

Geometry Course Objectives:

1. Basic tools of Geometry	
	A. Using patterns and inductive reasoning
	B. Describes points, lines, and planes
	C. Segments, rays, parallel lines and planes
	D. Measuring angles and segments
	E. Creating good definition of terms
	F. Using deductive reasoning
	G. Working with the coordinate plane
2. Investigating Geometric Figures	
	A. Basic types of triangles
	B. Polygons and their names and the interior and exterior angle measures
	C. Recognizing parallel and perpendicular lines
	D. Classifying quadrilaterals
	E. Circles and their terminology
	F. Congruent and similar figures
3. Triangle Relationships	
	A. Using logical reasoning: conjunctions, disjunctions, negations, conditionals, and their inverses, converses, and contrapositives and biconditionals.
	B. Properties of Isosceles triangles
	C. Midsegments of triangles
	D. Using indirect reasoning
	E. Triangle inequalities
	F. Loci of points
	G. Altitudes, medians, angle bisectors and perpendicular bisectors
4. Measuring in the plane	
	A. Perimeters and areas
	B. Areas of rectangles, parallelograms, triangles, trapezoids, regular polygons, and circles
	C. Simplifying radicals
	D. Using the Pythagorean theorem and its converse
	E. Special right triangles
	F. Finding arc lengths, sector areas, and segment of a circle
5. Three Dimensional Figures	
	A. Finding surface areas of pyramids and cones
	B. Finding volumes of prisms and cylinders
	C. Finding volumes of pyramids and cones
	D. Finding surface areas and volumes of spheres
6. Parallel Lines	
	A. Defining angle pairs created by transversals
	B. Proving lines parallel
	C. Calculating angles using angle relationships
7. Discovering Congruent Triangle Relationships	
	A. Recognizing information that would cause triangles to be congruent, ie. SSS, SAS, ASA, AAS, HL
	B. Using congruent triangles to recognize corresponding parts of congruent triangles are equal
8. Quadrilaterals	

	A. Properties of parallelograms
	B. Showing a quadrilateral is a parallelogram
	C. Properties of special parallelograms
	D. Properties of trapezoids and kites
	E. Working with basic coordinate geometry
9. Similar Figures	
	A. Ratio and proportions as they relate to lengths
	B. Showing triangles similar by AA, SSS, SAS
	C. Similarity of Right Triangles
	D. Proportions and similar triangles
	E. Relating lengths to areas to volumes in geometric figures
10. Circles in the Coordinate Plane	
	A. Standard equation of a circle
	B. Properties of tangents
	C. Properties of arcs and chords
	D. Working with central, inscribed, interior, and exterior angles
	E. Perform calculations using chords, tangent segments and secant segments
11. Right Triangle Trigonometry	
	A. Recognizing the angle relationships that create sine, cosine, and tangent ratios
	B. Angles of elevation and depression
	C. Calculating using vectors and trigonometry
	D. Using trigonometry to calculate areas of figures
12. Transformations of Geometric Shapes	
	A. Reflections of shapes
	B. Translations of shapes
	C. Rotations of shapes
	D. Dilations of shapes
	E. Types of Symmetry