

Year 6 - Maths Overview 2026-27

 **Who We Are**
Year-long

 **How We Organize Ourselves & Exhibition**
24th August- 25 March

 **How We Express Ourselves**
1 September - 30 November
Specialist-led UOI

 **Sharing the Planet**
14 September - 6 November

 **Where We Are in Place and Time**
4 January - 4 February

 **How the World Works**
12 April - 28 May

Maths Units							
August	September	October	November & Dec	January	February & March	April & May	June
Mathematical Mindsets	Place Value	- Four Operations - addition & subtraction - Data Handling - graphs	Four Operations - multiplication & division	Fractions, decimals & ratios	Data Handling - PYPX survey, interviews, graph	- Measurement - Shape & Space	Pattern & Function

	YEARLONG				
	Data Handling	Measurement	Shape & Space	Pattern & Function	Number
Conceptual Understandings	Phase 3 - Different graph forms highlight different aspects of data more efficiently. Phase 4 - Presented purposefully, accurately and effectively, data can be used for valid interpretation and communication. - Analysing data supports people in discovering patterns and making predictions. - Range, mode, median and mean can be used to summarize and analyse statistical data. - Probability can be represented on a scale of 0–1 or 0%–100%. - The probability of an event can be predicted theoretically.	Phase 3 - Objects and events have multiple attributes that can be measured using appropriate tools. - Connections between the place value system and units of measurement exist. Phase 4 - Conversion of units and measurements allows us to make sense of the world we live in. - The use of standard measurement units simplifies communication about the size of the objects. - There is always a smaller, more precise unit of measure. - Most measurements can be determined using a combination of units. - Accuracy of measurements depends on the situation and the precision of the tool.	Phase 3 - Shapes can be classified by their attributes or their properties. - Shapes can be transformed in different ways without impacting their properties. Phase 4 - Manipulation of shape and space takes place for a particular purpose. - Geometric tools and methods can be used to solve problems relating to shape and space. - Geometric ideas and relationships can be used to solve problems in other areas of mathematics and in authentic situations. - Points reference position on a cartesian plane.	Phase 3 - Patterns can be represented in a variety of different ways (for example, graph, pictorial, table, algebraic expression). - Analysing patterns supports mathematicians in making generalizations and predictions. Phase 4 - Identifying a pattern and making a generalization reflect algebraic reasoning. - An equation represents balance. - Variables can be used to describe quantities that can be changed. - The ideas developed for whole-number computations apply to variables. - The same algebraic expression can be used to describe different authentic contexts.	Phase 3 - The base ten place value system can be used to describe, compare, order and compute with numbers. - Equivalent fractions describe the same amount using different fractional parts. Phase 4 - The base ten place value system extends infinitely in two directions. - Part-whole relationships can be represented as fractions, decimals and percentages. - Whole numbers can be written as fractions. - Different representations of a number can be more useful in some situations. - There are an infinite number of fractions between any two fractions.

				Patterns can often be generalized using algebraic expressions, equations or functions.	Ratios are a comparison of two numbers or quantities.
	Data Handling	Measurement	Shape & Space	Pattern & Function	Number
Learning Outcomes	Data Handling - Collect, organize and represent statistical data (including bar, pie, line graphs and tree diagrams) - Interpret and draw conclusions from statistical data using range, mode, median and mean and scale on graphs - Interpret and compare a range of data displays, including side-by-side column graphs - Identify potentially misleading data representations with consideration of purpose Probability - Describe and order probability using fractions, decimals and percentages - Explain why the theoretical probability of an event might differ from experimental probability through conducting a chance experiment - Understands that a situation with limited options will result in a finite number of possible outcomes (possible combinations, tree diagram) - Understands mathematical fairness and identifies fair and unfair situations	Measurement of shape and space - Estimate, compare and measure objects using standard units of measurement: length, perimeter, mass, capacity, area, volume and temperature - Calculate and develop rules for determining area and perimeter of triangles - Calculate and develop rules for determining volume of cubes and cuboids - Identify and describe the relationships between area and volume, and between volume and capacity - Convert between units using decimals to at least two places (e.g. change 2.75 litres to 2750 ml, or vice versa) Measurement of time - Calculate time across time zones - Solve problems involving difference in time Angle - Estimate, compare, measure and construct angles within shapes - Calculate and develop rules to find unknown angles within shapes, around a point and on a straight line	2D and 3D Shape - Identify, describe, classify and visualize properties of circles using mathematical vocabulary - Visualise, describe, draw and model two-dimensional representations of three-dimensional objects and vice versa Transformation and symmetry - Identify and use scale (ratio) to reduce and enlarge 2D shapes - Transform, reduce and enlarge 3D objects - Describe and model congruency and similarity in 3D objects Location - Describe position using the language and notation of bearing - Locate and record features on a grid using coordinates in all four quadrants	- Investigate and represent patterns using words, symbols, numbers, tables and graphs - Use algebraic expressions to record the rules for patterns - Continue and create sequences involving whole numbers, fractions and decimals - Identify and describe properties of square and triangular numbers - Explore the use of brackets and order of operations to write number sentences.	Place Value - Apply place value to partition and rename numbers to thousandths - Recognise, and order integers (including negative integers) - Recognise, model and order decimal fractions to thousandths or beyond. - Round decimal fractions to the nearest tenth or whole number Four Operations - Use efficient mental and written strategies to add integers and decimals - Use efficient mental and written strategies subtract integers and decimals - Model multiplication and division of decimals by a single digit integer - Use efficient mental and written strategies to multiply decimal fractions by a one digit integer - Use efficient mental and written strategies for division representing remainders as fractions Fractions - Understand the relationship and convert between common fractions, decimal fractions and percentages - Find percentages of numbers or quantities with and without a calculator - Simplify fractions in mental and written form - Solve problems involving addition and subtraction of common fractions with the same or related denominators - Convert improper fractions to mixed numbers and vice versa - Read, write and solve problems involving ratio

	Phase 4	Phase 5	Phase 6	Phase 7	Phase 8
Number Sense *					
Place Value	• Reads and writes numbers to 100 • Demonstrates understanding of 2-digit place value • Rounds numbers to the nearest 10 • Uses models to represent place value	• Demonstrates understanding of 3-digit place value • Recognises numbers to 1000 • Rounds numbers to the nearest 100 • Explains the role of a zero digit in place value notation	• Recognises and models numbers to 100,000 and .01 • Applies understanding of the base ten relationship between adjacent place value positions • Relates decimals to understanding of place value • Rounds any multi-digit whole number to any place value	• Recognises and models numbers to millions and beyond • Extends base ten to decimals • Reads and writes integers • Identifies key aspects of the relationships between decimal numbers, zero and negative numbers	• Models the distributive property of multiplication to solve 2-digit by 2-digit multiplication
Four Operations	• Recognises and records sums up to 20 • Applies the properties of odd and even numbers when solving problems • Regroups using manipulatives in addition • Knows basic facts for addition and subtraction • Uses repeated addition to multiply • Represents and solves simple addition and subtraction problem using a range of strategies	• Applies basic facts for addition and subtraction • Solves simple addition and subtraction problems using a range of efficient mental and written strategies • Regroups using the addition algorithm • Represent and solve simple multiplication problems using a range of strategies • Decomposes numbers into products of factors and recognise multiples • Regroups using manipulatives in subtraction • Recognises, interprets and records subtraction equations • Divides using manipulatives	• Adds and subtracts large whole numbers • Applies place-value based strategies for solving problems involving multiplication of single-digit by 2-digit numbers • Explains the idea of a remainder and can determine what is left over from the division • Uses divisibility rules to determine if one number is divisible by another	• Adds and subtracts decimals to hundredths • Recalls multiplication tables • Uses a range of mental strategies based on partitioning and combining to solve multiplication problems • Applies estimation and number strategies to solve single and double digit division • Finds fractions, decimals, and percentages of amounts expressed as whole numbers, simple fractions, and decimals	• Works extensively with variables • Computes extensively with decimals, fractions and percents • Computes extensively with integers • Reads and writes exponents and square roots • Connects and converts decimals to fractions (and vice versa) to assist in mental and written computation involving multiplication and division
Fractions and Ratios	• Relates pictures to symbols of $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{8}$, $\frac{1}{3}$ • Explains how the more parts into which a whole is divided, the smaller the parts become	• Models the concepts of the whole and simple fractions • Draws linear, area and set models of fractions • Models fraction equivalency • Connects the concepts of fractions and division • Compares and orders fraction quantities using benchmark referents	• Models and names all types of fractions using a range of representations • Compares and orders fraction quantities using appropriate strategies • Converts between all types of fractions • Applies knowledge of fractions to add and subtract unlike denominators • Models and represents multiplication and division of fractions	• Uses and justifies the choice of fraction representation • Categorises types of fractions and simplifies where appropriate • Demonstrates understanding of fraction constructs, including part-whole, measure, division, operator and ratio • Reads and writes ratios	• Applies understanding of relationships within fractions when scaling
	Phase 4	Phase 5	Phase 6	Phase 7	Phase 8
Pattern & Function *					
Equations and Expressions	• Applies understanding of part-whole relationships • Reads and writes equations using the language of equivalence • Creates and interprets number sentences demonstrating the inverse relationship between addition and subtraction	• Solves and creates equations where the unknown amount may be positioned at the beginning or in the middle of an equation • Compares numbers using $>$, $<$, $=$ • Creates and interprets number sentences demonstrating the inverse relationship between multiplication and division • Models the commutative property	• Recognises and uses symbols to stand for unknown numbers • Applies known multiples and inverse operation to solve division problems	• Generalises the properties of addition and subtraction with whole numbers • Solves one-step linear equations	• Generalises properties of multiplication and division with whole numbers • Writes the linear rule connecting the variables

Patterns and Relationships	- Creates multi-variable patterns - Recognises, identifies, describes, and continues additive patterns that increase or decrease by fixed amounts and identify missing elements in the pattern.	- Identifies rules of patterns - Uses properties of number to identify patterns	- Identifies and describes the properties of prime and composite numbers - Begins to use repeating patterns to solve problems - Uses recursive rules to describe patterns within graphs and tables and make predictions - Predicts a higher term of a pattern using the pattern's rule	- Models problem situations with objects and uses representations such as graphs, tables, and equations to draw conclusions - Analyzes functional relationships to explain how a change in one quantity results in a change in another	- Identifies change in various contexts - Connects members of sequential patterns with their ordinal position and identifies the way the pattern is changing - Uses tables, graphs, diagrams and word rules to find and describe relationships in patterns
	Phase 4	Phase 5	Phase 6	Phase 7	Phase 8
Shape & Space *					
Shape	- Uses what they know about 3-D shapes to describe and work with 2-D shapes - Identifies and sorts 2-D shapes based on their attributes - Divides 2-D shapes to form different shapes - Identifies 2-D shapes in a variety of orientations	- Identifies and sorts 3-D shapes based on their attributes - Compares and contrasts 2-D and 3-D shapes by their characteristics - Identifies nets for 3-D objects	- Analyses and describes 2-D and 3-D shapes - Defines the spatial features common to all members of a group of plane shapes or prism - Uses angle and line properties to classify and describe triangles and quadrilaterals - Creates nets for 3-D objects	- Models the concept of dimension - Applies angle properties to identify perpendicular and parallel lines	- Uses 2-D representations of 3-D objects to visualise and solve problems - Uses relevant properties of geometrical figures to find unknown lengths and angles
Position and Movement	Identifies features on maps and plans	- Interprets and uses simple directions, describing paths, regions, positions and boundaries of their immediate environment - Locates position on maps using grid references		Uses maps to measure and compute	Applies language and notation of bearing to describe direction and position
Transformation	- Identifies and creates single line symmetry - Identifies and models flips, rotations and slides	Applies knowledge of transformation to manipulate objects	Identifies, describes and models congruence and similarity in 2-D shapes	- Recognises and explains symmetrical patterns, including tessellations - Applies knowledge of transformations within 4 quadrants	Applies angle properties to tessellate a plane surface
	Phase 4	Phase 5	Phase 6	Phase 7	Phase 8
Measurement *					
Metric Units	- Measures, compares and estimates using standard units to measure length - Measures, compares and estimates using standard units to measure mass - Measures, compares and estimates using standard units for volume & capacity - Uses standard units to measure everyday contexts - Identifies area and perimeter	- Measures perimeter using manipulatives and standard units - Draws and describes the column and row structure to represent area as an array - Uses tools to find measures, including timelines	- Measures area using manipulatives and standard units - Makes simple unit conversions - Uses measurable attributes to describe and compare objects - Uses rows, columns and layers to find the number of units needed to measure volume	- Selects and uses appropriate units & tools to measure - Determines and justifies levels of accuracy needed to solve real-life problems involving measurement - Uses and explains appropriate formulae to measure area and volume of simple shapes - Interprets plans involving scale	- Solves problems using decimal and fractional notation in measurement - Applies conversions of formal units of measurement in problem solving applications - Uses the constant pi to determine the circumference or diameter / radius of a circle

Non-Metric Units	- Knows the difference between AM and PM - Tells time to the hour, $\frac{1}{2}$ hour - Recognises an angle in terms of a rotation - Identifies angles as greater than, less than or equal to a right angle	- Tells time to quarter past and quarter to - Shows and tells time to the nearest 5 minutes - Estimates and identifies measures of angles in degrees up to one revolution - Classifies angles as greater than, less than or equal to a right angle	- Reads and interprets different representations of time on an analogue clock, digital clock or timer - Explains the relationship between different units of time and makes conversions - Estimates and measures angles in degrees	- Measures and constructs angles using appropriate measurement tools - Uses timetables and schedules	Determines times worldwide
	Phase 4	Phase 5	Phase 6	Phase 7	Phase 8
Data Handling *					
Data Handling	- Formulates questions that can be answered with data - Interprets and uses structural elements in data displays - Reads, interprets and discusses information on simple graphs and charts - Gives reasons and numerical data to support their evaluation of a statement	- Collects data for analysis - Uses strategies for organising data - Explores relationships between data - Creates a graph that represents the data	- Displays data in numerical and graphical forms, selecting the appropriate graph form(s) - Interprets data from graphs, noting generalities, range and multi-unit scale - Reads values between the marked units - Designs surveys and collects, organises and displays data	- Interpret and present discrete and continuous data using appropriate graphical methods - Designs and collects, organises, records and displays data - Identifies how statisticians gather data - Uses simple descriptive statistics as measures to represent typical values of a distribution	- Identifies, describes and explains the range, mode, median and mean in a set of data - Creates and manipulates an electronic database for their own purposes - Compares the usefulness of different representations of the same data - Interprets graphs depicting motion such as distance–time graphs - Explains how data displays can be misleading
Probability	Identifies that some events are more likely to happen than others	- Explains why one result is more likely than another - Recognises that all probabilities must lie between impossible and certain - Describes probabilities along a continuum	- Uses past experience to make predictions about simple events involving chance - Expresses probability as the number of ways an event can happen out of the total number of possibilities - Compares expected and actual results of a chance event	- Expresses probability using simple fractions, decimal values and percentages - Identifies and describes chance in events from data	Determines the theoretical probability of an event and explains why it might differ from experimental probability

ESF: [Scope & Sequence](#)

IB: [Subject Continuum](#)

RCHK: [Developmental Maths Continuum](#)

RCHK: POI