Whiteriver Unified School District Essential Standards Quarterly Focus

What is it we expect students to learn?	
Grade: 10	Subject: GEOMETRY
First Quarter G.G-CO.A.1 Know precise definitions of angle, circle, perpendicular line, parallel line, and line segment, based on the undefined notions of point, line, distance along a line, and distance around a circular arc. G.MG.1 Use geometric shapes, their measures, and their properties to describe objects (e.g., modeling a tree trunk or a human torso as a cylinder). G.GMD.3 Use volume formulas for cylinders, pyramids, cones, and spheres to solve problems. G.GPE.5 Prove the slope criteria for parallel and perpendicular lines and use them to solve geometric problems (e.g., find the equation of a line parallel or perpendicular to a given line that passes through a given point). .	Second Quarter G.G-CO.A.3 Given a rectangle, parallelogram, trapezoid, or regular polygon, describe the rotations and reflections that carry it onto itself. G.G-CO.A.5 Given a geometric figure and a rotation, reflection, or translation draw the transformed figure. Specify a sequence of transformations that will carry a given figure onto another. G.G-CO.C.10 Prove theorems about triangles. Theorems include: measures of interior angles of a triangle sum to 180°; base angles of isosceles triangle are congruent; the segment joining midpoints of two sides of a triangle is parallel to the third side and half the length; the medians of a triangle meet at a point. G.SRT.5 Use congruence and similarity criteria for triangles to solve problems and to prove relationships in geometric figures. G.CO.9 Prove theorems about lines and angles.

Third Quarter	Fourth Quarter
G.GPE.4 Use coordinates to prove simple geometric theorems algebraically. G.G-SRT.A.2 Given two figures, use the definition of similarity in terms of similarity transformations to decide if they are similar; explain using similarity transformations the meaning of similarity for triangles as the equality of all corresponding pairs of angles and the proportionality of all corresponding pairs of sides. G.SRT.4 Prove theorems about triangles. G.G-SRT.C.7 Explain and use the relationship between the sine and cosine of complementary angles. G.G-SRT.C.8 Use trigonometric ratios (including inverse trigonometric ratios) and the Pythagorean Theorem to find unknown measurements in right triangles utilizing real-world context	G.G-C.A.2 Identify and describe relationships among inscribed angles, radii, and chords. Include the relationship between central, inscribed, and circumscribed angles; inscribed angles on a diameter are right angles; the radius of a circle is perpendicular to the tangent where the radius intersects the circle. G.G-C.B.5 Derive using similarity the fact that the length of the arc intercepted by an angle is proportional to the radius and define the radian measure of the angle as the constant of proportionality; derive the formula for the area of a sector. Convert between degrees and radians. G.GMD.1 Give an informal argument for the formulas for the circumference of a circle, area of a circle, volume of a cylinder, pyramid, and cone. S.CP.9 Use permutations and combinations to compute probabilities of compound events and solve problems. S.MD.6 Use probabilities to make fair decisions (e.g., drawing by lots, using a random number generator).

- *Endurance- Knowledge and skills of value beyond a single date*
- *Leverage- Knowledge and skills valuable in multiple disciplines*
- *Readiness for the next level of learning- Knowledge and skills that are necessary for success in the next grade level or the next level of instruction*