ALPHA BORO PUBLIC SCHOOL			
CONTENT AREA: Mathematics	**GRADE: 8**	**UNIT #: 1**	**UNIT NAME: Geometry**

Major Supporting Additional (identified by PARCC Model Content Frameworks)

Bold type indicates grade level fluency requirements. (identified by PARCC Model Content Frameworks)

#	STUDENT LEARNING OBJECTIVES	CORRESPONDING CCSS/NJCCCS
1	Utilize the properties of rotation, reflection, and translation to model and relate pre-images of lines, line segments, and angles to their resultant image through physical representations and/or Geometry software.	8.G.1
2	Apply an effective sequence of rotations, reflections, and translations to prove that two dimensional figures are congruent.	8.G.2
3	Use the coordinate plane to locate pre-images of two-dimensional figures and determine the coordinates of a resultant image after applying dilations, rotations, reflections, and translations.	8.G.3
4	Recognize dilation as a reduction or an enlargement of a figure and determine the scale factor.	8.G.3
5	Apply an effective sequence of transformations to determine that figures are similar when corresponding angles are congruent and corresponding sides are proportional. Write similarity statements based on such transformations.	8.G.4
6	Justify facts about angles created when parallel lines are cut by a transversal.	8.G.5
7	Justify facts about the exterior angles of a triangle, the sum of the measures of the interior angles of a triangle and the angle-angle relationship used to identify similar triangles.	8.G.5

ALPHA BORO PUBLIC SCHOOL			
CONTENT AREA: Mathematics	**GRADE: 8**	**UNIT #: 1**	**UNIT NAME: Geometry**

Major Supporting Additional (identified by PARCC Model Content Frameworks)

Bold type indicates grade level fluency requirements. (identified by PARCC Model Content Frameworks)

Code #	CCSS and/or NJCCCS
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.
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.
8.G.3	Describe the effect of dilations, translations, rotations, and reflections on two-dimensional figures using coordinates.
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
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.*

ALPHA BORO PUBLIC SCHOOL			
CONTENT AREA: Mathematics	**GRADE: 8**	**UNIT #: 2**	**UNIT NAME: The Number System**

#	STUDENT LEARNING OBJECTIVES	CORRESPONDING CCSS
1	Compare rational and irrational numbers to demonstrate that the decimal expansion of irrational numbers do not repeat; show that every rational number has a decimal expansion which eventually repeats and convert such decimals into rational numbers.	8.NS.1
2	Use rational numbers to approximate and locate irrational numbers on a number line and estimate the value of expressions involving irrational numbers.	8.NS.2
3	Apply the properties of integer exponents to simplify and write equivalent numerical expressions.	8.EE.1
4	Use scientific notation to estimate and express the values of very large or very small numbers and compare their values (how many times larger/smaller is one than the other).	8.EE.3
5	Perform operations using numbers expressed in scientific notation, including problems where both decimals and scientific notation are used (interpret scientific notation generated when technology has been used for calculations).	8.EE.4
6	In real-world problem solving situations choose units of appropriate size for measurement of very small and very large quantities.	8.EE.4

Major Content Supporting Content **Additional Content** (Identified by PARCC Model Content Frameworks).

Bold type indicates grade level fluency requirements. *(Identified by PARCC Model Content Frameworks).*

Selected Opportunities for Connection to Mathematical Practices
1. **Make sense of problems and persevere in solving them.** SLO 6 Use problems that describe complex real-world conditions. 2. Reason abstractly and quantitatively. 3. Construct viable arguments and critique the reasoning of others. 4. Model with mathematics.

ALPHA BORO PUBLIC SCHOOL			
CONTENT AREA: Mathematics	**GRADE: 8**	**UNIT #: 2**	**UNIT NAME: The Number System**

5. Use appropriate tools strategically.
6. **Attend to precision.**
   SLO 6 Determine appropriate sized units for a given context.
7. **Look for and make use of structure.**
   SLO 3 Examine the form of expressions involving integer exponents and apply the correct property of exponents to create equivalent expressions .
8. **Look for and express regularity in repeated reasoning.**
   SLO 1 Explain orally or in written language the difference between a rational and an irrational number.

All of the content presented at this grade level has connections to the standards for mathematical practices.

Bold type identifies possible starting points for connections to the SLOs in this unit.

Code #	Common Core State Standards
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.
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. *For example, by truncating the decimal expansion of the square root of 2, show that the square root of 2 is between 1 and 2, then between 1.4 and 1.5, and explain how to continue on to get better approximations.*
8.EE.1	Know and apply the properties of integer exponents to generate equivalent numerical expressions.
8.EE.3	Use numbers expressed in the form of a single digit times an integer power of 10 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.*

ALPHA BORO PUBLIC SCHOOL			
CONTENT AREA: Mathematics	**GRADE: 8**	**UNIT #: 2**	**UNIT NAME: The Number System**

8.EE.4	Perform operations with numbers expressed in scientific notation, including problems where both decimals decimal and scientific notation are used. Use scientific notation and choose units of appropriate size for measurements of very large or very small quantities. Interpret scientific notation that has been generated by technology.

Major Content Supporting Content Additional Content (Identified by PARCC Model Content Frameworks).

Bold type indicates grade level fluency requirements. *(Identified by PARCC Model Content Frameworks).*

ALPHA BORO PUBLIC SCHOOL

	Student Learning Objective (SLO)		Language Objective		Language Needed
SLO: 1 CCSS: 8.EE.5 WIDA ELDS: 3 Speaking Reading Writing	Graph and analyze the different representations of proportional relationships and interpret the unit rate as the slope of the graph which indicates the rate of change.		Demonstrate comprehension of the different representations of proportional relationships by interpreting and explaining the unit rate as the slope of the graph *using* Charts/Posters*, a personal math dictionary and models.* *Note: ELLs may not be familiar with US measurement, ounces, pounds, tons, acres*		**VU:** Slope, proportion, measurement units **LFC:** Negative (which is NOT), follow directions **LC:** Varies by ELP level
	ELP 1	ELP 2	ELP 3	ELP 4	ELP 5
Language Objectives	Demonstrate comprehension of the different representations of proportional relationships by interpreting and explaining in L1 and/or use gestures, examples and selected technical words.	Demonstrate comprehension of the different representations of proportional relationships by interpreting and explaining in L1 and/or use selected technical vocabulary in phrases and short sentences.	Demonstrate comprehension of the different representations of proportional relationships by interpreting and explaining using key, technical vocabulary in simple sentences.	Demonstrate comprehension of the different representations of proportional relationships by interpreting and explaining using key technical vocabulary in expanded sentences.	Demonstrate comprehension of the different representations of proportional relationships by interpreting and explaining the unit rate as the slope of the graph using technical vocabulary in complex sentences.
Learning Supports	Teacher Modeling Personal math dictionary Small group/triads Word/Picture Wall L1 text and/or support Charts/Posters	Teacher Modeling Personal math dictionary Small group/triads Word/symbols wall L1 text and/or support Sentence Frame Charts/Posters	Teacher Modeling Personal math dictionary Small group/triads Sentence Starter Word Wall Charts/Posters	Teacher Modeling Small group/triads	Teacher Modeling

ALPHA BORO PUBLIC SCHOOL

	Student Learning Objective (SLO)		Language Objective		Language Needed
SLO: 2 CCSS: 8.EE.6 WIDA ELDS: 3 Reading Writing	Derive the equation of a line (y = mx for a line through the origin and the equation y = mx +b for a line intercepting the vertical axis at b) and use similar triangles to explain why the slope (m) is the same between any two points on a non-vertical line in the coordinate plane.		Demonstrate comprehension of how to derive the equation of a line and use similar triangle to explain why the slope is the same between any two points on a non-vertical line in the coordinate plane *using a* Word Wall, Think Alouds, Charts/Posters *and* Partner work.		**VU:** Slope, measurement units, coordinate plane **LFC:** Comparative phrases, relative clauses **LC:** Varies by ELP level
	ELP 1	ELP 2	ELP 3	ELP 4	ELP 5
Language Objectives	Demonstrate comprehension of the equation of a line and why the slope is the same between any two points on a non-vertical line in the coordinate plane in L1 and/or use gestures, examples and selected technical words.	Demonstrate comprehension of the equation of a line and why the slope is the same between any two points on a non-vertical line in the coordinate plane in L1 and/or use selected technical vocabulary in phrases and short sentences.	Demonstrate comprehension of the equation of a line and why the slope is the same between any two points on a non-vertical line in the coordinate plane using key, technical vocabulary in simple sentences.	Demonstrate comprehension of the equation of a line and why the slope is the same between any two points on a non-vertical line in the coordinate plane using key, technical vocabulary in expanded sentences.	Demonstrate comprehension of the equation of a line and why the slope is the same between any two points on a non-vertical line in the coordinate plane using technical vocabulary in complex sentences.
Learning Supports	Think Alouds Charts/Posters Partner work Demonstration Word/Picture Wall L1 text and/or support Completed examples	Think Alouds Charts/Posters Partner work Word/Picture Wall L1 text and/or support Sentence Frame Examples	Think Alouds Charts/Posters Partner work Sentence Starter Word Wall	Think Alouds Charts/Posters Partner work	Think Alouds Charts/Posters

	Student Learning Objective (SLO)		Language Objective		Language Needed
SLO: 3 CCSS: 8.EE.7 WIDA ELDS: 3 Reading Writing	Solve linear equations in one variable with rational number coefficients that might require expanding expressions using the distributive property and/or combining like terms, including examples with one solution, infinite solutions, or no solution.		Demonstrate comprehension of written problems on how to solve linear equations in one variable with rational number coefficients that might require expanding expressions using the distributive property and/or combining like terms, including examples with one solution, infinite solutions, or no solution *using a* Charts/Posters, *a* Word Wall *and* Math Journal.		**VU:** Linear/non-linear, coefficients, solution, infinite **LFC:** Question words **LC:** Varies by ELP level
	ELP 1	ELP 2	ELP 3	ELP 4	ELP 5
Language Objectives	Demonstrate comprehension of written problems in L1 and/or which use gestures, examples and selected technical words on how to solve linear equations in one variable with rational number coefficients.	Demonstrate comprehension of written problems in L1 and/or which use selected technical vocabulary in phrases and short sentences on how to solve linear equations in one variable with rational number coefficients.	Demonstrate comprehension of written problems which use key, technical vocabulary in simple sentences on how to solve linear equations in one variable with rational number coefficients.	Demonstrate comprehension of written problems which use key, technical vocabulary in expanded sentences on how to solve linear equations in one variable with rational number coefficients.	Demonstrate comprehension of written problems which use technical vocabulary in complex sentences on how to solve linear equations in one variable with rational number coefficients.
Learning Supports	Teacher Modeling Charts/Posters Math Journal Word/Picture Wall L1 text and/or support Illustrations/Illustrations/ diagrams/drawings/drawings Competed examples	Teacher Modeling Charts/Posters Math Journal Word/Picture Wall L1 text and/or support Sentence Frame	Teacher Modeling Charts/Posters Math Journal Sentence Starter Word Wall	Teacher Modeling Charts/Posters Math Journal	Charts/Posters Math Journal

	Student Learning Objective (SLO)		Language Objective		Language Needed
SLO: 4 CCSS: 8.EE.8 WIDA ELDS:3 Speaking Writing	Solve systems of linear equations in two variables by inspection, algebraically, and/or graphically (estimate solutions) to demonstrate solutions correspond to points of intersection of their graphs, because points of intersection satisfy both equations simultaneously.		Explain orally and in writing how to solve systems of linear equations in two variables by inspection, algebraically, and/or graphically (estimate solutions) to demonstrate solutions correspond to points of intersection of their graphs *using* Manipulatives, Charts/Posters, *a* Word Wall *and a* Math Journal.		**VU:** Solution, coordinate plane **LFC:** Cause/effect embedded clauses **LC:** Varies by ELP level
	ELP 1	ELP 2	ELP 3	ELP 4	ELP 5
Language Objectives	Explain orally and in writing how solutions correspond to points of intersection of their graphs in L1 and/or using gestures, examples and selected technical words in phrases.	Explain orally and in writing how solutions correspond to points of intersection of their graphs in L1 and/or using selected technical vocabulary in phrases and short sentences.	Explain orally and in writing how solutions correspond to points of intersection of their graphs using key, technical vocabulary in simple sentences.	Explain orally and in writing how solutions correspond to points of intersection of their graphs using key, technical vocabulary in expanded sentences.	Explain orally and in writing how solutions correspond to points of intersection of their graphs using technical vocabulary in complex sentences.
Learning Supports	Manipulatives Math Journal Charts/Posters Word/Picture Wall L1 text and/or support Illustrations/Illustrations/ diagrams/drawings/drawings	Manipulatives Math Journal Charts/Posters Word/Picture Wall L1 text and/or support Sentence Frame	Manipulatives Math Journal Charts/Posters Sentence Starter Word Wall	Manipulatives Math Journal Charts/Posters	Manipulatives

	Student Learning Objective (SLO)		Language Objective		Language Needed
SLO: 5 CCSS: 8.F.4 WIDA ELDS: 3 Listening Reading Writing	Construct a function to model the linear relationship between two variables and determine the rate of change and initial value of the real world data it represents from either graphs or tabulated values.		Demonstrate comprehension of the rate of change and initial value of real world data by identifying and constructing functions that model linear relationships between two variables *using a* Word Wall, Charts/Posters *and personal math dictionary.*		**VU:** Function, faucet, health club membership, constant rate, fee **LFC:** Embedded clauses **LC:** Varies by ELP level
	ELP 1	ELP 2	ELP 3	ELP 4	ELP 5
Language Objectives	Demonstrate comprehension of the rate of change and initial value of real world data by identifying the function which models the linear relationship between two variables in L1 and/or using gestures, examples and selected technical words.	Demonstrate comprehension of the rate of change and initial value of real world data by identifying the function which models the linear relationship between two variables in L1 and/or using selected technical vocabulary in phrases and short sentences.	Demonstrate comprehension of the rate of change and initial value of real world data by identifying the function which models the linear relationship between two variables using key, technical vocabulary in simple sentences.	Demonstrate comprehension of the rate of change and initial value of real world data by identifying the function which models the linear relationship between two variables using key technical vocabulary in expanded sentences.	Demonstrate comprehension of the rate of change and initial value of real world data by identifying the function which models the linear relationship between two variables using technical vocabulary in complex sentences.
Learning Supports	Teacher Modeling Personal math dictionary Peer Coach Word/Picture Wall L1 text and/or support Examples Cloze Sentences	Teacher Modeling Personal math dictionary Peer Coach Word/Picture Wall L1 text and/or support Sentence Frame	Teacher Modeling Charts/Posters Peer Coach Word Wall Sentence Starter	Teacher Modeling Charts/Posters	Charts/Posters

	Student Learning Objective (SLO)		Language Objective		Language Needed
SLO: 6 CCSS: 8.F.5 WIDA ELDS:3 Reading Writing	Sketch a graph of a function from a qualitative description and give a qualitative description of a graph of a function.		Demonstrate comprehension of graphs of functions by sketching a graph of a function from a qualitative description and giving a qualitative description of graph of a function *using a personal math dictionary,* Word Wall, *examples, and a* Think Alouds.		**VU:** Function, ounces, constant rate of speed **LFC:** Embedded clauses; comparatives **LC:** Varies by ELP level
	ELP 1	ELP 2	ELP 3	ELP 4	ELP 5
Language Objectives	Demonstrate comprehension of functions by sketching a graph of a function from a qualitative description in L1 and/or using gestures and selected technical words.	Demonstrate comprehension of functions by sketching a graph of a function from a qualitative description in L1 and/or using selected technical vocabulary in phrases or short sentences.	Demonstrate comprehension of functions by sketching a graph of a function from a qualitative description using key, technical vocabulary in simple sentences.	Demonstrate comprehension of functions by sketching a graph of a function from a qualitative description using key, technical vocabulary in expanded sentences.	Demonstrate comprehension of functions by sketching a graph of a function from a qualitative description using technical vocabulary in complex sentences.
Learning Supports	Think Alouds Personal math dictionary Word/Picture Wall L1 text and/or support Cloze Sentences	Think Alouds Personal math dictionary Word/Picture Wall L1 text and/or support Sentence Frame	Think Alouds Sentence Starter Word Wall Illustrations/diagrams/drawings	Think Alouds	Think Alouds

ALPHA BORO PUBLIC SCHOOL			
CONTENT AREA: Mathematics	**GRADE: 8**	**UNIT #: 4**	**UNIT NAME: Functions and Geomety**

#	STUDENT LEARNING OBJECTIVES	CORRESPONDING CCSS
1	Define functions as a rule that assigns one output to each input and determine if data represented as a graph or in a table is a function.	8.F.1
2	Compare two functions each represented in a different way (numerically, verbally, graphically, and algebraically) and draw conclusions about their properties (rate of change and intercepts).	8.F.2
3	Utilize equations, graphs, and tables to classify functions as linear or non-linear, recognizing that $y = mx + b$ is linear with a constant rate of change.	8.F.3
4	Evaluate square roots and cubic roots of small perfect squares and cubes respectively and use square 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. Identify √2 as irrational.	8.EE.2
5	Explain a proof of the Pythagorean Theorem and its converse.	8.G.6
6	Utilize the Pythagorean Theorem to determine unknown side lengths of right triangles in two and three dimensions to solve real-world and mathematical problems	8.G.7
7	Use the Pythagorean Theorem to determine the distance between two points in the coordinate plane.	8.G.8

Major Content Supporting Content **Additional Content** (Identified by PARCC Model Content Frameworks).

Bold type indicates grade level fluency requirements. *(Identified by PARCC Model Content Frameworks).*

ALPHA BORO PUBLIC SCHOOL			
CONTENT AREA: Mathematics	**GRADE: 8**	**UNIT #: 4**	**UNIT NAME: Functions and Geomety**

Selected Opportunities for Connection to Mathematical Practices

1. Make sense of problems and persevere in solving them.
2. **Reason abstractly and quantitatively.**
   SLO 2 Use functions that are represented in different ways to Identify and compare the rates of change and the intercepts of each.
3. **Construct viable arguments and critique the reasoning of others.**
   SLO 5 Explain the difference between the Pythagorean Theorem and its converse. Listen to or read the explanations of others and pose questions that will clarify or improve the explanations.
4. **Model with mathematics.**
   SLO 7 Use the coordinates of a figure represented on a coordinate plane to determine the length of a missing side.
5. Use appropriate tools strategically.
6. Attend to precision.
7. **Look for and make use of structure.**
   SLO 2 Identify the rate of change and the intercepts of functions represented in different ways.
8. Look for and express regularity in repeated reasoning.

All of the content presented at this grade level has connections to the standards for mathematical practices.

Bold type identifies possible starting points for connections to the SLOs in this unit.

ALPHA BORO PUBLIC SCHOOL			
CONTENT AREA: Mathematics	**GRADE: 8**	**UNIT #: 4**	**UNIT NAME: Functions and Geomety**

Code #	Common Core State Standards
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.
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.*
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 $A = s^2$ giving the area of a square as a function of its side lengths is not linear because its graph contains the points (1, 1), (2, 4), and (3, 9) which are not on a straight line.*
8.EE.2	Use square root and cube root symbols to represent solutions to equations of the form $\boldsymbol{x^2 = p}$ and $\boldsymbol{x^3 = p}$ where $\boldsymbol{p}$ is a positive rational number. Evaluate square roots of small perfect squares and cube roots of small perfect cubes. Know that the square root of 2 is irrational.
8.G.6	Explain a proof of the Pythagorean Theorem and its converse.
8.G.7	Apply the Pythagorean Theorem to determine unknown side lengths in right triangles in real-world and mathematical problems in two or three dimensions.
8.G.8	Apply the Pythagorean Theorem to find the distance between two points in a coordinate system.

Major Content Supporting Content Additional Content (Identified by PARCC Model Content Frameworks).

Bold type indicates grade level fluency requirements. *(Identified by PARCC Model Content Frameworks).*

ALPHA BORO PUBLIC SCHOOL			
CONTENT AREA: Mathematics	**GRADE: 8**	**UNIT #: 5**	**UNIT NAME: Geometry**

#	STUDENT LEARNING OBJECTIVES	CORRESPONDING CCSS
1	Using a linear equation to model real life problems then solve it by interpreting the meaning of the slope and the intercept.	8.SP.3
2	Construct and interpret scatter plots for bivariate measurement data and identify and interpret data patterns (clustering, outliers, positive or negative association, possible lines of best fit, and nonlinear association).	8.SP.1 8.SP.2
3	Construct frequency/relative frequency tables to analyze and describe possible associations between two variables.	8.SP.4
4	Know and apply the appropriate formula for the volume of a cone, a cylinder, or a sphere to solve real-world and mathematical problems.	**8.G.9**

Major Content Supporting Content **Additional Content** (Identified by PARCC Model Content Frameworks).

Bold type indicates grade level fluency requirements. *(Identified by PARCC Model Content Frameworks).*

Selected Opportunities for Connection to Mathematical Practices

1. **Make sense of problems and persevere in solving them.**
   SLO 4 Involve problems that must be constructed and deconstructed in order to solve.
2. Reason abstractly and quantitatively.
3. Construct viable arguments and critique the reasoning of others.
4. **Model with mathematics.**
   SLOs 1, 2 and 3 Use equations, scatter plots, and frequency tables to model relationships between real-world quantities.
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.

All of the content presented at this grade level has connections to the standards for mathematical practices.

ALPHA BORO PUBLIC SCHOOL			
CONTENT AREA: Mathematics	**GRADE: 8**	**UNIT #: 5**	**UNIT NAME: Geometry**

Bold type identifies possible starting points for connections to the SLOs in this unit.

Code #	Common Core State Standards
8.SP.1	Construct and interpret scatter plot 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.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.
8.SP.3	Use the equation of a linear model to solve problems in the context of bivariate 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.
8.SP.4	Understand the patterns of association can also be seen in bivariate categorical data by displaying the 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?*
8.G.9	Know the formulas for the volumes of cones, cylinders, and spheres and use them to solve real-world and mathematical problems.

Major Content Supporting Content **Additional Content** (Identified by PARCC Model Content Frameworks).

Bold type indicates grade level fluency requirements. *(Identified by PARCC Model Content Frameworks).*