

Mathematics - Subject Overviews – MYP 1



* All units taught in MYP Years 1-5 are continuously being developed and improved to best meet the needs of the students at LIS. Therefore, the following Subject Overview is only a reflection of current plans for the course. Some changes to this document may occur as a result of planning done throughout the academic year.

MYP 1	Unit	Concepts	Global Context	Statement of Inquiry	Inquiry Questions	MYP Objectives ATL Skills	Content
Unit 1	Numerical Adventures, a Journey into Ancient Math	Form Representation Systems	Orientation in space and time Civilizations and human interactions	Different systems and forms of representation develop as civilization evolve and humans interact.	Factual: What is a number system? Which number systems were used by ancient civilizations? Conceptual: Why did the ancient civilizations use different forms of number system? How did the ancient civilizations represent mathematical operations with their number system? Debatable: What could we learn from ancient number systems?	Criterion A: i, ii Criterion C: i, ii Criterion D: i ATL Skills Communication Information literacy Transfer	Number systems Mathematical operations Conversion techniques Deductive Reasoning Texts/Resources: DeltaMath Desmos Clark Creative
Unit 2	Fractions,	Form	Fairness and	Inequality and	Factual: In which	Criterion A: i, ii,	Ratios, Rates,

	Decimal & Percentages	Equivalence Quantity	development Inequality and difference	difference become clearer using equivalent forms of quantities.	forms can we present quantities? What are some real-life examples where we encounter fractions, decimals, and percentages? Conceptual: How does a fraction relate to a decimal number and a percentage? Debatable: Could using equivalent forms of quantities, such as fractions, decimals, and percentages, lead to fairer outcomes in real-world scenarios?	iii Criterion C: iii, iv ATL Skills Communication Organization	Percentages, Fractions, Operations with fractions Texts/Resources: DeltaMath, Desmos, Clark Creative
Unit 3	Spatial Reasoning with Perimeter, Area, & Volume	Logic Models Space	Globalization and sustainability Natural resources	Logical analysis of spatial models informs the creation of sustainable packaging solutions that optimize natural resources.	Factual: What different models are there for the shapes in the real world? Conceptual: How can we use logic to use space efficiently? Debatable: Why would we need to	Criterion B: i, ii, iii Criterion D: i, ii, iii, iv, v ATL Skills Critical-thinking Creative-thinking	Triangles Quadrilaterals Polygons Circles Rectangular prisms Cylinders Composite shapes Perimeter Area Surface area Volume Texts/Resources: DeltaMath

					use models for spacial objects?		Desmos Clark Creative
Unit 4	Data Management	Relationships Simplification Validity	Identities and relationships Community dynamics	Validating relationships through data can help us analyze issues within community dynamics.	Factual: What types of data can we collect to better understand community dynamics? Conceptual: Why is simplification important in analyzing data? Debatable: Could simplification of data lead to oversimplifying complex community issues?	Criterion A: i, ii, iii Criterion C: i, ii, iii, iv ATL Skills Communication Critical-thinking	Data types Data collection methods Organizing Summarizing Analyzing data Texts/Resources: DeltaMath, Desmos, Clark Creative
Unit 5	Art and Beauty in Geometry	Relationships Change Approximation	Personal and cultural expression Cultural symbols and artistic expressions	Mathematical relationships reveal how understanding change and employing approximation techniques contribute to deciphering cultural symbols and artistic expressions.	Factual: What are the fundamental mathematical principles underlying geometric shapes found in art and cultural symbols? Conceptual: How does the use of geometric transformations in art reflect or	Criterion D: i, ii, iii, iv, v ATL Skills Creative-thinking Transfer	Geometric shapes and properties Transformations Symmetry Cultural symbols Create geometric designs Texts/Resources: DeltaMath Desmos Clark Creative

					<p>symbolize societal or cultural changes over time?</p> <p>Debatable: Should mathematical principles be considered an essential part of understanding and interpreting art and cultural symbols?</p>		
<p>Unit 6</p>	<p>Algebra, Humans Amazing Invention!</p>	<p>Logic Generalization Patterns</p>	<p>Scientific and technical innovation Inventions</p>	<p>Humans observed patterns and generalized to make logical rules thus inventing algebra.</p>	<p>Factual: What are the key terms and rules used in algebra? What is a pattern and how do we describe them?</p> <p>Conceptual: How does algebra change how we think about the world? How could students generalize from patterns to create rules?</p> <p>Debatable: Is algebra something useful for our lives, or is it just used in math class?</p>	<p>Criterion B: i, ii, iii</p> <p>ATL Skills Communication Critical-thinking Transfer</p>	<p>Letters as unknown numbers Equations Pattern solving Substitution Rule finding Expanding brackets Collect like-terms Graphing</p> <p>Texts/Resources: DeltaMath Desmos Clark Creative</p>