Mathematics Grade 7
Shape and Space (SS)

Outcome	1 - Beginning The student is having difficulty demonstrating an understanding of the concept.	2 – Approaching The student is developing an understanding of the concept.	3 – Meeting The student consistently demonstrates an understanding of the concept or has achieved the concept.	4- Exemplary The student independently demonstrates an in-depth understanding of the concept, and consistently applies this knowledge to new situations.
SS7.1 **I can demonstrate an understanding of circles including circumference and central angles. [C, CN, R, V]**	• I can **identify** the radius, the diameter, **AND** the circumference of a circle.	• I can **demonstrate the relationship between a radius and diameter** in a circle.	• I can **demonstrate the relationship between** diameter **AND** circumference in a circle.	• I can **explain the relationship between** diameter **AND** circumference in a circle.
	• With help, I can identify the circumference of a circle on a diagram	• I am able to determine the **circumference of a circle, given its diameter.**	• I am able to **determine the circumference** of a circle, given its diameter, **AND determine its diameter given its circumference.**	• I am able to determine the circumference of a circle, given its diameter **AND** radius, **AND** determine its diameter **AND** radius given its circumference.
	• I can **identify a central angle** in a circle.	• Given one central angle, I am able to **find other central angles** in a circle.	• I can **demonstrate that the sum of the central angles of a circle is 360°.**	• Given the measure of some central angles in a circle, I **can determine the measure of a missing central angle.**
	With help, I can describe how the value of pi relates to the circumference of any circle.	• I can **describe how the value of pi relates to the circumference of any circle.**	• I **can explain how to use pi to determine the circumference of any circle, AND I** am able to provide the value of pi to two decimal places.	• I can demonstrate the relationship between a radius, a diameter, circumference, **AND** pi in a circle.
Comments				

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SS7.2 **I can develop and apply formulas for determining the area of:** ○ **triangles** ○ **parallelograms** ○ **circles.** **[CN, PS, R, V]**	• I can **explain the similarities and differences** between a rectangle and a triangle.	• I can **demonstrate the relationship** between a rectangle and a triangle.	• I can **develop a formula for determining the area of a triangle.**	• I can develop a formula for determining the area of a triangle**, AND explain the process.**
	• I can **explain the similarities and differences** between a rectangle and a parallelogram.	• I can **demonstrate the relationship** between a parallelogram **AND** a rectangle.	• I can **develop a formula for determining the area of a parallelogram**.	• I can develop a formula for determining the area of a parallelogram**, AND explain the process**.
	• **With help**, I can estimate the area of a circle, given its radius or diameter.	• Given the radius or diameter of a circle, I can estimate the area of a circle.	• Using a formula, I am able to find the **area of circles.**	• I can **demonstrate and explain** how the formula for the area of the circle is derived.
	• With help, I can solve problems involving the area of triangles, parallelograms **OR** circles.	• I can **solve problems** involving the area of triangles, parallelograms **OR** circles.	• I can **solve problems** involving the area of triangles, parallelograms **AND** circles.	• I can **solve complex, multistep problems** involving area of triangles, parallelograms, and circles.
Comments				

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SS7.3 **I can demonstrate an understanding of 2-D relationships involving lines and angles. [CN, R, V, T]**	• Given examples, I can identify parallel lines **AND** perpendicular lines.	• I can **create** parallel **OR** perpendicular line segments.	• I can **create and verify** parallel **AND** perpendicular line segments.	• I am able to create my own designs, using parallel and perpendicular lines.
	• Given examples, I can identify angle bisectors **AND** perpendicular bisectors.	• Using a variety of tools and methods, I can **create** angle bisectors **OR** perpendicular bisectors.	• Using a variety of tools and methods, I can **create and verify** angle bisectors **AND** perpendicular bisectors.	• I am able to **create and solve** problems involving parallel and perpendicular lines, bisectors, and perpendicular bisectors.
Comments:				

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SS7.4 **I can demonstrate an understanding of the Cartesian plane and ordered pairs with integral coordinates. [C, CN, V]**	• Given **positive coordinates**, I can plot points on the Cartesian plane.	• Given positive or negative coordinates, I can **plot points** anywhere on the Cartesian plane.	• I am able to create my own **simple** design anywhere on the Cartesian plane **AND** provide the ordered pairs for the points I have plotted.	• I am able to create my own **complex** design on the Cartesian plane and provide the coordinates for the points that I have plotted.
Comments:				

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SS7.5 **I can expand and demonstrate an understanding of transformations (translations, rotations, and reflections) of 2-D shapes in all four quadrants of the Cartesian plane. [CN, PS, T, V]**	• I can identify the translation, reflection, **AND** rotation of a design on the Cartesian plane.	• I am able to identify the coordinates of the vertices of a transformed design on the Cartesian plane.	• I can **perform two or more consecutive transformations** of a design anywhere on the Cartesian plane.	• I am able to **solve multi-step problem**s involving transformations on the Cartesian plane.
	• **With help**, I can describe the horizontal and vertical movement of a translated design anywhere on the Cartesian plane.	• I am able to describe the **horizontal and vertical movement** of a translated design **OR** direction and angle of a rotated design **OR** the line of reflection of a reflection design anywhere on the Cartesian plane.	• I am able to **describe the transformations (translation, rotation, AND reflection) of figures anywhere on the Cartesian plane, according to the appropriate criteria: horizontal and vertical movement, direction and angle of rotation, OR the line of reflection**.	• I am able to explain the similarities and differences between a variety of transformed designs on the Cartesian plane.
Comments:				