Math Year 5 Grade 10 Geometry

Unit title	Key concept	Related concept(s)	Global context	Statement of inquiry	MYP subject specific objective(s)	ATL skills	Content (topics, knowledge, skills)
Foundations of geometry	Form Logic	Patterns Representation	**Global Context: Personal and cultural expression** **Exploration: artistry, craft, creation, beauty**	Applying form by shaping the underlying structure of the entire course. Provides opportunities for students to appreciate the aesthetic nature of the constructs used in this discipline. Applying logic to identify patterns of beauty in various representations of nature allows us to observe transformations in the real world.	A i. ii. Bi. ii. Iii. C Iii. Iv. V.	Research: Information Literacy Skills • Use memory techniques to develop long-term memory Thinking: Creative thinking • apply existing knowledge to generate new ideas Transfer skills • inquire in different contexts to gain different perspectives.	1-A: Understanding Points, Lines and Planes 1. Identify, name, draw and apply basic facts of points, lines, segments, rays, and planes 1-B: Measuring and Constructing Segments 1. Use geometric postulates to determine length and midpoint 1-C: Measuring and Constructing Angles 1. Name and classify angles. 2. Measure and construct angles and angle bisectors. 1-D: Pairs of Angles 1. Identify adjacent, vertical, complementary and supplementary angles 2. Determine measures of pairs of angles 1-E: Using Formulas in Geometry 1. Apply formulas for perimeter, area, and circumference 1-F: Midpoint and Distance 1. Develop and apply the formula for midpoint 2. Use the distance formula and Pythagorean Theorem to find the distance between two points 2-A: Reflections and Line Symmetry

							1. Identifying line symmetry 2. Making predictions 2-B: Translations 1. Rigid motions 2. Vectors 2-C: Rotations 1. Angle of rotational symmetry 2. Rigid Motion 2-D: Compositions of Transformations 1. Identify and draw compositions of transformations
Parallel and perpendicular Lines	Logic	Measurement Space	**Orientation in time and space** **Exploration: Scale**	Applying measurement to create scale images requires a logical division of space.	A i. ii. D. ii. Iii. C I. ii. Iii. Iv. V.	Communication * read critically and for comprehension Affective skills * demonstrate persistence and perseverance Thinking, Creative thinking * consider multiple alternatives, including those that might be unlikely or impossible * practice flexible thinking - develop multiple opposing, contradictory and complementary arguments	A: Lines and Angles B: Proving Lines Parallel I. Use of tools II. Converse Theorems C: Perpendicular Lines
Triangles	Logic	Measurement Equivalence	**Scientific and Technical Innovation** **Exploration: mathematical puzzles**	Using logic to measure mathematical puzzles through scientific and technical innovation and equivalence.	A i, ii, iii B I. ii. iii D I. ii, iii, iv, v	Thinking, critical-thinking skills *drawing reasonable conclusions and generalizations *interpret data	5A Classifying triangles Angle Relationships in Triangles 5B Congruent triangles Triangles Congruence SSS, SAS, ASA, AAS and HL 5c Triangle Congruence CPCTC 5d Introduction to coordinate proofs 5e Isosceles and Equilateral Triangles 6A Perpendicular and Angle Bisectors

							6D Triangle Midsegment Theorem 6E Inequalities in One Triangle 6G The Pythagorean Theorem 6H Applying Special Right Triangles
Polygons	Form	Representation Measurement	**Global Context:** **Identities and relationships** **Exploration:** **Identity formation**	Applying knowledge of form to identify common measurements and representations of polygons to differentiate shapes.	A. i, ii, iii C. I, ii D I. ii, iii, iv, v	Communication *Communicate with peers using a variety of digital environments and media Critical-thinking skills: *Draw reasonable conclusions and generalizations	A: Properties and Attributes of Polygons B: Properties and Conditions of Parallelograms C: Properties of Kites and Trapezoids