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| **8.G.A**  Understand congruence and similarity.  **8.G.A.1**  Verify experimentally the properties of rotations, reflections, and translations. Properties include: lines are taken to lines, line segments are taken to line segments of the same length, angles are taken to angles of the same measure, parallel lines are taken to parallel lines.  **8.G.A.2**  Understand that a two-dimensional figure is congruent to another if one can be obtained from the other by a sequence of rotations, reflections, and translations; given two congruent figures, describe a sequence that demonstrates congruence.  **8.G.A.3**  Describe the effect of dilations, translations, rotations, and reflections on two-dimensional figures using coordinates.  **8.G.A.4**  Understand that a two-dimensional figure is similar to another if, and only if, one can be obtained from the other by a sequence of rotations, reflections, translations, and dilations; given two similar two-dimensional figures, describe a sequence that demonstrates similarity.  **8.G.A.5**  Use informal arguments to establish facts about the angle sum and exterior angle of triangles, about the angles created when parallel lines are cut by a transversal, and the angle-angle criterion for similarity of triangles. 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. | I can translate two-dimensional figures.  I can reflect two-dimensional figures.  I can rotate a two-dimensional figure.  I can describe and perform a sequence of transformations.  I can use sequence of translations, reflections, and rotations to show that figures are congruent.  I can dilate two-dimensional figures.  I can use a sequence of transformations, including dilations, to show that figures are similar.  I can identify and find the measures of angles formed by parallel lines and a transversal.  I can find the interior and exterior angle measures of a triangle.  I can use angle measures to determine whether two triangles are similar. | Topic 6: Congruence and Similarity | 1, 2, & 3 | * Analyze translations * Analyze reflections * Analyze rotations * Compose transformations * Understand congruent figures * Describe dilations * Understand similar figures * Angles, lines, and transversals * Interior and exterior angles * Angle-angle triangle similarity | * Topic Assessment * Quiz * Exit Ticket * Dot Check * Doc Cam (Show Me) * Threshold * Cold Call * Wait Time * Circulate * Turn and Talk | Transformation  Translation  Image  Reflection  Line of reflection  Rotation  Angle of rotation  Center of rotation  Congruent  Dilation  Scale factor  Enlargement  Reduction  Similar  Transversal  Corresponding angles  Alternate interior angles  Same-side interior angles  Remote interior angles  Exterior angle of a triangle  Adjacent angles  Complementary angles  Supplementary angles  Vertical angles |
| **8.G.B**  Understand and apply the Pythagorean Theorem.  **8.G.B.6**  Understand the Pythagorean Theorem and its converse.  **8.G.B.7**  Apply the Pythagorean Theorem to determine unknown side lengths in right triangles in real-world context and mathematical problems in two and three dimensions.  **8.G.B.8**  Apply the Pythagorean Theorem to find the distance between two points in a coordinate system. | I can use the Pythagorean Theorem to find unknown sides of triangles.  I can use the Converse of the Pythagorean Theorem to identify right triangles.  I can use the Pythagorean Theorem to solve problems.  I can use the Pythagorean Theorem to find the distance between two points in the coordinate plane. | Topic 7: Understand and Apply the Pythagorean Theorem | 1, 2, & 3 | * Understand the Pythagorean Theorem * Understand the Converse of the Pythagorean Theorem * Apply the Pythagorean Theorem to Solve Problems * Find the Distance in the Coordinate Plane | * Topic Assessment * Quiz * Exit Ticket * Dot Check * Doc Cam (Show Me) * Threshold * Cold Call * Wait Time * Circulate * Turn and Talk | Hypotenuse  Leg  Pythagorean Theorem  Proof  Converse of the Pythagorean Theorem  Cube root  Diagonal  Isosceles triangle  Perimeter  Right triangle  Square root |
| **8.G.C**  Solve real-world and mathematical problems involving volume of cylinders, cones, and spheres.  **8.G.C.9**  Understand and use formulas for volumes of cones, cylinders and spheres and use them to solve real-world context and mathematical problems. | I can find the surface area of cylinders, cones, and spheres.  I can use what I know about finding volumes of rectangular prisms to find the volume of a cylinder.  I can find the volume of cones.  I can find the volume of spheres and use it to solve problems. | Topic 8: Solve Problems Involving Surface Area and Volume. | 1, 2, & 3 | * Find Surface Area of Three-Dimensional Figures * Find Volume of Cylinders * Find Volume of Cones * Find Volume of Spheres | * Topic Assessment * Quiz * Exit Ticket * Dot Check * Doc Cam (Show Me) * Threshold * Cold Call * Wait Time * Circulate * Turn and Talk | Cone  Cylinder  Sphere  Composite Figure  Base  Diameter  Radius  Three-dimensional  Two-dimensional |