

Math 6	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7
Unit Title	Surface Area & Volume (Smarter Storage)	Ratios (Emergency Preparation)	Unit Rates and Percentages (A Better Buy)	Fraction Division	Rational Numbers	Expressions and Equations	Data Sets (A Deep Dive into Data)
Key Concepts	Form	Relationships	Relationships	Logic	Identity	Change	Connections
Related Concepts	Space Models	Change Equivalence	Quantity Representation	Models Approximation	Quantity Models	Equivalence Representation	Models Representation
Global Context & Exploration	<u>Scientific and Technical Innovation</u> <u>Explorations Ingenuity and Progress</u>	<u>Globalization and Sustainability</u> <u>Explorations Strategy and infrastructure</u>	<u>Globalization and Sustainability</u> <u>Explorations Commodities and commercialization</u>	<u>Scientific and Technical Innovation</u> <u>Explorations Methods</u>	<u>Identities and Relationships</u> <u>Explorations Status</u>	<u>Scientific and Technical Innovation</u> <u>Explorations Systems</u>	<u>Scientific and Technical Innovation</u> <u>Explorations Models</u>
Statement of Inquiry	Form and space drive ingenuity and progress .	Relationships to the environment change strategies for preparedness.	The relationship between quantity and need affects our commercial decisions.	Models and approximation are methods of logical problem-solving.	Numbers can model status and identity .	Systems can represent many types of changes .	Models represent connections between numbers and ourselves.
MYP Objectives	A. Knowing and understanding ii. apply the selected mathematics successfully when solving problems C. Communicating ii. use appropriate forms of mathematical representation to present information D. Applying mathematics in real-life contexts i. identify relevant elements of authentic real-life situations ii. select appropriate mathematical strategies when	A. Knowing and understanding iii. solve problems correctly in a variety of contexts. B. Investigating patterns i. apply mathematical problem-solving techniques to recognize patterns ii. describe patterns as relationships or general rules consistent with findings iii. verify whether the pattern works for other examples C. Communicating iv. communicate coherent	C. Communicating v. organize information using a logical structure. D. Applying mathematics in real-life contexts i. identify relevant elements of authentic real-life situations iv. explain the degree of accuracy of a solution v. describe whether a solution makes sense in the context of the authentic real-life situation.	A. Knowing and understanding i. select appropriate mathematics when solving problems in both familiar and unfamiliar situations ii. apply the selected mathematics successfully when solving problems iii. solve problems correctly in a variety of contexts. D. Applying mathematics in real-life contexts iv. explain the degree of accuracy of a solution	C. Communicating i. use appropriate mathematical language (notation, symbols and terminology) in both oral and written statements ii. use appropriate forms of mathematical representation to present information	A. Knowing and understanding i. select appropriate mathematics when solving problems in both familiar and unfamiliar situations B. Investigating patterns i. apply mathematical problem-solving techniques to recognize patterns iii. verify whether the pattern works for other examples. C. Communicating i. use appropriate mathematical language (notation, symbols and terminology) in both oral and written statements iv. communicate	B. Investigating patterns ii. describe patterns as relationships or general rules consistent with findings D. Applying mathematics in real-life contexts v. describe whether a solution makes sense in the context of the authentic real-life situation.

	solving authentic real-life situations iii. apply the selected mathematical strategies successfully to reach a solution	mathematical lines of reasoning D. Applying mathematics in real-life contexts ii. select appropriate mathematical strategies when solving authentic real-life situations iii. apply the selected mathematical strategies successfully to reach a solution				coherent mathematical lines of reasoning v. organize information using a logical structure.	
Approaches to Learning Skills	Communication Communication skills • Take effective notes in class Research Information literacy skills • Use memory techniques to develop long-term memory Thinking Creative-thinking skills • Create novel solutions to authentic problems	Communication Communication skills • Organize and depict information logically Self-management Organization skills • Plan short- and long-term assignments; meet deadlines Thinking Critical-thinking skills • Practice observing carefully in order to recognize problems.	Self-management Organization skills • Use appropriate strategies for organizing complex information Thinking Critical-thinking skills • Recognize and evaluate propositions Communication Collaboration skills • Delegate and share responsibility for decision-making	Self-management Reflection skills • Demonstrate flexibility in the selection and use of learning strategies Thinking Critical-thinking skills • Draw reasonable conclusions and generalizations. Thinking Creative-thinking skills • Use brainstorming and visual diagrams to generate new ideas and inquiries	Communication Communication skills • Understand and use mathematical notation Self-management Organization skills • Understand and use sensory learning preferences Thinking Critical-thinking skills • Identify obstacles and challenges	Communication Communication skills • Read critically and for comprehension • Use and interpret a range of discipline-specific terms and symbols Thinking Critical-thinking skills • Test generalizations and conclusions	Communication Communication skills • Use a variety of media to communicate with a range of audiences Research Information literacy skills • Process data and report results Thinking Creative-thinking skills • Consider multiple alternatives, including those that might be unlikely or impossible
Content (Topics, Knowledge, Standards)	Topics: Area • Calculate the area of parallelograms and triangles. • Calculate the area of polygons by decomposing into rectangles and triangles, or	Topics: Introducing Ratios • Use ratio language to describe a ratio relationship between two quantities and identify equivalent ratios.	Topics: Units and Measurement • Use ratio reasoning to convert between units of measurement. Unit Rates	Topics: Introduction to Dividing Fractions • Interpret and create diagrams that represent dividing whole numbers by fractions. Dividing Fractions	Topics: Negative Numbers and Absolute Values • Describe locations on the number line using positive and negative numbers. • Compare and order positive and negative numbers and absolute values.	Topics: Solving Equations • Write and solve equations of the form $x+p=q$ and $px=q$. Equivalent Expressions • Use the distributive property to write equivalent	Topics: Visualizing Data • Create dot plots and histograms to visualize data. • Informally describe and compare data sets.

	surrounding and subtracting. Surface Area • Connect polyhedra with nets that represent them. • Calculate the surface area of polyhedra made up of rectangles and triangles. Volume • Calculate the volume of prisms.	• Use tables, double number line diagrams and unit prices to solve problems with equivalent ratios. Solving Problems With Ratios • Develop and use strategies to compare ratios in context. • Students use unit rates, double number lines, and tables of equivalent ratios to solve real-world and mathematical problems.	• Recognize and calculate two unit rates for the same ratio relationship. • Use unit rates to solve problems involving tables of equivalent ratios. Percentages • Make connections between percentages, ratios, and rates. • Use ratio reasoning to determine unknown parts, wholes, and percentages.	• Use a variety of strategies to calculate quotients of fractions. • Solve problems that involve dividing fractions. Area and Volume • Use division of fractions to compare lengths. • Solve problems about areas and volumes with fractional dimensions.	Inequalities • Represent inequalities using symbols, words, and graphs. • Identify solutions to inequalities. The Coordinate Plane • Solve problems by graphing points with positive and negative coordinates. • Draw polygons given coordinates for the vertices.	expressions with variables. Expressions Involving Exponents • Evaluate numerical and variable expressions with whole number exponents. Representing Relationships • Use tables, equations, and graphs to represent relationships.	Mean and Mean Absolute Deviation (MAD) • Calculate the mean and MAD of a data set. • Use mean and MAD to describe and compare data sets. Median and Interquartile Range (IQR) • Compare and contrast the mean and median as measures of center. • Calculate the quartiles, IQR, and range of a data set. • Create box plots to visualize data. • Use median and IQR to describe and compare data sets.
Culminating Project	Smarter Storage	Emergency Plan	Party Planning			Puzzle Mobiles	Infographics