#### **COURSE TITLE**

Math 8

#### LENGTH

Full Year

#### DEPARTMENT

STEM Department

#### SCHOOL

Union Middle School

## DATE

September 10, 2018

Initial BOE Approval Date (Born on): 4/4/2016

## I. Introduction/Overview/Philosophy

In Grade 8, instructional time should focus on three critical areas: (1) formulating and reasoning about expressions and equations, including modeling an association in bivariate data with a linear equation, and solving linear equations and systems of linear equations; (2) grasping the concept of a function and using functions to describe quantitative relationships; (3) analyzing two- and three-dimensional space and figures using distance, angle, similarity, and congruence, and understanding and applying the Pythagorean Theorem.

# II. Objectives

## Course Outline:

- 1. Exponents
  - a. Work with integer exponents
  - b. Conversions with scientific notation
  - c. Finding the product and quotient in scientific notation
- 2. Algebraic Linear Equations
  - a. Solving Linear Equations with 1 & 2 Variables
  - b. Identifying the Number of Solutions to a Linear Equation
- 3. Lines and Linear Equations
  - a. Writing Linear Equations in Slope-Intercept Form
  - b. Sketching Graphs of Linear Equations
- 4. Systems of Linear Equations
  - a. Solving systems using elimination method & substitution method
  - b. Solving systems by graphing
  - c. Real-world problems
  - d. Inconsistent and dependent systems
- 5. Functions
  - a. Relations and functions
  - b. Linear and nonlinear functions
  - c. Comparing functions
- 6. Geometric Transformations
  - a. Reflections
  - b. Rotations
  - c. Translations
  - d. Dilations
- 7. Congruence and Similarity
  - a. Congruent figures
  - b. Similar figures
  - c. Relating to geometric transformations
- 8. Statistics

- a. Scatterplots
- b. Modeling Linear Associations
- c. 2-way Tables
- 9. Probability
  - a. Compound events
  - b. Independent events
  - c. Dependent events`

## **Student Outcomes:**

After successfully completing this course, the student will:

- Analyze and solve linear equations and simultaneous linear equations
- Define, evaluate, and compare functions
- Investigate patterns of association in bivariate data
- Know that there are numbers that are not rational, and approximate them by rational numbers
- Solve real-world and mathematical problems involving volume of cylinders, cones, and spheres
- Understand congruence and similarity using physical models, transparencies, or geometry software
- Understand the connections between proportional relationships, lines, and linear equations
- Use functions to model relationships between quantities
- Work with integer exponents
- Work with radicals and integer exponents

# New Jersey Student Learning Standards

## CAREER READY PRACTICES

## CRP1 Act as a responsible and contributing citizen and employee.

Career-ready individuals understand the obligations and responsibilities of being a member of a community, and they demonstrate this understanding every day through their interactions with others. They are conscientious of the impacts of their decisions on others and the environment around them. They think about the near-term and long-term consequences of their actions and seek to act in ways that contribute to the betterment of their teams, families, community and workplace. They are reliable and consistent in going beyond the minimum expectation and in participating in activities that serve the greater good.

## CRP2 Apply appropriate academic and technical skills.

Career-ready individuals readily access and use the knowledge and skills acquired through experience and education to be more productive. They make connections between abstract concepts with real-world applications, and they make correct insights about when it is appropriate to apply the use of an academic skill in a workplace situation

## CRP4 Communicate clearly and effectively and with reason.

Career-ready individuals communicate thoughts, ideas, and action plans with clarity, whether using written, verbal, and/or visual methods. They communicate in the workplace with clarity and purpose to make maximum use of their own and others' time. They are excellent writers; they master conventions, word choice, and organization, and use effective tone and presentation skills to articulate ideas. They are skilled at interacting with others; they are active listeners and speak clearly and with purpose. Career-ready individuals think about the audience for their communication and prepare accordingly to ensure the desired outcome.

## CRP6. Demonstrate creativity and innovation.

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Career-ready individuals regularly think of ideas that solve problems in new and different ways, and they contribute those ideas in a useful and productive manner to improve their organization. They can consider unconventional ideas and suggestions as solutions to issues, tasks or problems, and they discern which ideas and suggestions will add greatest value. They seek new methods, practices, and ideas from a variety of sources and seek to apply those ideas to their own workplace. They take action on their ideas and understand how to bring innovation to an organization.

## CRP7. Employ valid and reliable research strategies.

Career-ready individuals are discerning in accepting and using new information to make decisions, change practices or inform strategies. They use reliable research process to search for new information. They evaluate the validity of sources when considering the use and adoption of external information or practices in their workplace situation.

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

Career-ready individuals readily recognize problems in the workplace, understand the nature of the problem, and devise effective plans to solve the problem. They are aware of problems when they occur and take action quickly to address the problem; they thoughtfully investigate the root cause of the problem prior to introducing solutions. They carefully consider the options to solve the problem. Once a solution is agreed upon, they follow through to ensure the problem is solved, whether through their own actions or the actions of others.

## CRP11. Use technology to enhance productivity.

Career-ready individuals find and maximize the productive value of existing and new technology to accomplish workplace tasks and solve workplace problems. They are flexible and adaptive in acquiring new technology. They are proficient with ubiquitous technology applications. They understand the inherent risks-personal and organizational-of technology applications, and they take actions to prevent or mitigate these risks.

## CRP12. Work productively in teams while using cultural global competence.

Career-ready individuals positively contribute to every team, whether formal or informal. They apply an awareness of cultural difference to avoid barriers to productive and positive interaction. They find ways to increase the engagement and contribution of all team members. They plan and facilitate effective team meetings.

## TECHNOLOGY

**Standard 8.1 Educational Technology:** All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaborate and to create and communicate knowledge.

*Strand A: Technology Operations and Concepts:* Students demonstrate a sound understanding of technology concepts, systems and operations.

8.1.8.A.3- Use and/or develop a simulation that provides an environment to solve a real world problem or theory.

*Strand B. Creativity and Innovation:* Students demonstrate creative thinking, construct knowledge and develop innovative products and process using technology.

8.1.8.B.1- Synthesize and publish information about a local or global issue or event (ex. telecollaborative project, blog, school web).

*Strand D. Digital Citizenship:* Students understand human, cultural, and societal issues related to technology and practice legal and ethical behavior.

8.1.8.D.4- Assess the credibility and accuracy of digital content.

*Strand E: Research and Information Fluency:* Students apply digital tools to gather, evaluate, and use information.

8.1.8.E.1- Effectively use a variety of search tools and filters in professional public databases to find information to solve a real world problem.

**Standard 8.2 Technology Education, Engineering, Design, and Computational Thinking - Programming:** All students will develop an understanding of the nature and impact of technology, engineering, technological design, computational thinking and the designed world as they relate to the individual, global society, and the environment.

Strand A. The Nature of Technology: Creativity and Innovation Technology systems impact every aspect of the world in which we live.

8.2.8.A.2- Examine a system, consider how each part relates to other parts, and discuss a part to redesign to improve the system.

Strand C. Design: The design process is a systematic approach to solving problems.

8.2.8.C.1- Explain how different teams/groups can contribute to the overall design of a product

8.2.8.C.4- Identify the steps in the design process that would be used to solve a designated problem.

# 21st Century Life and Careers

9.2 Career Awareness, Exploration, and Preparation Strand B: Career Exploration

9.2.8.B.3- Evaluate communication, collaboration, and leadership skills that can be developed through school, home, work, and extracurricular activities for use in a career.

# 9.3 Career and Technical Education

Cluster: Science, Technology, Engineering & Mathematics Career Cluster

9.3.ST-ET.5-Apply the knowledge learned in STEM to solve problems.

# New Jersey Student Learning Standards- Math

8.EE.A.1. Know and apply the properties of integer exponents to generate equivalent numerical expressions. 8.EE.A.2. Use square root and cube root symbols to represent solutions to equations of the form  $x^2 = p$  and  $x^3 = p$ , where p is a positive rational number. Evaluate square roots of small perfect squares and cube roots of small perfect cubes. Know that  $2^2$  is irrational.

8.EE.A.3. Use numbers expressed in the form of a single digit times an integer power of 10 to estimate very large or very small quantities, and to express how many times as much one is than the other.

8.EE.A.4. Perform operations with numbers expressed in scientific notation, including problems where both decimal and scientific notation are used. Use scientific notation and choose units of appropriate size for measurements of very large or very small quantities (e.g., use millimeters per year for seafloor spreading). Interpret scientific notation that has been generated by technology.

8.EE.B.5. Graph proportional relationships, interpreting the unit rate as the slope of the graph. Compare two different proportional relationships represented in different ways.

8.EE.B.6. Use similar triangles to explain why the slope m is the same between any two distinct points on a non-vertical line in the coordinate plane; derive the equation y = mx for a line through the origin and the equation y = mx + b for a line intercepting the vertical axis at b.

8.EE.C.7. Solve linear equations in one variable.

8.EE.C.7a. Give examples of linear equations in one variable with one solution, infinitely many solutions, or no solutions. Show which of these possibilities is the case by successively transforming the given equation into simpler forms, until an equivalent equation of the form x = a, a = a, or a = b results (where a and b are different numbers).

8.EE.C.7b. Solve linear equations with rational number coefficients, including equations whose solutions require expanding expressions using the distributive property and collecting like terms.

8.EE.C.8. Analyze and solve pairs of simultaneous linear equations.

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8.EE.C.8a. Understand that solutions to a system of two linear equations in two variables correspond to points of intersection of their graphs, because points of intersection satisfy both equations simultaneously.

8.EE.C.8b. Solve systems of two linear equations in two variables algebraically, and estimate solutions by graphing the equations. Solve simple cases by inspection.

8.EE.C.8c. Solve real-world and mathematical problems leading to two linear equations in two variables.

8.F.A.1. Understand that a function is a rule that assigns to each input exactly one output. The graph of a function is the set of ordered pairs consisting of an input and the corresponding output.

8.F.A.2. Compare properties (e.g. rate of change, intercepts, domain and range) of two functions each represented in a different way (algebraically, graphically, numerically in tables, or by verbal descriptions). 8.F.A.3 Interpret the equation y = mx + b as defining a linear function, whose graph is a straight line; give examples of functions that are not linear.

8.F.B.4. Construct a function to model a linear relationship between two quantities. Determine the rate of change and initial value of the function from a description of a relationship or from two (x, y) values, including reading these from a table or from a graph. Interpret the rate of change and initial value of a linear function in terms of the situation it models, and in terms of its graph or a table of values.

8.F.B.5. Describe qualitatively the functional relationship between two quantities by analyzing a graph (e.g., where the function is increasing or decreasing, linear or nonlinear). Sketch a graph that exhibits the qualitative features of a function that has been described verbally.

8.G.A.1. Verify experimentally the properties of rotations, reflections, and translations:

8.G.A.1a. Lines are transformed to lines, and line segments to line segments of the same length.

8.G.A.1b. Angles are transformed to angles of the same measure.

8.G.A.1c. Parallel lines are transformed to parallel lines.

8.G.A.2. Understand that a two-dimensional figure is congruent to another if the second can be obtained from the first by a sequence of rotations, reflections, and translations; given two congruent figures, describe a sequence that exhibits the congruence between them.

8.G.A.3. Describe the effect of dilations, translations, rotations, and reflections on two-dimensional figures using coordinates.

8.G.A.4. Understand that a two-dimensional figure is similar to another if the second can be obtained from the first by a sequence of rotations, reflections, translations, and dilations; given two similar two-dimensional figures, describe a sequence that exhibits the similarity between them.

8.G.A.5 Use informal arguments to establish facts about the angle sum and exterior angle of triangles, about the angles created when parallel lines are cut by a transversal, and the angle-angle criterion for similarity of triangles.

8.G.B.6. Explain a proof of the Pythagorean Theorem and its converse.

8.G.B.7. Apply the Pythagorean Theorem to determine unknown side lengths in right triangles in real-world and mathematical problems in two and three dimensions.

8.G.B.8. Apply the Pythagorean Theorem to find the distance between two points in a coordinate system.

8.G.C.9. Know the formulas for the volumes of cones, cylinders, and spheres and use them to solve real-world and mathematical problems.

8.NS.A.1. Know that numbers that are not rational are called irrational. Understand informally that every number has a decimal expansion; for rational numbers show that the decimal expansion repeats eventually, and convert a decimal expansion which repeats eventually into a rational number.

8.NS.A.2. Use rational approximations of irrational numbers to compare the size of irrational numbers, locate them approximately on a number line diagram, and estimate the value of expressions

8.SP.A.1. Construct and interpret scatter plots for bivariate measurement data to investigate patterns of association between two quantities. Describe patterns such as clustering, outliers, positive or negative association, linear association, and nonlinear association.

8.SP.A.2. Know that straight lines are widely used to model relationships between two quantitative variables. For scatter plots that suggest a linear association, informally fit a straight line, and informally assess the model fit (e.g. line of best fit) by judging the closeness of the data points to the line.

8.SP.A.3. Use the equation of a linear model to solve problems in the context of bivariate measurement data, interpreting the slope and intercept.

8.SP.A.4. Understand that patterns of association can also be seen in bivariate categorical data by displaying frequencies and relative frequencies in a two-way table. Construct and interpret a two-way table summarizing data on two categorical variables collected from the same subjects. Use relative frequencies calculated for rows or columns to describe possible association between the two variables.

## Mathematical Practices

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

## III. Proficiency Levels

This curriculum is appropriate for students in grade 8 that need an additional year of math before taking Algebra 1.

## IV. Methods of Assessment

#### **Student Assessment**

The teacher will provide a variety of assessments during the course of the year. The assessment may include but is not limited to: chapter and unit tests and quizzes, teacher observations, open-ended problems, cooperative work, and homework.

#### **Curriculum/Teacher Assessment**

The teacher will provide the subject area supervisor with suggestions for changes on an ongoing basis.

# V. Grouping

This curriculum is appropriate for students in grade 8.

# VI. Articulation/Scope & Sequence/Time Frame

Course length is one year.

# VII. Resources

#### Texts/Supplemental Reading/References

Math in Focus, Marshall Cavendish, 2015

## VIII. Suggested Activities

Appropriate activities are listed in the curriculum map.

## IX. Methodologies

The following methods of instruction are suggested: teacher guided explorations, working in groups/working with a partner, working with manipulatives and discovery activities.

## X. Interdisciplinary Connections

At this grade level, connections to many other disciplines are appropriate and natural. Reading and writing become an integral part of the mathematics process. Connections with science are frequent throughout both curricula. Technology plays an important part in learning mathematics as well.

# XI. Differentiating Instruction for Students with Special Needs: Students with Disabilities, Students at Risk, English Language Learners, and Gifted & Talented Students

Differentiating instruction is a flexible process that includes the planning and design of instruction, how that instruction is delivered, and how student progress is measured. Teachers recognize that students can learn in multiple ways as they celebrate students' prior knowledge. By providing appropriately challenging learning, teachers can maximize success for all students.

Differentiating in this course includes but is not limited to:

Differentiation for Support (ELL, Special Education, Students at Risk)

- Peer mentoring on problems
- Differentiated teacher feedback on assignments
- Modeling out problems on whiteboard
- Visual aids as we project problems on whiteboard
- Study guides
- Tiered assignments
- Scaffolding of materials and assignments
- Re-teaching and review
- Guided note taking
- Exemplars of varied performance levels
- Multi-media approach to accommodating various learning styles

Differentiation for Enrichment

- Supplemental reading material for independent study
- Flexible grouping
- Tiered assignments
- Topic selection by interest
- Enhanced expectations for independent study
- Elevated questioning techniques using Webb's Depth of Knowledge matrix

## XII. Professional Development

The teacher will continue to improve expertise through participation in a variety of professional development opportunities.

# XII. Curriculum Map/Pacing Guide

| Unit Topic  | Time<br>Allocated | Differentiating Instruction for<br>Students with Disabilities, Students at<br>Risk, English Language Learners, &<br>Gifted & Talented Students  | Standards   | Assessments  |
|---|-------------------|---|---|--|
| <ul> <li>Exponents</li> <li>Work with integer exponents</li> <li>Conversions with scientific notation</li> <li>Finding the product and quotient in scientific notation</li> </ul>       | 5 weeks           | <i>For Support:</i><br>Guided notes, Note card with exponent<br>rules, Teacher modeling, Use of<br>calculator, Heterogeneous pairing<br><i>For Enhancement:</i><br>Khan Academy, Real-world problems<br>and scenarios         | 8.EE.1<br>8.EE.2<br>8.EE.3<br>8.EE.4<br>CRP1,2,4,6,7,8,11,12<br>8.1.8.A.3, 8.1.8.B.1,<br>8.1.8.D.4, 8.1.8.E.1<br>8.2.8.A.2, 8.2.8.C.1,<br>8.2.8.C.4<br>9.2.8.B.3<br>9.3.ST-ET.5   | <i>Formative Assessment:</i><br>Exit slips, Do now, Classwork, Homework<br><i>Summative Assessment</i><br>Quiz on product & quotient power and<br>power of a power.<br>Quiz on finding the product and quotient in<br>scientific notation.<br>Test on exponents<br>Test on scientific notation |
| <ul> <li>Algebraic Linear Equations</li> <li>Solving Linear Equations<br/>with 1 &amp; 2 Variables</li> <li>Identifying the Number of<br/>Solutions to a Linear<br/>Equation</li> </ul> | 5 weeks           | <i>For Support:</i><br>Assistive technologies, Multiple means<br>of representations, Modified homework<br>assignments, Use of calculator, Teacher<br>modeling, Khan academy<br><i>For Enhancement:</i><br>Real-world problems | 8.EE.7<br>8.EE.7b<br>8.EE.7a<br>8.EE.5<br>CRP1,2,4,6,7,8,11,12<br>8.1.8.A.3, 8.1.8.B.1,<br>8.1.8.D.4, 8.1.8.E.1<br>8.2.8.A.2, 8.2.8.C.1,<br>8.2.8.C.4<br>9.2.8.B.3<br>9.3.ST-ET.5 | <i>Formative Assessment:</i><br>Questioning, Exit slips, Do now,<br>Classwork, Homework<br><i>Summative Assessment:</i><br>Quiz on solving linear equations with 1<br>variable and identifying number of<br>solutions<br>Test on Algebraic Linear Equations                                    |
| <ul> <li>Lines and Linear Equations</li> <li>Writing Linear Equations in<br/>Slope-Intercept Form</li> <li>Sketching Graphs of Linear<br/>Equations</li> </ul>                          | 7 weeks           | <i>For Support:</i><br>Assistive technologies, Multiple means<br>of representations, Modified homework<br>assignments, Use of calculator, Teacher<br>modeling, Khan academy   | 8.EE.5<br>8.EE.6<br>CRP1,2,4,6,7,8,11,12<br>8.1.8.A.3, 8.1.8.B.1,<br>8.1.8.D.4, 8.1.8.E.1   | Formative Assessment:<br>Questioning, Participation, Exit slips, Do<br>now, Classwork, Homework<br>Summative Assessment:   |

| Math 8<br>Unit Topic  | Time      | Differentiating Instruction for   | Standards  | Assessments   |
|---|-----------|---|--|---|
|   | Allocated | Students with Disabilities, Students at<br>Risk, English Language Learners, &   |  |   |
|   |           | Gifted & Talented Students  |  |   |
|   |           | <i>For Enhancement:</i><br>Real-world problems, Interest-based<br>projects  | 8.2.8.A.2, 8.2.8.C.1,<br>8.2.8.C.4<br>9.2.8.B.3<br>9.3.ST-ET.5   | Meme Project on linear equations<br>Quiz on slope and slope-intercept form<br>Test on Lines and Linear Equations  |
| <ul> <li>Systems of Linear Equations</li> <li>Solving systems using<br/>elimination method &amp;<br/>substitution method</li> <li>Solving systems by graphing</li> <li>Real-world problems</li> <li>Inconsistent and dependent<br/>systems</li> </ul> | 4 weeks   | <ul> <li>For Support:<br/>Guided notes, Assistive technologies for<br/>graphing, Use of calculators, modeling,<br/>Modified homework</li> <li>For Enhancement:<br/>Higher order of thinking skills, Real-<br/>world problems, Adjusting the pace of<br/>the lesson</li> </ul> | 8.EE.8a<br>8.EE.8b<br>8.EE.8c<br>8.EE.8<br>CRP1,2,4,6,7,8,11,12<br>8.1.8.A.3, 8.1.8.B.1,<br>8.1.8.D.4, 8.1.8.E.1<br>8.2.8.A.2, 8.2.8.C.1,<br>8.2.8.C.4<br>9.2.8.B.3<br>9.3.ST-ET.5   | <i>Formative Assessment:</i><br>Homework, Classwork, Exit slips, Do now,<br>Group work, Questioning<br><i>Summative Assessment:</i><br>Quiz on solving systems of linear equations<br>using elimination and substitution methods<br>Test on systems of linear equations |
| <ul> <li>Functions</li> <li>Relations and functions</li> <li>Linear and nonlinear functions</li> <li>Comparing functions</li> </ul>   | 3 weeks   | For Support:         Guided notes, Use of calculators, Pre-         teaching of vocabulary and concepts,         Scaffolding         For Enhancement:         Khan academy, Extension activities  | 8.F.1<br>8.F.2<br>8.F.3<br>8.F.4<br>8.F.5<br>CRP1,2,4,6,7,8,11,12<br>8.1.8.A.3, 8.1.8.B.1,<br>8.1.8.D.4, 8.1.8.E.1<br>8.2.8.A.2, 8.2.8.C.1,<br>8.2.8.C.4<br>9.2.8.B.3<br>9.3.ST-ET.5 | <i>Formative Assessment:</i><br>Questioning, Participation, Exit slips, Do<br>now, Classwork, Homework<br><i>Summative Assessment:</i><br>Quiz on identifying function and relations<br>Test on Functions   |
| <ul> <li>Geometric Transformations</li> <li>Reflections</li> <li>Rotations</li> <li>Translations</li> </ul>   | 3 weeks   | <i>For Support:</i><br>Guided notes, Teacher modeling,<br>Assisted technology   | 8.G.1<br>8.G.1a<br>8.G.1b<br>8.G.1c  | <i>Formative Assessment:</i><br>Questioning, Participation, Exit slips, Do<br>now, Classwork, Homework  |

| Unit Topic   | Time<br>Allocated | Differentiating Instruction for<br>Students with Disabilities, Students at<br>Risk, English Language Learners, &<br>Gifted & Talented Students                               | Standards   | Assessments  |
|--|-------------------|--|---|--|
| • Dilations  |                   | <i>For Enhancement:</i><br>Interest based content, Adjusting the<br>pace of lessons  | CRP1,2,4,6,7,8,11,12<br>8.1.8.A.3, 8.1.8.B.1,<br>8.1.8.D.4, 8.1.8.E.1<br>8.2.8.A.2, 8.2.8.C.1,<br>8.2.8.C.4<br>9.2.8.B.3<br>9.3.ST-ET.5   | Summative Assessment:<br>Logo project  |
| <ul> <li>Congruence and Similarity</li> <li>Congruent figures</li> <li>Similar figures</li> <li>Relating to geometric transformations</li> </ul> | 4 weeks           | <i>For Support:</i><br>Use of visual and multi-sensory<br>formats, Use of assisted technology,<br>Rephrasing, Modeling,<br><i>For Enhancement:</i><br>IXL, Khan Academy      | 8.G.2<br>8.G.4<br>8.G.5<br>CRP1,2,4,6,7,8,11,12<br>8.1.8.A.3, 8.1.8.B.1,<br>8.1.8.D.4, 8.1.8.E.1<br>8.2.8.A.2, 8.2.8.C.1,<br>8.2.8.C.4<br>9.2.8.B.3<br>9.3.ST-ET.5              | <i>Formative Assessment:</i><br>Questioning, Participation, Exit slips, Do<br>now, Classwork, Homework<br><i>Summative Assessment:</i><br>Test on congruent and similar figures  |
| <ul> <li>Statistics</li> <li>Scatterplots</li> <li>Modeling Linear<br/>Associations</li> <li>2-way Tables</li> </ul>                             | 5 weeks           | For Support:         Assisted technology, Use of calculators,         Teacher modeling         For Enhancement:         Interest based content, Extension         activities | 8.SP.1<br>8.SP.2<br>8.SP.3<br>8.SP.4<br>CRP1,2,4,6,7,8,11,12<br>8.1.8.A.3, 8.1.8.B.1,<br>8.1.8.D.4, 8.1.8.E.1<br>8.2.8.A.2, 8.2.8.C.1,<br>8.2.8.C.4<br>9.2.8.B.3<br>9.3.ST-ET.5 | Formative Assessment:<br>Participation, Group collaboration, Exit<br>slips, Do now, Questioning, Classwork,<br>Homework<br>Summative Assessment:<br>Quiz on scatter plots and linear<br>associations<br>Quiz on 2-way tables<br>Statistics project |
| <ul><li>Probability</li><li>Compound events</li><li>Independent events</li></ul>   | 4 weeks           | <i>For Support:</i><br>Teacher modeling, Guided notes,<br>Manipulatives, Multiple means of   | 7.SP.5<br>7.SP.6<br>7.SP.8a   | <i>Formative Assessment:</i><br>Do now, Classwork, Questioning,<br>Homework, Participation, Questioning  |

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|--------------------|-------------------|--|--|--|
| Unit Topic         | Time<br>Allocated | Differentiating Instruction for<br>Students with Disabilities, Students at<br>Risk, English Language Learners, &<br>Gifted & Talented Students | Standards  | Assessments  |
| • Dependent events |                   | representation<br><i>For Enhancement:</i><br>Khan Academy, Extension activities  | 7.SP.8b<br>CRP1,2,4,6,7,8,11,12<br>8.1.8.A.3, 8.1.8.B.1,<br>8.1.8.D.4, 8.1.8.E.1<br>8.2.8.A.2, 8.2.8.C.1,<br>8.2.8.C.4<br>9.2.8.B.3<br>9.3.ST-ET.5 | Summative Assessment:<br>Quiz on independent and dependent events<br>Test on probability |