Ms. Lauren Year Plan 2022-2023

August 30, 2022-November 3, 2022	November 6, 2022-January 19, 2023	January 22, 2023-March 20, 2023	March 21, 2023-June 3, 2023
Grade 10 Integrated Geometry			
Chapter 1: Essentials of Geometry • Undefined Terms • The Real Numbers and Their Properties • Definitions, Lines, and Line Segments • Midpoints and Bisectors • Rays and Angles • More Angle Definitions • Triangles **Chapter 2: Logic** • 2.1 Sentences, Statements, and Truth Values • 2.2 Conjunctions • 2.3 Disjunctions • 2.4 Conditionals • 2.5 Inverses, Converses, and Contrapositives • 2.6 Biconditionals • 2.7 The Laws of Logic • 2.8 Drawing Conclusions **Chapter 3: Proving Statements in Geometry** • 3.1 Inductive Reasoning • 3.2 Definitions of Biconditionals • 3.3 Deductive Reasoning • 3.4 Direct and Indirect Proofs • 3.5 Postulates, Theorems, and Proof • 3.6 The Substitution Postulate • 3.7 The Addition and Subtraction Postulates • 3.8 The Multiplication and Division Postulates	**Chapter 4: Congruence of Line Segments, Angles, and Triangles** • 4.1 Postulates of Lines, Line Segments, and Angles • 4.2 Using Postulates and Definitions in Proofs • 4.3 Proving Theorems About Angles • 4.4 Congruent Polygons and Corresponding Parts • 4.5 Proving Triangles Congruent Using Side, Angle, Side • 4.6 Proving Triangles Congruent Using Angle, Side, Angle • 4.7 Proving Triangles Congruent Using Side, Side, Side **Chapter 5: Congruence Based on Triangles** • 5.1 Line Segments Associated with Triangles • 5.2 Using Congruent Triangles to Prove Line Segments Congruent and Angles Congruent • 5.3 Isosceles and Equilateral Triangles • 5.4 Using Two Pairs of Congruent Triangles • 5.5 Proving Overlapping Triangles Congruent • 5.6 Perpendicular Bisector of a Line Segment • 5.7 Basic Constructions **Chapter 6: Transformations on the Coordinate Plane** • 6.1 The Coordinates of a Point in a Plane • 6.2 Line Reflections • 6.3 Line Reflections in the Coordinate Plane • 6.4 Point Reflections in the Coordinate Plane • 6.5 Translations in the Coordinate Plane • 6.6 Rotations in the Coordinate Plane • 6.8 Dilations in the Coordinate Plane • 6.9 Transformations as Functions	**Chapter 7: Geometric Inequalities** • 7.1 Basic Inequality Postulates • 7.2 Inequality Postulates Involving Addition and Subtraction • 7.3 Inequality Postulates Involving Multiplication and Division • 7.4 An Inequality Involving the Lengths of the Sides of a Triangle • 7.5 An Inequality Involving an Exterior Angle of a Triangle • 7.6 Inequalities Involving Sides and Angles of a Triangle **Chapter 8: Slopes and Equations of Lines** • 8.1 The Slope of a Line • 8.2 The Equation of a Line • 8.3 Midpoint of a Line Segment • 8.4 The Slopes of Perpendicular Lines • 8.5 Coordinate Proof • 8.6 Concurrence of the Altitudes of a Triangle **Chapter 9: Parallel Lines** • 9.1 Proving Lines Parallel • 9.2 Properties of Parallel Lines • 9.3 Parallel Lines in the Coordinate Plane • 9.4 The Sum of the Measures of the Angles of a Triangle • 9.5 Proving Triangles Congruent by Angle, Angle, Side • 9.6 The Converse of the Isosceles Triangle Theorem • 9.7 Proving Right Triangles Congruent by Hypotenuse, Leg • 9.8 Interior and Exterior Angles of Polygons **Chapter 10: Quadrilaterals** • 10.1 The General Quadrilateral • 10.2 The Parallelogram • 10.3 Proving That a Quadrilateral Is a Parallelogram • 10.4 The Rectangle • 10.5 The Rhombus • 10.6 The Square • 10.7 The Trapezoid • 10.8 Areas of Polygons	**Chapter 11: The Geometry of Three Dimensions** • 11.1 Points, Lines, and Planes • 11.2 Perpendicular Lines and Planes • 11.3 Parallel Lines and Planes • 11.4 Surface Area of a Prism • 11.5 Volume of a Prism • 11.6 Pyramids • 11.7 Cylinders • 11.8 Cones • 11.9 Spheres **Chapter 12: Ratio, Proportion, and Similarity** • 12.1 Ratio and Proportion • 12.2 Proportions Involving Line Segments • 12.3 Similar Polygons • 12.4 Proving Triangles Similar • 12.5 Dilations • 12.6 Proportional Relations Among Segments Related to Triangles • 12.7 Concurrence of the Medians of a Triangle • 12.8 Proportions in a Right Triangle • 12.9 Pythagorean Theorem • 12.10 The Distance Formula **Chapter 13: Geometry of the Circle** • 13.1 Arcs and Angles • 13.2 Arcs and Chords • 13.3 Inscribed Angles and Their Measures • 13.4 Tangents and Secants • 13.5 Angles Formed by Tangents, Chords, and Secants • 13.6 Measures of Tangent Segments, Chords, and Secant Segments • 13.7 Circles in the Coordinate Plane • 13.8 Tangents and Secants in the Coordinate Plane