

Math: Year 1

Unit Title	Key Concept	Related concept(s)	Global Context	Statement of Inquiry	MYP subject-group objectives	ATL skills	Content (topics, knowledge, skills)
Unit 1 Area and Surface Area	Relationships	Simplification, Space, Measurement	Orientation of space and time	Understanding the relationships between the space and measurement of 2D shapes to 3D objects and their surface areas through simplification of shapes and objects.	A B D	Self-management Social	Area, height, base, triangles, polygon, parallelograms, polyhedra
Unit 2 Introduction to Ratios	Relationships	Equivalence Patterns Model	Identities and Relationships	Understanding the relationships within different types of word problem situations, creating visual representations, and making inferences to create ratios based on their models.	A B C D	Critical Thinking Communication	Ratios, equivalent ratio, rate, proportion, quantity, fractions, unit rate
Unit 3 Unit Rate and Percentages	Logic	Equivalence Representation Simplification	Identities and relationships	Understanding the logical connection between equivalent ratios and percentages to represent real world relationships using simplification to justify answers	B C D	Organizational Collaboration	Ratios, unit rate, percent, per, unit price, diagram (tape diagram, double number line, table), equivalent

Unit 4 Dividing Fractions	Logic	Model Simplification Quantity	Identities and Relationships	Understanding the logical concept of dividing fractions and relating it to a visual representation through modeling and simplification and connecting it back to numerical identities and relationships in the world.	A B C D	Critical Thinking Communication	Divide, multiply, inverse, fractions, simplify, improper fractions, mixed numbers, tape diagrams, equations, expressions
Unit 7	Logic	Space System Representation	Orientation of Time and Space	Understanding the number line system for positive and negative numbers and how their value is represented in a spatial context	A C D	Organization Critical Thinking	Interpret signed numbers in context, positive, negative, rational, opposite, absolute value, inequalities (greater than, less than, equal to), number line, distance away from 0, coordinate plane
Unit 6	Relationships	Change Equivalence Pattern	Identities and Relationships	Understanding the relationship between equivalent expressions using patterns and change justify the expressions identity and relationship on a context and global level.	B C D	Critical Thinking Reflective Information Literacy	Variables, coefficient," solutions, equivalent expressions, exponent, independent variable, and dependent variable, reasoning about real-world and geometric situations, equivalent ratios as equations, find connections between tables, graphs, and linear equations that represent the same equations

Math: Year 2

Unit Title	Key Concept	Related concept(s)	Global Context	Statement of Inquiry	MYP subject-group objectives	ATL skills	Content (topics, knowledge, skills)
Unit 1 Scale Drawings	Relationships	Change, Measurement	Orientation in time and space	Discovering relationships through measurement of change of different scaled drawings in space will help us understand different scaled drawings.	A C D	Communication Thinking	Angles, whole numbers, unit fractions, scale, distance, volume radius, area, diameter, circumference
Unit 2 Introducing Proportional Relationships	Relationships	Pattern, Representation	Scientific and Technical Innovation	Relationships formed by patterns and representations of proportionality work to form systems, models, methods, products, processes, and solutions.	C B D	Research	Tables, equations, graphs, proportional relationships, constant of proportionality
Unit 3 Measuring Circles	Form	Change, measurement	Personal and cultural expression	The form of circular logos as determined by the change in measurement based on a given scale factor to best express personal and cultural preferences	C D	Research	Circle, proportional, center, circumference, diameter, radius, area

<u>Unit 4</u> Proportional Relationships and Percents	Relationships	Change, representation Equivalence	Orientation in time in space	Students use equations to represent proportional relationships in which the constant of proportionality arises from a percentage.	C D	Critical Thinking	Ratios, scale factors, unit rates, fractions, percentages
<u>Unit 5</u> Rational Number Arithmetic	Relationships	Equivalence	Orientation in time and space	Students use tables and number line diagrams to represent sums and differences of signed numbers or changes in quantities represented by signed numbers such as temperature or elevation, becoming more fluent in writing different numerical addition and subtraction equations that express the same relationship.	A B C D	Communication	Rational numbers, temperature, elevation, deposit, withdrawal, position, direction, speed, percent change

Math: Year 3

Unit Title	Key Concept	Related concept(s)	Global Context	Statement of Inquiry	MYP subject-group objectives	ATL skills	Content (topics, knowledge, skills)
<u>Unit 1</u> Rigid Transformations and Congruence	Form	Pattern, justification	Orientation in space and time	The form of shapes changes through patterns, rules, and specific order to justify congruence through time and space.	A B C D	Critical thinking	Rigid transformations (rotations, reflections, translations) and congruence, angles in a triangle, drawing images of figures
<u>Unit 2</u> Dilations, Similarity, and Introducing Slope	Form	Pattern, justification	Identities and Relationships	There exist patterns in the relationship between shapes and their transformations.	A B C D	Reflection	Drawing dilations of figures, determining similarity, finding slope using slope triangles, finding points on a line

<u>Unit 3</u> Linear Relationships	Relationships	Simplification and Quantity	Scientific and Technical Innovation	We can use mathematical processes to model relationships between independent and dependent quantities in real-world contexts.	A B C D	Critical Thinking	Using unit rates to find the slope of a line, finding vertical (y) intercepts, writing equations of a line, finding graphing and comparing proportional and linear relationships
<u>Unit 4</u> Linear Equations and Linear Systems	Relationships	Systems, Model, Equivalence	Scientific and Technical Innovation	We can model real-world relationships using systems of equations to determine if and when quantities are equivalent.	A B C D	Critical Thinking	Write and solve linear equations in one variable, determine the number of potential solutions to a system of linear equations, solve a system of linear equations in two variables
<u>Unit 5</u> Functions and Volume	Relationships	Representations, Model	Scientific and Technical Innovation	Functions are used to model the various characteristics of different real world relationships.	A B C D	Organization	Use tables, graphs, and equations to represent functions as inputs and outputs, describe functions as increasing or decreasing, relate understanding of independent and dependent variables to functions
<u>Unit 6</u> Associations in Data	Relationships	Model, Quantity, Measurement	Fairness and Development	Relationships between quantities can be measured and modeled in a variety of ways to make fair decisions based on real-world data.	A B C D	Collaboration	generate and work with bivariate data sets, use the terms "scatter plot" and "association," describe associations as "positive" or "negative" and "linear" or "nonlinear, fit data to a line and describe the how well the fit describes data

<p><u>Unit 7</u> Exponents and Scientific Notation</p>	<p>Form</p>	<p>Simplification, Pattern</p>	<p>Scientific and Technical Innovation</p>	<p>There are patterns to how we simplify rational exponents and we can express them in different forms.</p>	<p>A B C D</p>	<p>Critical Thinking</p>	<p>Apply understanding of whole number exponents to integers, codify the properties of exponents, use orders of magnitude and scientific notation in order to represent and compute with very large and very small quantities</p>
<p><u>Unit 8</u> Pythagorean Theorem and Irrational Numbers</p>	<p>Logic</p>	<p>Pattern, Equivalence</p>	<p>Identities and Relationships</p>	<p>Use logic to identify all triangles have a relationship between the square of their hypotenuse and the sum of the squares of the remaining side lengths.</p>	<p>A B C D</p>	<p>Critical Thinking</p>	<p>work with geometric and symbolic representations of square and cube roots, understand proofs of the Pythagorean Theorem, utilize the Pythagorean Theorem to solve problems, approximate the value of square and cube roots</p>