Maths

Topic	Key Concepts	Related Concepts	Theme	ATL skills	Lines of Inquiry	Summative Assessments	Assessment Objectives
1 - Multi-Digit Whole Numbers 1A - Numbers to 10 Million 1B - Multiply Tens, Hundreds, Thousands 1C - Divide Tens, Hundreds and Thousands. **2 - The Four Operations with Whole Numbers** 2A - Order of Operations 2B - Multiply by a 2 Digit Fluently 2C - Word Problems Multiplying by a 2 Digit Number 2D - Divide by Tens 2E - Divide by a 2 Digit Number 2F - Word Problems: Dividing by a 2 Digit Number 2G - Word Problems	Forn Function	Number Addition Subtrtaction Multiplication Division Decimals Percentages	How we Organise Ourselves	Self management Organizational skills Research Thinking	- Different processes of decision making - Impact of our decisions on the economy. -The connections between local, national, and global economies	Singapore Maths Unit Review - End of unit assessments (chapter, cumulative and end-of-year assessments). Assessments to be aligned with Singapore mathematics and adapted from the online teachers platform.	To state the value in each digit in multi-digit numbers To be able to multiple and divide numbers by 10, 100 and 1000 To use whole number exponents to write powers of 10 To be able to use ordewr of operations to solve a numerical expression To be able to multiply a 3 and 4 digit number by a 2 digit number To divide a 2 digit number by a 2 digit number To solve three step real life problems involving the four operations with whole numbers

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3 - Addition & Subtraction of Fractions 3A - Add & Subtract Unlike Fractions 3B - Add & Subtract Mixed Numbers 3C - Word Problems **4 - Multiplication & Division of Fractions** 4A - Product & Fractions & Whole Numbers 4B - Priduct of Fractions 4C - Product of Mixed Numbers 4D - Fraction as Division 4E - Divide a Fraction by a Whole Number 4F - Divide a Whole Number by a Unit Fraction	Form Function Perspective	Measurement Volumne & Capacity	How the World Works	**Communication** ICT skills (using technology to gather, investigate and communicate information) **Thinking** Transfer skills (using skills and knowledge in multiple contexts) **Research** Information-literacy skills (data gathering and recording, synthesising and interpreting, evaluating and communicating)	- Characteristics and properties of solids, liquids and gases - How and why matter changes - Manipulating materials to affect change	Singapore Maths Unit Review - End of unit assessments (chapter, cumulative and end of year assessments). Assessments to be aligned with Singapore mathematics and adapted from the online teachers platform.	To be able to add and subtract two unlike fractions To solve one step word problems involving addition and subtraction of unlike fractions To add and subtract mixed numbers without renaming To solve one step world problems involving the addition and subtraction of mixed fractions To be able to use visual models to multiply fractions of whole numbers To be able to use visual models to multiply two mixed and improper fractions To be able to divide a whole number by a unit fraction

Unit	Concept	Concept	Theme	ATL Skills	Lines of Inquiry	Assessment	Learning Objectives
5 - Word Problems: The Four Operations of Fractions 5A - Word Problems **6 - Decimals** 6A - Thousandths 6B - Rounding Decimals	Change Form Connection	Measurement Division Modelling	How We Express Ourselves	**Communication** Literacy skills (reading, writing and using language to gather and communicate information) **Social** Developing positive interpersonal relationships and collaboration skills (using self-control, managing setbacks, supporting peers) **Thinking** Creative-thinking skills (generating novel ideas and considering new perspectives)	- Forms of persuasive communication - Reasons for communicating in various formats - Impact on audience	Singapore Maths Unit Review - End of unit assessments (chapter, cumulative and end of year assessments). Assessments to be aligned with Singapore mathematics and adapted from the online teachers platform.	To draw bar models to understand real-world problems involving fractions To solve real-world problems involving the four operations of fractions To draw bar models to understand real-world problems involving finding a fraction of a fraction To read and write decimals to thousandths To compare and order decimals to thousandths To express decimals as a fraction in its simplest form
7 - The Four Operations of Decimals 7A - Addition & Subtraction of Decimals 7B - Multiplication & Subtraction of Decimals 7C - Division of Decimals 7D - Conversion of Measurements Units **8 - Word Problems: the Four Operations of Decimals** 8A - Word Problems	Change Form Connection	Measurement Division Modelling	Sharing The Planet	**Research** Ethical use of media/information (understanding and applying social and ethical technology) **Thinking** Reflections/metacognition skills (reconsidering the process of learning) **Communication** Exchanging-information skills (listening, interpreting, speaking)	- Challenges and risks for children - Ways in which organizations work to protect children - Rights to equal opportunities	Singapore Maths Unit Review - End of unit assessments (chapter, cumulative and end of year assessments). Assessments to be aligned with singapore mathematics and adapted from the online teachers platform.	To be able to multiply and divide decimals to hundereths and thousandths To explain a pattern with decimals whren multiplying or dividing when multiplying by tenths or hundredths To solve one step word problems involving multiplication and division of decimals Convert larger to smaller measurement units To solve two-part word problems involving the four operations of decimals To solve multi step word problems involving the four operations of decimals

9 - Volume 9A - Measure & Compare Volumes 9B - Volume & Rectangular Prisms 9C - Volume of Composite Solids 9D - Word Problems - Volume of Solids **10 - Properties & Classification of 2D Shapes** 10A - Properties & Classifications of Triangles 10B - Properties & Classification of Quadrilaterals	Change Connection Causation Form Function Perspective Reflection	Shapes Measurement Multiplication Area Angles	Where We Are In Place and Time	**Thinking Skills** Critical-thinking skills (analysing and evaluating issues and ideas) **Communication Skills** ICT skills (using technology to gather and investigate information)	Exhibition	Singapore Maths Unit Review - End of unit assessments (chapter, cumulative and end of year assessments). Assessments to be aligned with Singapore mathematics and adapted from the online teachers platform.	To recognise volume of solids in cubit units To compare volume of solids in cubic units To calculate the volume of rectangular prisms To calculate the volume of composite solids To solve worded problems involving the calculation of volume of composite solids To identify equilateral, scalene and isosceles triangles To be able to classify triangles by their side lengths and angles To classify quadrilaterals by their properties
11 - Line Plots & The Coordinate Plane 11A - Line Plots 11B - The Coordinate Plane 11C - Line Graphs **12 - Number Patterns & Relationships** 12A - Number Patterns & Relationships	Perspective Form Connection	Timelines	Who We Are	**Self management** States of mind (mindfulness, perseverance, emotional management, self-motivation, resilience) **Social** Developing social-emotional intelligence	- Biological, emotional and social wellbeing - Changes that occur during adolescence/puberty - How relationships contribute to our sense of self	Singapore Maths Unit Review - End of unit assessments (chapter, cumulative and end of year assessments). Assessments to be aligned with singapore mathematics and adapted from the online teachers platform.	To be able to construct a line plot and represent a set of fractional measurement data To locate and plot point on a coordinate plane using ordered pairs To be able to interpret a line graph to solve problems To indetify the rule of number patterns To generate two number patterns given the rules To identify relationships between two terms

Taking Action

Taking action is one of the five essential elements of the PYP and an intricate part of the inquiry cycle which could be interpreted as a "conclusion" to learning. When taking action, students make connections to new knowledge they have acquired and apply their skills in everyday life.

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