	Algebra	Number	Geometry	Statistics and Probability
Mastering	• Substitute positive and negative numbers into a range of expressions • Plot and use line graphs for time series • Solve equations with brackets and unknowns on both sides • Constructing and solving equations in a context	• Solve problems involving BIDMAS • Adding and subtracting fractions including mixed numbers and improper fractions • Using prime factor trees method to find HCF and LCM • Estimate a square root by using trial and improvement methods • Solve problems involving ratio and proportions • Calculate percentage increase and decrease using a multiplier • Calculating percentage change and finding the original amount	• Convert between metric and imperial units of measure • Find missing sides of triangles, trapezia and parallelograms given the area • Calculate surface area of a cuboid • Find lengths of a cube's edge, given the volume • Find missing angles in a quadrilateral • Find missing angles on parallel lines using alternate, corresponding and vertically opposite angle rules • Angle proof • Identify the (positive integer) scale factor of a completed enlargement • Enlarge an object given a (positive integer) scale factor and a point • Construct line and angle bisectors • Construct SSS triangles • Produce a scale drawing • Describe and construct simple loci • Be able to draw a plan, side and front elevation of a 3D shape • *Identify congruent shapes*	• Designing a suitable questionnaire, being aware of bias, open and closed questions • Problem solving with questionnaires • Grouping and comparing grouped data accurately • Equally likely outcomes • Mutually exclusive outcomes • Sorting with Venn diagrams
Deepening	• Simplifying expressions that involve single brackets, powers and division • Solve two step equations • Derive an algebraic formula • Identifying missing co-ordinates to construct geometrical shapes • Plot and recognise graphs for horizontal and vertical lines • Plot linear graphs • Use and find a rule for the nth term of a linear sequence • Generate a formula to describe a sequence of patterns	• Use a calculator to carry out complex calculations • Add and subtract fractions with different denominators • Find the LCM and HCF of a pair of numbers by listing • Use ratio and proportions to solve problems in everyday context example maps • Divide a quantity into a given ratio • Increase or decrease two quantities using direct proportions • Calculate with negative numbers using all four operations • Round recurring decimals and write as a fraction • Construct scale drawings	• Reflect objects in angled mirror lines • Calculate areas of trapezia, parallelograms and compound shapes • Convert freely between metric units • Properties of quadrilaterals and polygons • Calculate the area of a triangle • Calculate volume of a cuboid • Find the surface area of a cuboid by counting squares • Identify order of rotational symmetry • Plot and transform objects given co-ordinates and instructions • Construct ASA triangles • Construct quadrilaterals • Identify scale factor • Isometric drawings • Draw nets with dimensions	• Use comparative bar charts stacked bar charts • Drawing and interpreting pie charts • Creating a data collation sheet. • Introduction of primary and secondary data • Plotting scatter graphs and describing correlation • Create and interpret stem and leaf diagrams • Use experimental probabilities • Comparing probabilities
Securing	• Interpret line graphs in context • Substitute whole numbers into expressions and formulae • Construct and solve one step equations • Describe and generate a sequence using term to term rules	• Find fractions of a quantity • Finding percentage of a quantity • Write a proportions as a fraction, decimal or percentage • Change between fractions, decimals and percentages • Simplify ratios to solve problems • Solve arithmetic problems in context • Interpret scale drawing • Interpret and use a calculator effectively	• Calculate the perimeter of compound shapes • Calculate the area of squares and rectangles by formula • Find missing sides of simple shapes given the perimeter • Convert between cm and mm • Calculate complementary/supplementary/explementary angles • Properties and names of triangles • Calculating the missing angle in a triangle • Identify lines of symmetry on a shape	• Types of data and averages e.g discrete and continuous data. • Calculate and evaluate mode, median, mean and range with more difficult problems • Calculate and evaluate mode, median, mean and range from a frequency table • Interpret bar charts and pie charts • Introducing theoretical probability

			• Reflect objects in a mirror line • Rotate objects from given instructions • Tessellate simple shapes • Describe translations • Translate an object from given instructions • Construct a SAS triangle • Identify parts of a 3D shape • Draw simple nets of 3D shapes • Match nets with 3D shapes	• Use fractions to represent probability • Interpret a Venn diagram • Introducing experimental probability
Developing	• Use letters to represent unknown numbers • Simplify expressions by collecting like terms • Identify and plot co-ordinates in all four quadrants • Use a formula to complete a table of values and plot the graph • Use a graph to estimate an unknown value • Multiply and divide numbers and letters in algebra • Understand and use inverse operations • Generate sequences from patterns of shapes	• Recognise prime numbers • Recognise and list factors and multiples • Write numbers in words and figures • Use place value in whole numbers and decimal problems, including money • Round a number to the nearest 10, 100, 1000 • Round a number to a given number of decimals places • Multiply and divide by 10,100,1000 • Use estimate to check a result • Use the order of operations (BIDMAS) • Use fractions to describe parts of a whole, including improper fractions • Calculate simple percentages, including problems involving money • Use efficient methods to add and subtract whole numbers • Use mental and written methods to add, subtract, multiply and divide whole numbers • Find or recognise squares and square roots • Use divisibility tests • Write and use ratio and proportions • Compare and simplify ratios • Write a proportion as a fractions or percentage	• Measure straight lines using a ruler in cm or mm • Read scales • Choosing an appropriate metric unit from a list • Measure angles using a protractor • Estimating angles • Naming angles • Calculate volume by counting cubes	• Interpreting and drawing line graphs • Interpreting graphs and charts • Calculate and evaluate mode, median, mean and range from a list • Planning a statistical enquiry/ collecting data/ tally charts and frequency tables and comparing data • Using words to describe probability • Introducing theoretical probability • Using the probability scale from 0 to 1 • Introducing experimental probability • Identify a set, complete and interpret a Venn diagram
Emerging	• Construct a formula in words • Use function machines • Find patterns in sequences of numbers	• Understand place value for whole numbers • Compare and order whole numbers • Add decimals using mental and written methods • Understand and order negative numbers in the context of temperature • Identify equivalent fractions • Mental methods of addition and subtraction	• Interpret time shown on a clock • Classifying and identifying simple 2D shapes by their properties • Perimeter of simple shapes (all side lengths given) • Estimate and calculate areas of shapes by counting squares • Using metric units in context • Adding angles • Compass turns • Drawing angles • Represent 3D shapes in 2D • Use a compass to draw circles • Identify and measure the radius and diameter of a circle	• Planning, collecting and organising data • Reading and drawing lists, pictograms and bar charts • Begin to understand pie charts • Calculate statistics including mode, median, mean and range • Introducing vocabulary to describe probability • Sort objects into a Venn diagram