Any standard highlighted in yellow has been determined by our WCSD teachers, district and state experts as essential for students to master.

Strand: I can understand congruence and similarity using physical models, transparencies, or geometry software. (8.G.1-5)
Strand: I can understand and apply the Pythagorean Theorem. (8.G.6-8)
Strand: I can solve real-world and mathematical problems involving volume of cylinders, cones, and spheres. (8.G.9)
Standard 8.G.1: I can verify experimentally the properties of rotations, reflections, and translations.

Learning Targets	Academic Vocabulary & Notation	Question Stems	Possible Assessments
• I can verify that congruence of line segments and angles is maintained through rotation, reflection, and translation. • I can verify that lines remain lines through rotation, reflection, and translation. • I can verify that when parallel lines are rotated, reflected, or translated, each in the same way, they remain parallel lines.	• line, angle, segment, parallel line, rigid motion, congruent, center of rotation, line of reflection, rotation, reflection, translation, transformation, dilation, tessellation, image, pre-image	• The hardest part of this unit is….. • I need help with_____ because……. • I thought of…..	• District CFA Geometry/ Transformations Form A • District CFA Geometry/ Transformations Form B • District CFA Geometry/ Transformations GVC Form

Strand: I can understand congruence and similarity using physical models, transparencies, or geometry software. (8.G.1-5)

Strand: I can understand and apply the Pythagorean Theorem. (8.G.6-8)

Strand: I can solve real-world and mathematical problems involving volume of cylinders, cones, and spheres. (8.G.9)

Standard 8.G.2: I 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.

Learning Targets	Academic Vocabulary & Notation	Question Stems	Possible Assessments
• I can understand that the congruency of two-dimensional figures is maintained while undergoing rigid transformations. • I can describe the transformation of a figure as a rotation, reflection, translation or a combination of transformations. • I can describe a sequence that exhibits the congruence between two figures.	• congruent, rotation, reflection, translation, rigid motion, center of rotation, line of reflection, angle of rotation, image, pre-image, isometry	• What would happen if….? • How is this similar to…..?	• District CFA Geometry/ Transformations Form A • District CFA Geometry/ Transformations Form B • District CFA Geometry/ Transformations GVC Form

Standard 8.G.3: I can describe the fact of dilations, translations, rotations, and reflections on two-dimensional figures using coordinates.

Learning Targets	Academic Vocabulary & Notation	Question Stems	Possible Assessments
• I understand how to dilate, translate, rotate, and reflect two-dimensional figures on the coordinate plane. • I can describe the effects of dilations, translations, rotations, and reflections using coordinate notation. • I can use coordinate notation to describe the transformation if given an image and its transformed image. •	• transformation, coordinate, dilation, rotation, reflection, translation, image, center of rotation, line of reflection, angle of rotation, scale factor	• When will we know we succeeded? • How is this similar to…..? • Convince me!	• District CFA Geometry/ Transformations Form A • District CFA Geometry/ Transformations Form B • District CFA Geometry/ Transformations GVC Form

Strand: I can understand congruence and similarity using physical models, transparencies, or geometry software. (8.G.1-5)

Strand: I can understand and apply the Pythagorean Theorem. (8.G.6-8)

Strand: I can solve real-world and mathematical problems involving volume of cylinders, cones, and spheres. (8.G.9)

Standard 8.G.4: I 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.

Learning Targets	Academic Vocabulary & Notation	Question Stems	Possible Assessments
• I can describe a sequence that exhibits the similarity between two similar two-dimensional figures. • I understand that any combinations of transformation will result in similar figures. • I can make dilations of figures by a given scale factor.	• similar, similarity, dilation, rotation, reflection, translation, transformation	• I did something like this before when….. • A question I had was…. • How do you know?	• District CFA Geometry/ Transformations Form A • District CFA Geometry/ Transformations Form B • District CFA Geometry/ Transformations GVC Form

Strand: I can understand congruence and similarity using physical models, transparencies, or geometry software. (8.G.1-5)

Strand: I can understand and apply the Pythagorean Theorem. (8.G.6-8)

Strand: I can solve real-world and mathematical problems involving volume of cylinders, cones, and spheres. (8.G.9)

Standard 8.G.5: I can use informal arguments to establish facts about 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.

Learning Targets	Academic Vocabulary & Notation	Question Stems	Possible Assessments
• I understand that the measure of an exterior angle of a triangle is equal to the sum of the measures of the non-adjacent angles. • I know that the sum of the angles of a triangle equals 180°. • I can determine the relationship between corresponding angles, alternate interior angles, alternate exterior angles, vertical pairs, and supplementary pairs when parallel lines are cut by a transversal. • I recognize that if two triangles have two congruent angles, then they are similar triangles (angle-angle).	• corresponding angles, alternate interior angles, alternate exterior angles, consecutive interior angles, supplementary pairs, vertical pairs, transversal, adjacent, non-adjacent, exterior angle of a triangle, remote interior angles of a triangle.	• What did you do? • What strategy did you use? • How can you describe what happened?	• District CFA Geometry/ Transformations Form A • District CFA Geometry/ Transformations Form B • District CFA Geometry/ Transformations GVC Form

Strand: I can understand congruence and similarity using physical models, transparencies, or geometry software. (8.G.1-5)

Strand: I can understand and apply the Pythagorean Theorem. (8.G.6-8)

Strand: I can solve real-world and mathematical problems involving volume of cylinders, cones, and spheres. (8.G.9)

Standard 8.G.6: I can explain a proof of the Pythagorean Theorem and its converse.

Learning Targets	Academic Vocabulary & Notation	Question Stems	Possible Assessments
• I know that the Pythagorean Theorem is a right triangle $a^2+b^2=c^2$. • I can understand and explain a proof of the Pythagorean Theorem. • I can understand and explain a proof of the converse of the Pythagorean Theorem.	• right triangle, leg, hypotenuse, square, Pythagorean Theorem, converse	• What questions arose as you worked? • What does this make you think of?	• District CFA Geometry/ Pythagorean Theorem Form A • District CFA Geometry/ Pythagorean Theorem Form B • District CFA Geometry/ Pythagorean Theorem GVC Form

Standard 8.G.7: I can apply the Pythagorean Theorem to determine unknown side lengths in right triangles in real-world and mathematical problems in two and three dimensions.

Learning Targets	Academic Vocabulary & Notation	Question Stems	Possible Assessments
• I can use the Pythagorean Theorem to solve for a missing side of a right triangle given the other two sides. • I can use the Pythagorean Theorem to solve problems in real-world contexts, including three-dimensional contexts.	• right triangle, leg, hypotenuse, Pythagorean Theorem, square, square root, √	• What were the steps involved? • What did you learn today?	• District CFA Geometry/ Pythagorean Theorem Form A • District CFA Geometry/ Pythagorean Theorem Form B • District CFA Geometry/ Pythagorean Theorem GVC Form

Strand: I can understand congruence and similarity using physical models, transparencies, or geometry software. (8.G.1-5)

Strand: I can understand and apply the Pythagorean Theorem. (8.G.6-8)

Strand: I can solve real-world and mathematical problems involving volume of cylinders, cones, and spheres. (8.G.9)

Standard 8.G.8: I can apply the Pythagorean Theorem to find the distance between two points in a coordinate system.

Learning Targets	Academic Vocabulary & Notation	Question Stems	Possible Assessments
• I can calculate the distance between two points in a coordinate system using the Pythagorean Theorem.	• right triangle, distance formula, let, hypotenuse, Pythagorean Theorem, square, square root	• My strategy was successful because…… • What did you learn today?	• District CFA Geometry/ Pythagorean Theorem Form A • District CFA Geometry/ Pythagorean Theorem Form B • District CFA Geometry/ Pythagorean Theorem GVC Form

Standard 8.G.9: I know the formulas for the volumes of cones, cylinders, and spheres and use them to solve real-world and mathematical problems.

Learning Targets	Academic Vocabulary & Notation	Question Stems	Possible Assessments
• I understand when and how to use formulas for volume of cones, cylinders, and spheres. • I can apply volume formulas to real-world problems.	• pi, ∏, radius, slant height, height, volume, hemisphere, diameter	• What decisions can you make from the pattern? • How could you solve this problem?	• District CFA Geometry/Volume Form A • District CFA Geometry/Volume Form B • District CFA Geometry/Volume GVC Form