

Block 1: Understanding Algebraic Notation	Calculating with the four
 By the end of this unit of learning all students will be able to Find the input and output from function machines using numbers and algebra Find a function machine from a given expression Simplify algebraic expressions Substitute positive and negative integers into expressions Generate a sequence from a rule Represent one- and two-step functions graphically 	Image: Continuing sequences Operations Pictorial sequences Continuing sequences Function Variable Inverse Expression Sequence Substitution Commutative
	End of block assessment Knowledge OrganiserAlgebraic Notation block Lower Attainer Guidance Higher Attainer Guidance
 Block 2: Equality and Equivalence By the end of this unit of learning all students will be able to Understand the meaning of equality Understand and use fact families Solve one step equations Identify like and unlike terms Collect like terms (using the ≡ symbol) 	Inverse operationsEquation Inverse Term Expression EquivalentEnd of block assessment Knowledge OrganiserEquivalence block Lower Attainer Guidance
 Block 3: Place Value By the end of this unit of learning all students will be able to Write numbers as words and integers ` Work out intervals on a number line Place integers on a number line Round integers to powers of 10 Order and compare integers using <, >, ≠ symbols Find the range from a list of integers Find the median from a list of integers Place decimals on a number line Order and compare decimals Write 10, 100, 1000 etc. as powers of ten Write positive integers in the form A x 10ⁿ Investigate negative powers of ten Write decimals in the form A x 10ⁿ Round numbers to one significant figure 	Writing numbers in words and integers Rounding using scales Finding the mid-point of two numbers Integer Ascending Descending Range Median Approximate End of block assessment Knowledge Organiser Place Value block Lower Attainer Guidance Higher Attainer Guidance



Block 4: Fractions, Decimals & Percentages	Times tables
Puthe and of this unit of loarning all students will be able to	
By the end of this unit of learning all students will be able to	Equivalent
Represent tenths and hundredths on diagrams and number lines	Percent
Convert and compare tenths and hundredths between	Numerator
fractions and decimals	Denominator
	Denominator
Convert and compare fifths and quarters between	End of block assessment
Convert between fractions and decimals – eighths and	
thousandths	Knowledge Organiser
Represent percentages on a hundred grids	FDP block
Represent fractions as diagrams	Lower Attainer Guidance
Represent fractions on number lines	Higher Attainer Guidance
Identify and use equivalent fractions	
Understand fractions as divisions	
Convert between fractions, decimals & percentages	
Use and interpret pie charts	
Explore fractions above one, decimals and percentages	
Progress Point 1	
lock 5: Solving problems with addition and subtraction	Number bonds
	Telling the time
y the end of this unit of learning all students will be able to	
Understand the properties of addition and subtraction	Commutative
Use mental strategies for addition and subtraction	
Use formal methods for addition of integers and decimals	Placeholder
Use formal methods for subtraction of integers and	Sum
decimals	Difference
Use a calculator to solve addition and subtraction	End of block assessment
problems	Knowledge Organiser
Calculate the perimeter of a given shape	
Solve financial maths	Solving problems with
Solve problems involving tables and timetables	addition and subtraction
Solve problems with frequency trees	b lock
Solve problems with bar charts and line charts	Lower Attainer Guidance
Add and subtract numbers given in standard form	Higher Attainer Guidance
lock 6: Solving problems with multiplication and division	Times tables
	Multiply/divide by 10,100 and
By the end of this unit of learning all students will be able to	1000
Understand the properties of multiplication and division	Multiple
Understand and use factors	Factor
Understand and use multiples	Array
Multiply and divide integers and decimals by powers of 10	Divisor
Multiply by 0.1 and 0.01	Product
Convert metric units	End of block assessment
Use formal methods to multiply integers	Knowledge Organiser
Use formal methods to divide integers	 Solving problems with
Use formal methods to divide integers	multiplication and division
Use formal methods to divide integers Understand and use order of operations	Multiplication and division block
Use formal methods to divide integers Understand and use order of operations Solve problems using the area of rectangles and	Multiplication and division block Lower Attainer Guidance
Use formal methods to divide integers Understand and use order of operations Solve problems using the area of rectangles and parallelograms	Multiplication and division block
Use formal methods to divide integers Understand and use order of operations Solve problems using the area of rectangles and parallelograms Solve problems using the area of triangles	Multiplication and division block Lower Attainer Guidance



YEAR 7

Block 7: Fractions and percentages of amounts	Division Shading parts of fractions
 Find a fraction of a given amount Use a given fraction to find the whole and/or other fractions Find a percentage of an amount using a calculator To be able to explain how to find simple percentages (10%, 50%) of amounts. Solve problems with fractions greater than 1 and percentages greater than 100% 	Fraction Equivalent Whole Percent Convert End of block assessment Knowledge Organiser
	Practions and percentages of amounts block Lower Attainer Guidance Higher Attainer Guidance
 Block 8: Operations and equations with directed number Understand and use representations of directed numbers Order directed numbers using a number line Perform calculations that cross zero (Use of number lines allowed) Add directed numbers Subtract directed numbers Multiplication and division of directed numbers Use a calculator for directed number calculations Evaluate algebraic expressions with directed number Introduction to two-step equations Solve two-step equations Use order of operations with directed numbers Roots of positive numbers Explore higher powers and roots 	Ordering positive integers Reading and ordering temperaturesSubtract Negative
 Block 9: Addition and subtraction of fractions Add and subtract unit fractions with the same denominator Add and subtract fractions with the same denominator Understand and use equivalent fractions Add and subtract fractions with different denominators Convert between mixed numbers and fractions Add and subtract improper fractions and mixed numbers Use fractions in algebraic contexts Use equivalence to add and subtract decimals and fractions Add and subtract simple algebraic fractions 	Addition and subtraction Factors Numerator Denominator Equivalent Mixed number Improper fraction Improper fraction Addition and subtraction of fractions block Lower Attainer Guidance Higher Attainer Guidance
Progress Point 2	



Block 10: Constructing, measuring and using geometric notation	Naming 2D shapes
 Draw and measure line segments Classify angles Draw and measure angles up to 180° Draw and measure angles between 180° and 360° Identify perpendicular and parallel lines Recognise types of triangle Identify polygons up to a decagon Construct triangles using SSS Construct triangles using SSS, SAS and ASA Construct more complex polygons Interpret simple pie charts using proportion Interpret pie charts 	Polygon Parallel Scalene triangle Isosceles triangle Acute Obtuse ReflexImage: Constructing is a constructing is a constructing is a construction is a c
Block 11: 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 Find and use the angle sum of any polygon Investigate angles in parallel lines 	Vertically opposite Interior angle Sum Polygon End of block assessment Knowledge Organiser Developing geometric reasoning block
 Understand and use parallel line angle rules Use known facts to obtain simple proofs. 	Higher Attainer Guidance
Block 12: Developing number sense	
 Know and use mental strategies for simple addition and subtraction of integers Know and use mental strategies for simple multiplication and division of integers Know and use mental arithmetic strategies for simple 	Commutative Divisor Expression Equation
 decimals Use factors to simplify calculations Use estimation as a method for checking mental calculations 	Factor End of block assessment Knowledge Organiser
 Use known number facts to derive other facts Use known algebraic facts to derive other facts Know when to use a mental strategy, formal written method or a calculator 	Developing number sense block Lower Attainer Guidance Higher Attainer Guidance



Block 13: Sets and probability	
 Identify and represent sets Interpret and create simple Venn diagrams Know and use the vocabulary of probability Understand and use the intersection of sets Understand and use the union of sets Understand and use the complement of a set Generate sample spaces for single events Calculate the probability of a single event Understand and use the probability scale Know that the sum of probabilities of all possible outcomes is 1 	Set Element Probability Mutually exclusive Bias Fair Random End of block assessment Knowledge Organiser Sets and Probability block
Block 14: Prime numbers and proof	Lower Attainer Guidance Higher Attainer Guidance
 Find and use multiples Identify factors of numbers and expressions Recognise and identify prime numbers Find common factors of a set of numbers including the HCF Find common multiples of a set of numbers including the 	Multiples Factors Prime HCF LCM
 LCM Write a number as a product of its prime factors Use a Venn diagram to calculate the HCF and LCM Make and test conjectures Use counterexamples to disprove a conjecture 	End of block assessment Knowledge Organiser Prime Numbers and Proof block Lower Attainer Guidance
Progress Point 3	Higher Attainer Guidance