New York City Department of Education
Mathematics Overview – Grade 8
2012-13 School Year

Overview

This document was created after closely examining the Common Core Learning Standards (CCLS) and the previous New York State Standards. It provides a high-level CCLS-aligned scope and sequence for Mathematics that also takes into account the differences in and transition from the New York State Standards. The scope and sequence is aligned to the Common Core and demonstrates a focus on the major work of the grade[1], which the State has indicated will be the focus of next year's 3-8 State exams. It is not based on any additional information about the changes in next year's tests. This scope and sequence represents one way that a school may choose to organize and teach the full range of the standards before the state test. This document contains the following components:

- **Year-long Overview:** A one-page view of the year that shows the:
  - **Unit Summary**: The number of suggested units across the year and the amount of instructional time spent on each unit. The instructional time is represented as pre-State test and post-State test.
  - **Omitted Concepts:** Concepts that are no longer taught at this grade-level according to the CCLS.
  - **Omitted Lessons:** Lessons within existing curriculum resources that should no longer be taught within this grade level according to the Common Core Learning Standards.
  - **Bridge Guidance:** Concepts that would have been taught in earlier grades, according to the Common Core, but were not part of the New York State Standards. They should be considered and woven into units during transition years since the concepts were not previously addressed/addressed fully in the New York State Standards. We ask that you consider the needs of your students when deciding if it is necessary to teach these concepts.
- **High-level Unit Overviews:** Overviews of each unit that include the:
  - **Unit Description:** A narrative description of the concepts the unit is intended to cover and the amount of instructional time suggested.
  - **Standards:** The group of related standards that should be taught within the unit.
  - **Impact Lessons & Other Resources Available:** A sample of suggested instructional resources for each unit, highlighting corresponding activities from *Impact Math* and *Everyday Math* (for bridge guidance only), as well as freely-available supplemental materials from a variety of online sources. Supplemental materials are activities that address standards cited within the unit. Educators can consider integrating all of the resources listed, as well as their own supplemental resources, to support addressing all of the standards covered in the unit. Note: these resources are **not sequenced** and are listed by standard**.**

How to Use:

To use this document, teacher teams could:

- Review the year-long and unit overviews to assess whether the scope and sequence makes sense for their school.
- Review the resources available by standard in each high-level unit overview.
- Use the high-level unit overviews and resources available to teach a sequence of instruction that fully addresses the standards represented.

[1] For a listing of content emphases by cluster, refer to http://engageny.org/resource/math-content-emphases. For additional guidance—including key advances by grade, opportunities for in-depth focus, connections between content and practice standards, etc.—refer to http://www.parcconline.org/sites/parcc/files/PARCC%20MCF%20for%20Mathematics_Fall%202011%20Release.pdf.
With questions or feedback on this document, please email commoncorefellows@schools.nyc.gov.

Version 6.6.2012

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Grade 8 Year-Long Overview:

This table shows an overview of all units that should be taught across the year and the recommended instructional time for each unit[1].

Grade 8: Suggested Distribution of Units in Instructional Days	Time	# of weeks
Unit 1: Congruence and Similarity	10%	**3 Weeks**
Unit 2: Functions	10%	**3 Weeks**
Unit 3: Linear Relationships	20%	**5 Weeks**
Unit 4: Linear Equations	20%	**5 Weeks**
Unit 5: Simultaneous Linear Equations	10%	**3 Weeks**
Unit 6: Exponents, Radicals & Irrational Numbers	17.5%	**4 Weeks**
Unit 7: Pythagorean Theorem	12.5%	**3 Weeks**
State Test		
Post-test: After the state test, teachers should consider focusing their instruction on re-visiting the *key advances from the previous grade* and *the grade level fluency expectations and/or culminating standards* identified in the PARCC Content Model Frameworks. Students should continue to solve a wide scope of problems corresponding to the *key advances from the previous grade* and receive sufficient support and opportunities for practice with *the grade level fluency expectations and/or culminating standards.*		

Omitted Concepts:

- Use physical models to perform operations with polynomials
- Add, subtract, multiply and divide polynomials (also use physical models)
- Factor algebraic expressions using GCF and quadratic trinomials
- Solve equations/proportions to convert to equivalent measurements within metric and customary measurement systems
- Recognize the characteristics of quadratics in a variety of representations

Omitted Lessons from Impact Math:

- 2.3,
- 3.1, 3.2
- 4.2
- 5.2, 5.3
- 7.2
- 8.2, 8.3, 8.4, 8.5
- 9.1, 9.2, 9.3, 9.4
- 11.1, 11.2
- 12.1, 12.2

Bridge Concepts

- Understand the concept of a unit rate a/b associated with a ratio $a:b$ with $b \neq 0$ and compute unit rates with ratios of fractions, including ratios of length, areas and other quantities measured in like or different units.
- Describe whether two quantities are in a proportional relationship using different strategies.
- Solve word problems leading to inequalities of the form $px + q > r$ or $px + q < r$, where p, q, and r are specific rational numbers. Graph the solution set of the inequality and interpret it in the context of the problem.*
- Use facts about supplementary, complementary, vertical and adjacent angles in a given figure
- Draw and construct geometric shapes (freehand, ruler and compass, and technology)

*Bridge concept for 1 year, then to be included in grade 7 curriculum.

[1] Unit overviews and suggested instructional time are based on the *Draft Curriculum Maps in Mathematics: Overview of Grades 5-8 Units* developed by Student Achievement Partners.

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Unit 1: Congruence and Similarity – (3 Weeks)

DESCRIPTION:

In this unit, students will explore and describe the effects of translations, rotations, reflections and dilations of two-dimensional figures using coordinates. Students will understand congruence or similarity of two-dimensional figures if the second can be obtained from the first by a sequence of geometric transformations. Using informal arguments about side and/or angle relationships, students will show that two triangles are congruent or similar. Students' work with congruence and similarity will allow them to make connections among proportional relationships, lines and linear equations in the upcoming units. The Mathematical Practices should be evident throughout instruction and connected to the content addressed in this unit. Students should engage in mathematical tasks that provide an opportunity to connect content and practices.

Standards	Impact Lessons & Other Resources Available	Pages
The standards and resources listed below are **not** intentionally sequenced and should **not** be taught consecutively. To teach the concepts represented in this unit, teacher teams could use this unit overview and other available resources to craft a coherent and focused sequence of instruction that fully addresses the standards and description of this unit.		
8.G.1 Verify experimentally the properties of rotations, reflections, and translations: a. Lines are taken to lines, and line segments to line segments of the same length. b. Angles are taken to angles of the same measure. c. Parallel lines are taken to parallel lines.	Impact Lesson 6.1 – Symmetry and Reflection	260-265
	Impact Lesson 6.2 – Rotation	273-275
	Impact Lesson 6.3 – Translations, Dilations, and Combined Transformations	285-288, 290-293
8.G.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.	Impact Lesson 6.3 – Translations, Dilations, and Combined Transformations	288-293
8.G.3 Describe the effect of dilations, translations, rotations, and reflections on two-dimensional figures using coordinates.	Impact Lesson 6.1 – Symmetry and Reflection	265
	Impact Lesson 6.2 – Rotation	281
	Impact Lesson 6.3 – Translations, Dilations, and Combined Transformations	287-288, 294-298
8.G.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.	http://map.mathshell.org/materials/tasks.php?taskid=361&subpage=apprentice	
	Impact Lesson 6.1 – Transformational Geometry	258-268
8.G.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. For example, arrange three copies of the same triangle so that the sum of the three angles appears to form a line, and give an argument in terms of transversals why this is so.	Impact Lesson 2.2 – Angle Relationships	87-93

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Unit 2: Functions [1] – (3 Weeks)

DESCRIPTION:

In this unit, students will formalize their previous work with linear relationships to develop an understanding of functions and relations. Students will compare the properties of two functions represented algebraically, graphically, numerically in tables and/or by verbal descriptions. Students' work with linear functions will be enhanced by working with scatter plots and linear models of association in bivariate measurement data. Students will construct and interpret scatter plots to investigate patterns of association and specific points in the data. This unit lends itself to opportunity to model with mathematics (MP4) and use appropriate tools strategically (MP5). The Mathematical Practices should be evident throughout instruction and connected to the content addressed in this unit. Students should engage in mathematical tasks that provide an opportunity to connect content and practices.

Standards	Impact Lessons & Other Resources Available	Pages
The standards and resources listed below are **not** intentionally sequenced and should **not** be taught consecutively. To teach the concepts represented in this unit, teacher teams could use this unit overview and other available resources to craft a coherent and focused sequence of instruction that fully addresses the standards and description of this unit.		
8.F.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.1	Impact Lesson 1.3 – Write Equations	35-38
	Impact Lesson 10.1 - Functions	526-532
8.F.2 Compare properties of two functions each represented in a different way (algebraically, graphically, numerically in tables, or by verbal descriptions). For example, given a linear function represented by a table of values and a linear function represented by an algebraic expression, determine which function has the greater rate of change.	http://www.illustrativemathematics.org/illustrations/641 (Battery Charging) http://dnet01.ode.state.oh.us/IMS.ItemDetails/LessonDetail.aspx?id=0907f84c805321f0 https://www.juab.k12.ut.us/index.php?option=com_content&view=article&id=1105:7th-12th-grade-algebra-1-lesson-plans-linear-tables&catid=65:math-secondary&Itemid=57 http://www.internet4classrooms.com/grade_level_help/algebra_linear_equation_slope_math_eighth_8th_grade.htm	
8.SP.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.	Impact Lesson 2.1 - Lines	74-78
	Impact Lesson 1-5	33-36

[1] *Function notation is not required in Grade 8.*

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Unit 3: Geometry: Linear Relationships – (5 Weeks)

DESCRIPTION:

In this unit, students will build on previous work with proportional relationships, unit rates and graphing to deepen their understanding of functions and linear equations. Students will graph proportional relationships and interpret the unit rate as the slope of the line. Students will be introduced to the term *constant of proportionality* as the unit rate in tables, graphs, equations and verbal descriptions. In addition to deriving and interpreting the equation y=mx+b, students will construct a function to model a linear relationship between two quantities. Students will analyze and sketch a graph of a function based on qualitative data. Students' work with proportional relationships, lines, linear equations and linear functions will be enhanced by working with scatter plots and linear models of association in bivariate measurement data. Students will assess a scatter plot to find a line of best fit. The Mathematical Practices should be evident throughout instruction and connected to the content addressed in this unit. Students should engage in mathematical tasks that provide an opportunity to connect content and practices.

Standards	Impact Lessons & Other Resources Available	Pages
The standards and resources listed below are **not** intentionally sequenced and should **not** be taught consecutively. To teach the concepts represented in this unit, teacher teams could use this unit overview and other available resources to craft a coherent and focused sequence of instruction that fully addresses the standards and description of this unit.		
8.EE.5 Graph proportional relationships, interpreting the unit rate as the slope of the graph. Compare two different proportional relationships represented in different ways. For example, compare a distance-time graph to a distance-time equation to determine which of two moving objects has greater speed.	Impact Lesson 1.1 – Direct Variation	4-5
	Impact Lesson 1.1 – Direct Variation	6-9, 12-15
	Impact Lesson 8.1 – Rates (*In Course 2)	377-379
	Impact Lesson 8.2 – Speed and Slope (*In Course 2)	389-396
8.EE.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.	Impact Lesson 1.1 – Direct Variation	4-5
	Impact Lesson 1.1 – Direct Variation	6-9, 12-15
8.F.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. For example, the function A = s2 giving the area of a square as a function of its side length is not linear because its graph contains the points (1,1), (2,4) and (3,9), which are not on a straight line.	Impact Lesson 1.1 – Direct Variation	12-15
	Impact Lesson 10.1 - Functions	528-532
	Impact Lesson 2.1 - Lines	69-70
8.F.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.	Impact Lesson 1.2 – Slope	24-28
	Impact Lesson 1.3 – Write Equations	38-47
8.F.5 Describe qualitatively the functional relationship between two quantities by analyzing a graph (e.g.,	Impact Lesson 1.1 – Direct Variation	10-15

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.	Impact Lesson 5-1 – Rearrange Algebraic Equations	252-256
8.SP.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 by judging the closeness of the data points to the line.	Impact Lesson 2.1 – Lines	74-78
	Impact Lesson 6-7	350-353

Bridge Guidance:

Standards	Impact Lessons & Other Resources Available	Pages
7.RP.1 Compute unit rates associated with ratios of fractions, including ratios of lengths, areas and other quantities measured in like or different units. For example, if a person walks 1/2 mile in each 1/4 hour, compute the unit rate as the complex fraction 1/2/1/4 miles per hour, equivalently 2 miles per hour.	Impact Lesson 10.1 – Ratios	495-497
	Impact Lesson 10.4 – Rates	540-546
7.RP.2 Recognize and represent proportional relationships between quantities. a. Decide whether two quantities are in a proportional relationship, e.g., by testing for equivalent ratios in a table or graphing on a coordinate plane and observing whether the graph is a straight line through the origin. b. Identify the constant of proportionality (unit rate) in tables, graphs, equations, diagrams, and verbal descriptions of proportional relationships. c. Represent proportional relationships by equations. For example, if total cost t is proportional to the number n of items purchased at a constant price p, the relationship between the total cost and the number of items can be expressed as t=pn. d. Explain what a point (x, y) on the graph of a proportional relationship means in terms of the situation, with special attention to the points (0, 0) and (1, r) where r is the unit rate.	Impact Lesson 8.1 – Rates	368-378
	Impact Lesson 10.1 – Ratios	495
	Impact Lesson 10.2 – Proportions and Similarity	505-510
7.RP.3 Use proportional relationships to solve multistep ratio and percent problems. Examples: simple interest, tax, markups and markdowns, gratuities and commissions, fees, percent increase and decrease, percent error.	Impact Lesson 8.1 – Rates	378
	Impact Lesson 10.2 – Proportions and Similarities	510-513
	Impact Lesson 10.2 – Proportions and Similarities	514-518
	Impact Lesson 10.3 – Percents and Proportions	530-536
	Impact Lesson 3.1 – Understand Percents (*In Course 3)	112-118

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Unit 4: Linear Equations – (5 Weeks)

DESCRIPTION:

In this unit, students will build upon informal knowledge of one-variable linear equations, to solve equations, which include cases with infinitely many solutions or no solutions as well as cases requiring algebraic manipulation. Solving an equation requires students to see and make use of structure (MP7). Students will use the equation of a linear model to solve problems in the context of bivariate measurement date, interpreting the slope and intercept. This unit introduces two-way tables as a way to organize categorical data and calculate relative frequencies. Also in this unit, students will extend their previous work with geometric measurement to include solving problems involving volumes of cones, cylinders and spheres. The Mathematical Practices should be evident throughout instruction and connected to the content addressed in this unit. Students should engage in mathematical tasks that provide an opportunity to connect content and practices.

Standards	Impact Lessons & Other Resources Available	Pages
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8.EE.7 Solve linear equations in one variable. a. 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). b. Solve linear equations with rational number coefficients, including equations whose solutions require expanding expressions using the distributive property and collecting like terms.	Impact Lesson 7.1 – Equations	312-316
8.SP.3 Use the equation of a linear model to solve problems in the context of bivariate measurement data, interpreting the slope and intercept. For example, in a linear model for a biology experiment, interpret a slope of 1.5 cm/hr as meaning that an additional hour of sunlight each day is associated with an additional 1.5 cm in mature plant height.	Impact Lesson 2.1 – Lines	74-78
	Impact Lesson 6-7	350-353
8.SP.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. For example, collect data from students in your class on whether or not they have a curfew on school nights and whether or not they have assigned chores at home. Is there evidence that those who have a curfew also tend to have chores?	Impact Lesson NY-5	NY749-NY751
8.G.9 Know the formulas for the volumes of cones, cylinders, and spheres and use them to solve real-world and	Impact Lesson 5.1 – Rearrange Algebraic	220-222

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mathematical problems.	Equations	

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Bridge Guidance:

Standards	Impact Lessons & Other Resources Available	Pages
7.EE.3 Use variables to represent quantities in a real-world or mathematical problem, and construct simple equations and inequalities to solve problems by reasoning about the quantities. a. Solve word problems leading to equations of the form px + q = r and p(x + q) = r, where p, q, and r are specific rational numbers. Solve equations of these forms fluently. Compare an algebraic solution to an arithmetic solution, identifying the sequence of the operations used in each approach. For example, the perimeter of a rectangle is 54 cm. Its length is 6 cm. What is its width? b. Solve word problems leading to inequalities of the form px + q > r or px + q < r, where p, q, and r are specific rational numbers. Graph the solution set of the inequality and interpret it in the context of the problem. For example: As a salesperson, you are paid $50 per week plus $3 per sale. This week you want your pay to be at least $100. Write an inequality for the number of sales you need to make, and describe the solutions.	Impact Lesson 9.1 – Find a Solution Method	437
7.EE.4 Use variables to represent quantities in a real-world or mathematical problem, and construct simple equations and inequalities to solve problems by reasoning about the quantities. a. Solve word problems leading to equations of the form *px + q = r* and *p(x + q) = r*, where *p, q* and *r* are specific rational numbers. Solve equations of these forms fluently. Compare an algebraic solution to an arithmetic solution, identifying the sequence of the operations used in each approach. *For example the perimeter of a rectangle is 5.4 cm. Its length is 6 cm. What is its width?* b. Solve word problems leading to inequalities of the form *px + q < and r* are specific rational numbers. Graph the solution set of the inequality and interpret it in the context of the problem. *For example: As a salesperson, you are paid $50 per week plus $3 per sale. This week you want your pay to be at least $100. Write an inequality for the number of sales you need to make, and describe the solutions.*		

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Unit 5: Simultaneous Linear Equations – (3 Weeks)

DESCRIPTION:

In this unit, students will analyze and solve pairs of simultaneous linear equations, both algebraically and graphically, with and without the use of a graphing calculator. They will understand the meaning of the solution to a system and their graphs. Students will build on what they know about two-variable linear equations and increase the varieties of real-world and mathematical problems they can solve. The Mathematical Practices should be evident throughout instruction and connected to the content addressed in this unit. Students should engage in mathematical tasks that provide an opportunity to connect content and practices.

Standards	Impact Lessons & Other Resources Available	Pages
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8.EE.8 Analyze and solve pairs of simultaneous linear equations. a. 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. b. Solve systems of two linear equations in two variables algebraically, and estimate solutions by graphing the equations. Solve simple cases by inspection. For example, $3x + 2y = 5$ and $3x + 2y = 6$ have no solution because $3x + 2y$ cannot simultaneously be 5 and 6. c. Solve real-world and mathematical problems leading to two linear equations in two variables. For example, given coordinates for two pairs of points, determine whether the line through the first pair of points intersects the line through the second pair.	Impact Lesson 7.3 – Solve Systems of Equations	343-355

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Unit 6: Exponents, Radicals & Irrational Numbers – (4 Weeks)

DESCRIPTION:

In this unit, students will know that numbers that are not rational are called irrational and can be approximated using rational numbers. Students will develop and apply the properties of integer exponents. Students use square root and cube root symbols to represent solutions to equations, in addition to evaluating square roots of small perfect squares and cube roots of small perfect cubes. Students solve real-world problems that involve operations with numbers written in scientific notation. Students will compare numbers written in scientific notation to express how many times as much one is than the other. Scientific notation presents opportunities for strategically using appropriate tools (MP5). The Mathematical Practices should be evident throughout instruction and connected to the content addressed in this unit. Students should engage in mathematical tasks that provide an opportunity to connect content and practices.

Standards	Impact Lessons & Other Resources Available	Pages
The standards and resources listed below are **not** intentionally sequenced and should **not** be taught consecutively. To teach the concepts represented in this unit, teacher teams could use this unit overview and other available resources to craft a coherent and focused sequence of instruction that fully addresses the standards and description of this unit.		
8.NS.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.	Impact Lesson 7.2 – Irrational Numbers (*In Course 2)	336-338
8.NS.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 (e.g., π2). For example, by truncating the decimal expansion of √2, show that √2 is between 1 and 2, then between 1.4 and 1.5, and explain how to continue on to get better approximations.	Impact Lesson 7.2 – Irrational Numbers (*In Course 2)	334-338
8.EE.1 Know and apply the properties of integer exponents to generate equivalent numerical expressions. For example, $32 \times 3^{-5} = 3^{-3} = 1/33 = 1/27$.	Impact Lesson 4.1 – Exponents	146-155
8.EE.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 is irrational.	Impact Lesson 4.3 – Radicals	185-187, 192-193
8.EE.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. For example, estimate the population of the United States as 3×10^8 and the population of the world as 7×10^9, and determine that the world population is more than 20 times larger.	Impact Lesson 4.1 – Exponents	174-184
	Impact Lesson 4.1 – Exponents	159-161
8.EE.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	Impact Lesson 4.1 – Exponents	146-152, 156-161

scientific notation that has been generated by technology.		

Unit 7:Pythagorean Theorem – (3 Weeks)

DESCRIPTION:

In this unit, students will explore the relationship between the sides of a right triangle to develop the Pythagorean theorem. They will relate their work with irrational number to the application of the Pythagorean theorem to determine an unknown side length of a right triangle in real-world and mathematical contexts. Students extend the application of the Pythagorean theorem to determine the length of a diagonal of two- and three-dimensional figures. Students will extend the application of the Pythagorean theorem to calculate the distance between two points in a coordinate system. The Pythagorean theorem provides opportunities for students to construct viable arguments and critique the reasoning of others (MP3). The Mathematical Practices should be evident throughout instruction and connected to the content addressed in this unit. Students should engage in mathematical tasks that provide an opportunity to connect content and practices.

Standards	Impact Lessons & Other Resources Available	Pages
The standards and resources listed below are **not** intentionally sequenced and should **not** be taught consecutively. To teach the concepts represented in this unit, teacher teams could use this unit overview and other available resources to craft a coherent and focused sequence of instruction that fully addresses the standards and description of this unit.		
8.G.6 Explain a proof of the Pythagorean Theorem and its converse.	Impact Lesson 7.3 – The Pythagorean Theorem (*In Course 2)	343-346
8.G.7 Apply the Pythagorean Theorem to determine unknown side lengths in right triangles in real-world and mathematical problems in two and three dimensions.	Impact Lesson 7.3 – The Pythagorean Theorem (*In Course 2)	347-350
8.G.8 Apply the Pythagorean Theorem to find the distance between two points in a coordinate system.	Impact Lesson 7.3 – The Pythagorean Theorem (*In Course 2)	351-354