CURRICULUM UNIT MAP
1ST QUARTER

COURSE TITLE: Geometry **GRADE:** 10th

Unit Title and Objectives	List CLTs for Each Objective	Brief Description of Formative Assessment(s)	End-of-Unit Benchmark or Performance Assessment
Unit 1: Points, Lines, Planes, and Angles (20 days) **Days 1-6 OBJECTIVE** Identify and model points, lines, planes, collinear points, coplanar points, intersecting lines, and intersecting planes in space using proper verbage and notation (1.1,1.2) (DOK 3)	Identify and model points, lines, and planes(1.1.1) Identify collinear and coplanar points using correct notation and verbage Identify coplanar lines using correct notation and verbage Draw a model given specific properties Identify collinear and coplanar points and intersecting lines and planes is space (1.1.2) Measure segments and determine the accuracy of the measurement (1.2.1) Compute with measurements (1.2.2) Find the effect of precision on the perimeter of a polygon Find the effects of precision on the area of a polygon	Example Problems: 1) Draw and indentify (label) a model (figure) that shows that plane *R* contains both lines *s* and AC that intersect at point B. Name three collinear points in plane *R* . (DOK 3) 2) Draw a given object with the two-point perspective technique, demonstrating the two sets of lines vanishing points. (DOK 1)	
Days 7-9 OBJECTIVE Model and solve problems that involve finding the distance and midpoints using a construction, a number line, and or a coordinate plane, including those involving area and perimeter (1.3) (DOK 2)	Find the distance between two points (1.3.1) Find the distance between two points using distance formula and or Pythagorean Theorem Find the distance between two points to calculate perimeter and or area Find the distance between two points using the ACT program on the graphing calculator Find the midpoint of a segment (1.3.2) Use the midpoint formula to find the midpoint of two points Reverse the midpoint formula to find endpoints	Example Problems: 1) Given a diagram of several intersecting lines, identify all angles with a given vertex. (DOK 1) 2) Given an angle measure the angle and classify it by its angle measurement. (DOK 1) 3) Given and angle copy the angle using a compass and a straightedge. (DOK 1) 4) Given a diagram of several intersecting lines (involving complimentary and or supplementary angles) with the measure of angles in terms in x, calculate the value of x and the measures of the angles. (DOK 2) 5) Given an angle, bisect the angle using a compass and a straightedge. (DOK 1) 6) Given a diagram of several intersecting lines (involving perpendicular lines and or bisecting lines) with the measure of angles in terms in x, calculate the value of x and the measures of the angles.(DOK 2)	

CURRICULUM UNIT MAP
1ST QUARTER (Cont'd)

COURSE TITLE: Geometry **GRADE:** 10th

Unit Title and Objectives	List CLTs for Each Objective	Brief Description of Formative Assessment(s)	End-of-Unit Benchmark or Performance Assessment
Unit 1: Points, Lines, Planes, and Angles (20 days) **Days 10-15 OBJECTIVES** Identify and use angle relationships, including bisectors, and congruent, adjacent, vertical, linear, complimentary, and supplementary angles, to model and solve problems (including those that require algebra) (1.4,1.5) (DOK 2)	Measure and classify angles (1.4.1) Measure angles using a protractor and classify by degree measure Copy an angle using a straight edge and a compass Identify and use congruent angles and the bisector of an angle (1.4.2) Bisect an angle using a straight edge and a compass Use definition of a bisector to solve angle measures Use definition of a bisector to solve angle measures involving algebraic expressions Identify perpendicular lines (1.5.1) Construct a perpendicular using a straightedge and a compass Identify perpendicular lines by measuring angles Identify perpendicular lines by finding and comparing slopes Identify and use special pairs of angles (1.5.2) Solve for angle measure using properties of congruent, adjacent, vertical, linear, complimentary, and supplementary angles that have algebraic expressions	Example Problems: 1) Draw a line on a coordinate plane so that you can determine at least two points on the graph. Label those two points D and G. Calculate the distance between points D and G. Find the coordinates of E, the midpoint of line segment DG. Find the coordinates of point H given that G is the midpoint of line segment DH. (DOK 2) 2) Given five triangles on a grid (not a coordinate plane) calculate the perimeter of each triangle using the Pythagorean Theorem. Then choose two of the triangles and calculate the area of the triangle.(DOK 2)	
Days 15-20 OBJECTIVE Solve problems involving finding the perimeter and area of polygons (including regular, irregular, concave, and convex) and those involving net diagrams, the coordinate plane, analyzing parameter changes, and maximizing area (1.6) (DOK 2)	Identify and name polygons (1.6.1) Distinguish polygons from other 1, 2, and 3 dimensional figures Classify polygons by sides/concavity/regularity Find perimeters of polygons (1.6.2) Calculate the perimeter of a polygon using the coordinate plane Calculate the perimeter of a polygon given a net diagram Calculate the perimeter of a polygon involving algebraic expressions Evaluate and predict the effects of a parameter change on the perimeter and area of a polygon	Example Problems: 1) Given a polygon with the vertices P(-3,4), Q(0,8), R(3,8), and S(0,4). Classify the polygon, calculate its perimeter and area. (DOK 2) 2) Using grid paper draw all possible rectangles with length and width that are whole numbers and with a perimeter of 12. When is the area maximized? Repeat this process with a perimeter of 36. What do you notice about the lengths and widths of each? (DOK 2)	End-of-unit test consists of example test items from formative assessments

CURRICULUM UNIT MAP
1ST QUARTER (Cont'd)

COURSE TITLE: Geometry **GRADE:** 10th

Unit Title and Objectives	List CLTs for Each Objective	Brief Description of Formative Assessment(s)	End-of-Unit Benchmark or Performance Assessment
Unit 2: Reasoning and Proof (20 days) **Days 1-3 OBJECTIVES** Make, confirm, and or disprove (by counterexample) conjectures based on inductive reasoning, including those involving patterns and functions and geometry (2.1) (DOK 3)	Make conjectures based on inductive reasoning (2.1.1) Find the next number in a pattern and draw a model if needed Classify the pattern type as linear, quadratic, cubic, exponential, or geometric Find the explicit formula (equations) for the nth term of a linear, quadratic, cubic, or exponential pattern Find counterexamples (2.1.2) Find a counterexample to prove a conjecture false	Example Problems: 1) Make a conjecture based on a description of a pattern. (DOK 2) 2) Given a statement and a false conjecture find a counterexample. (DOK 2) 3) Given a statement make a conjecture and draw a figure to illustrate. (DOK 2) 4) Given a geometric sequence of numbers find the next value and make a conjecture about the sequence. (DOK 3) 5) Given a visual pattern and a partially completed data table: draw the next two diagrams in the pattern, complete the data table, find the recursive (now next) and explicit formulas (nth term). (DOK 3)	
Unit: 2 Reasoning and Proof (continued) **Days 4-6 OBJECTIVES** Analyze the truth values of compound statements (conjuctions and disjunctions) by interpreting and constructing truth tables and Venn diagrams(2.2)(DOK 2)	Determine truth values of conjunctions and disjunctions (2.2.1) Read the notation of sets and logic of compound statements Identify the truth value of disjunctions and conjunctions Interpret Venn Diagrams Construct truth tables (2.2.2) Construct a truth table for compound statements Evaluate truth tables to identify tautologies	Example Problems: 1) Determine the truth value of a compound statement given the values of p and q. (DOK 2) 2) Complete the truth table for a compound statement with p and q. (DOK 2) 3) Given a description of data (p,q,r) make a Venn Diagram representing the data and answer questions of literal interpretation of the data. (DOK 1) 4) Given an algebraic statement, find the negation of the statement. (DOK 1)	

CURRICULUM UNIT MAP
1ST QUARTER (Cont'd)

COURSE TITLE: Geometry **GRADE:** 10th

Unit Title and Objectives	List CLTs for Each Objective	Brief Description of Formative Assessment(s)	End-of-Unit Benchmark or Performance Assessment
Days 7-12 OBJECTIVES Utilize deductive reasoning by analyzing conditional and biconditional statements including converse, inverse, and contrapositive if-then statements, the Law of Detachment, and the Law of Syllogism (2.3,2.4) (DOK 3)	Analyze statements in if-then form (2.3.1) Identify the hypothesis and the conclusion of an If-Then statement Write If-Then statements Determine the truth value of If-Then statements Write the converse, inverse, and contrapositive of if-then statements (2.3.2) Write the converse, inverse, and contrapositive of If-Then statements Determine the truth values of converse, inverse, and contrapositive statements Use the Law of Detachment (2.4.1) Use the Law of Detachment to write a valid conclusion Use the Law of Detachment to evaluate the validity of conclusions	Example Problems: 1) Given either a conditional, converse, inverse, and or contrapositive statement, complete the chart to find all other related statements not given and their truth values. (DOK 2) 2) Given two statements and a conclusion, determine which law, property, or postulate makes it valid. If it is not a valid conclusion give a counter example proving it false. (DOK 3)	
Unit: 2 Reasoning and Proof (Cont'd) **Days 13-20 OBJECTIVES** Use algebra to write a formal proof and use properties of equality in formal geometry proofs, including reflexive, symmetric, transitive, distributive, and addition and multiplication properties and or properties of points, lines, planes, segment addition, segment congruence, and or angle relation-ships (2.5, 2.6, 2.7, 2.8)(DOK3)	Identify and use basic postulates about points, lines, and planes (2.5.1) Use algebra to write two-column proofs (2.6.1) Use properties of equality in geometry proofs (2.6.2) Write two- column proofs involving segment addition (2.7.1) Write two- column proofs involving supplementary and complementary angles (2.8.1) Write two- column proofs involving congruent and right angles (2.8.2)	Example Problems: 1) Given a partial algebraic, complete the proof by filling in missing statements and or reasons. (DOK 3) 2) Given an algebraic equation and write a two-column proof. (DOK 3) 3) Given an algebraic statement write the property, law, postulate, or theorem that justifies that statement. (DOK 3)	End-of-unit test consists of example test items from formative assessments

CURRICULUM UNIT MAP

2nd QUARTER

COURSE TITLE: Geometry **GRADE:** 10th

Unit Title and Objectives	List CLTs for Each Objective	Brief Description of Formative Assessment(s)	End-of-Unit Benchmark or Performance Assessment
Unit 3: Parallel/Perpendicular Lines (20 days) **Days 1 OBJECTIVE** Use a graphing calculator to find the intersection points of two lines using various methods including the trace, intersect, table, and rref functions of the calculator (DOK 1)	Use a graphing calculator to find the intersection points of two lines using various methods including the trace, intersect, table, and rref functions of the calculator (DOK 1)	Have students demonstrate at the overhead or at their desk how to find the intersection of two points using either the trace, intersect, table, or rref functions of the calculator. (DOK 1)	
Days 2-7 OBJECTIVE Solve problems of angle measure of parallel lines cut by a transversal, including using algebra to find angle measures (3.1,3.2) (DOK 2)	Identify relationships between two lines or two planes (3.1.1) Name angles formed by a pair of lines and a transversal (3.1.2) Use the properties of parallel lines to determine congruent angles (3.2.1) Use algebra to find angle measures (3.2.2)	Given a pair of parallel lines and a transversal and the measures of three angles in terms of x or y, solve for x, y, and the other angle measures. (DOK 2)	
Days 8-13 OBJECTIVE Find and use slope to identify parallel and perpendicular lines and solve problems by writing linear equations given information (including intercepts) about the graph (3.3,3.4) (DOK 2)	Find the slope of lines (3.3.1) Use slope to identify parallel and perpendicular line. (3.3.2) Write an equation of a line given information about its graph (3.4.1) Solve problems by writing equations (3.4.2) Name angles formed by a pair of lines and a transversal (3.1.2)	Example Problems: 1) Given a graph of a line write the equation of the line in y=mx+b form. (DOK 1) 2) Given a graph of a line and a point not on the line, write the equation of the line that is parallel and or perpendicular to the line and goes through the given point. (DOK 2) 3) Given a various combination of points, slope, intercepts, or a parallel or perpendicular equation, write the equation of the line. (DOK 2) 4)Given a real-world senerio write an equation of a line that would model the senerio. (DOK 2)	

CURRICULUM UNIT MAP
2nd QUARTER (Cont'd)

COURSE TITLE: Geometry **GRADE:** 10th

Unit Title and Objectives	List CLTs for Each Objective	Brief Description of Formative Assessment(s)	End-of-Unit Benchmark or Performance Assessment
Days 14-20 OBJECTIVE Solve application problems that involve proving lines parallel or perpendicular, based on angle relationships and or finding the distance between parallel lines, and or point and a line (3.5,3.6) (DOK 3)	Recognize angle conditions that occur with parallel lines (3.5.1) Prove that two lines are parallel based on given angle relationships (3.5.2) Find the distance between a point and a line (3.6.1) Find the distance between parallel lines (3.6.2)	1) Plot the following points on a coordinate plane: M(2,7), L(6,0), and C(0,4). Prove that triangle MLC is a right triangle. (DOK 2) 2) Plot the following points on a coordinate plane: A(2,2), B(8,2), C(7,6), and D(3,6). Prove that the quadrilateral ABCD is a trapezoid. (DOK 3) 3) Given two equations: y=3/4 x - 1 and y-3/4 x + 1/8 calculate the distance between the two lines. (DOK 2)	End-of-unit test consists of example test items from formative assessments
Unit 4: Congruent Triangles (20 days) **Days 1-6 OBJECTIVE** Classify triangles (by sides and angles) and apply the Angle Sum theorem and the Exterior Angle theorem to solve problems of angle measure and to prove conjectures of angle measure (4.1, 4.2) (DOK 2)	Identify and classify triangles by angles (4.1.1) Identify and classify triangles by sides (4.1.2) Apply Angle Sum Theorem (4.2.1) Apply the Exterior Angle Theorem (4.2.2)	1) Draw and indentify (label) a model (figure) that shows that plane *R* contains both lines *s* and AC that intersect at point B. Name three collinear points in plane *R* . (DOK 3) 2) Draw a given object with the two-point perspective technique, demonstrating the two sets of lines vanishing points. (DOK 1)	
Days 7-9 OBJECTIVE Name and label corresponding parts of congruent triangles and identify congruence transformations (turns/rotations, flips/reflections, slides/translations) (4.3) (DOK 1)	Name and label corresponding parts of congruent triangles (4.3.1) Identify congruence transformations (4.3.2)	1) Given the coordinates of vertices of two triangles a coordinate plane prove the two triangles are congruent, name the type of congruence transformation and the corresponding parts. (DOK 1) 2) Given a statement and diagram of two triangles being congruent and the coordinates of a vertex, find the coordinates of the corresponding vertex. (DOK 1) 3) Given a diagram of congruent shapes in a real-world setting, identify the type of congruence transformation and state the congruent parts. (DOK 1) 4) Create a graphic design that includes using a given triangle and a list of 5 required congruent transformations that must be included, and state the rules for each translation included in the design (DOK 2)	

CURRICULUM UNIT MAP
2nd QUARTER (Cont'd)

COURSE TITLE: Geometry **GRADE:** 10th

Unit Title and Objectives	List CLTs for Each Objective	Brief Description of Formative Assessment(s)	End-of-Unit Benchmark or Performance Assessment
Unit 4: Congruent Triangles (Cont'd) **Days 10-15 OBJECTIVE** Use SSS, SAS, ASA, and AAS postulates to test and or prove triangle congruence and to construct congruent triangles (4.4, 4.5)(DOK 3)	Test for triangle congruence using SSS, SAS, ASA, or AAS postulates Write a two-column proof involving SSS, SAS, ASA, or AAS postulates Write a coordinate proof involving SSS, SAS, ASA, or AAS postulates Construct congruent triangles using a compass and a straight edge	1) Given a triangle, construct a congruent triangle using a straightedge and compass only. (DOK 1) 2) Given two triangles in a coordinate plane use SSS, ASA, or AAS postulates and algebraic techniques to prove or disprove their congruence. (DOK 2) 3) Given two triangles not in the coordinate plane use SSS, ASA, or AAS postulates and a protractor, compass, and or a ruler to prove or disprove angle congruence. (DOK 3) 4) Given only SS, AS, or AA, or AAA conditions to construct 2 unique triangles that fit the conditions. (DOK 3) 5) Given an unknown distance (not easily measurable) and several known distances, estimate the unknown distance using the technique of triangulation. (DOK 3)	
Days 16-20 OBJECTIVE Use properties of isosceles and equilateral triangles to solve application problems of angle measure and to prove or disprove conjectures using a coordinate plane (4.6, 4.7) (DOK 3)	Use properties of isosceles triangles (4.6.1) Use properties of equilateral triangles (4.6.2) Position and label triangles for use in coordinate proofs (4.7.1) Write coordinate proofs (4.7.2)	1) Given an equilateral triangle and its angle measures in terms of x, y, and z, find the actual measures of the angles. (DOK 2) 2) Given an isosceles triangle and the coordinates of one of its vertices find the other coordinates of the remaining vertices. (DOK 2) 3) Solve a real-world application problem of navigation or construction involving equilateral triangles and the coordinate plane. (DOK 3) 4) Given a triangle use construct a coordinate proof to determine if the triangle is an equilateral, isosceles, or scalene. (DOK 3)	End-of-unit test consists of example test items from formative assessments

CURRICULUM UNIT MAP
3RD QUARTER

COURSE TITLE: Geometry **GRADE:** 10th

Unit Title and Objectives	List CLTs for Each Objective	Brief Description of Formative Assessment(s)	End-of-Unit Benchmark or Performance Assessment
Unit 5: Right Triangles and Trigonometry (15 days) **Days 1-15 OBJECTIVE** Solve problems using the geometric mean, the Pythagorean Theorem, and or its converse (7.1, 7.2, 7.3)	Find the geometric mean between two numbers (7.1.1) Solve problems involving relationships between parts of a right triangle and the altitude and its hypotenuse (7.1.2) Use the Pythagoream Theorem to solve application problems (7.2.1) Use the converse of the Pythagorean Theorem to prove right triangles (7.2.2) Use properties of 45-45-90 triangles to solve triangles (7.3.1) Use properties of 30-60-90 triangles to solve triangles (7.3.2)	Under development	
Unit: 6 Transformations (5 days) **Days 1-3 OBJECTIVE** Draw reflected images (including reflections about a line, the x-axis, y-axis, origin, and the line y = x) and recognize and draw lines of symmetry and points of symmetry to solve application problems (9.1)(DOK 2)	Draw reflected images (9.1.1) Recognize and draw lines of symmetry (9.1.2)	Example Problems: 1) Given a polygon and a line in the coordinate plane, reflect the polygon about the y=x, x-axis, y-axis, or the origin. (DOK 1) 2) Given a polygon in the coordinate plane perform repeated reflections on a given set of lines. (DOK 2) 3) Given a polygon and a line use a compass and a straightedge to reflect the polygon about the line. (DOK 2) 2) Given a polygon determine the lines and points of symmetry and draw them. (DOK 2)	
Day 4-5 OBJECTIVE Draw rotated images using the angle of rotation and identify figures with rotational symmetries (9.2) (DOK 3)	Draw translated images using coordinates (9.2.1) Draw translated images using repeated reflections (9.2.2)	1) Given a polygon on the coordinate plane and a rule for translation, translate the polygon. (DOK 2) 2) Given a polygon and a point of reference for a translation, use a compass and straightedge to translate the polygon. (DOK 2) 3) Given an image and pre-image of a polygon that has been translated, find the rule for translation. (DOK 2) 4) Given a polygon translate by repeating reflections. (DOK 2)	End-of-unit test consists of example test items from formative assessments

CURRICULUM UNIT MAP
3rd QUARTER (Cont'd)

COURSE TITLE: Geometry **GRADE:** 10th

Unit Title and Objectives	List CLTs for Each Objective	Brief Description of Formative Assessment(s)	End-of-Unit Benchmark or Performance Assessment
Unit: 7 Circles (20 days) **Days 1-3 OBJECTIVE** Solve non-routine and application problems involving circumference (DOK 3)	Identify and use parts of a circle (10.1.1) Solve problems involving the circumference and area of a circle (10.1.2)	1) Given a circle inscribed in a square and given the length of the side of the square find the circumference of the circle. (DOK 2) 2) Given a square inscribed in a circle and given the length of the side of the square find the circumference of the circle. (DOK 2) 3) Given three concentric circles with a constant change in radius, find the approximate and exact circumference of the circles. (DOK 2) 4) Suppose a belt tightly stretched about the equator of the earth just fits. How long of a piece should be inserted so that the belt could encircle the earth at a distance of 1 m away from the equator at all points? (DOK3) 5)The track coach at Arcadia Valley High plans to make 8 lanes each 1 meter wide on the running track. Consider the following. The track measures y meters along the inside curb. The track has straight parallel sides and semicircular ends. If the runners in a race lined up at the same spot and stayed in their own lanes throughout the race, they would not run the same distance. To make the race even, by how much should each lane be staggered? (DOK 3) 6) The Egyptians used rollers to move the big blocks that went into the pyramids. Suppose a block is supported on two rollers, each 21 cm in diameter. How far can the block advance in one complete revolution? (DOK 3)	
Days 4-15 OBJECTIVE Find arc and angle measures in a circle including those involving inscribed and circumscribed polygons, concentric circles, and application problems that involve arc and angle measure of circles . (10.2,10.3,10.4,10.6) (DOK 2)	Recognize major arcs, minor arcs, semi-circles, and central angles and their measures (10.2.1) Find the arc length (10.2.2) Recognize and use relationships between arcs and chords (10.3.1) Recognize and use relationships between chords and diameters (10.3.2) Find measures of inscribed angles (10.4.1) Find measures of angles of inscribed polygons (10.4.2) Find measures of angles formed by lines intersecting on or inside the circle (10.6.1) Find measures of angles formed by lines intersecting outside the circle (10.6.2)	Example Test Items 1) Construct a circle graph that represents given data. (DOK 1) 2) Given a circle graph answer 3 or more literal questions about the data represented. (DOK 1) 3) Given the measure of a central, inscribed, and or circumscribed angle find the measure of its arc. (DOK 2) 4) Given the diameter or radius of a circle and the length of a chord find how far the chord is from the center of the circle. (DOK 2) 5) A bridge across the river is built in the shape of a circular arc. The middle of the bridge is ten meters above the water. Twenty-seven meters from shore, the bridge is nine meters above the water. How wide is the river? (DOK 2)	

CURRICULUM UNIT MAP
3rd QUARTER (Cont'd)

COURSE TITLE: Geometry **GRADE:** 10th

Unit Title and Objectives	List CLTs for Each Objective	Brief Description of Formative Assessment(s)	End-of-Unit Benchmark or Performance Assessment
Unit: 7 Circles (cont'd) **Days 15-20 OBJECTIVE** Use properties of tangents and circumscribed polygons to solve application problems and find measures of segments that intersect the interior and or exterior of a circle (10.5, 10.7) (DOK 2)	Use properties of tangents (10.5.1) Solve problems involving circumscribed polygons (10.5.2) Find measures of segments that intersect in the interior of the circle (10.7.1) Find measures of segments that intersect in the exterior of a circle (10.7.2)	1) Given a circle and a point on the exterior of the circle, construct a tangent line to circle through the given point. (DOK 2) 2) Given three points, construct a circle through any three noncolinear points. (DOK 2) 3) Given a line segment tangent to a circle a given point and 2 of the 3 measurements from the right triangle, find the missing measurement. (DOK 2) 4) Given a triangle circumscribed by a circle and 2 tangent segment measures, find the perimeter of the triangle. (DOK 2) 5) Given a circle with two intersecting chords and 3 of the 4 measures, find the missing measurement of the line segment. (DOK 2) 6) Solve an application problem that involves the intersection of a tangent and a secant. (DOK 3)	End-of-unit test consists of example test items from formative assessments

CURRICULUM UNIT MAP
4th QUARTER

COURSE TITLE: Geometry **GRADE:** 10th

Unit Title and Objectives	List CLTs for Each Objective	Brief Description of Formative Assessment(s)	End-of-Unit Benchmark or Performance Assessment
Unit 12: Surface Area (15 days) **Days 1-6 OBJECTIVE** Calculate and solve application problems involving lateral and surface areas of prisms and pyramid (12.3, 12.5) (DOK 2)	Find lateral surface areas of prisms (12.3.1) Find surface areas of prisms (12.3.2) Find lateral areas of regular pyramids (12.5.1) Find surface areas of regular pyramids (12.5.2)	1) Given a physical object (prism and or pyramid) take the necessary measurements to calculate lateral and total surface area within a specified margin of error. (DOK 2) 2) Given the total surface area or lateral surface area of a pyramid or prism work backwards to solve for a specified linear measurement. (DOK 2) 3) Given a net diagram identify the solid and calculate the lateral and total surface area. (DOK 2) 4) Solve real-world word problems that involve calculating lateral and or total surface area of pyramids and prisms. (DOK 2)	
Days 7-15 OBJECTIVE Calculate and solve application problems involving the lateral areas and or surface areas of cylinders, cones, and spheres (12.4, 12.6, 12.7) (DOK 2)	Find lateral areas of cylinders (12.4.1) Find surface areas of cylinders (12.4.2) Find lateral areas of cones (12.6.1) Find surface areas of cones (12.6.2) Recognize and define basic properties of spheres (12.7.1) Find surface areas of spheres (12.7.2)	1) Given a physical object (cylinder, cone, and or sphere) take the necessary measurements to calculate lateral and total surface area within a specified margin of error. (DOK 2) 2) Given the total surface area or lateral surface area of a cylinder, cone, and or sphere work backwards to solve for a specified linear measurement. (DOK 2) 3) Given a net diagram identify the solid and calculate the lateral and total surface area. (DOK 2) 4) Solve real-world word problems that involve calculating lateral and or total surface area of cylinders, cones, and spheres. (DOK 2)	End-of-unit test consists of example test items from formative assessments

CURRICULUM UNIT MAP
4th QUARTER (Cont'd)

COURSE TITLE: Geometry **GRADE:** 10th

Unit Title and Objectives	List CLTs for Each Objective	Brief Description of Formative Assessment(s)	End-of-Unit Benchmark or Performance Assessment
Unit: 13 Volume (15 days) **Days 1-12 OBJECTIVE** Calculate the volumes and solve application problems involving the volumes of prisms, cylinders, pyramids, circular cones, and spheres (13.1, 13.2, 13.3) (DOK 3)	Find volumes of prisms (13.1.1) Find volumes of cylinders (13.1.2) Find volumes of pyramids (13.2.1) Find volumes of cones (13.2.2) Find volumes of spheres (13.3.1) Solve applications involving volumes of spheres (13.3.2)	1) Given a prism, cylinder, pyramid, cone, and or sphere and all necessary measurements calculate the volume. (DOK 1) 2) Given a net diagram of a prism, cylinder, pyramid, cone, and or sphere, identify the shape, and calculate the volume. (DOK 2) 3) Given a poyhedra composed a prism, cylinder, pyramid, cone, and or sphere and all necessary measurements calculate the volume of the object, including those that require the subtraction of volume. (DOK 2) 4) Given a volume of a prism, cylinder, pyramid, cone, and or a sphere, and some linear measurements then find the missing measurements. (DOK 2) 5) Complete a chart comparing the volume to surface area of 5 prisms, cylinders, pyramids, cones, and or spheres and write a statement about the change in surface area and volume when the dimensions are doubled or tripled. (DOK 3) 6) Solve a real-world word problem that requires volume calculations of a prism, cylinder, pyramid, cone, and or sphere. (DOK 3)	
Days 13-15 OBJECTIVE Identify congruent or similar solids, state the properties of similar solids, and analyzing the affects of changing dimensions on the surface area and volume of geometric solids (13.4) (DOK 3)	Identify congruent or similar solids (13.4.1) State the properties of similar solids (13.4.2)	1) Given two polyhedra and their dimensions determine whether the pair are similar, congruent, or neither. (DOK 2) 2) Complete a chart comparing the surface area, volume, scale factor, ratios of surface areas, and ratios of volume and write a valid conclusion based on the data. (DOK 3) 3) Find the volume or surface of a solid given the linear measurements and scale factor of a similar solid. (DOK 2)	End-of-unit test consists of example test items from formative assessments

**** This assumes 40 instructional days and 5 unit review and testing days for quarters 1,2,3**

**This assumes 30 instructional days, 10 days for state testing and other 4th quarter disruptions, and 5 days for unit review and testing.