

	Algebra	Data and Probability	Numeracy Skills	Shape
Emerging	<ul style="list-style-type: none"> Know basic algebraic notation 	<ul style="list-style-type: none"> Understand the what is meant by the mean. 	<ul style="list-style-type: none"> Understand and use place value Know the symbols =, ≠, <, >, ≤, ≥ Know the square numbers Can recognise fractional areas Number bonds up to 100 	<ul style="list-style-type: none"> Know the conventions for a 2D coordinate grid Know that area of a rectangle = $l \times w$ Know the meaning of faces, edges and vertices Know the names of special triangles and quadrilaterals
Developing	<ul style="list-style-type: none"> Use and apply simple formulae Uses technical language such as algebraic expressions, equations and formulae Use and interpret algebraic notation, including: ab in place of $a \times b$, $3y$ in place of $3 \times y$ and $3 \times y$, a^2 in place of $a \times a$, a^3 in place of $a \times a \times a$, a/b in place of $a \div b$, brackets Substitute numerical values into formulae and algebraic expressions Generate terms of a sequence from a term-to-term rule 	<ul style="list-style-type: none"> Calculate and interpret the mean Interpret and construct pie charts and use these to solve problem 	<ul style="list-style-type: none"> Know the first 6 cube numbers Know the first 12 triangular numbers Solve problems with negative numbers Use technical language such as prime numbers, factors, common factors and highest common factor. Use positive integer powers and associated real roots (square, cube and higher), recognise powers of 2, 3, 4, 5 Apply the four operations, including formal written methods, to integers and decimals Express one quantity as a fraction of another Define percentage as 'number of parts per hundred' Express one quantity as a percentage of another Can list the first multiples of integers Interpret percentages and percentage changes as a fraction or a decimal Can find equivalent fractions by multiplying Written 3 digit addition and subtraction involving decimals 	<ul style="list-style-type: none"> Know that area of a triangle = $b \times h \div 2$ Describe positions on the full coordinate grid (all four quadrants) Use conventional terms and notations: points, lines, vertices, edges, planes, parallel lines, perpendicular lines, right angles, polygons, regular polygons and polygons Draw diagrams from written description Identify properties of the faces, surfaces, edges and vertices of: cubes, cuboids, prisms, cylinders, pyramids, cones and spheres Use standard units of measure (length, area, volume/capacity, mass, time, money, etc.) Measure line segments and angles in geometric figures Apply the properties of angles at a point, angles at a point on a straight line, vertically opposite angles Calculate perimeters of 2D shapes
Secure	<ul style="list-style-type: none"> Simplify and manipulate algebraic expressions by collecting like terms and multiplying a single term over a bracket Use function machines with inputs and outputs Express missing number problems algebraically 		<ul style="list-style-type: none"> Check calculations using approximation and estimation Compare and order fractions, including fractions > 1 Order positive and negative integers, decimals and fractions Solve problems involving percentage change, including percentage increase/decrease Round numbers and measures to an appropriate degree of accuracy (nearest, d.p) Express numbers as a product of prime factors 	<ul style="list-style-type: none"> Know that area of a parallelogram = $b \times h$ Use, read, write and convert between standard units, converting measurements of length, mass, volume and time Derive and apply the properties and definitions of special types of quadrilaterals, including square, rectangle, parallelogram, trapezium, kite and rhombus; and triangles
Advanced	<ul style="list-style-type: none"> Cancel and simplify calculations and expressions 	<ul style="list-style-type: none"> Understand how to find the mean from a frequency table 	<ul style="list-style-type: none"> Round numbers and measures to an appropriate degree of accuracy (nearest significant figure) Apply the four operations, including formal written methods, to simple fractions (proper and improper), and mixed numbers 	<ul style="list-style-type: none"> Solve problems involving the calculation and conversion of units of measure
Excelling	<ul style="list-style-type: none"> Simplify algebraic expression involving indices. 		<ul style="list-style-type: none"> Solve problems with terminating and recurring decimals Count and perform simple sums with numbers in different base systems 	