Unit Title	Key Concepts	Related Concepts	Global Context	Statement of Inquiry	Approaches to Learning	Objectives	Content - Summary of Unit
Unit 1: Linear Relationships	Form	Change, Systems	Scientific and technical innovation Mathematical puzzles	Change and systems impact form, through mathematical puzzles.	Thinking Skills: In order for students to know and understand mathematics in real-life contexts, students must use critical thinking skills by interpreting data.	A..Knowing & Understanding I,ii,iii D.Applying Mathematics in real-life contexts I,ii,iii,iv,v	Fundamental properties of segment and angle measures and deductive reasoning and writing proofs. Properties of parallel lines and the angle relationships formed when parallel lines are cut by a transversal. Angle relationships to prove whether or not lines are parallel. Rigid transformations: reflections, translations, and rotations. create new images and complete proofs, such as the proof for demonstrating that a composition of two or more rigid motions is also a rigid motion Congruence and transformations resulting in congruent figures. Definitions of congruence and congruence transformations and provides examples to help students determine if figures are congruent.
Unit 2: Relationships Between Quantities	Relationships	Space	Orientation in space and time Boundaries	Space and justification impact relationships by improving boundaries.	Communication Skills: In order for students to investigating patterns and communicating, students must use communication skills by using appropriate forms of writing for different purposes and audiences.	B. Investigating Patterns i,ii,iii,iv,v C.Communicating i,ii,iii	Relate right triangles to the coordinates of a line going through the origin, and compare persistent features of the triangles to persistent features of the line. Explain how a mathematical relationship represented by a written description can also be represented by a table or graph Students will visually display a relationship between two variables
Unit 3: Exponential & Quadratic Relationships	Relationships	Models Representation	Identities and relationships Mathematical identities, modelling versus reality, equations and variations	Decision making can be improved by using a model to represent relationships through exploring mathematical identities.	Thinking Skills: In order for students to investigate patterns and apply mathematics in real-life contexts, students must use critical thinking skills by applying skills and knowledge in unfamiliar situations.	B. Investigating Patterns i,ii,iii,iv,v D.Applying Mathematics in real-life contexts I,ii,iii,iv,v	Use a scatter plot to identify an association and make a prediction.Find and compare sample space and probabilities of compound events using a table, a tree diagram, and an organized list.Use theoretical probability and proportional reasoning to make a prediction about a simple or compound event, and make a qualitative prediction.
Unit 4: Application & Problem Solving	Logic	Representation Simplification	Scientific and technical innovation Processes and solutions	Critical thinking involves representing and simplifying concepts to apply logic and fuel processes and solutions.	Self-management: In order for students to know and understand communicating, students must use self-management skills by developing new skills, techniques and strategies for effective learning.	A..Knowing & Understanding I,ii,iii C.Communicating i,ii,iii	Determine if a number is rational. Decompose regular polygons into triangles, and identify the relationship between the number of sides of the polygon and the number of triangles formed. Use the Laws of Exponents to write a number as a whole number times a power of 10.