Main Scheme - 7 x 1hrs per fortnight

Sequences	Describe and continue a sequence given diagrammatically
	Predict and check the next term(s) of a sequence
	Represent sequences in tabular and graphical forms
	Recognise the difference between linear and non-linear sequences
	Continue numerical linear sequences
	Continue numerical non-linear sequences
	Explain the term-to-term rule of numerical sequences in words
	H - Find missing numbers within sequences
Place Value and Ordering Numbers	Recognise the place value of any digit in an integer up to one billion
	Understand and write integers up to one billion in words and figures
	Work out intervals on a number line
	Position integers on a number line
	Round integerss to the nearest power of 10
	Compare two numbers using =, ≠, <, >, ≤ and ≥
	Order a list of integers
	Understand place value for decimals
	Position decimals on a number line
	Compare and order any number up to one billion
	Round a number to 1 significant figure
	H - Write 10, 100, 1000 etc as powers of 10; H - Write positive integers in the form A x 10^n
	H - Investigate negative powers of 10; H - Write decimals in the form A x 10^n
Directed Number	Understand and use representations of directed numbers
	Order directed numbers using lines and appropriate symbols
	Perform calculations that cross zero
	Add directed numbers
	Subtract directed numbers
	Multiplication of directed numbers
	Multiplication and division of directed numbers
	Use a calculator for directed number calculations
Algebraic Notation	Given a numerical input, find the output of a single function machine
	Use inverse operations to find the input given the output
	Use diagrams and letters to generalise number operations
	Use diagrams and letters with single function machines
	Find the function machine given a simple expression
	Find numerical inputs and outputs for a series of two function machines
	Use diagrams and letters with a series of two function machines
	Find the function machine given a two-step expression
	Substitute values into single operation expressions; Evaluate algebraic expressions with directed number
	Substitute values into two-step expressions
	Generate sequences given an algebraic rule
	Represent one- and two-step functions graphically (inc. table of values)

Equality and Equivalence	Understand the meaning of equality
	Understand and use fact families, numerically and algebraically
	Understand the meaning of like and unlike terms
	Understand the meaning of equivalence
	Simplify algebraic expressions by collecting the like term using the ≡ symbol
	Solve one-step linear equations involving addition and subtraction using inverse operations
	Solve one-step linear equations involving multiplication and division using inverse operations
	Introduction to two-step equations
	Solve two-step equations
FDP equivalence	Represent tenths and hundredths as diagrams
	Represent tenths and hundredths on number lines
	Interchange between fractional and decimal number lines
	Convert between fractions and decimals - tenths and hundredths
	Convert between fractions and decimals - fifths and quarters
	H - Convert between fractions and decimals - eighths and thousandths
	Understand the meaning of percentage using a hundred square
	Convert fluency between simple fractions, decimals and percentages
	Represent any fraction as a diagram
	Represent fractions on number lines
	Identify and use simple equivalent fractions
	Understand fractions as division
	Convert fluently between FDP
	H - Explore fractions above one, decimals and percentages
Solving Problems with Addition/Subtraction	Properties of addition and subtraction
	Mental strategies for addition and subtraction
	Use formal methods for addition of integers
	Use formal methods for addition of decimals
	Use formal methods for subtraction of integers
	Use formal methods for subtraction of decimals
	Choose the most appropriate method: mental strategies, formal written or calculator
	Calculate with money/Solve financial maths problems
	Solve problems involving time and the calendar (including timetables)
	Solve problems with frequency trees (and two way tables)
	Solve problems with bar charts and line charts
Solving Problems with Multiplication/Division	Properties of multiplication and division
	Understand and use factors
	Understand and use multiples
	Multiply and divide integers and decimals by powers of 10
	H - Multiply by 0.1 and 0.01
	Convert metric units (length, weight and capacity)
	Use formal methods to multiply integers
	Use formal methods to multiply decimals
	Use formal methods to divide integers
	Use formal methods to divide decimals
	Understand and use order of operations; Use order of operations with directed numbers
	Estimate the answer to a calculation
	H - Explore multiplication and division in algebraic expressions

Fractions and Percentages of Amounts	Find a fraction of a given amount
	Use a given fraction to find the whole and/or other fractions
	Find a percentage of a given amount using mental methods
	Find a percentage of a given amount using a calculator
	H - Solve problems with fractions greater than 1 and percentages greater than 100%
Addition and Subtraction of Fractions	Convert between mixed numbers and fractions
	Add and subtract unit fractions with the same denominator
	Add and subtract fractions with the same denominator
	Add and subtract fractions from integers expressing the answer as a single fraction
	Understand and use equivalent fractions
	Add and subtract fractions where denominators share a simple common multiple
	Add and subtract fractions with any denominator
	Add and subtract improper fractions and mixed numbers
	Use fractions in algebraic contexts
	Use equivalence to add and subtract decimals and fractions
	H - Add and subtract simple algebraic fractions
Measuring and Using Geometric Notation	Understand and use letter and labelling conventions including those for geometric figures
	Draw and measure line segments including geometric figures
	Understand angles as a measure of turn
	Classify angles
	Measure angles up to 180 degrees. Draw angles up to 180 degrees.
	Draw and measure angles between 180 and 360 degrees
	Identify parallel and perpendicular lines.
	Recognise types of triangle
	Recognise types of quadrilaterals
	Identify polygons up to decagons.
Developing Geometric Reasoning	Understand and use the sum of angles at a point
	Understand and use the sum of angles on a straight line
	Understand and use the equality of vertically opposite angles
	Know and apply the sum of angles in a triangle
	Know and apply the sum of angles in a quadrilateral
	Solve angle problems using properties of triangles and quadrilaterals
	Solve complex angle problems
	Solve problems in the context of perimeter
	Solve problems using the area of rectangles and parallelograms
	Solve problems using the area of triangles
	H - Solve problems using the area of trapezia
	H - Convert metric units of area
	H - Find and use the angle sum of any polygon
	H - Investigate angles in parallel lines
	H - Understand and use parallel line angle rules
	H - Use known facts to obtain simple proofs