



Mathematics Grade 8 Shape and Space (SS)				
Outcome	1 - Little Evidence With help, I understand parts of the simpler ideas and do a few of the simpler skills.	2 - Partial Evidence I understand the simpler ideas and can do the simpler skills. I am working on the more complex ideas and skills.	3 - Sufficient Evidence I understand the more complex ideas and can master the complex skills that are taught in class. I achieve the outcome.	4- Extensive Evidence I have a deep understanding of the complex ideas, and I can use the skills I have learned in situations that were not taught in class.
SS8.1 I can demonstrate understanding of the Pythagorean Theorem concretely or pictorially and symbolically and by solving problems. [CN, PS, R, T, V]	<ul style="list-style-type: none">I can identify and label the parts of a right triangle (legs, hypotenuse, right angle)	<ul style="list-style-type: none">I can identify that $a^2 + b^2 = c^2$ for right triangles and only right triangles, concretely, pictorially OR symbolically	<ul style="list-style-type: none">I can explain that $a^2 + b^2 = c^2$ concretely, pictorially AND symbolically AND I can solve problems using the Pythagorean theorem.	<ul style="list-style-type: none">I can create and solve real life problems involving the Pythagorean theorem, Pythagorean triples, or the converse of the Pythagorean Theorem
Comments				



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SS8.2 I can demonstrate understanding of the surface area of 3-D objects limited to right prisms and cylinders (concretely, pictorially, and symbolically) by: 1. analyzing views 2. sketching and constructing 3-D objects, nets, and top, side, and front views 3. generalizing strategies and formulae 4. analyzing the effect of orientation 5. solving problems. [C, CN, PS, R, T V]	<ul style="list-style-type: none"> • With help, I can use the net of a 3D object (cylinder and prism) to calculate the surface area. 	<ul style="list-style-type: none"> • I can use the net of a cylinder OR right prism to calculate the surface area. • 	<ul style="list-style-type: none"> • I can use the net of a cylinder AND right prism to calculate the surface area. 	<ul style="list-style-type: none"> • I can extend my understanding of surface area of cylinders and right prisms to composite 3-D objects.
	<ul style="list-style-type: none"> • With help, I can sketch the top, front OR side views of 3D objects. 	<ul style="list-style-type: none"> • I can sketch the top, front AND side views of 3D objects. 	<ul style="list-style-type: none"> • I can sketch the top, front AND side views of 3D objects when rotated in increments of 90°. 	<ul style="list-style-type: none"> • I can predict and sketch the top, front and side views of 3D objects when rotated in increments of 90° and verify concretely and pictorially.
	<ul style="list-style-type: none"> • With help, I can create a net for a cylinder and prism. 	<ul style="list-style-type: none"> • I can create a net for a cylinder OR prism 	<ul style="list-style-type: none"> • I can create a net for a cylinder AND prism. 	<ul style="list-style-type: none"> • I can predict and create nets for cylinders and prisms and verify the net by constructing the 3D object.
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SS8.3 I can demonstrate understanding of volume limited to right prisms and cylinders (concretely, pictorially, or symbolically) by: <ol style="list-style-type: none"> 1. relating area to volume 2. generalizing strategies and formulae 3. analyzing the effect of orientation 4. solving problems. [CN, PS, R, V]	<ul style="list-style-type: none"> I can identify situations in my life where I need to know the volume of a right prism AND a cylinder. 	<ul style="list-style-type: none"> I can describe relationship between area of the base of a right prism AND cylinder and the volume of the 3-D object. 	<ul style="list-style-type: none"> I can use the relationship between the area of the base of a right prism or cylinder and the volume of the 3-D object to determine a formula for the volume of the object, AND apply the formula to determine the of right prisms and cylinders. 	<ul style="list-style-type: none"> I can create and solve personally relevant problems involving the volume of right prisms and right cylinders.
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SS8.4 I can demonstrate an understanding of tessellation by: 1. explaining the properties of shapes that make tessellating possible 2. creating tessellations 3. identifying tessellations in the environment. [C, CN, PS, T, V]	<ul style="list-style-type: none"> • With help, I can identify transformations (translations, reflections and rotations) within a tessellation. 	<ul style="list-style-type: none"> • I can identify a few transformations (translations, reflections OR rotations) within a tessellation. 	<ul style="list-style-type: none"> • I can identify transformations (translations, reflections AND rotations) within a tessellation. 	<ul style="list-style-type: none"> • I can identify and explain transformations (translations, reflections and rotations) including angle measurements, within a tessellation.
	<ul style="list-style-type: none"> • With help, I can design and create a tessellation involving one 2D shape. 	<ul style="list-style-type: none"> • I can design and create a tessellation involving one or more 2D shapes. 	<ul style="list-style-type: none"> • I can design and create a tessellation involving one or more 2D shapes and document the mathematics involved in the tessellation e.g. angles, transformations) 	<ul style="list-style-type: none"> • I can design and create a tessellation involving at least two 2D shapes, document the mathematics involved in the tessellation e.g. angles, transformations), and explain my creation.