SUBJECT: MATH   **GRADE: Eighth**   **TIMELINE: 1st Quarter**

Standard	Kid Friendly Learning Objectives	Content (subject or topic covered in enVision Math)	DOK Level	Skills (ability, practice, aptitude that will be learned)	Assessment	Academic Vocabulary
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.	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

REVISED: June 2021

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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.						
8.G.B Understand and apply the Pythagorean Theorem.	I can use the Pythagorean Theorem to find unknown sides of triangles. I can use the Converse of	Topic 7: Understand and Apply the Pythagorean Theorem	1, 2, & 3	• Understand the Pythagorean Theorem • Understand the Converse of the	• Topic Assessment • Quiz • Exit Ticket	Hypotenuse Leg Pythagorean Theorem Proof

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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.	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.			Pythagorean Theorem • Apply the Pythagorean Theorem to Solve Problems • Find the Distance in the Coordinate Plane	• Dot Check • Doc Cam (Show Me) • Threshold • Cold Call • Wait Time • Circulate • Turn and Talk	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**	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.	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	• Topic Assessment • Quiz • Exit Ticket • Dot Check • Doc Cam (Show Me) • Threshold	Cone Cylinder Sphere Composite Figure Base Diameter

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Standard	Kid Friendly Learning Objectives	Content (subject or topic covered in enVision Math)	DOK Level	Skills (ability, practice, aptitude that will be learned)	Assessment	Academic Vocabulary
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 volume of cones. I can find the volume of spheres and use it to solve problems.			Spheres	• Cold Call • Wait Time • Circulate • Turn and Talk	Radius Three-dimensional Two-dimensional