclusions from sample surveys, experiments, and observational studies

Use data from a sample survey to estimate a population mean or proportion; develop a margin of error through the use of simulation models for random sampling

Learning Objectives and Activities

Objectives:

SWBAT:

- Find and compare data using the mean, median, mode and range of data
- Understand the outlier in your data
- Find the standard deviation of a data set
- Use the graphing calculator, make a scatter plot and find regressions
- Predict values using lines of regressions
- Calculate the probability of simple and compound events

Activities:

- Graphing calculator activity (such as height vs. shoe size)
- Statistics packet
- Graphing calculator overhead
- www.mathtopia.com

Assessments

Formative:

- Daily Practice Problems
- IXL Practice
- Math Scavenger Hunt/Trail
- Entrance/Exit Cards
- Teacher Observation
- Class Discussion on Mathematical Methods
- Graphing Organizers

Summative:

- Celebration of Knowledge and Mid-unit Quizzes
- Topic Tests

Benchmark:

- Cumulative final exam with multiple choice, short answer and extended construct response questions

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Alternative:

- Individual or group productive struggle assessment during introductory lessons

Interdisciplinary Connections

Science: HS-LS3-3: In this statistics unit students will apply concepts of statistics and probability to explain the variation and distribution of expressed traits in a population.

Career Readiness, Life Literacies, and Key Skills

Technology Integration

Students will use graphing calculators to use math tools strategically and attend to precision and will use Desmos in order to discover new concepts involving graphing and functions.

- 9.4.8.IML.3: Create a digital visualization that effectively communicates a data set using formatting techniques such as form, position, size, color, movement, and spatial grouping
- 9.4.5.CT.3: Describe how digital tools and technology may be used to solve problems.

Supplemental instruction and math games will be presented using IXL Math and Video Tutor-bigideasmath.com.

- 9.4.12.TL.1: Assess digital tools based on features such as accessibility options, capacities, and utility for accomplishing a specified task

Students will use Google Classroom to collaborate, work towards solving authentic problems, or participate in an online classroom discussion utilizing pre-learned etiquette about blended learning platforms.

- 9.4.12.TL.4: Collaborate in online learning communities or social networks or virtual worlds to analyze and propose a resolution to a real-world problem.

Students will utilize Geogebra and Statistical Websites to further investigate concepts to demonstrate understanding of standards.

- 9.4.8.IML.3: Create a digital visualization that effectively communicates a data set using formatting techniques such as form, position, size, color, movement, and spatial grouping

Career Education

CRP8: Utilize critical thinking to make sense of problems and persevere in solving them.

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SPARTAN MISSION:

Meeting the needs of all students with a proud tradition of academic excellence.

DEPARTMENT Mathematics

COURSE Foundations of Algebra II

CRP11: Use technology to enhance productivity.

Modifications (ELL, Special Education, At-Risk Students, Gifted & Talented, & 504 Plans)

ELL:

- Work toward longer passages as skills in English increase
- Use visuals
- Introduce key vocabulary before lesson
- Teacher models reading aloud daily
- Provide peer tutoring
- Use of Bilingual Dictionary
- Guided notes and/or scaffold outline for written assignments
- Provide students with English Learner leveled readers.

Supports for Students With IEPs:

- Allow extra time to complete assignments or tests
- Guided notes and/or scaffold outline for written assignments
- Work in a small group
- Allow answers to be given orally or dictated
- Use large print books, Braille, or books on CD (digital text)
- Follow all IEP modifications

At-Risk Students:

- Guided notes and/or scaffold outline for written assignments
- Introduce key vocabulary before lesson
- Work in a small group
- Lesson taught again using a differentiated approach
- Allow answers to be given orally or dictated
- Use visuals / Anchor Charts
- Leveled texts according to ability

Gifted and Talented:

- Create an enhanced set of introductory activities (e.g. advance organizers, concept maps, concept puzzles)
- Provide options, alternatives and choices to differentiate and broaden the curriculum
- Organize and offer flexible small group learning activities
- Provide whole group enrichment explorations
- Teach cognitive and methodological skills

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- Use center, stations, or contracts
- Organize integrated problem-solving simulations
- Propose interest-based extension activities
- Expose students to beyond level texts.

Supports for Students With 504 Plans:

- Follow all the 504 plan modifications
- Text to speech/audio recorded selections
- Amplification system as needed
- Leveled texts according to ability
- Fine motor skill stations embedded in rotation as needed
- Modified or constrained spelling word lists
- Provide anchor charts with high frequency words and phonemic patterns

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